Future through Memory

Virtual Storytelling in Toronto's Chinatown

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Abstract

Future through Memory is a study in the affordances of virtual production through co-design as a method of civic engagement, placemaking and placekeeping in Toronto's Chinatown. The title "*Future through Memory*" hearkens back to Wendy Chun's text, *The Enduring, Ephemeral, or The Future is a Memory (2008).* Using participatory action research as the central methodology, co-creation workshops were held with individuals within the Toronto Chinatown community to develop what Pierre Nora's describes *les lieux de mémoire* (site of memory) in "*Between Memory and History: Les Lieux de Mémoire*" (1998) within an interactive documentary using WebVR (*A-Frame*). This study explores the use of collective memory, oral testimony, transmedia storytelling and 3D photogrammetric scans as a method to highlight the agency of participants within the community, the diaspora experience and discussions of identity. This project takes a decolonial theoretical framework and is centred on developing a collective memory — "collective, plural, yet individual" (Nora, 1989), questioning traditional structures of historical representation within virtual reality.

Keywords — Belonging & Othering / Chinatown / Chinese-Canadianism / Cultural Preservation / Culture & Heritage / Decolonization / Dialogue / Diaspora / Interactive Documentary / Collective Memory / Generative Design / Memory Studies / Virtual Reality / Volumetric Media

Acknowledgements

Through the creation of the virtual spaces within this thesis, we cannot move forward without acknowledging their physical counterparts. To look together and imagine the future, we must reflect and acknowledge the land in which Toronto's Chinatown sits and the land myself and all the participants of my thesis workshop occupy in the creation of the resulting interactive documentary (i-Doc), *Future through Memory.*

      Tkaronto, the Mohawk word meaning "the place in the water where the trees are standing," exists on the ancestral and traditional territories of the Mississaugas of the Credit, the Haudenosaunee, the Anishinaabe, and the Huron-Wendat and is where OCAD University is located, within the Toronto Chinatown neighbourhood where this work was created for, in and about.

      Toronto's downtown Chinatown (also known as West Chinatown) is situated along Dundas Street and Spadina Avenue. Spadina, the Anishinaabemowin word for *ishpadinaa*, meaning high hill or ridge, and as a path where Indigenous communities would and continue to gather today. As a settler, a second-generation Chinese-Canadian, I am a guest to these lands and am grateful for the stewardship of the Mississauga of the Credit river hold. Toronto is in the Dish with One Spoon territory, the Dish with One Spoon treaty is an agreement between the Anishinaabe, Mississaugas and Haudenosaunee to share the territory and protect the land and is one in which all parts of this project and individuals involved share an obligation to withhold.

      This work is an imagining and a reflection of a collective memory, and as much a collective desire to protect Toronto's Chinatown as well as learning and sharing from our diasporic experiences and acknowledgement of a long history of solidarity between the Black and Indigenous community. As this project evolves past the confines of this paper and its digital counterpart, I wish this work to continue to reflect on how we can work in solidarity with Indigenous Nations in contemporary issues as well as continue to support the BIPOC (Black, Indigenous, People of Colour) community within the Toronto Chinatown neighbourhood.

Dedication & Gratitude

To my parents, for pushing me these past few years and giving me the opportunity to take on this journey.

To Brendan, my partner, my better half, and biggest support through this whole grad school experience and the past two years and more. So many moments apart through this long journey, but my closest friend along the way.

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Chapter 1 Introduction

1.1 — Historical Context

I was born in Vancouver, BC to two immigrant parents from Hong Kong. My Cantonese is mostly conversational, and my reading skills are generally elementary level. I'll admit my Chinese-Canadian identity did not play a large part in the way I perceived myself for the majority of my life, having grown up in the suburbs, and even less so, my understanding of how Chinatowns would play a role in my life. I remember visiting Vancouver's Chinatown frequently as a child, with many afternoons spent buying trading cards with my grandma or waiting for my mom to finish work. Those visits and memories tapered off growing up, as we lived in the suburbs and our neighbourhoods continued to develop, the development of ethnoburbs[1] such as Richmond, Burnaby, and Coquitlam which offered many similar products and services closer to home. After graduating from my university, I worked briefly in the Chinatown area, and would visit the neighbourhood on almost the weekly basis. It seems strange to think about how I'd find myself gravitating towards Chinatown most of my adult life, but never had time to reflect on its history and how my own experience may be part of a larger shared experience.

I was fortunate and privileged enough when I was younger to have been able to travel to different countries around the world. I can say, with a childish frustration, that my parents would drag my older sister and I to Chinatowns no matter which country we visited. This frustration and confusion was always present and perhaps stirred a sense of dread for me: "Why are we travelling so far to another country (or even continent) just to eat Chinese food we can eat at home?" I remember making a big fuss about, perhaps even with tears involved.

"When in Rome," the saying goes.

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[1] An *ethnoburb* is a suburban residential and business area with a notable cluster of a particular ethnic minority population. Though may not constitute a majority within the region, it reflects a significant amount of the population (Li, 1998)

And reflecting on it now, I realize how much I took Chinatowns for granted. The thought of the constant existence of Chinatowns across the world was unquestioned, a place that will simply always be there. A place indirectly related to myself. And I am thankful for those experiences now as I reflect and appreciate the depth and diversity of the Chinese diaspora experience across the world.

There is no clear definition of a "Chinatown", though it is usually perceived as a Chinese quarter within any city outside of China. This could be one or two streets that Chinese people called *tangren jie* or *tong yan gaai* (Chinese street - 唐人街) or historically what white settlers called "Chinamen quarters", "Chinese community" or "Chinatown." (Lai 22)

Each Chinatown in Canada has its own unique history, even broadly in North America, but all highlight the resilience of the communities within them. A resilience I sometimes wish that individuals weren't forced to carry due to the hardships they endured in the past and even today. Having seen the changes of Vancouver's Chinatown growing up in the West Coast and now in Toronto as I aim to attain my MDes during the ongoing COVID-19[2] pandemic, I wonder more than ever "What will happen to Chinatown?"

This question isn't new, not for myself or others around me, though it has taken on new meanings in the past year. This question isn't limited to the Chinatown community, but to the many racialized and marginalized communities across the world. The thoughts of belonging and othering are not new in Chinatowns, communities which Chinese people have fought for since Canada became a dominion. Through my research, I've been given the opportunity to meet many people, both near and far, working on similar projects as me, with the same questions and concerns, as well as their greater passions for protecting Chinatowns across Canada (and North America).

This study is not simply a study of just "Chinatowns", geographically, historically, culturally. It goes beyond visual representation and aesthetics. It is also a project about belonging and identity, the diasporic experience as well as exploring the dynamics of power through archives, images and structures. The ability to write one's own history and explore imaginings of how we see the future both physically and virtually. This thesis is about collective memory: its imbalances, its imaginings, and the active call to remember together in an unprecedented time.

1.1.1 — The importance of Chinatowns across Canada

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[2] Coronavirus disease 2019 (COVID-19) is a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

To better understand the context of this thesis, one requires knowledge of the history of the Chinese within Canada and in Toronto. In the 1880s, Chinatowns were the first place of arrival for many new Chinese migrants and labourers coming from China. Many early Chinese migrants to Canada arrived from the Guangdong province in southern China in the search of Gold Mountain or *Gum San* (金山), a synonym for North America, or for the western regions of North America, usually San Francisco, California or British Columbia. With the discovery of gold in the Fraser River of B.C, prospectors from California and Chinese migrants came to Victoria, BC. These early pioneer immigrants would become the foundation of Canada's multiculturalism as we know it today.
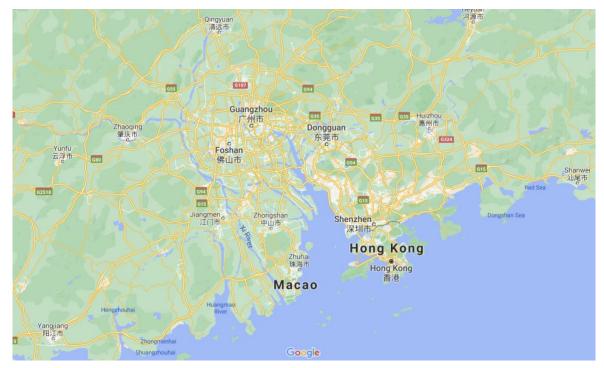
Figure 1 Guangdong Province, China as seen on Google Maps

By the end of the gold rush, more Chinese migrants were lured into Canada for the construction of the Canadian Pacific Railway. This decision was not without strong opposition both internally from the Canadian government and its citizens. Chinese railway workers were paid much less than their white counterparts and were given the riskiest jobs. Andrew Onderdonk, an American construction contractor, estimated five to six hundred workers lost their lives through the construction of the railway, approximately three Chinese workers per kilometer of track (Lai 32). Despite these hardships, Chinese people continued to migrate to Canada risking their lives, hoping to create a new life in *Gold Mountain*.

Chinatowns, or more simply, Chinese quarters, varied in sizes and were frequently in gold or coal mining towns or places close to train stations. At the completion of the CPR, Chinese workers were without employment and many switched to alternate options for themselves such as launderers and restaurateurs, the few employment options legal to them. This shift to entrepreneurship wasn't without notice and racism from White settlers. Jobs were scarce and the competition was high for Chinese people looking for eligible jobs. Many White settlers vyed for similar employment. This competition and racism pushed many Chinese eastwards as they attempted to escape the overt prejudices against them in the west coast (Mah, 1977)

Anti-Asian racism is not new in Canada. In 1907, an anti-Asian riot led by white supremacists targeted Chinese, Japanese and Punjabi Sikh communities within Vancouver. This racism was not isolated, but also ingrained in the fabric of the country as the racism towards Chinese people would intensify resulting in restrictions on Chinese immigration with the implementation of the *Chinese Immigration Act*, also known as the *Chinese Exclusion Act.* A head tax of $50 was implemented in 1885, the first legislation to exclude migration based on ethnicity, which increased to $100 in 1900, and up to $500 in 1902 before an amendment of the act on July 1st, 1923 on Dominion Day (Canada Day), which would bar the majority of Chinese people from entering the country with few exceptions. The day was also known as "Humiliation Day" in the Chinese community at the time (Lai 238).

Chinese people were drawn together through mutual aid. The language barriers slowed people's assimilations to the predominantly White-settler country and living together allowed the Chinese way of life to be preserved (Mah 5). Due to the restriction of immigration laws, many Chinese people separated from their families back home turned towards their communities, within associations for fellowship (8). These places were considered sanctuaries for Chinese people, a place "where they were secure from threats and discrimination" (Lai 16). While Chinatown was a place of comfort, security, and companionship to the Chinese, it was still perceived by the White community as a place of filth and sin, where gamblers, prostitutes, pimps and other social outcasts congregated (70).

Individuals in Chinatown were bound by intimate kinship structures, an ocean apart from their families. The way individuals congregated together in Chinatowns, while being segregated from the primarily White settler communities could be defined by the way they walk into the world indicating closeness of body language and speech. "It changes how I am seen, how he is seen." mentions bell hooks, in conversation with Ron Scapp in *Teaching Community* (2003). hooks, a Black author and professor, writes of the absence of White people including Black people and people of colour into their intimate kinship structures (106). Individuals were drawn together by association and mutual aid, in the context of the politics of recognition: "this is yet another way race matters in a white-supremacist

patriarchal context. It is still important for us to document these border crossings, the process by which we create community." (hooks 123).

The composition of Chinatown communities has also diversified compared to the fairly homogeneous group in the early 19th century. In the 1960s, many migrants arrived from across the West Indies, South America, Southeast Asian and Taiwan (Nipp, 1985). The largest source of newcomers were from Hong Kong, migrants from a cosmopolitan city that spoke English and were well-educated were different from many of the early Chinese that came from villages that had made up the community prior (Chan, 2011; 127).

No longer did Chinatown simply represent a group of individuals from the southern province of China, but had branched itself outwards from "Chineseness that is invariably and solely defined in relation to the motherland, China" and more than the contemporary practices and values of diasporan Chinese and the characteristics of larger questions of displacement, capital accumulation, and other transnational processes." (Ong, 2016; 24)

As Doug Saunders (2010) describes the misrepresentation of arrival cities[3] from many "as an ecologically defined group rather than as part of the social system" (28) leads to a failure in urban-housing policies. The perception of arrival cities as a homogenous netherworld in which "the static poor are consigned to prison-like neighbourhoods guarded by hostile police, abused by exploitative corporations. [...]" is to disregard the function of arrival cities which is the creation and maintenance of a network: a web of human relationships connecting villages to arrival cities to established city." (29). Historic Chinatowns, the result of great migrations of humans, result in the special kind of urban place, a transitional area that reflects a great economic and cultural boom, Saunder further presses: "The difference depends on our ability to notice and our willingness to engage." (12).

While historical Chinatowns today may no longer hold the role of an "arrival city" (Saunders, 2010), they continue to play an important role for individuals within a community and major cities within Canada. Chinatowns today are places for individuals to seek affordable goods and services in their native language, a place of deep cultural significance, and a place of congregation rather than its origin as a place resulting from segregation. Outside of the immediate community, Chinatowns are also

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[3] *Arrival city:* a term coined by Doug Saunders. Arrival cities are transitional urban spaces that serve as an primary settlement after immigration. As quoted by Saunders: "Arrival cities are known around the world by many names: as the slums, *favelas, bustees, bidonvilles ashwaiyyat,* shantytowns, *kampongs*, urban villages, *gecekondular,* and barrios of the developing world, but also as the immigrant neighborhoods, ethnic districts, *banlieues difficiles*, *Plattenbau* developments, Chinatowns, Little Indias, Hispanic quarters, urban slums, and migrant suburbs of wealthy countries, which are themselves each year absorbing two million people, mainly villagers, from the developing world.*" (2010, 28) The term is used to unite these places together and highlight their transitory role.

considered tourist attractions, relying on tourism for survival, as many locals leave the area for more affordable spaces in the city and in the suburbs.

Categorized by David Chuenyan Lai, Chinatowns could be categorized in four groups: *Old Chinatowns*, *New Chinatowns, Replaced Chinatowns*, and *Reconstructed Historic Chinatowns* (4). *Historic Chinatowns* and *Old Chinatowns* are areas established before the Second World War and have kept their distinct original streetscape and designated as heritage sites. Today, many *Historic Chinatowns* have depopulated, with many prior residents having moved to other parts of the city and into ethnoburbs. Ethnoburbs, places such as Scarborough, Markham or Richmond Hill within the Greater Toronto area, could also be described as *New Chinatowns*; commercialized areas characterized by a concentration of Chinese businesses along streets or shopping plazas (Lai 23).
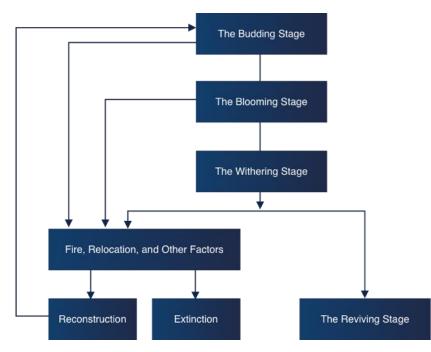
Figure 2 Chinatown Stage-Development Model: Life Cycle [4]

Chinatowns in Canada were not entirely alike, and varied in age of development, size of population, and economic conditions. Yet all Old Chinatowns grow through the same budding, blooming and withering stages, writes Lai, who proposed a *Stage-Development Model* (5) detailing the evolution of many old and historic Chinatowns. Old Chinatowns across Canada shared similar settings within the budding stage, frequently being situated in the edges of downtown areas, physically and culturally

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[4] Chuenyan Lai, David. *Chinatown Stage-Development Mode: Life Cycle.* 1988. University of British Columbia Press.

separated from adjacent neighbourhoods. While perhaps businesses from one Chinatown to another were constant: groceries, laundries, Chinese restaurants, and the history and memory of each one differs to reflect each tightly knit community. Old Chinatowns carried a strong visual image, and it is the individuals who occupied and lived in these spaces able to demystify the "mythical image as a mysterious and dangerous place with many narrow alleys and underground tunnels." (Lai: 68)

1.1.2 — The Politics of Recognition

Human identity is created dialogically, writes Charles Taylor in *Multiculturalism and the Politics of Recognition* (1994) and is created in response to our relations, including our actual dialogues. Identity also occurs collectively within the spatial framework as previously described by Halbwachs. Individuals, as *dialogical* characters are human agents, where *language* is seen in a broader content, writes Taylor, as both "expressions of art, gesture, love and the like" (Taylor 32).

The history of Chinatown is a story of migration, transnationality, and diaspora. The identities within the Toronto community, much broader and diverse than the simple name given to it by white settlers in the 18th century. Having found its beginnings in St John's Ward, Toronto's first immigrant neighbourhood, Toronto Chinatown's history was built upon the existing Black and Jewish neighbourhoods and the community before it. Toronto's Chinatown is deeply ingrained in the displays of solidarity and community with the Black, Eastern European, and Jewish community and the Spadina area as well as the long history of Chinese-Canadian relationships with Indigenous communities.

This ethnic diversity brought Toronto, which had been a "staunchly Anglo-outpost preoccupied with defending its Christian values" (Lorinc, 2015), a historic point of inflection and with it anti-Chinese sentiment. The racism towards the Chinese community in the late eighteenth century across Canada could be seen in popular media as shown in *fig 3*.
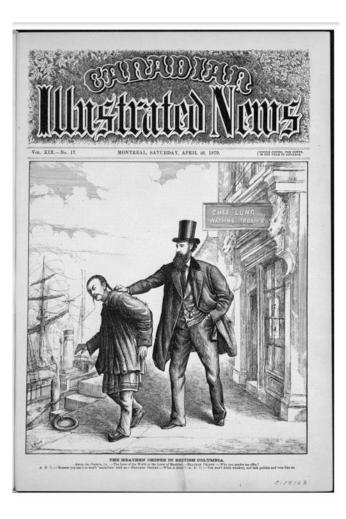
Figure 3 The Heathen Chinee in British Columbia, Published in April 26, 1879 (Library and Archives Canada) [5]

In a government response to anti-Chinese sentiment and to answer the "Chinese question", a 1884 report titled *Report of the Royal Commission on Chinese Immigration Report and Evidence* was released. One witness testifies: "Unless the Chinese character should undergo a radical change they cannot become permanent settlers."

So, who represents Chinatown and what does it mean to be Chinese-Canadian? The dynamics of power and under constant negotiation and without any formal claim. Before 1923, the Chinese population in Toronto was relatively homogeneous, many born in villages, coming from the province of Guangdong. This change is not simply seen, but also heard. From the late 1960s, the immigration laws

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[5] Weston, J. *The Heathen Chinese In British Columbia.* 1879. Library and Archives Canada C-072064. http://central.bac-lac.gc.ca/.redirect?app=fonandcol&id=2914880&lang=eng

in Canada changed the community in size and complexity. "Their faces were Chinese, but they spoke with languages, accents, and dialects from around the world." (Chan, 2012)

Figure 4 Certificate of a $500 head tax paid by Kwok Chee Mark who arrived in Victoria, BC in 1918
(Library and Archives Canada)[6]

Migration and images play a role in creating uniformity. The frequencies in which images (such as passports photos) dictate the guidelines of what is acceptable and unacceptable (Campt, 2017). What Campt describes as the doubted "refusal to stay in one's proper place" and a refusal that Campt herself equates to striving for freedom that Ruth Wilson Gilmore articulates as the "possibility to live unbounded lives." (32) This frequent exploration of boundaries of identity has been documented and already present in Chinese-Canadian literature, writes Shaobo Xie in *Rememory, Reinscription, Resignification* (2006), which argues both inside and outside the syntax of hegemonic mainstream culture (363). From text to images, this "code-switching"[7] is employed as being both instrumental and affective conduits of the aspirations of thousands of new Commonwealth migrants. These possibilities,

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[6] *Certificate of payment of head tax.* 1918. Library and Archives Canada. *http://central.bac-lac.gc.ca/.redirect?app=fonandcol&id=106434&lang=eng*
[7] Code-switching, a term coined by Mary Louise Pratt, enables "speakers to switch spontaneously and fluidly between two languages" and lays claim to cultural power and not to be owned by a dominant language.

in addition to the diversity and complexities of the diasporic experience, come together in the co-creation process and the discussions between individuals within this thesis study.

1.1.3 — The History of Toronto's Chinatowns

Toronto's downtown Chinatown ('West Chinatown') many individuals know today is located along Spadina Avenue and Dundas Street is actually one of three Chinatowns in Toronto's history. The first Chinatown in Toronto was located in St. John's Ward (frequently called the Ward), the city's first immigrant neighbourhood in the city. What had been described as "Toronto's most impoverished – and most notorious – 'slum' was contrary to uniformly 'poor' (Lorinc, 2015; 12).

Though Toronto's first Chinatown's early community was fairly homogeneous, that wasn't to say it was removed from the Jewish, Italian, and African-Canadian communities that occupied the space before it. In an in-depth look at Toronto's early Chinese community, Valerie Mah writes about the many Jewish businesses along Elizabeth Street side by side Chinese grocers and fish stores and Jewish clientele at restaurants (48). This is also present today in the close proximity of West Chinatown and Kensington Market, a distinctive multicultural neighbourhood and originally named the Jewish market.

In the 1960's, the City of Toronto had proposed, with little consultation with the Chinese community, to expropriate the area for the development of Nathan Phillips Square and New City Hall. By the end of the 1960's, only one-third of the original first Chinatown remained, many businesses and residents having moved further west down Dundas Street to Spadina Avenue to what many now call today West Chinatown, or simply downtown Chinatown. Other businesses and residences moved eastward to Gerrard Street and Broadview Avenue to East Chinatown, or further up into the suburbs into neighbourhoods such as Scarborough.

To protect the remaining third of First Chinatown, north of the New City Hall, the *Save Chinatown Committee* was established and stopped the City's development. The movement and displacement of Chinatown community then and now feel like a familiar story. The fight for Toronto's Chinatown did not end after the construction of the civic square. West Chinatown has had its own

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[8] City of Toronto Archives, RG Reports, Box 9, 1957. https://www.toronto.ca/city-government/accountability-operations-customer-service/access-city-information-or-records/city-of-toronto-archives/whats-online/web-exhibits/a-step-forward-in-time-torontos-new-city-hall/a-step-forward-in-time-international-competition/

difficulties, though a significant influence over the community was a new wave of social and political activism among students, professionals, and new immigrants wanting to become more actively involved in Canadian cultural and political life (Chan 136). This growth of civic engagement by driven by a generation of young people, some local-born and some overseas, tackled issues that threatened the livelihood of the community and carried on the same courage and determination as the early migrant pioneers.

1.1.4 — Anti-Asian Racism as Health Crisis, then and now

In March 2003, news of *Severe Acute Respiratory Syndrome* (SARS) spreading in China and Hong Kong had hit Canada. I was only nine years old at the time. Though the disease is different, the past offers hindsight at what we're continuing to learn about the COVID-19 pandemic and its effects, both short and long term on the Chinatown community.

In *The yellow peril revisited: the impact of SARS on Chinese and Southeast Asian Communities*, a non-exhaustive study by Carianne Leung and Dr Jian Guan, the authors detail the impact of SARS on the Chinese Canadian and Southeast Asian communities in the early onset of the disease as well as its lasting impact. From the 2004 study, the authors note that while SARS was named a "crisis" in the context of public health, the existence of a social crisis accompanied it: "Throughout the barrage of media reporting on SARS, very few media outlets addressed the social alienation, discrimination, racist practices that Asian communities experienced during this time." (4)

The summarization of the study which details the impacts of the media, alienation, discrimination and harassment, employment and self-image and sense of belonging seems to mirror the same sentiment today. In January 2020, news appeared of a novel coronavirus first appearing in Wuhan, China. COVID-19, what we know it as today has played a large factor in our lives, as well as this thesis research. The first appearance of COVID-19 in China has led to many deaths as well as a rise in anti-Asian racism and sentiment in the news and acts of violence towards the Asian community across the world. According to the first national report of anti-Asian racism (2020)[9] by the Chinese Canadian National Council (CCNC), Canada exceeded the United States in reported racist incidents per capita.

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[9] "More Anti-Asian Racist Incidents Reported Per Capita in Canada than US According to First National Report." *Chinese Canadian National Council - For Social Justice*, 9 Sept. 2020, ccncsj.ca/more-anti-asian-racist-incidents-reported-per-capita-in-canada-than-us-according-to-first-national-report

Over a hundred years later after the anti-Asian riots in Vancouver, this pervasive racism and white supremacy remains woven in the fabric of Canada (CCNC, 2020). Organizers from *Project 1907*, a grassroot group of Asian Canadian community organizers, mentioned within the report: "The recent surge in anti-Asian violence, vandalism and xenophobia is reminiscent of the 1907 Anti-Asian Riots and the decades of targeted discrimination that followed. Many seniors in our communities say they haven't experienced or feared such intense levels of hate since the mid 1900s." (2)

At the time of my writing and conducting of this Masters thesis, Ontario has been under strict lockdown with many businesses and services closed with 761,000 cases nationally as of January 27, 2021, with the city of Toronto entering its first major lockdown on March 23, 2020, and its second on November 23, 2020.

With many individuals forced to socially distance for the safety of everyone, local businesses across North America have suffered, many permanently closing. These businesses include businesses run by people of colour, who have been hit hardest.

Despite this, communities have rallied together to protect local businesses, fighting for workers' rights as well as continuing the fight for affordable housing more than ever. The present time is difficult, and it has also allowed for introspection and reflection. No one can answer what will become of Chinatowns across North America, though to protect these communities and other marginalized and racialized neighbourhoods further, I urge individuals to look towards these individual communities and look towards dismantling systems that continue to oppress, marginalize and learn how we can support one another through mutual aid.

1.2 — Purpose

In January 2020, a building in New York's Chinatown caught fire, damaging multiple artifacts and documents of Chinese-American history. I had just begun my research into Chinatown at the time, and the news stirred a sense of urgency within me, as early news of COVID-19 spreading began to spread in the month of February and March 2020 leading up to the first lockdown. This urgency to protect one's cultural heritage, both physical and digital seemed to grow tenfold. How many stories untold and how many stories left to tell about our histories left untold? These needs continue to persist even in my own research, hoping to access the community's history should be readily accessible, and other means of community-based archives which would continue to shape this research.

My background is not in archival studies, though I've realized archiving, perhaps in the amateur form of hobbyist collecting; in categorizing playing cards, hoarding books and photographs, brought

together through general fascination with the past has followed me my whole life, a desire to learn more of history.

As Anita Lee, an executive producer of the National Film Board of Canada says; "Artists of colour have historically been relegated to "community media." They have carried a double burden of both representing a community and also of being made responsible to make work about a community." (Uricchio, William, and Katerina Cizek, 2019). These works, frequently framed as having "less artistic merit" or legitimacy, actively critique the institution and a collective "canon". Archiving itself is not restricted to institutions, to archivists, it comes from artists, designers, and embodied within performers, in so many forms. With this study, I'd like to open the discussion to the creation of communal archives through co-creation and co-design.

These forms of art, archiving, and collecting tell a deeper story, of both a community and ourselves. Our own histories make each individual a "living connection" to a past's passing history, transmitting our memories, traumas, and intergenerational acts to another (Hirsch, 2012; 104) and is an active call to listen, not merely to our communities in the present, but also learning from our pasts.

This study is situated as a social art practice (Thompson, 2017) through the use of digital storytelling and a generative design process. Digital storytelling, as described by Jean Burgess (2006) as "explicitly designed to amplify the ordinary voice" (205-206). Though to simply amply voices itself is not dialogics[10], which requires the drive towards action. Through a generative co-design process, knowledge is shared and produced between active co-creators with each other and the objects and virtual worlds created. This diversity in which storytelling is conducted and knowledge produced; the sharing builds new interconnections between individuals, histories, environments, geographies; actively contributes to our own relationships (Christensen, et al. 2018).

Participatory action research (PAR) through a co-design approach is the central focus of this thesis project. Co-design implies the collective building of a tool or platform, with individuals introduced to the project in its early stages (Uricchio, 2019). These discussions of the co-design process through dialogue and the act of co-creation will be the central guiding method.

The purpose of this study is to create a space of conversation in unprecedented times during COVID-19 and allow individuals within Toronto's Chinatown the ability to reimagine and document their memories through co-design with the help of cultural and heritage preservation techniques. Through critical pedagogies, the development of a communal archive that both explores the affordances of interactive documentary (i-docs) and virtual reality technology and the ability to embody the archive and

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[10] *dialogics*: The use of conversation or shared dialogue to explore the meaning of something; akin to creating dialogue.

a shared collective memory. While research frequently positions the researcher as an exterior force and individual, this study is also from the perspective of myself also being a member of the Toronto Chinatown community and also actively contributing to this thesis project as well.

The workshop framework is developed with a collaborative approach with the co-design, as well as communal care through the active sharing of knowledge and connection to events occurring within other groups within the community.

1.2.1 — Participatory Action within *Immediations*

Toronto's Chinatowns and the Chinese community in Canada have a history of restrictions and exclusions. The challenges of gentrification and anti-Asian sentiment within the neighbourhood is one that has extended beyond present day challenges, though have been brought back to light in the ongoing COVID-19 pandemic.

This urgency and struggle has always been present, at least in relation to Vancouver and Toronto Chinatown's history. The evolving situation of COVID-19, and the rise of anti-Asian racism has driven many local businesses and individuals to be pushed into precarious situations, deepening these challenges further, as many businesses cannot apply for government subsidies, and many local Chinatown businesses feel "pushed to the brink" across Canada.
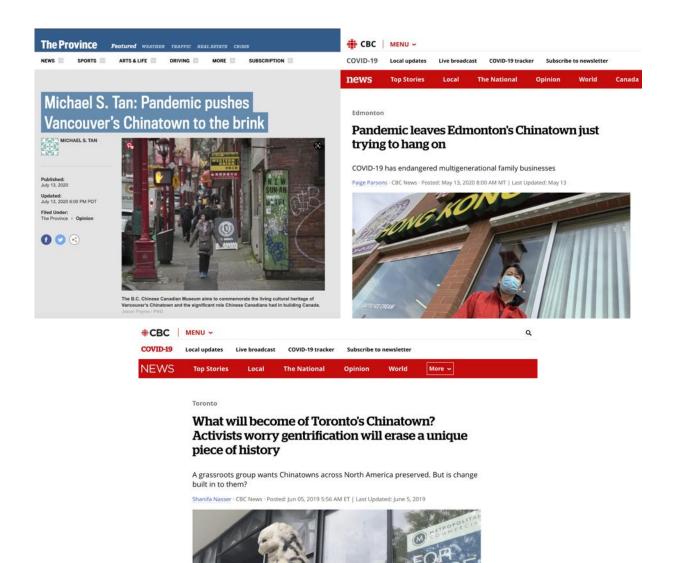
Figure 6 Various new articles pertaining to Vancouver [11], Edmonton's [12], and Toronto's Chinatown[13]

In *Immediations: The Humanitarian Impulse in Documentary (2017),* Pooja Rangan stresses that the gesture of handing the camera over to the "other" while appearing radical, can heir to the kind of paternalism as a mode of discourse rather than empowering subjects (Longfellow 58). The

[11] Tan, Michael S. "Michael S. Tan: Pandemic Pushes Vancouver's Chinatown to the Brink." *The Province*, 14 July 2020, theprovince.com/opinion/michael-s-tan-pandemic-pushes-vancouvers-chinatown-to-the-brink.
[12] Parsons, Paige. "Pandemic Leaves Edmonton's Chinatown Just Trying to Hang On." *CBC News*, 13 May 2020, www.cbc.ca/news/canada/edmonton/edmonton-chinatown-trying-to-hang-on-through-pandemic-1.5566362.
[13] Nasser , Shanifa. "What Will Become of Toronto's Chinatown? Activists Worry Gentrification Will Erase a Unique Piece of History." *CBC News*, 5 June 2019, www.cbc.ca/news/canada/toronto/chinatown-toronto-gentrification-1.5162626.

humanitarian desire to preserve and protect individuals, frequently drives the "act now, think later." mindset as Rangan refers to participatory documentary as a "humanitarian media intervention" as a place of discursive construction of emergency.

The challenges faced by Chinatowns across North America are a combination of the urgent threat of anti-Asian violence as well as gentrification and rampant condominium development. It is important to both acknowledge these challenges while also combatting the urgency and fear of falling into a mediated spectacle, so that representation of individuals isn't reduced to the essence of humans in "some foundational quality". (Rangan 13)[14]

This study is not focused merely on the pandemic, nor is it an interactive documentary attempting to simply describe the current struggles of the community. It is a study in the act of remembrance, individually and collectively, exploring the complex dynamics of the past, present, and future and the diasporic experience.

Judith Butler, an American philosopher and gender theorist, writes within *Violence, Mourning, Politic*s in *Precarious Life* (2004), when an individual loses certain people or is disposed from a place or community, one both goes through the action of mourning, where priorities are identified, and perhaps something of oneself is also revealed. "I might try to tell a story here about what I am feeling, but it would have to be a story in which the very "I" who seeks to tell the story is stopped in the midst of the telling; the very "I" is called into question by its relations to the Other, a relation to that does not precisely reduce me to speechlessness," What Butler writes so poetically highlights the struggles of participatory work and the shortcomings of what makes a 'collective' memory and what defines a collective, community, and group. In relation to this study, the act of witnessing and remembrance also highlights topics about intersectionality, the diasporic experience and self-image. The existence of the "I" in relation to the "You" to collectively create the "We" in the words of Butler and Susan Sontag will be further expanded upon in *Section 3.1.1*.

1.3 — Framing the Research

The reclaiming of memory and the action of remembrance are transformative in the physical and virtual worlds we create. In the emerging tech of 3D scanning, how we remember is evolving, no longer tied to two dimensions, but can be experienced in other ways and senses.

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[14] Rangan writes of tactics of humanizing others and presentations of humanity through representable traits (the face, the eyes), reducing individuals to a foundational quality.

The objective of this research is to explore how virtual reality and interactive documentary can provide agency not simply to the viewer, but be collaborative in its creation though collective histories (memories) and civic engagement. What began as a technological experiment, has also become an exploration of communal care in the creation of virtual space for individuals within the Chinatown community to gather. The output of this process is a workshop framework for community members to gather in a co-creation process remotely and the development of a series of 'sites of memory' (*lieux de mémoire*) in virtual reality to actively contribute to a growing communal archive and interactive documentary. This leads to my main questions for this research project:

- *What role does co-design play in placemaking and placekeeping of actual and virtual spaces?*
- *What part does collective narrative, public memory, and virtual reconstructions play in future placekeeping and placemaking?*
- *How do these methods applied to the virtual production of VR and interactive documentary become a method of civic engagement through co-design?*

Co-design in virtual and actual spaces is implemented with the use of virtual production. The agency of these methods and the development of a workshop framework that allows participants to reflect and actively engage with the Toronto Chinatown community and has the potential for expansion and reusability as a model for digital storytelling in other communities as well. Civic engagement is then achieved through dialogics and creation of a virtual (and eventual physical) forum for individuals to meet. This creation of virtual space for discussion and a collective imagining of post memory then gains its own agency that contributes to their physical counterpart.

In the making of space, this includes digital and physical place making that encourages intergenerational and intersectional dialogue between the participants of this project as well as community members.

1.4 — The Contribution & Rationale

We are tied collectively in the physical spaces we occupy, in the times of social distancing, this space takes form virtually. Virtual spaces have then been seen as a line to the ongoings of people's lives and staying connected at the times of COVID-19. This workshop then doesn't simply fill the needs of being a space for individuals to speak openly about their memories, but also the ability to continue to engage with their community through intergenerational and intersectional dialogue.

The theories that inform this research draw from community engagement through active co-design and co-production. The relevant methodologies are then placed in context of the emergent field of interactive documentary and development of rogue archives from the position of collective memory as a catalyst for social change and civic engagement through the act of remembrance, identifying its shortfalls and risk.

This project and workshop is for the Toronto Chinatown community first and foremost, the focus within the study to create a space for reflection and an ongoing dialogue with the community remote during the COVID-19 pandemic. "Community" conveys a more intimate human and self defined space (Smith, 2013; 127); therefore the approach to this community research is one that relies upon and validates that the community itself makes its own definitions. Though it is not permanently tied in that way as its purpose is to also allow individuals from the workshops to take their shared knowledge and expand it into their other communities. Reflection is then a method of dialogics rather than anti-dialogics as opposing theories of cultural action as described by Paulo Friere, where "the former as an instrument of oppression and the latter as an instrument of liberation." (Freire, 2018).

This project then exists within the boundaries of history and memory, through the creation of digital artifacts (photogrammetric scans) and are then contextualized in the form of personal memory. They are references and imaginings of personal experiences that individuals have chosen to remember, and to explore. It is an evolution of oral histories and video essays, no longer simply tied to auditory and 2D references, but can also be explored in 3D space. They are imaginings of the future of communal archives, and rather than the separation of data and history, to also immerse oneself in their own or another's memory.

1.5 — Chapter Overview

This document begins with an outline of the methodological approaches of community-based research (CBR) and of participatory action research (PAR), and is expanded within the field of interactive documentary.

In **Chapter 2**, the discussion of the methodologies and methods used within this project will emphasize the value of participatory action and dialogics as a catalyst for change. Decolonial methodologies and critical pedagogies will be reviewed, and expanded upon with the context of the rise in critical consciousness when identity works of social justice and decolonization. This then expands to the emerging popularity of participatory research, identifying its opportunities and risks.

In **Chapter 3,** a contextual review will discuss the theoretical framework and the concept of collective memory taking a spatial framework and the act of remembrance as both an action of resistance and challenge to a historical canon. The topic of collective memory and the value of memory archives will be expanded upon with a discussion on the use of postmemory and embodied knowledge.

In **Chapter 4**, I will detail a series of three prototypes developed prior to the final thesis project and reflecting on the mixed methods approach in their creation and early technological exploration that would inform the final output of this thesis project.

In **Chapter 5**, these learnings will be put into practice as I will present the final workshop framework *Future through Memory - Virtual Storytelling in Toronto's Chinatown*. An in-depth outline of the methods and techniques used as well as a breakdown to the workshop facilitation and the final interactive documentary output in the form of a communal archive. Finally, **Chapter 6** will conclude the thesis document with a discussion of the work and future iterations.

Chapter 2 Methodologies

In this chapter, I will discuss the decolonial methodologies and the use of co-creation used within this study. In the first section, I will detail the concept of collective memory and knowledge sharing through the teachings of Linda Tuhiwai Smith and bell hooks.

In the second section, I will place these methodologies in the context of the emergent field of interactive documentary and development of rogue archives. A discussion of the use of co-creation and its shortfalls and risks will be reviewed as well as the use of co-creation in racialized communities and defining the roles of individuals within a participatory and collaborative process. A critical viewpoint of being an active agent, defining the roles of participants, collaborators, and co-designers, aims to oppose the extraction of information through exploitation of labour within the realm of documentary.

To conclude, the methodologies discussed will be positioned in their role and how collective memory can be used as a catalyst for social change and civic engagement through the act of remembrance.

2.1 — Decolonial Methodologies

2.1.1 — Community and Knowledge Sharing

While this study is not a direct feminist project, it draws upon approaches from intersectional feminism and a focus in decolonial research practices. In *Decolonizing Methodologies: Research and Indigenous Peoples* (2012)*,* Linda Tuhiwai Smith identifies the struggles between interests and ways of knowing. The contrast between sharing 'knowledge' in itself is a deliberate term compared to sharing of 'information'— surface knowledge (pamphlet knowledge). In relation to the responsibilities of academia and researchers, the need to share more than surface knowledge, and instead to share theories and analysis which in the way knowledge and information is constructed and represented. "The challenge is always to demystify, to decolonize." (16)

This philosophy is supported with Paulo Freire, the Brazillian philosopher's opposition to what he describes as the "banking" model of education. In Freire's view, it is important to be mindful of the

perception of students as not to be "containers" or "receptacles" and that education is less so an act of deposition, and instead of communication. Knowledge is then said to emerge "through invention and re-invention, through the restless, impatient continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other." writes Smith. To oppose this banking model that Freiere and Smith describe, the teacher and student can oppose a system that "mirrors an oppressive society as a whole" (Freire 73).

To share knowledge is not a short exercise but a long-term commitment, Smith continues. The act itself allows cultures to survive, as knowledge is passed onto generations. And just like knowledge, memories act in a similar fashion, transformed and revisited over time through inner and outer dialogue before slipping into the realm of history. This commitment to knowledge spurs reflection into action. Within the *Pedagogy of the Oppressed* (2018), Freire states that "reflection - true reflection - leads to action." and that action will constitute an authentic praxis only if its consequences because the object of critical reflections - with action is pure activism. This reflection in a collective discussion provides a greater understanding of the community through a 'collective' memory that provides civic engagement. It is through this collaboration, and the reflection that we're able to reconstruct a society in which Ivan Illich (1985) describes as able to "enlarge the contribution of autonomous individuals and primary groups to the total effectiveness of a new system of production designed to satisfy the human needs which it also determines."

2.1.2 — Teaching Community

In *Teaching Community: A Pedagogy of Hope* (2004), bell hooks in dialogue with Ron Scapp discuss bearing witness to real community. "The single most important realization has been the need to establish a genuine sense of community based on trust." says Scapp, where hooks adds that trust "usually means finding what we have in common as well as what separates makes us different." Community action research relies upon and validates that the community itself makes its own definitions. This is research also driven by approaches that assume that people know and can reflect on their own life (Smith 127). This long term and authentic commitment requires that people re-examine themselves constantly. Community and co-creation is based on trust, which is the indispensable precondition for revolutionary change, writes Freire (60).

Research is highly institutionalized. Its existence is integral to political structures, by governments distributing funds to a vast amount of fields. Non-government and local communities also carry their own research, analysis and critique of research (Smith 124). In the words of Linda Tuhiwai

Smith; "Communities carrying out what they may regard as a very humble little project are reluctant to name it as research in case it provokes the scorn and outrage of 'real' researchers."

This collaborative approach to inquiry or investigation then provides the means to take systematic action to resolve specific problems. The emphasis on process as methodology and method rather than the outcome. As processes enable the expectation to "be respectful, to enable people, to heal, and to educate" as a step towards self-determination (Smith 128). This individual agency, and unity within diversity requires solidarity between persons, collective yearnings that traverse the body into what hooks would describe as a "universal spirit" (hooks 110).

2.1.3 — Critical Consciousness

This thesis project is centered on a collective memory to a spatial location. In critical pedagogies that engage in critical multiculturalism and place-based education situates land as public Commons (Tuck, Eve and K. Wayne Yang, 2012). Co-creation with the Toronto Chinatown community therefore requires a fluency between each other's stories and experiences, but also fluency in the land and indigenous sovereignty. In the words of Yupiaq scholar, Oscar Kawagley: "We know that Mother Nature has a culture, and it is a Native culture" (2010, xiii), directs us to think through land as "more than a site upon which humans make history or as a location that accumulates history" (Goeman, 2008; 24). Freire's philosophies, frequently tie liberation to redemption, blurring the distinctions between oppressed and oppressor. (Tuck, Eve and K. Wayne Yang 20)

Eve Tuck and K. Wayne Yang's text, *Decolonization is not a metaphor* (2012), details what is unsettling about decolonization and the disconnects between repatriation of Indigenous land and life and improvement of societies and schools. As mentioned in Chapter 1, the politics of recognition and in the context of the acts of passing, Sara Ahmed (2000) asserts the importance of being able to replace "the stranger" and to "become without becoming". The experiences of oppression and colonization differ between groups though are frequently homogenized. This equivocation by describing all the struggles against imperialism as 'decolonizing' then creates an ambiguity between decolonization and social justice work (17). A critical consciousness is then required in the pursuit of social justice and critical enlightenment and distractions that conceal the need to give up land or power or privilege which specifically require the repatriation of Indigenous land and life (21). This thesis project aims to establish this critical consciousness through dialogue between participations. Though the project itself is an exploration, these guiding principles will allow the project to work towards decolonization, by its

methodologies, and a more inclusive co-creative approach that provides both physical and virtual placemaking and placekeeping for BIPOC individuals.

2.2 — Participatory Action Research within Interactive Documentary

In this section, I will discuss the use of participatory action research (PAR) and co-creation in the emergent field of interactive documentary. Participatory action research is an approach to research in communities, emphasizing participation by those members. PAR carries multiple definitions, though is generally seen in parallel or encompassing collaboration as the heart of its methodology. Participatory visual and media approaches have been embraced in the past few years through the various critiques of traditional ethnographic study (Gubrium, A., & Krista, H, 2013). Participatory action research derives from the ideas of critical consciousness and dialogical reflection as transformative power. In digital storytelling and participatory digital archiving, new possibilities for participatory approaches as co-producers of knowledge also allows individuals to be active co-researchers (13).

With technological advancements, collaboration is an increasing part of the documentary production process. In *New Documentary Ecologies: Emerging Platforms, Practices and Discourses* (2014) by Kate Nash et al, discusses the discourses present and evolving within the emerging field. No longer are viewers bound to a singular narrative, a story told by the single author. Interactive documentaries within a network are "living, changing, and constantly evolving." (Gaylor, 2012) and provide multiple modes for interactivity. Nash then identifies the three dimensions of interactivity: technology, relationships, and audience experience which play a part in the discussions surrounding the consequences of the documentary's social orientation. Sandra Gaudenzi identifies the four distinct collaborative strategies documentary makers have been attempting to get the audience more involved with content production (Nash et al, 6):

1. Documentaries constructed with content submitted by the audience
2. Allowing audience to comment to encourage debate
3. Involve in the collaboration with specific communities, but closed to online audience
4. Production is dependent entirely on user-generated content.

The risks associated with co-creation may then be a muddled process or challenges to develop "high-quality" storytelling (Uricchio William and Katerina Cizek, 2019). And while this attempt of a development of a collective "canon" will be expanded upon in *Section 3.3.1*, the challenge is then posed on community-based co-creation as to how to gather the voices of multiple parts of the community into a succinct narrative. Guandenzi expands upon the idea that interactive documentaries are *Living Documentaries*: "What actually matters to me is that it is an artefact that demands agency and active participation of some sort from more than one actant and therefore it does not exist as an independent entity- as it is always putting several entities in relation with each other" (Guandenzi, 2011). While active collaboration and involvement of the audience and specified community provide a more democratic system of creation, there are also the paradox between collaboration and exploitation in the way the invitation to participate is 'framed'.

2.2.1 — Generative Research Design and Co-Design

This thesis project uses generative research design within a workshop framework to engage individuals within the Toronto Chinatown to create a virtual space through the use of a web-based VR platform and the creation of 3D models using photogrammetric rendering. The use of generative design and creation of space, both as a conversational space and in immersive 3D space, then becomes a location of active listening and ongoing dialogue between members of the community over time.

Co-creation "has demanded intense reflection on the nature and ethical responsibility we bear as initiators and facilitators as we work with what our ethics boards refer to as "vulnerable communities." (Longfellow, 2020). There is also no established "canon" to co-creation, the process is as much about listening as it is about speaking, says Hank Willis Thompson. While capitalism leads us to measure efficiency and transactions to assess a project, it's difficult to quantify contributions, "There need to be ways for people to come and go without being discouraged or disrespected." (Thomson, Hank Willis, and Katherine Cizek, 2019)

"Co-creation is not one process" Brenda Longfellow writes in *Co-Creation Is Not for the Faint of Heart: Musings from an Evolving Field* (2020), it takes a mixed-methods approach that assumes multiple forms that require an agile revision throughout a project's life. This means a co-creation can take specific forms depending on specific contexts and challenges. This is guided by the principle of there being a spectrum of collaboration and understanding that co-creation is not about consensual decision making at every step, but is also a deeper process than consultation or community feedback screenings at the very end. (59)

2.2.2 — Defining the Roles

In the use of PAR, terms can be confusing, with the term co-creation frequently used as a new alternative to participation in the realm of corporations and loses its nuance of the term. The use of certain terms also defines the experience of the project and the collective workings with other individuals that challenge traditional views of professionals working with non-professionals rather than being a producer/consumer or sender/receiver relationship but a circulation of sharing and development (Uricchio, William, and Katerina Cizek, 2019). Lucas LaRochelle of *Queering the Map* (2018) describes the differentiation between participant and co-creator: "Participation, for me, assumes that there's one person who's created the art that people are participating in, but ultimately, it is that person's project. Co-creation would be a more distributed network of actors coming together to create something."

It is a gathering of individuals in their respective fields contributing to a body of work, as Gina Czarnecki, a British pioneer in bio-art would further expand upon in an interview in *Collective Wisdom* (2019); "For me, [co-creation] means developing the ideas from concept, [the] original concept. I suppose that's pure co-creation. The other form is finding people who can develop and enhance the project into something that you could never have anticipated yourself. It is better than the sum of the parts, and taking both of your disciplines and strengths and co-evolve it into something together."

Based on these definitions, the collaborators within this thesis workshop are active participants but are co-creators in the development of their site of memory (or "memory space" within this study) in the interactive documentary output. Individuals can exercise their agency and desires in the formation of their spaces and equals within discussion spaces. These terms aren't prescriptive and are defined here to better articulate the dynamic of engagement through the process of this thesis project. The level of participation required by individuals to engage with the conversations, though additional engagements are up to each participant's interest, comfort level, as well as availability. By participating in the project and discussions, and the creation of dialogics and co-creating the final output, individuals enter a social bond with other participants.

That is also not to say all material within the workshop is shared collectively, as individuals can share parts of their experiences and different levels of intimacy based on the items of their emotional toolkit. All materials created by each participant remained and will remain in their ownership as well as all media shared (photographs, recordings, video).

Co-creation is not without its own "risks" when it comes to the process of storytelling and decision-making. To individuals, the process of co-creation can threaten editorial control as Jennifer

MacArthur, a documentary producer, says as "the risks are totally incoherent narratives." from an artistic perspective, devoid of "anybody's shared experience or understanding," (Uricchio, William, and Katerina Cizek, 2019). I challenge these assumptions remembering Taylor's argument that counter against the usage of scripts and the experiences expected to be shared to fall into belonging, that these nuanced experiences are not incoherent, but they are subtleties and differences are to be celebrated.

Storytelling implicates a personal introspection that contradicts the objectivity of scholarly pursuit. It requires listening, and reflection, as well as opens the problem to dialogue and processual and adaptive thinking (Christensen, et al. xiii). Still, vigilant reflexivity is required by myself as the facilitator of the project, that while artist-community collaborations have the potential to "reoccupy lost cultural spaces and propose historical counter-memories" that the collaboration does not devolve to a sense of self-fashioning, leading individuals to become co-producers of their self-appropriation in the name of self-affirmation (Kwon, 2002; 152).

Chapter 3 Contextual Review

In this chapter, I will discuss the formation of "collective memory" within a 3D spatial framework and expand to a discussion of the power of memory as both being plural and individualistic in the development of sites of memory (*lieux de mémoire)* as coined by Pierre Nora (1989)*.* From there I will discuss the use of collective knowledge, embodied knowledge, and the concept of postmemory as it relates to the creation of the thesis project.

The politics of recognition, identifying the dynamics of power through theories of cultural imperialism are also explored to define the purpose of the thesis study. This is then contextualized in the discussion of repertoire and the creation of communal archives and rogue archives. The concepts and theories discussed are then brought together in the outcome, *Future Through Memory,* which highlights the value of emergent narrative storytelling methods and critical explorations of new networked media forms. The existence of rogue archives and control after decentralization then situates itself within the paradox of technological advancement as racing both towards the future and the past in what Wendy Chun describes as the "bleeding edge of obsolescence." (Chun, 2008)

3.1 — (Re)Creation of the Site of Memory

In this section, I will present the discussion revolving around the division and interconnectedness of personal memory and history, the act of witnessing, and the role of "collective memory" existing within a spatial framework. From the defining characteristics of a collective memory, I will expand further to the individual and plural memory in relation to bodies, vulnerability and one's own agency.

3.1.1 — Collective Memory as a Spatial Framework

Memories and identity are formed within an individual concerning their surrounding community. In addition to both tradition and customs, our identities are also tied to objects and places as Maurice Halbwachs (1950) writes "Indeed, the forms of surrounding objects certainly possess such a

significance. They do stand about us a mute and motionless society. While they do not speak, we nevertheless understand them because they have a meaning easily interpreted." (1) A community's image of the external milieu or what Pierre Nora describes as "les milieux de mémoire" are the real environments that are paramount in a group idea of form, and permeate every element of its consciousness, moderating, and governing its evolution. This permeation is why when individuals remain united or scatter into new surroundings, they can recall what has been left and its layout.

"It is to space - the space we occupy, traverse, have continual access to, or can at any time reconstruct in thought and imagination - that we must turn our attention." (Halbwachs 5) These sentiments are echoed by Pierre Nora forty years later in what he describes as *les lieux de mémoire* (sites of memory) and how we may reflect on spaces that may no longer exist. When physical space is no longer existing, whether through war or the evolution of time, the missing streets and structures create a sense of absence, and "burst of indignation and protest. It resists with all the force of its traditions, which have an effect." and are tasked with the evaluation of one's identity (Halbwachs 4). Collective memory exists within a localized group within a spatial framework of reference. In a localized study by Halbwachs, they saw it difficult for members to describe memory without spatial imagery, further challenging the further individuals into the past. It is in this sense that memory is transformative, Nora writes, and that history is "perpetually suspicious" of memory, as its "true mission is to suppress and destroy it." (Nora, 9). The act of memory and remembrance can then be seen as both a transformative process in the present as a method of engagement.

In *Regarding the Pain of Others* (2003), Susan Sontag, shifts our attention from memory to remembering "Perhaps too much value is assigned to memory, not enough to thinking. Remembering is an ethical act, has ethical value in and of itself. Memory is, achingly, the only relation we can have with the dead."

3.1.2 — Collective Knowledge, History & Memory

"Memory is blind to all but the group it binds." Pierre Nora writes in *Between History and Memory* (1989). The philosopher expands further the concept of memory as "nature multiple and yet specific; collective, plural, and yet individual." (Nora 9). The shared connections between personal memories can inform a community's collective memory while maintaining the individuality of independent thoughts and experiences. This reflection of personal memory is also a part of the transformative process of memory as something to be reflected upon where the importance of events being clearer for individuals.

How can we understand collective memory, not as a singular entity, as Judith Butler would argue, on a level of discourse, highlighting how certain lives are not considered lives at all (Butler, 2006). How then do we frame those lives singularly or collectively? In relation to memories such as events of violence, which become places of remembrance and trauma, the attention to who is remembered and mourned brings to light the individuals a community considers "real" as the perspective of violence cannot injure or negate the lives of those already negated (33).

The exploration of one's narrative, and this passing of what Hirsch described as the post-ness of memory, "absent memory" "inherited memory" and how memory can be transferred to individuals who are unable to live an event." (106) History, as both explained by Nora and Sontag is "perpetually suspicious of memory" (Nora 10) and "gives contradictory signals about the value of remembering" (Sontag 115) further heightened in the span of collective history. Just as much as personal reflection is part of our evolution of memory and events and how they play a part in building our identities.

"Memories are linked between individuals. [...] Once verbalized," Aleida Assmann (2006) insists "the individual's memories are fused with the inter-subjective symbolic system of language, and are, strictly speaking, no longer a purely exclusive and unalienable property." The act of witnessing allows individuals to think critically of their role within a community. "Witnessing is the will to push at the limits of our looking." Kyo Maclear writes in *The Art of Witnessing* (1999). This level of care is critical in the goal for liberation that Freire describes as "True solidarity is found only in the plenitude of this act of love, in its existentiality, in its praxis." Who one collectively chooses to remember as human requires a critical analysis in relation to the way history and memory are challenges and collected as memory is (trans)formed through history, and requires the present act of *remembering,* as Sontag would write: "Heartlessness and amnesia seem to go together."

3.1.3 — Postmemory, Photography, & Reproductions

What can individuals within a community do to reclaim their own history and identity, born with the task of carrying memory, or what Marianne Hirsch, a professor in feminist theory and memory studies describes as "postmemory"? Hirsch draws on the term with the use of "post" in "postmemory" signalling the temporal delay and more than a location in the aftermath, the use of "memory" in the term is more difficult, as more a possession of *history we* have never lived (105)*.* The responsibility of guardianship and the personal urgency to carry stories of traumatic personal and generational pasts brings together the personal, familial, generational sense of ownership and protectiveness as what Susan Sontag

(2003) described as the "pain of others" in the shape of "broken refrains" and "flashes of imagery" (Hoffman, 2004).

Diana Taylor (2003) calls upon the "repertoire" of embodied knowledge and directs the discussion of the value of a memory archive and what its place is in relation to history alone cannot offer. In his book, *Das kulturelle Gedächtnis*[15] (1997), Jan Assmann distinguishes between two kinds of collective remembrance, "communicative" memory and what he calls "cultural" memory. Communicative memory is described as a memory that is witnessed as an adult and carried by the individual, its eventual institutionalization of archival memory which becomes "cultural" memory. This passing of memory is another role of the photographic image as a medium of postmemory, as Hirsch writes: "clarifies the connection between affiliative postmemory and the mechanisms by which public archives and institutions have been able to re-embody and to re-individualize "cultural/archival" memory.

This re-individualization draws upon the contemporary discussions revolving monuments, or as James Young proposes, the *Counter-monument*. (Hoheisel, Horst et al, 2000) Born out of the premise of challenging their predecessors' form as rather sealing the memories of individuals into an embodied form, but rather the remembrance of absence, its reconstructions as "illusory as memory itself" that the individuals that participate become the monuments themselves in the act of reflection. These themes that negotiate the boundaries of memory and identity are present in Chinese-Canadian literature, where the recurring theme "is the question of identity, which in turn leads to an inquiry into the past, both private and collective" (Lee, 1971). These are reframed as the act of rememory, reinscription, and resignification as strategies of decolonization. (Xie, 352)

3.2 — Connecting History and Memory through Virtual Archives

In this section I will describe discussions surrounding digital humanities and how heritage making has taken a 'participatory turn' and shifted to democratization and decentralization. This shift to a democratic resource, as many turn towards places such as the internet, challenges existing perspectives of history and identity, counter-mapping and destabilizing assumptions.

The topic of technological advancement within a digital network is then focused on the creation of rogue archives and digital media as the cultural dominant. I will also describe technology advancements, shortfalls and the paradox of emergent technology in relation to both providing more

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[15] Das kulturelle Gedächtnis; Cultural Memory

access to memory while also allowing individuals the ability to forget. The paradox of the internet's archival promise and ephemeral nature in the form of rogue archives will then provide speculations of evolving archives and repertoires for remembrance.

3.2.1 — Repertoire and the Archive

Cultural memory has been moved into the public sphere, outside of institutions, and into the hands of rogues. Rogue archivists; amateurs, fans, hackers, pirates and volunteers having taken the role of "rogue" memory workers. (De Kosnik, 2016) The works managed putting emphasis in transforming "archive" terms which generally signify exclusivity, locked rooms, in opposition to what Jeremy Bentham proposed of "publicity is the very soul of justice" (Bentham, 1843). With the mentality that websites operate as information commons, instead of concealed workings closer to the poetics of Sharon Sliwinsky in Human Rights in Camera opposing *camera obscura* (literally, "dark chamber") and embracing an "anyone can do" attitude that Jacques Derrida (2005) begets "serious social and cultural transformations". Rogue archives challenge the "canon" of institutional archives, themselves holding no "canon" themselves and oppose the very notion of canonicity (De Kosnik 21) as the utilization of canon creates a distinction of "high" culture and "low" culture.

Cultural memory itself has gone rogue, no longer simply the afterthought of the making and distribution of cultural texts, but precedes that making or occurs every step of the process. Just as much as "archival" memory is valorized by print-analogue culture, it diminishes repertoire, which Diana Taylor (2007) calls "embodied memory" - unreproducible knowledge. Repertoire comes into the finding and maintenance of archives in the form of labour, "endless" labour, to keep them operational as to fend off stagnation and its disappearance into "historical consciousness" (Haskin, 2007; 406). Archival labour consists of a repertoire of repetitive actions, that consists of moves such as paying for server space, processing submissions, debugging, responding to questions, data migration, as well as representing the archive to interested members of the public or press, and it is in these actions that highlight the fragility of digital data, that they cannot be regarded as long-lasting structures. (De Kosnik 7).

3.2.2 — Control after Decentralization

In *Protocol, or, How Control Exists after Decentralization* (2001) Alexander Galloway outlines the recent discussions in information societies, networks societies, control societies, and shows social change is

indissociable from technological development (xii). How this relates to memory, and participatory work, is the control over information within a distributed network.

Current networks are decentralized and rhizomatic, carrying themes of distribution, and anti-authority to explain interconnected systems of all kinds. *Protocols*, conventional rules and standards that govern relationships within networks are then used to define code as Galloway proposes the thought of code as *protocol,* that of being processed based and procedural, to challenge us to understand power relationships by understanding "how it works" and "who it works for" (xiii).

While this thesis study is less focused on the infrastructure of its web-based creation, the parallels drawn between the hierarchy of control within participatory research should also be reflected within its creation in virtual space. The internet is dynamic, experimental, and real-time, it is a "living network" just as communal archives are "living databases" are also *life-resistance,* in what Galloway and Thacker (2004) described as resistant to power (24).

The democratization of technology discourse is considered to possess and exercise more creativity and agency than ever before (Burgess 202). In early forms of documentary, 'community' often referred to people who inhabited a specific place, and/or shared values and identities. (Uricchio William and Katerina Cizek, 2019). The use of the internet by documentarians, in the creation of I-docs, has shifted the potential for the audience to also become co-creators. Online documentary has introduced non-linear, and iterative relationships, developing space for participation through multiple user-generated outputs. These opportunities broaden perspectives both in the actual and the virtual, and provide co-creators ownership and greater individual authorial control.
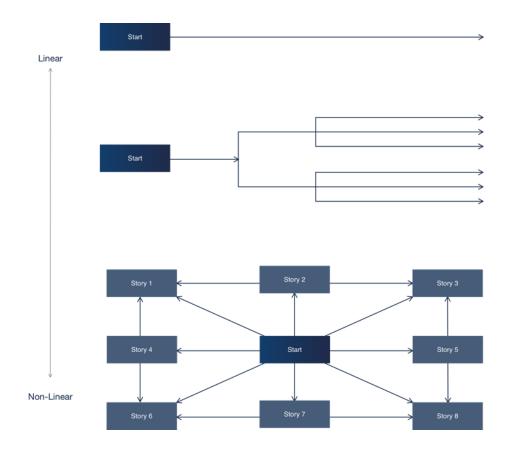
Figure 7 Degrees of linear and non-linear narrative, description the different types of interactive documentary (LL)

The internet is built and maintained by individuals. Though that may have shifted to many mega corporations that may control and moderate most online content in the past decade, it's the contributions of individuals that keep these systems alive. Cultural studies have been shaped as a response to this social update in communication technology. 'Ordinary' people's lived experiences and cultural practices becoming a site of negotiation and political potential (Burgess 202). While online networks have connected individuals to decentralized and open-source methods, in-person co-creation remains crucial to meaningful issues of equity and injustice by allowing individuals to co-create in these dynamic systems (Uricchio William and Katerina Cizek, 2019). Understanding of these protocols to engagement both in the actual and the virtual are critical to identify what Henry Jenkins, a media scholar, describes as "participation gaps"[16] (Jenkens, 2009). The elevation of the 'ordinary' voice is also

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[16] Participation gaps: the unequal access to the opportunities, experiences, skills, and knowledge that will prepare individuals for full participation.

not equal, whether through "participation gaps" or "digital divides"[17], pathways *to participation*, as described by Michael Premo, in the form of in-person meetings as well as online collaboration are critical for removing barriers for participants and expanding rhizomatic online networks.

3.2.3 — The Bleeding Edge of Obsolescence

In *The Enduring Ephemeral, or the Future is a Memory* (2008) Wendy Hui Kyong Chun, a new media theorist, describes 'new' media as occupying two spectrums as it "races both into the future and the past," towards "bleeding edge of obsolescence." This paradox outlined by Chun draws attention to the benefits and shortfalls to technological advancements and the conflation of memory and storage. Chun then proposed a recommendation to the opportunities of "digital media's archival promise" to counter our disillusioned state which allows us to believe the availability and functionality on the internet allows one to imagine everything stored will be accessible at all times.

Ekaterina Haskins seems to echoes Chun's sentiments within their text *Between Archive and Participation: Public Memory in a Digital Age* (2007) while new media and technology allow a diversity of content and collective authorship: "One cannot ignore that today's memorializing occurs in a climate of rapid obsolescence and the disappearance of historical consciousness," Haskin writes, "that much of computer-mediated communication serves commercial and entertainment purposes, and that interactivity can nurture narcissistic amnesia no less than communal exchange." (407) How this communal exchange and reflection take place when contemporary "democratization of the past" is paradoxically intertwined with the disappearance of historical consciousness. (Gillis, 1994)

What Haskins asks of digital memorials and monuments, is a deeper and new way to both to archive and also reflect and discuss these artifacts before they are forced into obsolescence: "It is one thing to collect and digitize large quantities of memorial artifacts; it is quite another to display them in ways to stimulate not only spectatorship but also meaningful participation." (410) The grandeur of digital memorials and archives as ephemeral beings, decentralized perhaps to the point of disorientation seems to carry Pierre Nora's similar sentiment to the Monument and that "less memory is experienced from the inside, the more it exists through its exterior scaffolding and outward signs." (13)

New affordances of collaboration and sharing in online systems have brought the emergence of a new "participatory culture" (Jenkins et al, 2006). These emergent modes of participation could also be argued to create new modes of capitalism, and arguably perhaps a new kind of mediated citizenship

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[17] Digital divides; referring to lack of access to equipment or technologies

characterized by "the pursuit of self-organizing, reflexive, common purpose among voluntary co-subject." (Hartley 2010; 17)

3.3 — Forward

The complex relationships between participants and the dynamics of collaboration and exploitation are the agenda for future documentary research. It is a discussion of labour, in the repertoire of rogue archives, just as much the labour individuals within a community tasked with the responsibility of remembering. To develop a better understanding of a community, through collective memory is also to acknowledge the scripts that a community follows, and the individuals identified to be part of that community. A topic that is not without contemporary discourse, the discussions between community members regarding what to document now in this precarious time, would perhaps be solved with the instinct to document everything, to archive everything, the act itself requiring a critical analysis should we fall into the paradox of technical obsolescence. The bounds of collective memory within a community would then tell us that they should exist within the community, rather than falling into exterior powers.

This communal approach is not without its challenges, as both self-reflecting on the individual and with a community to identify the individuals unaccounted for. Within a participatory approach, there requires a level of attention to the intertwined nature of the collaboration/extraction dynamic can only be partly addressed with an understanding of the provision of content and the involuntary provision of data (Nash et al, 25) and perhaps opens the discussion to a broader conversation on the challenges of community-based PARs both physically and virtually.

Chapter 4 Early Prototypes

The main prototype, *Future through Memory*, which acts as both a workshop framework and interactive documentary created through PARs and co-design. This endeavor required first historical and archival research of Toronto's Chinatowns' history and more broadly Chinese-Canadian history.

In this chapter, I will detail the three prototypes I developed to explore both the technological limitations and affordances of virtual reality and interactive documentary technology, a mixed-methods approach to PARs, as well as informal and formal explorations in Toronto's Chinatowns histories.

From there, exploration in photogrammetric, VR, and interactive documentary practices were conducted with an informed context and understanding of where they would be situated surrounding existing projects and initiatives. This chapter concludes with a summative reflection of these three prototypes and how these explorations both support and contrast one another in their methodological approach and inform the final thesis prototype, an interactive documentary and communal archive titled *Future through Memory*.

4.1 — Early Prototype 1 — InChinatown - TO

In the winter of 2020, I developed my first prototype as an early exploration to develop a better understanding of Toronto Chinatown's history and the development of a community-based archive of Toronto Chinatown's history. What had begun as an elective project, had become the steppingstone and the early iterations of what would eventually become the *Future through Memory* workshop design.

4.1.1 — Inspiration

This prototype is inspired by the many interactive documentaries that already exist today and the desire to create those same works for the Toronto Chinatown community. Having grown up and frequently visited Vancouver's Chinatown, I was inspired to use the project as a way to develop a better understanding of the Toronto Chinatown neighbourhood which is in close proximity with OCAD

University. The desire to create this interactive documentary was from my observations that there was an absence of a recent singular publicly accessible archive documenting Toronto Chinatown's history using a multimedia approach. Archives require maintenance to stay-up to date, at risk of falling into "historical obsolescence" one of the shortfalls of database documentaries and online archives, because of this, the opportunity to create one as part of my thesis research was impetus for this endeavour.

While many sites documenting Toronto's Chinatown history existed, I was interested in developing a comprehensive archive that could also host 3D models and 360° imagery of the neighbourhood to better document the structures and places that reside in the space. This endeavour is also with the reflection of the assimilation of new technologies and also a reflection of its archival promise.

4.1.2 — Development

As my first prototype, the main research of this project was the use of historical texts, diagrams and documents by City of Toronto archives, photogrammetric scanning, as well as interviews with members of the Chinatown community. In the time between January 2020 until March 2020, I was able to conduct three semi-structured interviews before being limited by resources as the city of Toronto entered its first major lockdown.

While many archiving and open encyclopedic platforms exist, such as Wikipedia, the intention to create an independent platform was used for the ability to host more complex file types such as photogrammetric models, and 360° imagery and video. The interactive documentary was designed by myself and developed with the help of a professional developer on WordPress. The final output, InChinatown-TO.ca, provided a brief history in the three Chinatowns with the city of Toronto beginning from 1870, documenting First Chinatown (Old Chinatown), as well as East Chinatown (Gerrard and Broadview), and West Chinatown (Spadina and Dundas).

Figure 8 Image from InChinatown-TO.ca, documenting Toronto's First Chinatown (LL)

Individual webpages were developed documenting each Chinatown in Toronto, and could be expanded going into individual businesses and themes. The content was listed chronologically, from the approximate date of each Chinatown's development beginning from the late 18th century all the way to present day. The interactive documentary aspects of this project would come from the use of photogrammetric scans within the website that would allow individuals to view annotations to select models as well as the viewing of 360° imagery of locations in Chinatowns. Photogrammetric models from notable locations of each Chinatown were scanned and rendered using *Agisoft Metashape* and were uploaded and annotated online using *Sketchfab*, an online 3D model community.
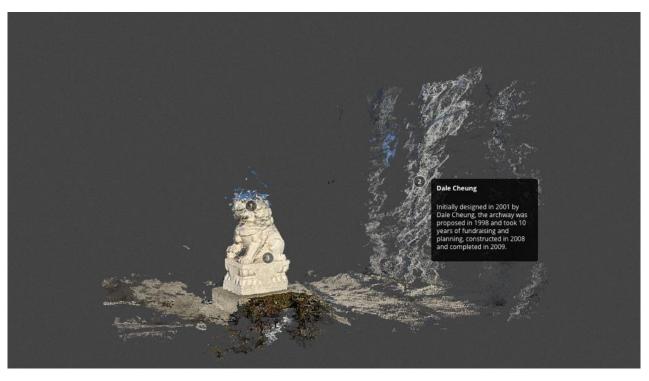
Figure 9 A photogrammetric scan of the archway in Toronto's East Chinatown hosted on Sketchfab and embedded within the final the I-Doc website (LL)

Content translation was another important factor in the creation of this early prototype, as accessibility to the sharing of knowledge is critical in engagement with individuals. All the written text of the first prototype was translated with the help of a community translator to traditional Chinese.

Prototype I, which can be InChinatown-TO.ca, scratches the surface of a non-exhaustive list of histories shown and the many histories left to tell. The design of the website and organization of the three neighbourhoods made it apparent the complexities and overlaps of Toronto Chinatown's history and how it expands to a broader narrative of the Chinese-Canadian identity, the diasporic experience, and solidarity between Black and Indigenous history.

4.2 — Early Prototype II — A-Frame Exploration

Prototype 2 was developed in the spring of 2020 and is composed of two parts, the first (A), as an exploration in multiple game engines and as proof of concept in the creation of early memory space (*lieux de mémoire*). The second part (B) is then taking a more participatory approach in its creation, seeing if participants with differentiating skills and knowledge levels are capable of creating a similar

space as well as exploring what topics they are interested in exploring. Exploration conducted was placing photogrammetric scans of what remains of Toronto's first Chinatown (Elizabeth Street) and testing the technical capabilities of Unity, Unreal Engine, and *A-Frame* to explore the possibilities of rebuilding Toronto's first Chinatown in virtual reality.

4.2.1 — Inspiration

The concept of the creation of sites of memory began in this prototype phase. Though my experience with 3D modelling is limited, the concept of recreating a space from memory while also incorporating a generative archival process helped to further develop my initial research questions. Two interactive documentary works were inspirations for this second prototype: Stan Douglas' *CIRCA 1948* (2014), an interactive app which documents two historic sites, Hogan's Alley and the Old Vancouver Hotel in Vancouver, BC and *Biidaaban: First Light* (2018) by Lisa Jackson, an Anishinaabe artist, is an imagining of Toronto's future, reclaimed by nature with the recreation of Nathan Phillips Square through an Indigenous lens as the central location.

Figure 10 Recreation of Hogan's Alley in Vancouver, BC from *CIRCA 1948* by artist, Stan Douglas
© Stan Douglas [18]

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[18] Douglas, Stan and David Zwirner. *Hogan's Alley 1948.* 2014. New York/London.

Coincidently both interactive documentaries covered are geographically close to each city's respective Chinatown. Hogan's Alley, Vancouver's first concentrated Black community also neighboured Vancouver's Chinatown, and Nathan Phillips Square in Toronto, built overtop St. John's Ward – the location of Toronto's first Chinatown. The two works are VR-based interactive documentary experiences that provide both a look into the past and future imaginings of historical neighbourhoods and highlight the need to identify the dynamics of BIPOC spaces and the historical and cultural connections to diasporic experiences.

Figure 11 Still image of Nathan Phillips Square as viewed in *Biidaaban (First Light)* by artist, Lisa Jackson © National Film Board of Canada. Retrieved from http://mediaspace.nfb.ca/epk/biidaaban/[19]

Using photogrammetry 3D modelling rather than reconstructing the buildings using modelling software, the projects shifts towards one part an archival and documentary practice that could be created through a generative design process. Shifting the methodology of this project towards a participatory approach was implemented in the ACCORD (Archaeological Community Co-Production of Research Resources) project by the Glasgow School of Art.

The ACCORD project examined the opportunities and implications of collaborative, community-based, digital recording and modelling. The project team worked with community heritage groups

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[19] Jackson, Lisa, and NFB. BIIDAABAN: FIRST LIGHT. 2018. National Film Board of Canada

across Scotland to create 3D records and models of places significant to the participants specifically. The distinct aspect of the ACCORD project was that co-design encouraged community participants to take an active role. By allowing participants to be part of the generative design process, the works created also acquire authenticity and value through the expression of identity and belonging. Participants were encouraged to talk to one another "asking questions, exchanging anecdotes, and commenting on each others' experiences and points of view" (Kitzinger and Barbour 1999, 4). Some of the places visualized as part of the ACCORD project were associated with family history and genealogical connections, by more frequently related to less direct or specific notions of inheritance and cultural continuity (Jones, Sian et al, 2017).

These learnings and findings from the project would help to inform Prototype 2, and what would be the best methods to use to directly involve the community to decide what is documented. Participation in the production of the 3D visualizations contributed to the sense of authenticity. What the ACCORD project additionally showed in the context of community co-production at least, 3D heritage visualization can create, extend, and reinforce networks of relations between people. (Jones, Siân, et al 347)

Figure 12 Co-design and co-production with community groups. (ACCORD, 2017, CC-BY)[20]

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[20] Co-design and co-production with community groups. Clockwise from top left: (a) photogrammetry with Ardnamurchan Community Archaeology Group; (b) co-design with Kirkcudbright Historical Society; (c) focused group interview and (d) RTI, both with and Colintraive and Glendaruel History and Archaeology Group

4.2.2 — Development

In Prototype 2-A, I looked at creating photogrammetric scans of Elizabeth Street, behind Nathan Phillips Square, which is the location of First Chinatown. From there I explored the abilities to recreate the street in two game engines (Unity and Unreal Engine) then in a web-based VR framework (A-Frame). While Unity and Unreal Engine provided more control over the virtual scene, they were both very difficult to manoeuvre and use with a standard laptop and baseline GPU. This technical limitation was brought into consideration to the effectiveness of a gaming engine to reconstruct Chinatown and work towards the development of sites of memory and interest with the inclusion of other active participants within the project.

Figure 13 A reconstruction of Elizabeth Street viewed in Unity (LL)

Unity and UE are powerful tools, though a different framework needed to be used for the use of participatory world-building that could provide a faster onboarding process and ease of use. Because of these criteria, web-based VR was the most suitable platform to be used as it allows individuals to view and control a virtual environment with less technological barriers. Another prototype recreating Elizabeth Street now using *A-Frame* was done, which provided greater ease of use. *A-Frame,* originally conceived within Mozilla, is now maintained by the co-creators of *A-Frame* within SuperMedium. As an

independent open source project, A-Frame is also one of the largest VR communities to date[21]. The web-based VR framework supported the use of 3D models (both as point clouds and 3D meshes) as well as audio, images, and video files. In addition to the multimedia file support for *A-Frame*, being open source, the web-based VR framework allowed for VR and flat viewing on desktop and mobile devices as well as headsets.

Functions such as *A-Frame's* Inspector view would also allow anyone to arrange items from the model, providing individuals with a much more accessible way of learning how to build a VR environment.

Figure 14 Image of a reconstruction of Elizabeth St and Hagerman St. in the First Chinatown viewed in A-Frame Inspector (LL)

The attempted recreation in Toronto's first Chinatown in Prototype 2-A posed new questions, as contrary to both West and East Chinatown, the location no longer remains, buried underneath the city hall and civic square. 3D modelling would then be better suited in the recreation of those works, though my knowledge is limited in that area. The recreation of models through images versus reconstructions based on physical data would also pose further theoretical questions I have on the memory, history, and virtual representations of physical spaces. Prototype 2 was developed using A-Frame version 1.1.0.

By Prototype 2-B, to incorporate a participatory approach to the creation process, I conducted a series of 1-on-1 semi-structured interviews with individuals part of the Vancouver and Toronto

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[21] Supermedium. "Introduction – A-Frame." *A-Frame*, aframe.io/docs/1.1.0/introduction/#what-is-a-frame.

Chinatown community and provided brief demonstrations of photogrammetry and discussing their relationship with Chinatown. During the five interviews I was able to conduct, topics covered were how people felt about their relationship with Chinatown and what places, objects, or themes stood out for them the most. The five individuals took part in the second iteration of my prototype and resulted in three A-Frame prototypes documenting sites within Vancouver and Toronto's Chinatowns.
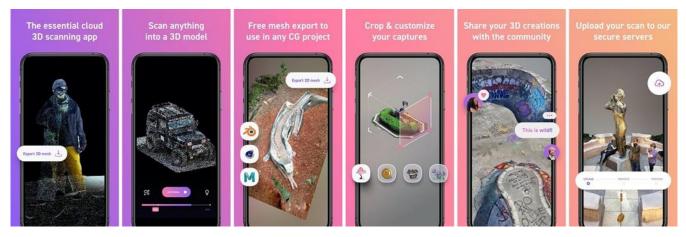
Figure 15 The *display.land* app was featured on the Android app store before its discontinuation[22].

Additional photogrammetric and LiDAR-based scanning tools in the form of mobile apps were used. As "consumer-grade" photogrammetry becomes more readily available, so does the introduction of many popular photogrammetric scanning apps. *Display.land* was a popular mobile scanning app available for Apple and Android users that would allow for cloud-based rendering of models using a phone's camera. As part of the prototype, both display.land and Agisoft metashape were used to compare the quality of the rendering possible.

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[22] https://play.google.com/store/apps/details?id=com.ubiquity6.displayar&hl=en_CA&gl=US

Figure 16 3D model of a Chinese-Canadian monument in Vancouver's Chinatown, *display.land* model (left) and *Agisoft* model (right) (LL)

Comparing consumer-grade apps such as *display.land* and professional-grade photogrammetry using *Agisoft*, *Agisoft* far exceeded the capabilities and output abilities of *display.land*. Though *display.land* was far more beneficial in onboarding individuals to the creation process. While the quality of the scan wasn't as high, the ability to receive feedback and view a rendered output was much faster using mobile-based apps.

In July 2020, users were notified of *display.land*'s discontinuation. The discontinuation of this service would make it inaccessible for participants for the planned Fall 2020 workshop. This knowledge also allowed for planning on the shortfalls of mobile scanning apps and the difficulty of archive participants materials. While mobile-based photogrammetry and LiDAR scanning hold a lot of promise, the emerging tech is still currently in its infancy, as many scanning apps either do not output high enough resolution to properly reconstruct a building, better suited only for medium, person-sized objects. They are frequently acquired by other corporations. These frequent changes in the industry make it difficult for individuals to keep ownership of their digital media reliably. Cloud-based rendering also does not allow users to view their data gathered, instead only receiving the rendered output to be exported.

The final three A-Frames developed were hosted on a local server, and was an exploration as to how to connect all the environments using A-Frames portal functionality, that connects URLs in 3D space.

Figure 17 The use of portals connecting A-Frame experiences together in Prototype 2-B (LL)

Figure 18 Prototype 2-B using A-Frame co-created with participants (LL)

4.3 — Prototype III — First Chinatown (1890 - 1960)

Prototype 3 was created in parallel with the facilitation of the *Future through Memory* workshop, and was a continued exploration into my personal interest in Toronto's First Chinatown and revisiting the archival material from the City of Toronto Archives. This third prototype was an exploration in data visualization and reimaginings of archival material to recreate a map of Toronto's first Chinatown to develop a better understanding of the streets and alleyways of the Ward. With most of First Chinatown beneath Nathan Phillips Square and New City Hall, my intentions were to use the prototype as a method to visually recreate an interactive map of past existing businesses and residents of Toronto's Chinatown. The intention of this is to highlight the power of diagrams to develop a better understanding of the neighbourhood and also a deeper inquiry to Toronto's Chinese community's past.

4.3.1 — Inspiration

Prototype 3 was inspired by aesthetics and use of old maps and diagrams, and stories of Toronto's first immigrant neighbourhood. This prototype is further inspired by Douglas' interactive app, *CIRCA 1948* (2014), and the desire to recreate 3D models of a historic site in Toronto's city. Due to my technological limitations and time constraints for this prototype, the final output was constrained to a website format.

Figure 19 Nathan Phillips Square (First Chinatown) as viewed in *OldTO* (2018) [23]

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[23] SidewalkLabs. "OldTO: Mapping Historical Photos." *OldTO*, 2018, oldto.sidewalklabs.com/about.html?kiosk=1.

An existing project titled *OldTO* developed by Sidewalk Labs (2018) is an open-source map using historical images from the City of Toronto archives. While some images of Toronto's first Chinatown are visible within the map as shown in fig. 19, the images overlaid are based on the modern street layout and do not depict the many streets that ceased to exist after the city hall's construction.

4.3.2 — Development

This prototype was created referring to many historical texts and cross-referencing archives to locate individual businesses located in First Chinatown from 1890s until 1960s before the expropriation of Chinatown buildings to make way for Toronto's Nathan Phillips Square and New City Hall. The map was developed referred primarily to fire insurance maps from 1910 based on Goad's Atlas of Toronto (1910)[24], in an effort to better visualize and map the Chinatown businesses to develop understanding of the structures lost after the construction.
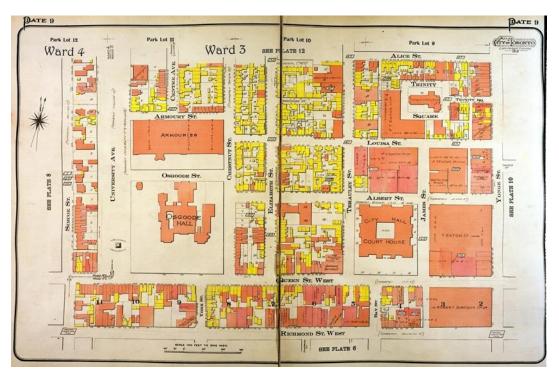

Figure 20 St. John's Ward (Ward 3) in *Goad's Fire Insurance Map* from 1910 [25]

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[24] Goad, Charles E. *Goad's Atlas of the City of Toronto and Suburbs: Founded on Registered Plans and Special Surveys, Showing Plan Numbers, Lots & Buildings*, Wilson & Bunnell, 1910.
[25] Goad, Charles Edward D. *Atlas of the City of Toronto*. 1910. Volume 1, Plate 9. Toronto Public Library

Images and information were supported by the City of Toronto's Archives, the Toronto Public Library archives as additional archives that could be accessible online due to the ongoing COVID-19 pandemic. Other methods used within this project were also two semi-structured oral interviews conducted remotely with individuals with historical connections to Toronto's First Chinatown and connected to many of the early pioneers of Chinese-Canadian history in Ontario.

Figure 21 Image from *First Chinatown (1890-1960)* and the interactive map of Toronto's first Chinatown (LL)

The output of Prototype 3, titled *First Chinatown (1890-1960),* is accessible as a subdomain of Prototype 1 at *firstchinatown.inchinatown-to.ca*. The site was completed with the help of a professional web developer and sections of the website translated in traditional Chinese with the help of a community translator. Approximately 45 individual businesses between 1890 until 1960 were able to be identified based on a content analysis of historical texts and records. All locations that were able to be located and cross-referenced based on archival fire insurance maps were placed on the interactive map.

Currently the site has 45 buildings identified, a developed system to be able to sort the buildings chronologically or situate the buildings in a visual timeliness would help better represent the changing neighbourhood through each decade and better visualize the migration of businesses to other parts of the city.

4.4 — Summative Reflection

The three prototypes discussed highlight the varying degrees of participation both physically and virtually, and the numerous issues and items requiring attention in community-based work. Each prototype displayed their own challenge and learnings.

Prototype 1 was a launching point into Toronto's Chinatown and Chinese-Canadian history. While development of the prototype was limited due to the fast-changing situation of the first COVID-19 lockdown that occurred in March 2020 leading to restrictions to archive and library access and social distancing limiting access to the physical location of Chinatown.

The research conducted was primarily content analysis, based on more historical texts and diagrams, and participation was limited to interactions without direct engagement in the project. The decision to document three Chinatowns within the timeline only allowed for a summarization of Toronto's histories within the allotted timeline. Time limitations would restrict the breadth and depth of the stories desired to be showcased, though have the opportunity to grow over time with the involvement of more individuals within the Chinatown community.

Prototype 2-B expanded this approach through a participatory lens, shifting the focus less on history and more individual and collective memory. These prototypes highlight the complexities and mixed methods required for co-design, especially within a remote setting. Flexibility is required when

gauging the expected outputs of individuals, identifying the resources available to them, and being wary of participation gaps and digital divides to individuals do not become overwhelmed. There are multiple aspects to consider when it comes to accessibility, which is both an openness to always leave room for input and contributions. Other aspects such as language are important when it comes to accessibility of content, mindfulness to stories told being understandable to the people reflected. This accessibility highlights the need for information better serving the individuals it reflects. Translation in Simplified and Traditional Chinese for accessibility to older members of the Chinese community, as well as non-English speaking members.

Labour is another element in this project, as the care of archives requires tremendous labour in its care and maintenance, it also requires time and resources. The structure of these prototypes, to make way for growth and involvement with more members of the community, are critical to their continued survival. These prototypes are not merely steppingstones, but proof of concept of new possibilities and ways to engage with the Chinatown community. They must be cared for and nurtured to continue to grow, lest they fall into obsolescence in the paradox of digital media highlighted by Chun.

This labour is also taken in the form of emotional labour, in the listening of images and constant reflection. The development of these three prototypes further aligns with this listening of images within the archive and our personal belongings, to uncover many untold stories within Toronto's Chinatowns as well as the diasporic experiences of individuals within Canada. There is the urgency to document our current time and to revisit our past, a requirement to both bring these objects into a contemporary digital space. These images and spaces command a different kind of attention and listening but ruminate loudly on practices of diasporic refusal, fugivity and futurity (Campt, 24).

The learnings taken from these prototypes is the complexity of co-design, but also the patience and flexibility required to allow the individual listening to each other and our own belongings. As we move towards the future, the route perhaps is less so jumping to emergent technologies blindly, but active listening and building towards something long-standing shared and created collectively.

Chapter 5 A *Future through Memory*

獨木不成林

A single tree makes no forest;

This project exists within and for the Toronto Chinatown community, with hopes of expanding or creating other iterations for other Chinatowns across Canada. Through the course of October 21, 2020, until March 18, 2021, I worked with 12-20 participants from the Toronto Chinatown community. The name of the workshop and overall thesis project, *Future through Memory* hearkens back to Wendy Chun's text *The Enduring, Ephemeral, or The Future is a Memory (2008),* which details the paradoxes of new and emergent media, in which this thesis focuses, but also reflect the act of remembrance and acknowledgement as a grounding base to develop and guide oneself (and a community) towards the future.

With the participation of the members of the first workshop, we worked to develop both a workshop framework that would become a space of dialogue, shared knowledge and worked towards developing the interactive documentary output.

5.1 — Methodologies

This research project takes a transformative worldview with the use of community-based participatory action research (CB-PAR) as the central methodologies that guide and frame this thesis project. Due to the limitations of the contact between myself and participants, a mixed-methods approach was used to develop more flexibility within the workshop framework and the final interactive documentary output. The use of digital storytelling is through the use of volumetric media and examining storytelling as a mode of understanding, sharing, and creating knowledge but also a mode of knowledge production and dissemination (Christensen, et al. xii)

5.1.1 — Defining Priorities and Success

The focus of this study is the use of photogrammetric scans and web-based VR as a generative co-creation process within a participatory workshop framework. The focus on process and dialogue as a methodology and method are the guiding focus rather than attempting to achieve authenticity or a canon from the virtual object and site generated. As the project concerns the use of collective memory, personal memory and oral histories, there is the messiness that is expected from the process: historical accuracies in the retelling of people's stories are less the focus and more the act of remembrance and the generative process of the work and building of the sites of memory. A

focus on the co-creation process then means a lesser focus on a higher-end finish of scans, though co-creators can attempt re-scanning their work however many times until they are satisfied.

This study takes a rethinking of foundational approaches of diaspora studies, frequently on the discussion of mobility, resistance, and expressiveness, and broadens the focus on the quietness and frequencies of images. A method for engaging with photographic images by Tina Campt (2017), this focus on the *infra-ordinary* (Perec, 1972) - a focus on the everyday practices, reveals the mundane and banality as also essential in the possibility of Black futurity (8). This attention to quietness is also relevant to the Asian diasporic experience, as Campt connects the realizations of a future in the form of acts and actions, resistance, frequently produced by subordinated, subaltern, and marginalized groups (17). We must not only look but also listen to others, in less likely places as seen every day and disposed of images of archives or personal belongings.

Success then is the effectiveness of the workshops based on participant discussions and feedback, and how accessible the content was that allowed them to create their own space remotely and this listening of media and virtual objects. The qualitative data of the workshop is then from a generative framework that is measured on the receptiveness and the engagement and dialogues between participants. It is difficult to measure a bond with another, either individual or object, it's mute, thought felt between our actions.

5.1.2 — Methods & Techniques

The technologies used are not new, though their use in a collaborative nature within a workshop framework provides new insights to the affordances of VR and interactive documentary in an evolving field.

Photogrammetry through co-design is the central method used within this project. Popular in creating film and video game assets, photogrammetry is also used in many institutions as a means of cultural preservation. "Consumer-grade" photogrammetry is an evolving field entering the consumer market and has become greatly accessible for the public with many new higher-end mobile devices such as the IPhone 12 or IPad Pro coming with built-in LiDAR scanning capabilities. Broader accessibility to 3D scanning technology allows individuals the opportunity to document their lives from in 3D space, their own histories and memories and highlight an evolving media form being readily accessible to most people in the coming years.

For the creation of photogrammetric scans, participants were asked to use their own smartphones and DSLRs to limit the exchange of physical items and allow them to retain ownership of their own content and were able to conduct their scans at their own time.

Due to bylaw restrictions on drones, restricting the use of flying in busy retail and residential areas, photogrammetry used by handheld mobile devices also provides the opportunity to do moderate-high end scans to most individuals without the use of a drone and license. This use, perhaps skirts city drone bylaws, but allows individuals the opportunity to create their own scans with a low barrier to entry.

5.1.3 — Accessible Tools and Technologies

With the majority of the project being held remotely, accessible tools and technologies were critical to the success of the project and workshop. *Zoom*, a popular video conferencing app, was used to conduct all the workshops remotely. The necessity of video calls to stay engaged during the COVID-19 pandemic made participants familiar with its usage with little instruction. *Zoom's* built-in recording feature was used to document all workshops. All workshop recordings were stored privately to maintain a safe discussion space and as per the Research Ethics Boards requirements of handling of raw data.
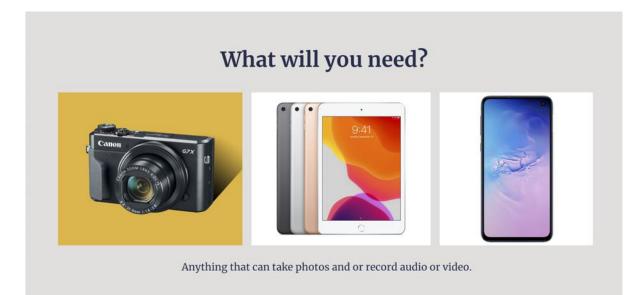

Figure 23 Slide from *Session 1* of the Workshop presentation; detailing tools needed by participants (LL)

Agisoft Metashape and *Autodesk ReCap (Reality Capture)* were the two photogrammetric software recommended, as well as *Meshroom*. The two former software listed are both industry-grade photogrammetry rendering software that provide free trials of their software or generous discounts for students. All photogrammetric software used and promoted within the study was either free, offered discounted pricing for students, or provided a free trial to allow participants to render their models themselves. Technical assistance was also provided by myself in case there were any technical or financial barriers for participants accessing rendering capabilities.

The choice to use this software is also motivated by their ability for participants to retain ownership of their images taken, as well as versatility in the way models are exported. The two software capabilities prolong the file formats and longevity to revisit the scans at a later date. Many mobile-based 3D scanning apps were also available, though many are frequently cloud-based in their rendering, limiting exporting capabilities and limitations to revisit the objects recorded.

A-Frame, the web-based VR platform was used to construct all the memory spaces, based on the research conducted in Prototype 2 which allows desktop and mobile VR and flat viewing. *A-Frame,* which is also open source, supports a variety of VR headsets, and is more intuitive in building memory spaces collaboratively and efficiently compared to *Unreal Engine* and *Unity*.

Figure 24 Tools and software used as part of the workshop (LL)

Google Docs was used as a way for collaborative note taking during group discussions during break out room sessions. Because all breakout room sessions couldn't be observed or facilitated, the live

document was an effective way to help prompt participants with their discussion topics while apart, and able to review each other's experiences together once all reconvened.

5.1.4 — Scope & Limitations

This research investigates the affordances of interactive documentary and virtual reality within a workshop framework with an interactive documentary output. Participants of the workshop are then co-creators of the project with power in their own right to engage and contribute to the development of the project.

The limitations of this project broadly is the time allocated to conduct the research which poses difficulties to develop deep relationships and sustainable impact of community-based PAR. Additional restrictions to meeting physically pose limitations to flattening dynamics of power that can occur without physical spaces, while meeting virtually still allowed for relationships to be formed, the inability to meet within the community this research is centred around proved difficult to properly reflect the desires to actively keep community members involved in the facilitation of the workshop and its final output.

These limitations to physically meeting and gathering, posed by municipal, provincial, and federal restrictions due to COVID-19 then creates gaps in participation as well as digital divides as equal access to resources to conduct the research are placed inequality onto participations. As all workshops were held remotely through Zoom, these limitations are addressed using mixed methods that individuals can request 1-on-1 meetings to help troubleshoot and access resources required.

The data gathered by participants from recorded sessions of each workshop was not published to retain the privacy of individuals to speak comfortably within the space. All materials created and shared by participants in the main thesis project remain in their ownership.

Due to the ever-changing situation of the COVID-19 pandemic, the workshop framework followed a reflexive approach through critical pedagogies so as not to overwhelm participants. There are limitations to providing sensitizing materials, to interaction or exchange of physical material. It was a conscious decision not to then use additional platforms for brainstorming (such as *Plectica* or *Miro*) during break out room exercises to make the content more accessible and minimize the digital divides and onboarding onto the project. Based on the ongoing pandemic and weight on interaction in digital spaces, *Zoom fatigue*[26] is a very relevant issue, fewer platforms and tools were used to keep the project engaging with fewer barriers.

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[26]Zoom fatigue: *Exhaustion from video calls;* Fosslien, Liz, and Mollie West Duffy. *How to Combat Zoom Fatigue.* 14 Aug. 2020, hbr.org/2020/04/how-to-combat-zoom-fatigue.

With the stresses and multiple factors that affected individuals doing the pandemic, full attendance to the study was also optional. Participants were not required to stay the full length of each meeting and were able to skip meetings and provided the discussion material in the recap emails after each session. Participants were also allowed to withdraw from the study at any time.

Time limitations would also limit how involved participants could contribute to the web development process of the interactive documentary process. Most participants were able to create a photogrammetric model with supporting images and media within the time though time limitation, may limit the amount of detail they would have time to curate within the space.

5.2 — Part I: The Workshop

5.2.1 — Promotion of the Study & Recruitment

Promotion of the thesis project was conducted from late September until October 21st, 2020 primarily through Instagram from my research-focused account named *chinatown.vr* as well as email correspondence with individuals. The social media account was also a place to share my photogrammetric scans and research outside of the thesis project that was centred around Chinatowns across Canada. The use of social media made it also easy for individuals within the Chinatown communities (from Toronto, Vancouver, and more) to learn more about the workshop and my research. Correspondence between prospective participants was mostly done through email, direct messages on social media, or word of mouth.

In preparation for the workshop, a group informal semi-structured interview with members in the community, discussing the proposal of this project, their thoughts and questions. At the completion of the workshop, participants continued to be connected to the project through email correspondence to update them throughout the project process.

The workshop took place from October 21st until December 2nd, every Wednesday evening from 7:00 pm until 8:30 pm within the Fall 2020 semester. Facilitation of the workshop in the autumn weather would also prove to be better suited to conduct photogrammetry outside. To participate in the study, participants were required to match the following criteria based on the methodology and as recommended by the Research Ethics Board at OCAD U.

Individuals were invited to participate in the project with the following listed eligibility criteria:

1. Participants must be at least 18 years of age.
2. Participants are not required to reside within Toronto's Chinatown but should have some connection (economic, social, cultural, historical, or community connection).
3. Participants will also require a smartphone and/or camera that can take photos and record audio.
4. No prior experience in 3D scanning or documentary required.

Participants were also allowed to have any friends or family members take part in the project as part of the co-creation process of their memory spaces. There was no written prioritization stated for the audience for the project, though participants that identified as BIPOC were encouraged. Participants were not required to self-identify during the process of signing up for the project as it was in its initial stages. A total of 25 participants had signed up for the workshop; a final 12 participants took part in the workshop to its completion. After the completion of the workshop on December 2, 2020, six participants had managed to establish their A-Frame with many others continuing to work in the new year.
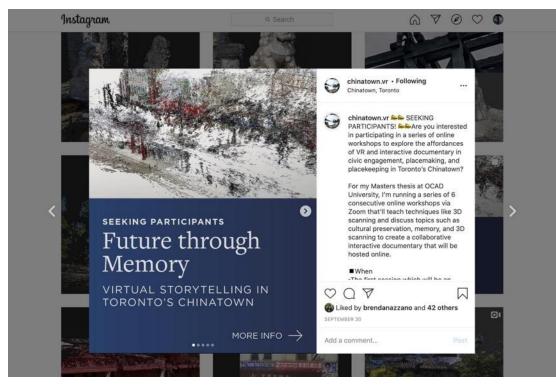

Figure 25 Instagram post promoting the workshop on Instagram, *@chinatown.vr* (LL)

It is worth noting most participants in the workshop are from an academic background, though different fields of interests. Many participants were from an artistic background or experienced in documentary media. The focus to promote the project solely through social media and established connections played a part in the individuals that chose to participate. As the project is based primarily in English, it is worth noting that individuals would also require a fluency in English, be active on social media and have a mobile device to conduct the workshop, which would influence the demographic. Few participants were experienced in photogrammetry and virtual reality technology beforehand.

5.2.2 — Workshop Design Process

The workshop framework was organized into three phases: 1. *Introduction to the Technology*, 2. *Co-creation and Co-Design of the I-Doc,* and 3. *Group Feedback and Discussion*. This structure would guide the workshop and allow it to be iterative and flexible to maintain the safety of participants and with the changing situation and regulations occurring in Toronto due to the COVID-19 pandemic.

The timeline of 6-8 weeks was established with three weeks introducing the project and materials, then three weeks for co-creation and co-production. The timelines for creation were not firm, as participants can slowly work toward gathering their emotional toolkits and photogrammetric scans within the workshop period or after the workshop time. This flexibility allows for more casual relationships to form and makes the space more comfortable to participate at their own pace as well as be adaptable with the continuing situation with COVID-19 which changed the safety and accessibility to resources and outside activities.

This path to expression (Sanders, 2018) would provide time for sensitizing materials, and providing participants of the workshop with homework activities and goals each week, being gathering objects for their emotional toolkits (images, video, audio, or text they would like to share) and what they would like to contribute to the development of their A-Frame memory space (157). Overtime discussions with participants would take place as a frequent group would begin to form.

5.2.3 — Participant Safety Protocols, Rights, and Obligations

To create a "communicative space", Bergold and Thomas (2012) stress the need to develop a safe space for participants to disclose their personal views, opinions and experiences. In the creation of this

space, Bergold and Thomas built upon Kemmis (2001), Wicks and Reasons (2009) to draw on Habernas's deliberations of "domination-free" discourse.

The authors distinguish three phases I. the process of participatory research 1. *The Inclusion Phase*, 2. *The Control Phase*, and 3. *The Intimacy Phase*, in each phase being problems "emotional", "task" and "organizational" issues that need to be addressed.
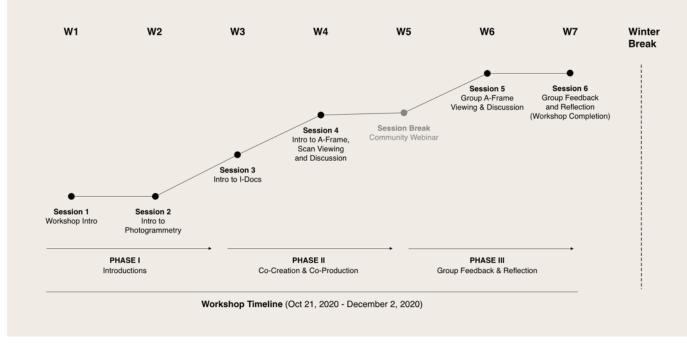
Due to the current COVID19 pandemic, the safety of an enclosed space within the community was not possible with social distancing and the constantly changing lockdown situation. Still, the intention to limit the initial workshop to be approximately 10-12 people would allow for a small enough group for conversation without breakout rooms.

For participants to speak requires smaller groups to develop an environment that individuals can speak of their experience without judgement or consequence. To record sessions in the background using a camera is not possible, but within the current situation is resolved with the use of Zoom and the meeting recording functionality. Individuals were notified of their rights to withdraw from the workshop at any time and statement of the sessions being recorded before the recording of each session.

5.2.4 — Workshop Facilitation

Each workshop session began with a land acknowledgement, an outline of the agenda for the day, as well as a check-in with participants where individuals were asked to state their name, pronouns, whether their access needs were met, and a brief update on how their week is doing. This allowed everyone in the workshop to slowly get to know each other while cameras are not required to be on during the sessions.

To help manage the online sessions, a colleague helped moderate the workshop and assisted with having participants enter the room and moderating chats to make sure no questions are missed. From **Session 4** and onwards, my primary advisor Immony Men also took part in the workshops as a facilitator to also help guide moderating discussions during breakout sessions when it is not possible to be in all rooms to guide smaller group discussions.

Each session was then provided with a recap email the following Thursday afternoon providing a link to the presentation shown and a password protected access to the recording of the Zoom recording with personal breakout room discussions edited out for participant's privacy. Participants were also free to send any correspondence in case they require 1-on-1 consultation or assistance with their projects.

5.2.5 — Phase I - Introduction

The first phase of the workshop was an introduction to the workshop content. This consisted of three sessions: 1. *Introduction to the Project*, 2. *Introduction to Photogrammetry*, and 3. *Introduction to Interactive Documentary*. The first session introduction to the project allows participants to get to know one another and their expectations or goals for the workshop. This also allows a better understanding of how much more or less support is required in each session, individuals access needs as well as if any individuals were comfortable with working with code.
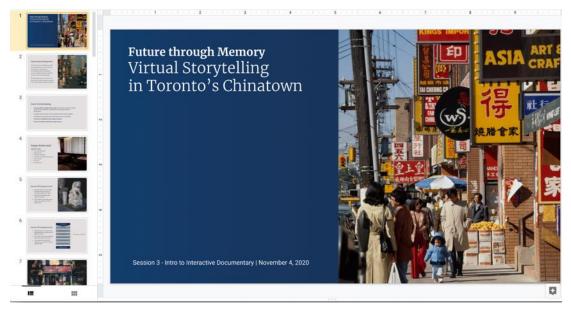
Figure 27 Screen capture of *Session 3 - Intro to Interactive Documentary* on Google Slides (LL)
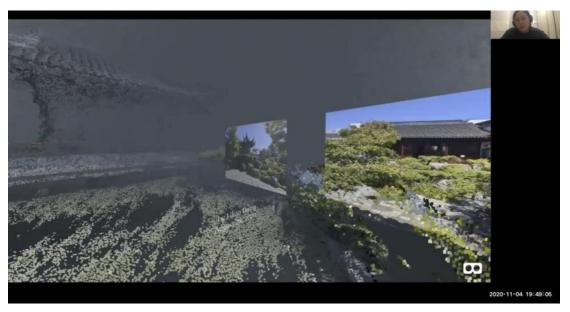

Figure 28 Session 3 - Intro to Interactive Documentary, viewing a demo in A-Frame (LL)

Both **Session 2** and **Session 3** were primarily focused on providing more information of the technology covered accompanied with demonstrations as to how to do photogrammetry as well as a rundown of A-*Frame* and how individuals could build their own *A-Frame* or best get assistance. The first three sessions ran for 1.5 hours, with the first 15 minutes for a group check-in, 1 hour of presentation and demonstration, then 15 minutes for open questions. By Session 3, participants were provided a basic

photogrammetry demonstration and encouraged the next few weeks to attempt scanning their own objects or locations and gathering material for their emotional toolkits. In addition to photogrammetric scans, co-creators were also encouraged to incorporate images, audio, and video to help build their site of memory ('memory space') in *A-Frame*.

5.2.6 — Phase II - Co-Creation and Co-Design

From **Session 3** to **Session 6,** workshop meetings were focused on the creation process as well as presenting co-creators' process of their scans. Participants were asked to share their photogrammetric scans. Group exercises such as breakout room discussions with 3-4 people per room, assisted with a shared *Google Doc* was used for note taking and helping prompt the discussion topics. By the fourth session, a core group of participants had begun to form as individuals are able to attend more regular sessions, though complete attendance was optional.

Co-creators were able to share their photogrammetric scans and discuss the context of their objects and locations. Individuals who weren't sure what they were interested in scanning were also able to take part in breakout room sessions later in the night.
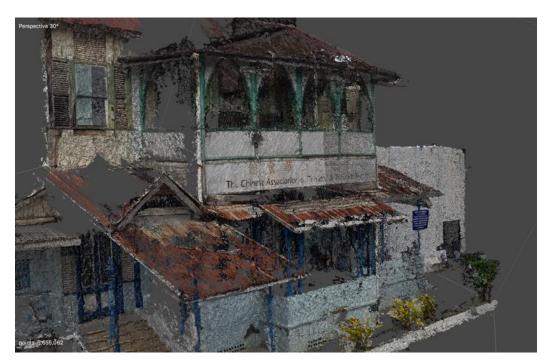

Figure 29 A photogrammetric scan of the Chinese Association of Trinidad and Tobago by Co-Creator, Joshua Lue Chee Kong, photographs taken by Sam Bayne.

Breakout room session questions were based on personal experiences and helped guide participants through the different ways their story could take shape with different senses and provide broader details of their scene such as identifying who they would like to make their memory space for, what time it takes place, or whether the space was still existing. Part of this process also includes participants working in a shared *Google Doc* while in breakout rooms to help make notes of each other's works or questions and prompts to act to help guide their conversations.

Figure 30 Temporary version of the website connecting everyone's *A-Frame* during the workshop

Figure 31 Co-creator, Joshua Lue Chee Kong's memory space viewable in A-Frame

Participants were also able to build their own *A-Frame* or I could help guide them through the process, sample code was created with file set-up to allow participants more familiar with coding to be able to build their *A-Frames*. Participants had the option to either have myself host their final *A-Frame* or host the *A-Frame* themselves and provide a final URL link. This decentralized method of co-creation would also allow participants greater control over their own virtual spaces depending on their own expertise and development skills.

5.2.7 — Phase III - Group Feedback & Reflection

On Friday, November 20, 2020, the Toronto and Peel region were placed under lockdown for the second time as cases continued to grow, rising to 1.500 cases provincially. With the Toronto region falling under the "grey zone", all non-essential businesses were asked to remain closed.

     Session 5 though **6** were group feedback and reflection sections, these sections then are more focused on gathering feedback, and troubleshooting any issues participants were having with photogrammetry and A-Frame. At the end of the **Session 6** and the workshop on December 2, 2020, participants were asked to fill in an Exit Survey Feedback form on *Google Forms* to gather their feedback and provide the opportunity to give feedback anonymously:

From the 12 participants, six filled the exit survey form, some of the feedback comments from participants based on whether they would incorporate their learnings into their own practice[27]:

- *"I am building a virtual tour of the Toronto Islands as part of a feature documentary that I have directed, shot and produced."*

- *"Yes, I do plan to apply what I have learned into digitally documenting heritage sites in Trinidad and Tobago. Using both my photo collection and by engaging with local communities and heritage groups in the use of photogrammetry to document their built heritage."*

After the completion of the workshop, all participants were provided the remainder of December 2020 to rest before the winter holidays, with the project resuming in January 2021. Participants were also allowed to continue asking questions or booking 1-on-1 meetings for assistance.

5.2.8 — Additional Material

Additional support with participants, for individuals who were comfortable meeting in Toronto's West Chinatown or East Chinatown could meet while respecting provincial and municipal guidelines. These meetings were informal and on-site with locations that connected the participants' interests and allowed them to learn photogrammetric in a much more engaged manner on-site. Meeting individuals at the location of their choosing also allows participants to be comfortable discussing their goals and memories in a less formal manner (Sanders 103).

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[27] Question posed in the Exit Feedback Survey (Appendix C) on Google Forms "Do you plan on incorporating the techniques and knowledge you've learnt into your own practice" where out of 6 responses, 4: maybe and 2: Yes. The following question was "If Yes, How so?"
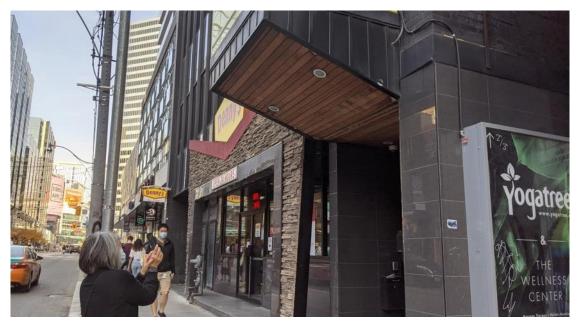
Figure 32 Co-creator, Jeanette Kong, doing photogrammetry along Dundas and Elizabeth Street (LL)

Figure 33 Lilian Leung demonstrating how to do photogrammetry of a building façade (Xie, 2020)

Between **Session 4** to **Session 5**, a one-week break was placed to allow participants to take part in another community-based webinars occurring at the same time. This includes webinars and panels hosted by the Myseum of Toronto and the Reel Asian Film Festival (RAFF), participants were encouraged to take part in the optional seminars as physical meeting was limited.

Participants were also notified of any relevant events, webinars, related to Toronto's Chinatown hosted by community organizations. This sharing of knowledge of community-based events hoped to keep individuals better informed of ongoing events.

5.3 — Part II: The Interactive Documentary

After the completion of the workshop in December 2020, the next step was to bring together everyone's contributions in a networked space that would be able to properly showcase everyone's work. This includes creating a space that would be able to feature everyone's summaries of their spaces, biographies of the co-creators, and develop a space that would allow future participants (co-creators) to get involved in this growing, living database. Early design renderings were shared with participants during the workshop to help to share the expected design.
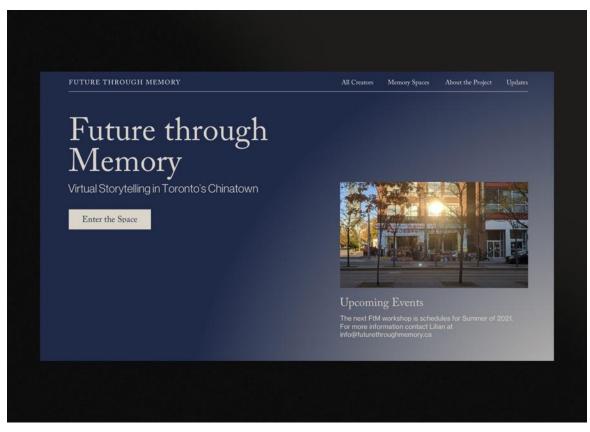

Figure 34 Early design layout of the final interactive documentary and living database (LL)

The development of the I-Doc and archive helps to guide and archive each individual participant and provide an artist statement for their *A-Frame* memory spaces. The website was built using *Wordpress* and developed with the help of a professional web developer to make sure the site framework could be scaled to support future iterations and be a space to get updated information of new workshop sessions. This central hub would also become a space to communicate the research and outcome of the project and provide in-depth documentation of the study to provide transparency over the workshop framework and initial outcomes.
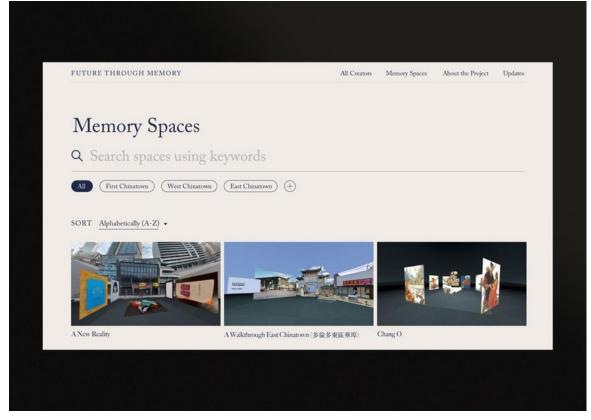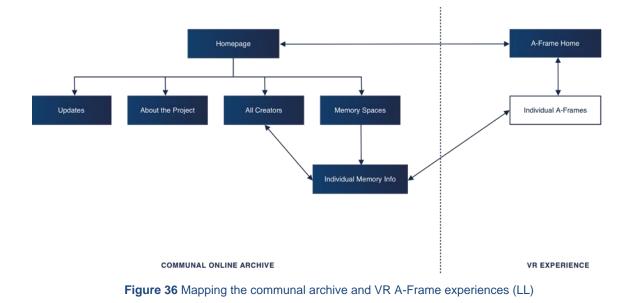

Figure 35 Showcase of Memory Spaces within the interactive documentary (LL)

The website functions in two parts, a website acting as a communal archive of everyone's contributions, and detailing the documentation created, but also branches outwards into the VR A-Frame experiences. The final *A-Frame* memory spaces were built using the most recent update A-Frame version 1.2.0. Though the project had a central hub, featuring summarizations of the spaces through

the use of artist statements and brief bios of each member of the project, each A-Frame is part of a decentralization system, depending on the participants experienced in web development.

Figure 36 Mapping the communal archive and VR A-Frame experiences (LL)

The site featured seven independent A-Frame memory spaces co-created by participants, and include photogrammetric models, images, and audio, created collectively and independently. Each A-Frame tells a unique story and memory to each participant and is supported by an artist statement and summary of each space.
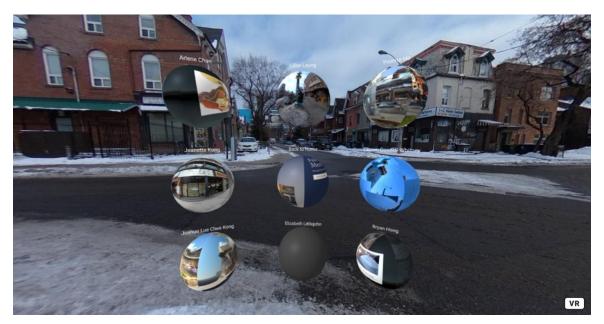
Figure 37 A-Frame homepage connecting all participant's memory spaces (LL)

Figure 38 Memory space of co-creator, Joshua Lue Chee Kong, My Mother's Village *(鹿湖坝)*

The output of *Future through Memory,* which acts as both an I-doc and communal archive, was shared online at futurethroughmemory.ca. Though the central database documentary featured everyone's contributions, co-creators' individual contributions could continue to be tied to their own servers and retain their own ownership. This decentralized method of ownership allows individuals to exercise their

own agency and rights to their own memories, and challenges the frequently overshadowed by prevalent conventions that support the individual author (Uricchio William and Katerina Cizek, 2019).

Providing more accessibility to the content created, the communal archive was also translated into Traditional and Simplified Chinese as well as Vietnamese, the two most common written languages following English within the Toronto Chinatown community.

5.3.1 — Co-Creators of *Future through Memory*

By the end of this project seven individual co-creators were able to present their final pieces within the interactive documentary. Each participant comes from different age demographics and well as academic backgrounds, ethnicities, and nationalities. Biographies and artist statements were written and provided by each co-creator, detailing their memory spaces and information about themselves. I feel very fortunate to have worked with these individuals throughout the whole process and the stories they've decided to share. Their provided biographies are available on the *Creator* page within the final I-doc website.

5.4 — Project Findings

5.4.1 — Iterative Process

What had begun as a geographically located project, focused centrally towards Toronto's Chinatown became more categorical as participants' interests and intentions of their *lieux de mémoire* developed over time. This openness, shifting the focus, perhaps to more of the diasporic experiences, allowed the listening of individual voices and brought their interests and diverse backgrounds and perspectives into the space.

While the beginning process of the workshop was conceptualized, iterations were made depending on the number of participants that chose to continue with the project and their capacity to complete the work. Co-creators were able to contribute however much time and input as they felt comfortable and were able to finalize their work in a flexible schedule. Though a natural fall-off of participants was normal and expected, the difficulties of the ongoing pandemic had affected individuals ability to partake in the workshop.

At the end of the workshop, all participants were given time to discuss their feedback on the workshop collectively as well as were provided with an online survey using *Google Forms* to optionally provide their feedback anonymously. After the winter break, most correspondences were conducted primarily through email and providing interim updates every few weeks leading up towards the Digital Futures Graduate Exhibition.

5.4.2 — Challenges and Learnings

One of the greatest challenges was not being able to meet with individuals in-person, which limited how much I could help teach photogrammetry. Due to most interactions being held remotely, it is difficult identifying if there are any participation gaps or digital divides in case participants don't feel comfortable providing feedback. As everyone's skill level and resource needs are different. Due to being unable to meet physically, it was difficult maintaining momentum for the project around everyone's schedules as well as adapting to the unpredictability of the COVID-19 situation and weather which would limit individual's ability to conduct photogrammetry or gather supporting materials. Still, the online sessions seemed to have run the best they could have, with most feedback by participants of the workshop providing positive feedback. In future iterations, running sessions in the spring-summer when the weather is warmer would be easier and make locations much more accessible.

Based on the participant feedback survey, one question posed as to whether there was anything participants wished to learn but the workshop wasn't able to cover, out of 4 responses, 3 responses were based on technology-based questions that would require more hands-on assistance[28].

- *"Possibly a few more technical pointers on things to avoid and why it might be an issue when trying to make a model?"*

- *"I wouldn't mind learning the technological aspects of the software, but that would need more time and hands-on instruction."*

- *"I would have liked to learn more about A Frame and have more hands-on access to VR and AR equipment."*

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[28] Question posed in the Exit Survey Feedback (Appendix C) on Google Form: "Was there something you wanted to learn but think the workshop wasn't able to cover?"

The use of online tools such as *Zoom* and *Google Docs* proved helpful for gathering notes during discussion sessions. Openness to allow individuals in different backgrounds to work at their own pace and what development tools worked best to suit their needs, this flexibility allowed for a more relaxed approach where individuals as well as allow time to accommodate the needs of individuals.

It's worth noting most participants of the project were researchers, artists, and designers of higher education. This also reflects the needs to broaden the reach of this project to more individuals within the community and is a slow process, as both require a physical space that individuals could more open enter the creation process and having it be more accessible with the help of a broader group of individuals. Taking learnings from the ACCORD project, an alternate solution may be working with other grassroots organizations and heritage groups.

Having established a workshop framework and I-doc output at the end of this thesis project has provided advantages for future iterations, as both providing a proof of concept for new prospective collaborations as well as growing a larger group of individuals interested in photogrammetric scanning and VR and can continue contributing to the project together.

Chapter 6 *Conclusion*

6.1 — **Technological Affordances to Civic Engagement**

In this thesis project, dialogics was created between individuals, both physical and virtually present. While a focus in the process is a central methodology and method to community-based approaches to research (Smith 128), mindfulness to the exploitive and extractive practices that can come from PARs is required. In the co-creation of *Future through Memory,* we were able to create a space for individuals to speak of their concerns and hopes and the action of remembrance. Virtual reality and interactive documentary themselves as technological methods do not simply offer the way to civic engagement, though they provide the opportunity to give voice to "ordinary people" civic engagement comes from the development of public forums and engaging the community directly through a co-creation process, which both holds a commitment to the community over time to better serve the people.

The initial goal of this thesis was to explore the virtual production of VR and interactive documentary through co-design as a method for civic engagement. Though my initial questions were on the affordances of these methods, a deeper focus was placed on the potential participatory aspects of their creation. Exploration was done by exploring collective histories (memories), and virtual reconstructions through photogrammetric scanning as a means of digital placemaking and placekeeping in physical and digital spaces.

To answer the supporting research question: "*What role does co-design play in placemaking and placekeeping of actual and virtual spaces?".* The co-creation with individuals within the workshop highlights the importance of equal recognition of each person's voice and contributions. Charles Taylor (1994) writes, echoing the thoughts of Friere, Smith, and Butler; "Equal recognition is not just the appropriate mode for a healthy democratic society. Its refusal can inflict damage on those who are denied," Intersectionality is then seen as a method to recognize and re-evaluate the scripts and collective identity carried by individuals and groups.

The co-creation of virtual space is then also a method of virtual placemaking, which can develop deeper relationships with our physical counterparts. It is difficult to connect with individuals without being all able to gather in the location of focus, though what we were able to achieve was a recreation through embodied memory, not an exact recreation of Toronto Chinatown, but a new and alternate

imagining of Chinatown based on the perspectives and experiences of the individuals who took part in this project.

Collective narrative, public memory, and virtual reconstructions play a critical part in future placekeeping and placemaking. In the creation of virtual space, through dialogues between participants at a time when meeting physically was impossible and in the physical, when it was safe for us to meet outside within Chinatown. The act of meeting allows participants (co-creators) to also develop our own collective memory in the creation of our own spaces. It is through a long-term commitment to the community that this collective narrative can continue to evolve, incorporating the imaginings and experiences of the community, documenting memories that are uniquely theirs that individuals in the future can point towards through the process of "communicative" memory.

In this thesis, I sought out to explore the affordances of VR and interactive documentary as a method of civic engagement. After the first version of this project, it is clear that these methods cannot engage individuals without a participatory approach in its creation and openness to listen and provide space to listen to them. VR and interactive documentary can amplify the ordinary voice, though, the topic of authorial control differs depending on the approach. That isn't to say sole authorship does not have its importance as all these works collectively speak to the complexity of the diasporic experience.

6.2 — Contribution and Limitations

While due diligence had been made to use widely supported and open-source material, the paradoxical situation of digital media racing towards the past, as new technologies arise seems inescapable. The I-doc, *Future through Memory*, exists online for now as well as its architectural framework stored in multiple drives for safekeeping. There is no way of knowing how it'll continue to take shape in coming years and new technological advancements, but the commitment to dialogue with the community allows it to retain its ephemeral existence.

These projects require a longer practice of relationship-building to continue to build something that best reflects the community it represents and serves. They require constant conversations, and are filled with nuances, at the same time, the discussions of authorship and vision are blurry as we attempt to reach a goal together. As this project continues to evolve, it requires a constant revisiting of the dynamic and all individuals involved as to be mindful that the practices don't fall into extractive and exploitive acts.

Some participants have been able to take these learnings and apply their knowledge of photogrammetry to their communities, expanding into other groups and the desire to document historical sites and personal memories. As access to volumetric media capture may become easier and more accessible over time, the creation of the spaces feature must be tied to the workshop framework and navigating the creation of these spaces collectively, though they may be our own experiences.

In the process of implementing decolonial methodologies, a greater awareness and acknowledgement between the social justice aspects of this project and the goals to move towards decolonization. Though this thesis project was created with individuals within the Toronto Chinatown community, it doesn't fully represent the community as a whole and the complex relationships, histories, and memories within it. Still, this thesis project has provided the framework and principles for its future iterations.

6.3 — Future Research & Iterations

There are a multitude of ways this workshop framework and interactive documentary can continue to evolve in future iterations. When it is safe to do so, being able to host this workshop again in physical space within the Toronto Chinatown community would be one of my biggest goals. Being able to speak face-to-face with individuals and able to guide individuals with their tools and be more engaged through the photogrammetry making process would be a great advantage, both in terms of allowing participants to retain more ownership of their content and be more engaged with the creation process of the project. Being able to engage with emotional toolkits, to be able to actually hold an old photograph and to share material with one another, and to physically visit those spaces would be an exciting future iteration and methods for this workshop and firmly tie the actual and the virtual aspects of this workshop. Being physically present with one another also provides the ability to connect with individuals where this emergent technology is usually inaccessible.

To further practice the theoretical and methodologies expressed within this document, is to be able to mobilize the community further in its creation. Connecting with more individuals directly within the community will be a large part of expanding this research, its future iterations unclear, though requiring consultation and participation with the community and how to best serve the people it represents. A prioritization of BIPOC perspectives will also provide more input and collaboration from the marginalized and racialized individuals within the community. This practice also requires identifying

the complex dynamics of race and class within this study, so as not to result in the erasure and aspects of community identity.

These guidelines are not merely in prospective participation, but also the development of a larger team that would be able to work with the project that would like to develop this communal archive further. This constant feedback and iteration process as a long-term commitment will allow this project to continue to evolve and reflect the goals initially discussed within this document and also make room for new goals as established by the community. Broadening the access of this framework with individuals within the community will also allow for a deeper exploration in issues of identity and complexities of Chinatown, inter-Asian communication, and transmission of ideas from diasporic individuals.

From a technological standpoint, areas left to be explored are also the participatory opportunities to external viewers of the interactive documentary component. Further user-testing for third-party use and visitors to the I-doc can go through more iterations as resources become available and also being able to establish a better understanding of VR itself and its affordances in digital storytelling from a broader perspective.

6.4 — The Path Forward

This thesis project was completed on March 18, 2021, at this point COVID-19 cases in Canada reached 918,000 and has been almost exactly a year of lockdowns in the Greater Toronto area. Since the conception of this project, the situation of anti-Asian racism has intensified, and Chinatowns across North America continue to struggle through the pandemic. Despite this, communities have come together decrying anti-Asian racism and violence and have exercised mutual aid for one another and fought against many social justice issues, with many new Chinatown-focused organizations forming to protect their communities. This year has been filled with many events, webinars, artworks, and protests to protect Chinatown communities. This highlights that while most individuals do not or no longer inhabit these communities, they are a crucial part in relation to our identities, culture, and heritage.

These actions by community members are less occupied with a sense of nostalgia of a time gone in the past, but the urgency and desires to become involved without our communities, and to build and implement systems to protect individuals within this difficult time.

This paper is non-exhaustive to the level of depth each topic is deserving to be told. No one can truly predict the coming years as a whole, and uncertainty for Toronto's Chinatown and Chinatowns

across Canada, though the passion and drive by the many people involved in so many projects and initiatives is one that mirrors the determination of the early pioneers.

This isn't the end of *Future through Memory,* it is only the beginning. My desires to continue speaking with the Chinatown community growing larger, in what I hope can continue for many years to come. The work from this thesis is merely a steppingstone of many future iterations and explorations to be co-created with individuals and the imaginings of their pasts to build something for the future. Perhaps in a far future I'll create another memory space and reflect even more so on this experience, conducting this thesis in strange and unpredictable time, though I don't need time to realize how special this opportunity was, is, and continues to be.

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Appendices

Appendix A — Research Ethics Board approval statement

This project has been reviewed and received ethics clearance through the Research Ethics Board at OCAD University (File Number #101861).

Appendix B — Participant Consent Form

Consent Form

Date: October 1st, 2020
Project Title: **Future through Memory** - *Virtual Storytelling in Toronto's Chinatown*

Principal (or Student) Investigator: Faculty Supervisor (if applicable):
Lilian Leung   Immony Men
Faculty of Liberal Arts and Sciences,   Faculty of Liberal Arts and Sciences,
Graduate Studies   Graduate Studies
OCAD University   OCAD University

Purpose

- This study is designed to explore the affordances of virtual reality and interactive documentary as a method for civic engagement, placemaking and placekeeping.
- As a participant, you'll be an active collaborator within this project
- Workshops will be held primarily in English for the understanding of all participants, though can support Cantonese or Mandarin discussions and topics.
- The result of this study will contribute to the PI (Lilian Leung)'s thesis for completion of their Masters of Design.
- This research project and its findings will NOT be commercialized.

Eligibility

- Participants must be at least 18 years of age to participate in this project.
- Participants are not required to reside within Toronto's (West) Chinatown but should have some sort of connection (but should have some sort of connection (economic, social, cultural, historical or community connection)
- No prior experience in 3D scanning or documentary is required.
- Language used should be at a grade 6 to 8 comprehension level.

What's Involved

As a participant (collaborator), you will be asked to take part in a series of weekly workshop meetings that are 1.5 hours (75 minutes) for 6-8 consecutive weeks. Participants will not be required to stay the whole session and not required to attend every session. During each workshop, participants will be required to engage in conversation about topics revolving their own personal experiences or memories of Chinatown. Each workshop will begin with a 10-15 minute introduction and status check where individuals will be reminded of their rights and obligations within the study. Each workshop will be composed of technical teaching of interactive documentary techniques then followed by discussion between participants as to what topics they're interested in exploring themselves within the study (ex. what memory would they like to explore and document within this study), how the PI ('Principal Investigator') can help aid them with their interests and how the collaborative group would like the final interactive documentary project to be depicted.

The only equipment required by the participants is their own smartphone device or electronic device that can takes photos or record video. If a participant requires access to equipment, they can contact the principal student investigator ('Lilian Leung') for technical support.

Potential Benefits

Possible benefits of participation include

- Contribution to a collective body of knowledge about Toronto's Downtown Chinatown

- As co-creators, participants will be credited as co-authors of the final project and exhibited at the Digital Futures Graduate Exhibition 2021 whether it be held physically or virtually.

- The digital content co-created during the workshop sessions such as 3-dimensional scans belong to the co-creator and can be repurposed for their own personal use.

Potential Risks

There also may be risks associated with participation

- The content being made is intended for public exhibition at OCAD University, and other possible future opportunities. Throughout all workshops participants will be reminded of the public nature of the representations they are creating, and will be given clear opportunities to exit the project, or adjust their stories at any time.

- Participations can exit any time – there is no pressure to continue by Lilian Leung or any other person.

- Risks associated concerning personal identification are up to the co-creators discretion to what they would like to share and will be reviewed internally before being shared publicly.

Confidentiality

Due to the nature of documentation involving image and voice, confidentiality will not be provided. Data (voice / image / video) collected during this study will be stored on a password protected Mac computer in a reasonable secure location. Data (voice / image /video) will be kept for a year after which time images and documentation not for used display or project archiving will be deleted. Access to this data will be restricted to Lilian Leung and Immony Men.

Audio- or Video-Recording:

- Participants will be recorded using in-software recording technology provided by Zoom. Participants will be notified at the beginning of each workshop that the session is being recorded.

- The recording will be stored as raw data and will be stored in a password protected computer belonging to the Principal Investigator.

- Participants have right to review the recordings or transcripts.

Data collected during this study will be stored in a password protect laptop belonging to the principal investigator. The raw data recordings will not be shared publicly. All audio or video recordings shared online will content co-created with the participant and with their consent. Participants are able to omit or remove any material during review and online publication.

Raw data such as workshop recordings will be kept for the length of the study and one year after which time the data will be disposed of ('deleted').

Access to this data will be restricted to the Principal Investigator ('Lilian Leung') and their Faculty Supervisor ('Immony Men')

Incentives for Participating

- Incentives are currently not being offered as part of this study.
- Should financial compensation be available, all participants will notified and receive equal compensation at the completion of the study.

Voluntary Participation

Participation in this study is voluntary. If you wish, you may decline to answer any questions or participate in any component of the study.

Further, you may decide to withdraw from this study at any time, or request withdrawal of your data prior to data analysis and you may do so without any penalty or loss of benefits to which you are entitled. Your choice of whether or not to participate will not influence your future relations with OCAD University [and/or other institutions/partners of the research] or the investigators ('Lilian Leung') involved in the research.

To withdraw from this study, let the PI ('Lilian Leung') know at any point during the study or you may contact Immony Men by imen@faculty.ocadu.ca

To withdraw your data from the study, please contact Lilian Leung by email no later than the fourth session, November 11th , 2020. All data relating to the participant will be removed.

PUBLICATION OF RESULTS

Results of this study may be published in the PI's student thesis document and presented

during the graduate exhibition. In any publication, data will be presented in aggregate forms. Quotations from interviews or surveys will not be attributed to you without your permission.

Feedback about this study will be available through a survey provided to all participants after the completion of the study. Feedback data from this study will be kept internally.

Contact Information and Ethics Clearance

If you have any questions about this study or require further information, please ask. If you have questions later about the research, you may contact the Principal Investigator ('Lilian Leung') or the Faculty Supervisor ('Immony Men') using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at OCAD University (Approved File #101861)

If you have questions regarding your rights as a participant in this study please contact:
Research Ethics Board c/o Office of the Vice President, Research and Innovation

OCAD University
100 McCaul Street
Toronto, M5T1W1
416 977 6000 x4368
research@ocadu.ca

Agreement

I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Attributing quotes

All information you provide is considered confidential; your name will not be included or, in any other way, associated with the data collected in the study. Furthermore, because our interest is in the average responses of the entire group of participants, you will not be identified individually in any way in written reports of this research.

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☐ Yes, I wish to be attributed for my contribution to this research study. You may use my name alongside statements and/or quotations that you have collected from me.

Audio- or video- recording
☐ I agree to be [audio-/video-recorded] for the purposes of this study. I understand how these recordings will be stored and destroyed.

Name: _____

Signature: _____   Date: _____

Thank you for your assistance in this project. Please keep a copy of this form for your records.

Appendix C — Workshop Exit Feedback Survey to Participants (Post-Workshop)

Future Through Memory - Exit Feedback Survey

This is an exit feedback survey for all individuals that have participated in the first Future through Memory - Virtual Storytelling in Toronto's Chinatown, the workshop ran from October 21st, 2020 until December 2nd, 2020.

The feedback from this survey may be used with your personal information undisclosed within the final Masters thesis document as part of the completion of Lilian Leung's MDes in the Digital Futures Masters program at OCAD University.

The responses from this survey will be held internally by Lilian Leung for 1 year as reference to this project (December 2nd, 2020 until December 2nd 2021). All responses for this workshop should be in before January 1st, 2021

If you have any questions or concerns about this study or would like any assistance with any part, please contact me, Lilian Leung at

*Required

Your Name (can leave blank for anonymity)

Your answer

How useful did you find the technical demonstrations (photogrammetry and A-frame) during this workshop? *

	1	2	3	4	5	
Not Useful	○	○	○	○	○	Very Useful

How useful did you find the discussions during this workshop to help you on your own Memory Space (A-Frame)? *

	1	2	3	4	5	
Not Useful	○	○	○	○	○	Very Useful

Do you plan on incorporating the techniques and knowledge you've learnt into your own practice? *

○ Yes
○ No
○ Maybe

If you answeres YES, how so?

Your answer

Did you find the workshop difficult to follow? (In language, technical terms, and concepts) *

	1	2	3	4	5	
Very Easy	○	○	○	○	○	Very Difficult

Did you find you had enough time to complete the workshop tasks during outside workshop hours? (gathering images for rendering, or assets to add to your Memory Space) *

○ Yes, Just Right

○ Yes, But Would Prefer More Time

○ No, Needed More Time

○ Other:

If you answered NO, how much additional time would you think you'd need?

Your answer

Did you find incorporating outside workshop activities and events (promoting outside workshops and webinars) helpful? *

	1	2	3	4	5	
Not Helpful	○	○	○	○	○	Very Helpful

Did you feel comfortable and safe taking part in the workshop? (safe to speak and questions during each session) *

	1	2	3	4	5	
No	○	○	○	○	○	Yes

Did you learn something new about Toronto Chinatown's history you didn't know before? *

Your answer

Did you find this workshop made you more interested in learning about Toronto's Chinatown?

○ Yes

○ No

Was there something you wanted to learn but think the workshop wasn't able to cover?

Your answer

Was there something you wanted to learn but think the workshop wasn't able to cover?

Your answer

Would you like to participate in this workshop again in an in-person format such as in-person discussions at a physical venue or a walking tour demonstration (once it's safe to do so)? *

○ Yes

○ No

○ Maybe

Additional Feedback or Comments about the Workshop

Your answer

Submit

Appendix D — Workshop Material Release and Submission Form (Post-Workshop)

Future Through Memory - A-Frame Submission Form

The name and photo associated with your Google account will be recorded when you upload files and submit this form.

Privacy Details

This section helps to confirm how long individuals would like their A-Frame (memory space) visible for this project. This section will be accompanied with a formal material release form closer to March 2021 to receive formal release of your work online.

How would you like your A-Frame to be visible? *

○ Publicly Viewable

○ Password Protected (Will Contact You for More Details)

How long would you like your A-Frame visible? *

○ 1 Year

○ 3 Years

○ As long as possible

A copy of your responses will be emailed to the address you provided.

Back   Submit

Never submit passwords through Google Forms.

reCAPTCHA
Privacy Terms

This form was created inside of OCAD University. Report Abuse

Google Forms

Future Through Memory - A-Frame Submission Form

The name and photo associated with your Google account will be recorded when you upload files and submit this form.

Profile Details

This section is for content that will be viewable publicly from the final website that's hosting everyone's A-Frames together. Both profile image and artist statement will be available with your A-Frame. In case you'd like to make any revisions at a later time, please feel free to message

Your Credited Name (how would you like your name displayed on the final website) *

Your answer

Profile Image for the Project

⬆ Add file

Artist Statement of Your Memory Space (1-2 Paragraphs) *

Your answer

Creator Bio (1-2 Paragraphs) *

Your answer

Do you have a website/portfolio you'd like your bio to link to? (Optional)

Your answer

Do you have a title for your A-Frame? (if no, please put N/A) *

Your answer

If you would like to host your A-Frame from your own server, please provide the URL link (if Lilian is helping you host it, skip to next question):

Your answer

Where is your memory situated? *

○ First Chinatown

○ West Chinatown

○ East Chinatown

○ Other:

Where is your memory situated? *

○ First Chinatown

○ West Chinatown

○ East Chinatown

○ Other: _____

What year or time period would you situate your memory? (if relevant)

Your answer

What tags or keywords would you put for your Memory Space? *

Your answer

Back   Next

Appendix E — Images in Open Research Repository

This project has attached supporting material in the OCAD University Open Research Repository.