

# **Assimilation, Dissimilation**

An inclusive, participant based installation to express  
Toronto's collective memory

by

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ASSIMILATION, DISSIMILATION

- AN INCLUSIVE, PARTICIPANT BASED INSTALLATION TO EXPRESS TORONTO'S COLLECTIVE MEMORY

MASTER OF FINE ARTS 2013

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OCAD UNIVERSITY

## **Abstract**

This thesis paper documents the process from ideation to materialization of making this inclusive, and participatory interactive installation at Union Station. This new social media installation intends to encourage participants to reflect and discuss collective memory of this multicultural nation by asking immigrants and/or their descendants “what has changed in you, living in Toronto?” Union Station, as a gateway and starting point for many immigrants arriving here, could entice them to reflect on their transition of moving from their home country to coming to this new environment. People from different cultural backgrounds could express their experiences on being an insider or outsider of the mainstream society, by which people could raise self-awareness, understand each other and get connected.

## **Keywords**

public space installation, user experience, interactive installation, collective memory, collective experience, multiculturalism, culture integration, Toronto immigration history

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## **Chapter 1: Introduction**

### **1.1 Background**

If we define history from a colonial - European point of view, Canada does not have a long history. First Nation people and Inuits have inhabited the land now called Canada for millennia. In contemporary history, the first French settlers landed in 1663 to establish the first colony here in Canada. Within this framework of defining Canada's history, its development is less than 350 years. Early immigrants were from United Kingdom and France, and later an increasing influx of immigrants came from all around the world. Currently, immigrants accounts for 98% of the country's population (Gibney, Hansen, 2005, P67). Each of these immigrants have their own cultural and historical background, while most of them maintain some connections and/or some aspects of their original culture heritage.

Although Canada and the US have very similar immigration policies, people find that Canada's experience with ethnicity (at the level of both social attitudes and social reality) has been rather different from United States. This difference in experience is often defined as the "Canadian mosaic", in which ethnic groups have maintained their cultural distinctiveness while functioning as part of the whole (Palmer, 1975). This is very different from the American cultural integration idea, that of the 'melting pot', in which people of diverse origins have allegedly fused to become Americans (Palmer, 1975).

Canada has embraced multiculturalism as envisioned in the "Mosaic", initially as a solution to the national question regarding identity within this multi-ethnic country.



Canada is the first and only country of multicultural policies advocated by the official government (Miriam, 2011).

Immigrants often face the problem of how to integrate into Canadian culture, beyond the confinement of their own cultural community. It takes much more effort for people from a culture other than the Western immigrants to settle here, especially for the people who do not speak English or French as their first language. There are explicit and implicit barriers of language, culture, skin color, etc. Various immigrant groups in Canada often live in their small ethnic circles. Take my aunt's family for example, they immigrated to Canada in the early 90s. Friends in their circle are all Chinese, including those at their work places. They maintained their lifestyle as it used to be in China; they buy western food and ingredients and made Chinese dishes with them; they hang out with friends on Chinese traditional festivals. Basically, they have no connection with other people from different ethnic group.

A study commissioned by the multi-ethnic ministry (Statistics Canada, 2003) showed that just more than half of Canadians think that approach of multiculturalism (expressed in policies, legislation w.r.t. work, housing, services) helps new immigrants integrate into the mainstream, and more than twenty percent of Canadians believe that the multicultural approach make some of the new immigrants never able to completely integrate into the mainstream society.

The vision of the "Culture mosaic" as a guiding principle for immigration and integration is a double-edged sword: it seems helpful for new immigrants to settle into

new environments, but it also causes isolation of ethnic groups. Any newcomer to Canada will easily find connections with people from the same cultural background, and these connections will help them settle in the new environment. However, there is a large potential for new immigrants to stay in their cultural circle without building relationships with people from different cultures. There are also the immigrants that adapt to the mainstream. They transform themselves to a new status: they tend to lose their culture, traditions, and their connection to their heritage. This happened more often to the descendants of first generation immigrants. The second-generation immigrants are often more easily assimilated into the Canadian society than their parents. The second-generation immigrants are more prone to abandon their original language and culture, thus reducing their contact with members of the ethnic groups and they are less likely to attend ethnic culturally related social events. My aunt's son, for example, who is now 23, came to Canada when he was 5. Now he speaks fluent English and Chinese (he can't write or read), most of his friends are white. In Chinese, we call those who grow up in western countries "banana", which means their skin is yellow, but inside is totally white.

As it is the main aim of the multicultural vision of the mosaic, the immigrant has dual identities. They maintain what they were, keep their own culture, become part of the new society and participate in that social life. Both people I mentioned above have their own drawbacks. The goals of how to connect them, and find a compromise in between the two streams become the main topic of this paper.

## 1.2 Objectives

Misunderstandings regarding each other's culture often spring from miscommunication. My idea is to build an installation that allows people from different backgrounds to communicate and sew the "mosaic" pieces together, to overcome some of the culture boundaries. To achieve this, I intend to enable people to share their stories living in Toronto. By sharing their own memories, people will have the chance to know and learn what other people have been experiencing in this city, while integrating and assimilating in Canada. I envision the installation as a kind of public bulletin board, where people's personal stories about how they changed or what they feel they left behind while integrating into the Canadian fabric will become a kind of 'story quilt'. The metaphor of the 'quilt' may be appropriate as it is in essence a patchwork of small fabrics that together form a larger blanket of parts.

I have Union Station as my industry partner for this project. Within this context they will provide the site and the permissions to install a public art installation. Union Station is a perfect place to build this social platform as it is a hub for transit. It has newcomers, local residents, and visitors from other cities, countries on an ongoing basis. People gathered in the waiting spaces of Union Station would have the chance to meet and get in touch with different ethnic groups. I chose the waiting room at Via Rail station as the location to build my project, because waiting time provides ample opportunity to reflect on where I came from and where I go. Passengers are not rushing to work or to

take transit. The installation can also make the waiting experience or visiting experience in the station more worthwhile.

### **1.3 Thesis statement**

This paper will investigate the process of how immigrants feel of adapting to the society, to find connections between different kind of immigrant groups, and to find common themes, anecdotes, and examples of how new Canadians have experienced ‘assimilation’ and ‘dissimilation’. The installation aims to encourage people to reassess themselves by asking these questions: “who am I?”, “who was I?”, and “who will I be?” The sharing of these stories of change is perhaps a more dynamic and inclusive way of expressing a collective memory from immigrants’ point of view.

To achieve this, I defined two opposite attributes relating to immigration by using the terms “Assimilation” and “Dissimilation”.

The Linguistic definition of assimilation is: the act or process of assimilating; the state of being assimilated; the process whereby a minority group gradually adopts the customs and attitudes of the prevailing culture (The American Heritage® Dictionary of the English Language). Assimilation is understood as the process in which the immigrant adapts, changes. For this thesis, I am using the definition as proposed by the cultural psychologist Jean Piaget (2004) to describe part of the adaptation process: “Through assimilation, we take in new information or experiences and incorporate them into our existing ideas. The process is somewhat subjective, because we tend to modify experience or information somewhat to fit in with our preexisting beliefs.”

In the Canadian society, “Assimilation” can be applied to people who: find themselves already assimilated into the mainstream; in the process of changing/assimilating, whether it is subjective or it is inevitable.

“Dissimilation”, according to its definition, is “the act or process of making or becoming dissimilar” (The American Heritage® Dictionary of the English Language).

These are the people who: find themselves hard to get involved into the mainstream because of barriers of language, misunderstandings, and/or shadow of fear with bad previous experience; these people like to stick to themselves to what they were, keeping their own cultures, and old life style, living in a isolated society. It relates to the loss or abandonment of culture or cultural characteristics of a people, society.

Ideally, the reproduction of collective memory could evoke assimilated people to find back their lost part, and make dissimilated people challenge their conservative thinking, and encourage them to be open to change.

Interacting with the installation, participants can write their story or send a photo that represent their changes through an intuitive interface. (Technically, the uploading of text and image will run through existing services Twitter or Instagram). The central server will get resources in real-time, then it will remix the stories and images with interactive visual effects and project them on the wall in the Via Rail waiting room at Union Station.

The research question is:

**How can public social media installation evoke people from different backgrounds to share their stories in the Union Station waiting room and connect them through this installation?**

To answer the main research question step by step, I have set sub questions. First, how can I make the installation attractive to people in the public space? The next question is how can the installation become a part of the platform for people from different cultures to communicate? The last question is how to embed the installation into the environment harmoniously, with both ideation and physical presentation?

## **1.4 Motivation**

### *1.4.1 About me*

I have 6 years training in industrial design, 4 years in the Nanjing with a bachelor's degree, followed by a master degree of design in Monash University, Melbourne. In my early years, I would never doubted that I would become an industrial designer, but as time went by, I found that there are too many limitations to make an ideal product. For example, you need to build perfect model, it needs to flawlessly fit the inside mechanical structure.

I start to re-examine myself, what do I want to be and what is the most suitable work for me. In Melbourne, I worked as graphic designer in Cam Art & Craft company. I broadened my product design ability to screen-based design. Since then, I became interested in interactive design and planned to build something to connect physical form

and screen-based interactivity. I got enrolled in the Digital Futures program in OCAD U, where I decided to be an interaction designer.

Due to my industrial design background, my thought is set to “form follows function” or “design to solve problems”. Currently enrolled in an MFA program, I get a chance to make my dream come true. The two years in the Digital Futures program provides me with knowledge of coding, and functional prototyping. Now I am glad that I could actually build an interactive installation on my own.

Both Australia and Canada are known as immigrant friendly countries, but I found they are different fundamentally. I found that it is hard for new immigrants in Australia to get into mainstream. Most of them are doing labour work or are opening their own business. People with colored skin are excluded from society. The “White Australia” policy was officially abolished since 1973 (Department of Immigration and Citizenship, Australian Government), but the longer I stayed, the more I felt that the society is still “White”.

Canada, however, makes me much more comfortable. I have had no difficulties living here, and people warmly offer help and support to newcomers no matter what background one has. People from every race are treated equally, and enjoy the same rights. If they have a qualified skill, it is not hard to get a job.

The huge difference of immigrants’ status evokes me to think about myself: how I have changed through these three years living in western countries. I did not realize the changes until I went back to China, and noticed the changes in my thoughts and

behaviors. My conversations with friends are different now, they like to talk about relationship, Chinese celebrities, social news, now I can hardly get it. If I bring up topic of some new released film or American culture, they would become speechless. I feel awkward. That is why I want to integrate immigrant's self-awareness and their immigration experiences into the final thesis.

#### *1.4.2 About this city*



Figure 1. Toronto history 1

Before the 17th century, there were aboriginal people living in the area that is now Toronto (Ronald 2008). The name of “Toronto” comes from the Iroquois language “where there are trees’ in water”, and also from the “a place where people meet”. Around the 18th century, French people came to this place, then after the war, British people started ruled the area.





Figure 2. Toronto history 2

*The make-up of York and of the province as a whole changed dramatically after French-British war. On the one hand, American immigration essentially dried up. The economic turmoil that followed the British and allied victory over Napoleon, combined with industrialization and modernization in the UK created severe economic and social stresses that led many people to seek new life for themselves in Canada. (Ronald 2008)*

Along with natural increase, the population transformed Toronto from a frontier town into a significant commercial centre surrounded by a large and growing agricultural hinterland.

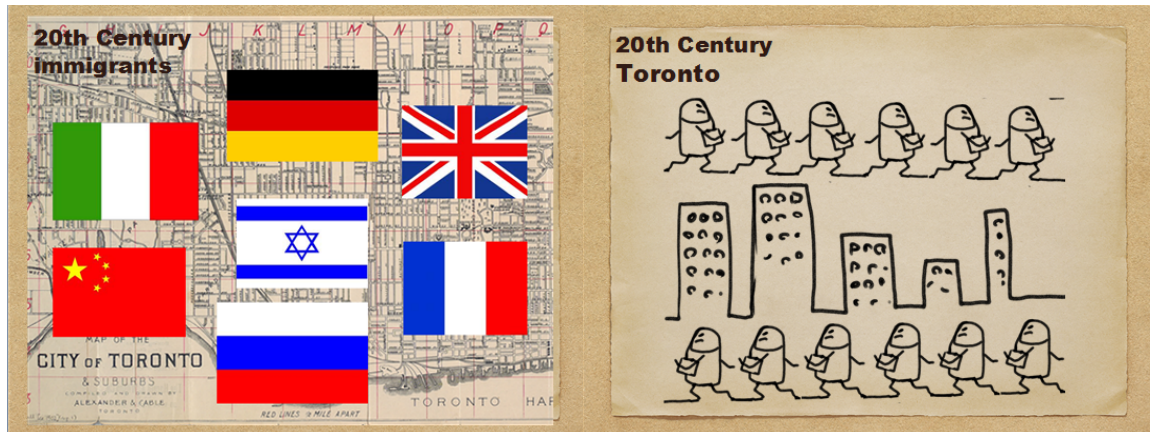


Figure 3. Toronto history 3

“In the late 19th century, Chinese immigrant workers were brought in to Canada to build railroads. In the 20th century, Italian and Portuguese workers were imported to build subway systems in Toronto” (Deborah 1982). Since then, more immigrants came to this city and settled down. Toronto becomes famous for its acceptance of immigrants.

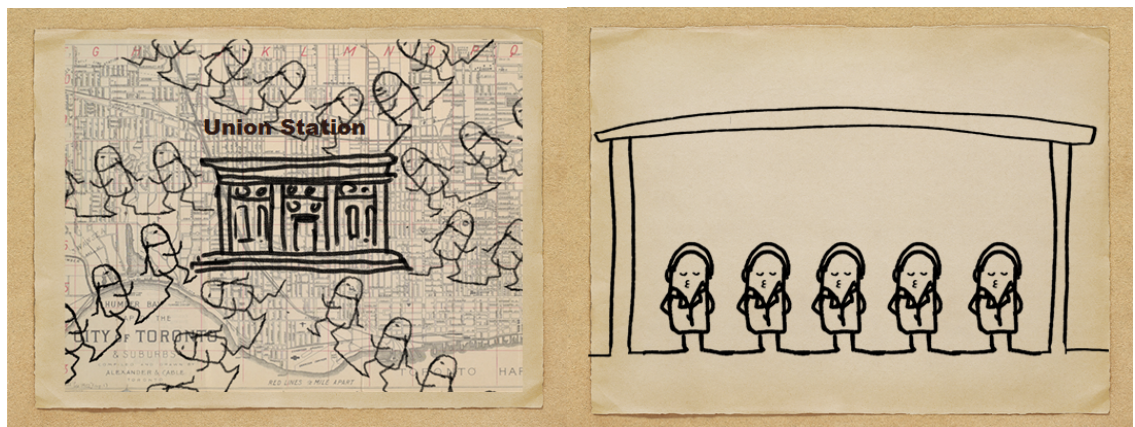


Figure 4. Toronto history 4

The history of the current Union Station can be traced to 1858. It became a national historical site of Canada in 1975 (City of Toronto). It is part of Toronto’s history and identity. It is the busiest, most important multi-modal passenger transportation hub connecting Via train, Go train, bus, subway, bicycle, and walking (PATH). There are

thousands of people, visitors, local residents, and new immigrants, who come and leave without acknowledging each other.

In the Asia, we have a saying of “缘分” (yuán fèn), which means it is the luck to bring people together(Baidu). There is also a saying in Buddhism classic “前世五百次的回眸，才换得今生的擦肩而过” (Baidu), which means in the preexistent living together for long while that can only form one chance to meet each other in this life”. While so many passengers are gathered in the same place at the same time, there is an opportunity to cherish this moment and get to know the people beside us. This is my motivation to build an social platform that encourages connection and communication among people in Union Station. Through this platform, they can reflect on Toronto – the place of meeting, and of meetings that could have taken place.

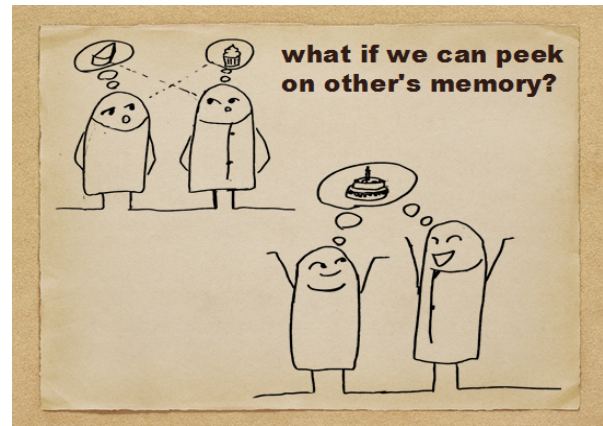


Figure 5. Human nature

We are from different cultures, place, education, and we look different, yet deep inside, we are the same. “Human beings are social animals. Our lives depend on other humans. Human infants are born unable to transport or care for themselves. Their survival depends on another human's efforts. We develop and learn about the world around us



through the filter of other people.” (Gray, 2010). It is our instinct to get in touch with people, even with different backgrounds; our curiosity makes us dig down into each other’s stories and backgrounds.

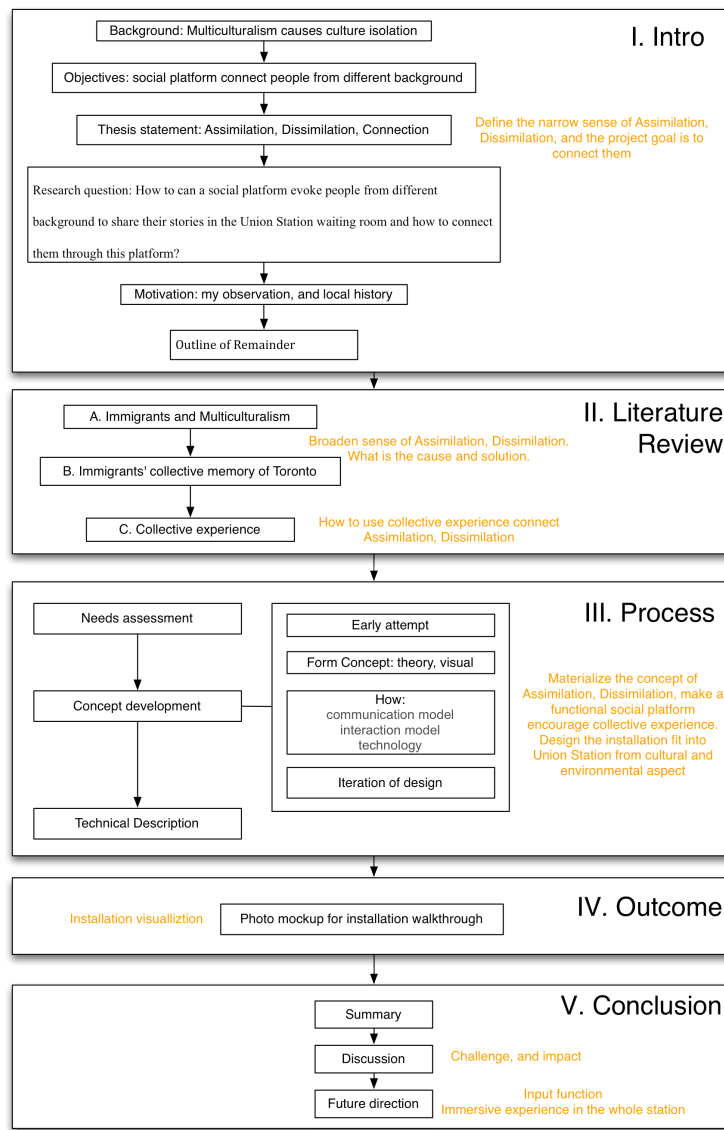


### 1.5 Outline of Remainder

Figure 6. Peek memory

Chapter II is the literature review, where I will develop my thesis with theoretical aspects. In Section A, I refine the definition of “Assimilation, Dissimilation”. I will review the immigrants stories, categorize the immigrants’ status, and identify the elements or motives of how they get blended into the cultural mosaic of Canada. Section B will describe the idea of what makes or defines a collective memory of a place and how individual’s expressions can contribute to the collection. Section C is how the system can be designed to collect and provoke people to share their memories of assimilation, and dissimilation. By researching on artists’ work who has focused on collective experience, especially in the public space, I aim to borrow presentation and interaction strategies that could attract audiences to engage with the public installation. Chapter III document the process of making the installation. First it will document the observations in Union Station and by placing myself as a traveller within Union station, I will document more specific needs from the environment and from users’ point of view. In section B of this chapter, based on the needs assessment and literature review, I will report on how I

integrated the concept of “Assimilation, Dissimilation”. This will be followed by the description of methods to design the interactions, which encourage audience to participate and get involved with the installation. Chapter IV document a detailed walkthrough of how the interactive installation work. The final chapter is the conclusion, in which I will review the whole process and discuss about challenges and future directions.



## Thesis Outline

Graphic Diagram

Figure 7. Thesis outline

## **Chapter 2: Literature Review**

### **2.1 Introduction**

To approach my goal of developing an interactive social platform that enables different new Canadians to express, share and connect experiences, I start with exploring the literature around immigrants' adaptation to Canadian society to deepen my understanding of "Assimilation, Dissimilation". This includes discussing on the social integration model, and identifying more specific reasons of social isolation. I then explore the term of collective memory in relation to the terms of "Assimilation and Dissimilation". I briefly touch on some relevant issues regarding deep meaning of collective memory; what is the specific kind of collective memory matching my projects' need, and both historic and contemporary forms of presenting collective memory. Finally, to address the issues of collective experience of playful interactions, I will examine relevant art installations to illustrate how they engage people to participate in a public installation, and how to use collective, individual experiences to reproduce the collective memory.

### **2.2 Immigrants' adaption to Canadian society**

This section explores the basic research on how immigrants integrate into a new environment and experience. I then discuss the literature that investigates the underlying social model of integration.

"Economic integration, cultural acceptance, behavioral adaptation, and identity are the basic dimensions of social integration" (Yang, 2009). "They have some degree of

hierarchical relationship and priorities, but more importantly, they are interdependent and have causal relationship to each other. Social integration is the process of individuals, ethnic groups; different cultures complementing and adapting to each other” (Ren, Wu, 2006, P33). Since entering the new environment, due to the differences of language, culture, customs, values, and institutional barriers or subjective discrimination, the vast majority of immigrants will experience a segregation process. The process can be long or short. Facing the strange new environment, immigrants will come across similar problems. Immigrants find that past interpersonal networks, social resources, etc. will mostly have disappeared. The new network has not yet been established and language, and living habits are significantly different from mainstream society. This marginalized phenomenon makes immigrants feel rootless (Park, 1928). They may also feel troubled, uneasy, contradictory, withdrawal, anger, sadness, regret and/or homesickness.

From the first step on this land, the immigrants begin a long trip of “integration”; some of them successfully inflow into mainstream society, some people merges into ethnic minority circles from the same culture (or hometown), and some people integrate into mainstream society and maintain their own characteristics. “Integration” is a two-way interaction; it is necessary for immigrants to integrate into their own wishes, but the acceptance of local people is also valuable.

The “integration” contains at least four dimensions: “economic integration”, “cultural acceptance”, “behavioral adaptation”, and new “identity” for the mainstream society. Progressive relationship and interdependence exists between them. Migrants'

integration into the new environment began with economic integration, then through cultural acceptance, behavioral adaptation, and finally reach the identity of the mainstream society (Yang 2009).

Only when migrants have a stable job, a decent income, they will have more confidence, more ability to conduct in-depth integration, and be better accepted by the locals. “The cultural acceptance of immigrants involves migrants’ understanding and recognition of local language, culture, customs, social philosophy” (Yang 2009, P50).

For first-generation immigrants, before they come to a new environment, they have completed the process of socialization in their previous country and have formed their own view of social life. As they have been deep-rooted within their country of origin, it is difficult for them to quickly adapt into a new environment. Behavior adaption refers to the “immigrants’ behavior being integrated into local rules and customs, forming demeanor closer to the local people” (Yang 2009), such as dress etiquettes, eating customs, leisure, consumer behavior, community participation, etc. The final level of integration is the adaptation of one’s identity, which is the “psychological distance between the new environment and home” (Yang 2009). Identity refers to a sense of belonging, thinking “Who I am, where I came from, and what I will be”. Only when immigrants have a strong sense of identity and belonging, and they think they are locals, they really are integrated into the mainstream society.

Part of the immigrants, after having experienced the initial isolation, gradually accepts the culture and values of mainstream society through work environment, schools,



and social community. They change their behaviors and adapt into the mainstream lifestyle. They achieved integration in a (few) dimension (s); people who have inherent advantages (e.g.: an inclusive open mind, strong language skills, a good level of education, excellent professional skills, etc.) can easily integrate into the mainstream society in a shorter timeframe, while preserving their own cultural traditions. However, there are some who fails to integrate into the mainstream society and may always stay at a certain fringe, living isolated from the mainstream society.

Based on the above ideas, referencing to the migrants' adaptation level of economy, culture, behavior, and identity, I refined the categories of "Assimilation, Dissimilation" to the following social integration modes: isolated, diverse, integrative, selective, and fusion.

**Isolated:**

This reflects on my previous definition of "Dissimilation". Immigrants often fail to integrate into mainstream society. They perform low upon the four integration dimensions and become marginalized. These are the two stories from early immigrants in Toronto at the early 1980s.

*If you were Chinese, there were only two things you could do - run a laundry or a restaurant. Our family did both. When I came home from school, I had to work in the restaurant, then I'd jump over to the laundry, work there before running back to school. You know, we didn't serve Chinese food - nobody ate Chinese food then! (Chan 2011, P49)*

*Women are just the wrapping paper used to sell cars or whatever. The people in the subway posters all look like they have a lot of money, like they don't have to work....Theses Canadians, it's the way they speak, it's the way they walk, if a person is a little light colored, a blond, it's better accepted. The posters, the signs, they are all the same. If they put immigrants on television, it's a joke, sort of as if they were ignorant or stupid. In the newspaper, if they are English Canadians and they've gone to school, and are well dressed, they are the loved ones. (Deborah 1982, P84)*

**Diverse:**

Immigrants achieve economic integration with the local residents, but in other aspects they still maintain their own characteristics and traditions. There are large amounts of immigrants who are in this mode in Toronto, like my aunt, and other residents in Chinatown, Korean town, and Little India. They obtain descent income levels within their cultural circle, but they hardly get involved in the mainstream society's activity. They are still outsiders, lacking identity of being Canadian, who are completely dissimilated from mainstream society.

**Integrative:**

Immigrants are essentially successful integrated into the mainstream society in the four aspects of the economy, culture, behavior, and identity. This hardly happens within the first generation of immigrants, but more often on the descendants of first generation. "They have been living at the destination for many years, their education from parents and grandparents about their original cultural and life experiences are gradually forgotten

over time. Their understanding of hometown culture is far less developed than their local culture, and their recognition of home is far less developed than the recognition of their new destination” (Wang, 2001) The psychological distance to their hometown is increasingly widening. Eventually they will only have single identity which is “I am Canadian”. “Banana” is this kind of immigrants. Although the diet, clothing, religion, language, ethnic differences can continue, inside the immigrants, they are similar to western people’s way of thinking. They are 100% assimilated to the mainstream with a lost of connection to their own heritage background.

**Selective:**

Immigrants may not have significant difference with the local population in the economic and behavior aspects, but the cultural aspects of both culture are accepted into the ground. However, in the cultural aspects, they accept local culture, while at the same time they try to retain their own cultural traditions and characteristics. This usually happened on the second and third generation immigrants. They have dual identities, both as a Canadian, and an inheritor of their own culture. In the Toronto-based video artist Richard Fung’s movie *Dirty Laundry* (1996), Roger Kwong is the descendant of the Canadian Chinese immigrant, his great-grandfather was the first member of his family to immigrate to the West for Canadian railway labor work. The movie is about his journey across Canada, which is simultaneously an Asian Canadian man’s journey into the 19th century past of Chinese immigrant railroad labors in Canada. The journey across geography spatializes a temporal exploration of an unknown past. In the movie, there is a

scene that has an extended metaphor which impressed me extensively. I would like to embed it into the form of my own work: Roger is standing naked in front of the projection of his great-grandfather's story. The word are projected on his chest. It feels like at this moment, he becomes his great-grandfather; he is connected to his own past. For these people, they are partially assimilated into the mainstream society.

**Fusion:**

Migrants can fully adapt to mainstream economic life and at other aspects they develop a mutual acceptance, mutual penetration, and co-existence with other local cultures; eventually they achieve "fusion". At this stage, the immigrants have a positive interaction with the local population. People in the society tolerate different lifestyle, language, customs; they also compete and conflict with each other, as within the same ethnic group; the society appreciates the contribution of immigrants, work solidarity with different ethnic group to reach the harmonious coexistence.

*Secretary general Zhongxin Liang from Canada Immigration and Multicultural Ministry said, "Canada woven a variety of ethnic, various immigrant into a piece of cloth. If we unite, we will be very strong. Any time you pull out a line alone, then, you can see that this line is cotton, silk or linen. You retain your own original family traditions, language. This is the unique part of Canada." (UDNTV interview, 2012)*

“The ultimate goal of Multiculturalism is to integrate different ethnic groups, formatting a unique overall Canadian national culture” (Rand, 1993). It is as what “fusion” mode suggests, having dual identities.

However, in Toronto, every ethnic group exists harmoniously, but next to each other. Although they appreciate each other, they do not blend. Immigrants and their descendants often belong to the “diverse”, “integrative” or “selective” modes, which mostly referring to a singular identity. Having a single identity in a Multicultural society easily causes vagueness, uncertainty and inner self-contradictory on their awareness of their own identity and evaluation. They are anxious in the sense of belonging, and keep asking "Who am I and where do I belong?".

### **2.3 Collective Memory**

What is “collective memory”? Hutton (1993), who is a professor of History at the University of Vermont, defines collective memory as an “elaborate network of social morals, values, and ideals that marks out the dimension of our imaginations according to the attitudes of the social group to which we relate”.

There’s huge gap between memory and history. For French historian Nora (1996), memory is ‘always embodied in living societies . . . subject to the dialectic of remembering and forgetting . . . [and] always a phenomenon of the present’. History, on the other hand, is a representation or reconstruction of the past that is always problematic and incomplete. American scholar, author, professor, and critic Sturken (1997) says that it is better to view history and memory as ‘entangled rather than oppositional . . . [and]

that there is much traffic across the(ir) borders'. This distinction between, and entanglement of, history and memory provides a reminder that any study of collective memory must keep in mind several considerations: questions concerning 'which memory?' and 'who remembers?' (Zelizer, 1998).

For native Canadian people, they learn local history from books and also from oral history from their elders. They gain knowledge of local culture from their daily experiences. Outsiders, such as new immigrants learn the local culture and history by studying literature resources.

The knowledge they absorbed will be inevitably incomprehensive. While the history is written from an official point of view, it neglects the everyday life details of what minorities experience. Due to the isolated culture circle (barriers of geography, language, custom, etc.) here in Toronto, it is hard for a person to enter into a different ethnic group and experience their own culture. That is what they miss to reshape their second identity in this multicultural society.

From the late 1980s onwards, German Egyptologist Jan Assmann (1995) noted the issue of cultural identity. He introduced the concept of "cultural memory" into the scope of the collective memory study. The core value of his theory is to emphasize that each cultural system there is a "cohesive structure". At the time level, "cohesive structure" connects the past and the present and preserves the important events of the past and their memories in a certain form; at the social level, this "cohesive structure" contains a common value system and code of conduct; those stuffs are stripped out from all

members' shared past experiences and memories. As an extension of the collective memory, cultural memory has been deeply engraved with the imprint of the nation-state, and become an important symbol of national identity and collective identity.

Based on his theory, "shared past experiences and memories" is the factor for "Assimilation" group and "Dissimilation" group to form their second identity, which is the basis to connect them as an integrated "fusion" group. Therefore, individual's "past experiences and memories" become the type of collective memory that I look into. However, "past experiences and memories" of a person can be very broad, including memories of romantic relationship, career, childhood, parenting, and so on. I still need to find the specific kind of collective memory concerned forming the second identity.

*Since the opening in 1927, Union Station has been one of the most significant hubs in Canada's transportation network. In the last 35 years, the station has taken on added importance in the Toronto area as the terminal for commuter rail services and as a vital link in the Toronto subway system. Many events that have helped to shape the nation have taken place at Union Station. It was the scene of tearful goodbyes and joyful reunions during the Second World War and was also a gateway for many immigrants arriving in Canada. Today, the station is recognizable nation-wide. Time has only increased the numbers that walk through those Bedford limestone columns. (City of Toronto website)*

Union Station, as the carrier of my project, has strong bond to Toronto immigrants' culture and history.

*Canadian immigration policy has always been determined by the countries's labour requirements as well as racial and ethnic considerations. Until World War II, The preference was for white, English-speaking immigrants; Third World immigrants were brought over only to fill specific gaps in the labour force. During the post-war period of prosperity, skilled workers from Europe and the United States were admitted to meet professional and technical needs. In the late sixties and early seventies, large numbers of unskilled and semi-skilled immigrants were admitted to fill jobs Canadians wouldn't take. (Deborah 1982, P49).*

The Canadian Pacific Railway (CPR) was originally constructed by Chinese immigrants around 1880, who were paid rice mats for doing the most dangerous jobs, some of them even lost their lives. After the construction, the train carried Chinese worker from BC to Toronto to start their new lives (Chan 2011). Union Station, as the Toronto terminal of CPR, was actually the first spot where Chinese immigrants started their new lives. Around 1960s, Toronto imported Portuguese to build the subway (Deborah 1982), including Union Station as one of the stops. Besides these history backgrounds of immigrants, Union Station runs as the "gateway" and welcomes new immigrants everyday. Some flew from other countries, some migrate from other cities in Canada. Geographically and psychologically, Union Station is the start of their new lives; here



they are given new identities. Union Station is also a transit hub for travelers from inside and outside of Toronto; here they start their new journey.

Collective memory ‘exists in the world’ and such ‘landmarks’ and collective memories are often ‘material’ and are dependent on how groups interact with them (Kansteiner, 2002). Union Station is such a place where transit people from old life and new life, and they can share the same experience of transformation. “Collective memory can be seen both as a cumulative construction and a interspersed construction of the past” (Wang, Liu, 2006). Then I found this specific kind of collective memory relate to the identity transition, which is the story of change from the past to new life in Toronto. By sharing this people from different backgrounds will be able to know the others’ “past experiences and memories”; here they share their memories, and perceive others’ memories. Immigrants, travelers, and local residents, together they can reproduce the collective memories of Toronto.

The benefit of reproducing the collective memory at Union Station is that, this “starting point” will motivate immigrants to recover their memories of the past, thus “sharing experiences and memories” will be enticed. To achieve this, the social platform will collect memory of change by simply ask the question “what has changed in you, living in Toronto?”

## **2.4 Collective Experience**

After defining the goal and content of the installation, the next thing needs to be considered is how to do it. I will first look into other artists’ related work: to see how they

present memories or stories; how they attain the attraction of the audiences and how to maintain audiences' engagement. Then I will research on literature resources of memory's representation to decide the best form to conduct the collective memory project to attract audiences in this the social platform.

#### *2.4.1 Artists' related work*

##### **Memory [en]code**



Figure 8. Memory [en]code

“memory [en]code” (Schmidt, Hinrichs, Dunning, Carpendale, 2006) is an interactive tabletop installation - the aim is to visualize the dynamic character of human memory in an interactive way. It is set in an immersive meditative space, [en]code invites participants to see a visualization of memory. Participants can think back and share their memories. By typing their stories on the virtual keyboard on the tabletop interface, memories will be shaped into cellular forms. The player can interact with the memory cells in several ways - they can merge cells and drag cells. Overtime the memories will be get merged, becoming a collective memory of installation participants.

This installation inspired me greatly. It has the same purpose with mine- sharing narratives of memories with others. The fact that participants can drag different memories and merge them into one, producing evocatively visualizations, mimics the concept of collecting memory. Moreover, the memory cells can change form and content over time through the interaction with users. These are ideas that relate well both in terms of ideas and delivery to my project, as it shows the integration of the immigrants. The participants in this project observes a form of compelling words where there messages hide behind cell-like shapes, moving dynamically. It triggers people to touch it. The folded story cell provokes people's curiosity. From which I can learn that to present "collective memory", I can make the memory pieces interact with participants, dragging, unfolding and combining them together. These will attract audience to actually try it rather than being an observer.

### **Post Mortem**



Figure 9. Post Mortem by Jannis Kreft (2011)

"Post Mortem" creates a mutual multi-death experience for the entire family. The player can experience what happens to the body after death when exposed in a warm and humid climate where flies fly around to the "body". Textures of decaying skin are projected and mapped to match the player's arm, presenting the process of rot of the human body. The description of player's life will show around the arm.

This work provides participants a collective experience of "death". People sitting around the table, "die together". The work provokes the empathy of the audiences and makes them start conversation around topic of "death". This work inspired me to create sympathetic vibration around audience, which may engage people. Adopting the concept of this project, the audience in my research project will be asked the same question "What has Toronto changed you?" at the same spot - where my installation is in the waiting room, to share the theme of story "change". Besides this communal experience, at that moment audiences are also doing the same thing; they are waiting for the train. The collective experience will cause resonance, creating the chance for passengers to know each other. Other than evocation, the body projection mapping also fascinates me, along with the impressive scene in *Dirty Laundry* that I mentioned earlier. It encourages audience to put themselves in the content of storytelling, making user part of the installation content. This form engaged user both in form and substance. I will put a large amount of consideration on this human-projection interaction modus in the later design process.

### **Interactive twitter wall**



Figure 10. Interactive twitter wall

The Canadian Tourism Commission (CTC) has set this interactive twitter walls in NYC, showing photos and tweets about Canadian destinations on a large touchscreen. Passers-by not only can view the tweets displaying on the wall but also can upload photos and information about a related Canadian destination; they then are encouraged to interact with the postings.

“It’s a neat combination of online and offline destination marketing, and shows just how much power a social media-based tourism ad campaign has to influence and engage even an offline audience”(P. Ling 2010).

Nowadays, twitter walls are commonly used at conferences and events for audience to share their opinions of the events towards twitter. The interesting part I found of this projection is that it painted building facades into website-like framework, creating a lifelike Internet surfing experience for the passers-by. It is a funny combination of the screen-based media with the real life. I would like to make my installation embedded into

the environment harmoniously; I can borrow the idea from this project and enclose the context of environment and the installation to match each other. The story sharing method is done by sending Twitter tweets. It is easy for publishing idea and also as a social platform; it is also convenient to meet new people. At this point, I would consider Twitter as my memory input tool for my audiences.

#### *2.4.2 Representation of collective memory*

Collective memory can be considered as a non-historical memory of the past. To investigate the representation of collective memory, I will start with research on rendering the form of “memory”.

“Verbal memory”, was the early tool for delivering the history. It is flexible and changeable. Because there is no written information, it lacks the authenticity and durability. The “text” then is invented as a storage medium for memory rather than a medium to communicate. In time it extends the memory, and in space it extends the range for dissemination. Then the era of mass media comes, “images” cannot only be stored to observe memory objectively, but also afterwards the memory can be passed and be reproduced (Liu 2009).

Together with knowledge from the related projects I researched earlier, I decide to use the “text” for presenting individual memory, as it can show the memory content comprehensively for other audience to read. “Images” is also the form of memory I want to add, because it allows for the memory to be observed objectively and vividly. The ideal

form is player share their memories with both text and image, so that this materialized individual memory can be accepted and understood in an easier manner.

For the information we receive, we always store them in the brain, but with the elapse of time, some of the information will become increasingly blurred and even disappear. However, if there is some kind of external stimulus (reading, conversation, visual imagery, etc.), such as when the scene has linked with the past experience, our original memories will be aroused. Union Station as the heritage and where passengers share the common experience of starting their new journey, the place itself will first evoke them to pick up the past memory. Then other's "shared past experience" of "Change" will also be a stimulation for user to recover the original memory, since the user will have full access to view collective memory.

"Memory can not be completely clear and comprehensive; the essence of it is that the past memory can be reconstructed. Our understanding of the past mostly depends on our current experience" (Wang, Liu, 2006). The fact that we will constantly change and add new content to the past memories that are based on the personal new status, indicating that the memory includes both past experience and new understandings from current experience. To form the second identity, the goal is let audience to gain the experience from other people that they miss to understand from other cultures. "Tell me and I forget; me and I remember; involve me and I understand" (Anonymous). To let participants understand others' memories and use them to recall their own past memories is my ultimate goal. That is why this social platform needs to be interactive to involve

audiences. The form of story projected on the body is what I would like to achieve. It will present the person himself with the current status along with his own past memory of change.

From here I generally form the idea of setting an installation at Union Station Via Rail waiting room. The installation collects the memory from the passengers of “what Toronto has changed me”, then the audiences will have “the memory with image and text” projected on their bodies. This interaction reflects the notion of “shared past experience and memory” of the second identity, which eventually exhibits multicultural “fusion”.



## **Chapter 3: Process**

Above I collected the pieces of components for building installation from theoretical point of view. In this chapter I will dig into the detail of installation, making the conceptual model into a practical model. It includes field trips to Union Station where I will set my installation, for discovering the environment and understanding user needs. Then from iterated design process, I finalize the whole installation.

### **3.1 Needs Assessment**

#### *3.1.1 Union Station Needs*

### 3.1.1.1 Observation

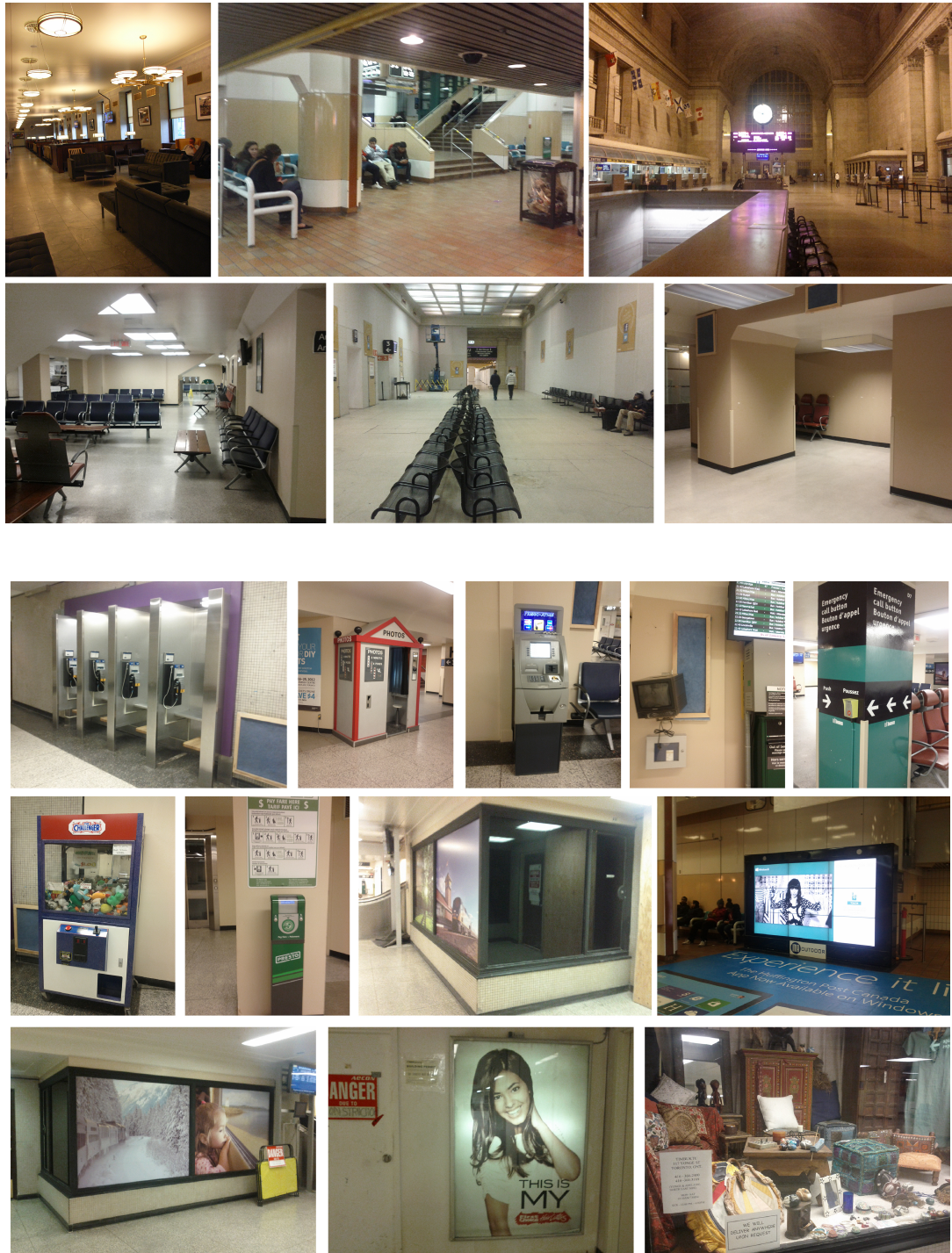


Figure 11. Union Station Environment Observation

To have a better understanding of what the environment that the project is designed for, I took a field trip to Union Station. The photos I took shown above are all the objects that passengers can interact with. The photos allow me to understand how to make passengers' waiting experience better, so I will look at what passengers can do in the waiting room; in other word, what can entertain them there.

There are not so many new interactive objects. As far as I saw, there is only one large LCD screen with gesture interaction for advertising Microsoft Windows 8. Surprisingly no one plays it. This screen is set at the GO train waiting area. According to my analysis, the reason for this is that: 1. There is no clear instruction of how to play, and it does not attract passengers. 2. GO train concourse is a busy transportation hub, passengers take GO train transit from home to work, having limit time. Therefore, they may not be able to stay still to join the interactive ads. The other objects that can entertain passengers in the VIA rail waiting room are old and functionless. The only eye-catching toy machine is broken. From a perspective of the customer, I am not satisfied with this environment.

#### 3.1.1.2 Consignor Needs

In next four years, Union Station will experience several physical changes -some positive, some challenges, which is known as "revitalization". On the positive side, there will be an big opening of the York concourse and associated retail level in 2013. There will be a brand new experience for passengers, since Union Station has left an impression of old heritage to everyone. The challenging side is that, during the construction period,

there might be confusion for passengers to relocate to York concourse as some exits and hallways are blocked and closed.

City of Toronto seeks help from our DF program; they want us to add some digital components to raise awareness of upcoming milestones of changes in advance, which they wish will mitigate the effect of the construction (i.e. customer frustration, hoarding as eyesore, way finding). More specifically, they need the installation to impart a sense of delight and enjoyment to create positive customer experience during this construction period. They also want to engage audiences and leave them impression of Union Station as interactive, fun and creative.

Based on the need, I decide to build a small-scale art installation with my concept of “Assimilation, Dissimilation”, which will be a digital interactive projection on the wall, creating a better waiting experience. The project can also convey the theme of the immigrant culture in this city, encouraging people to know themselves and others better.

### *3.1.2 Audience Needs*

## 3.1.2.1 Observation

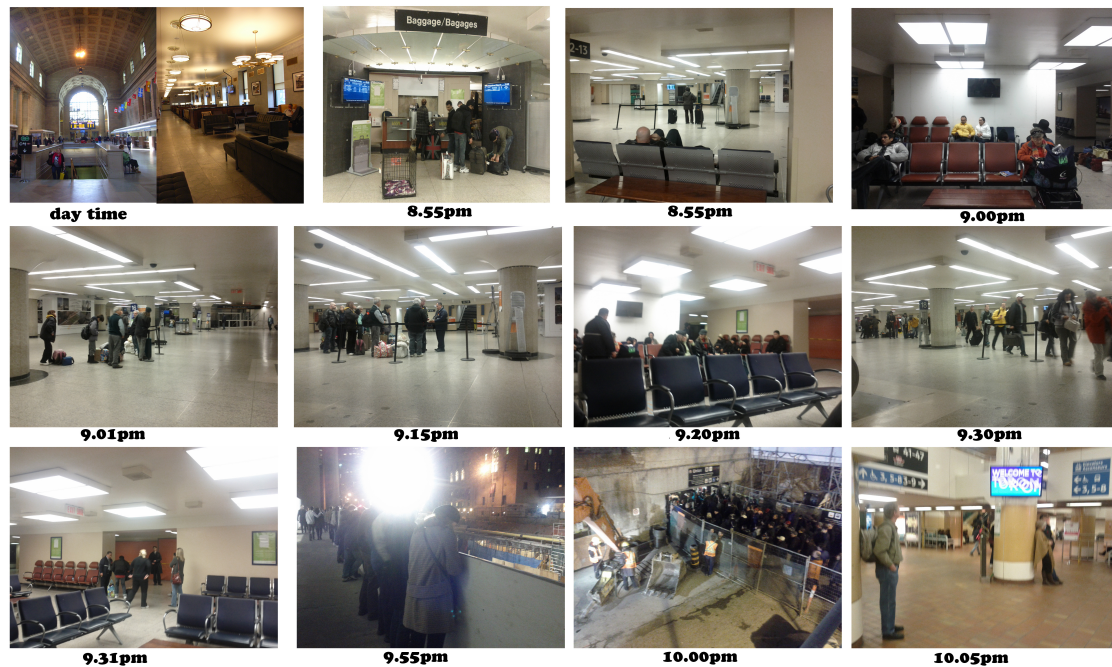


Figure 12. Union Station Passengers

Through my observations in the Via rail waiting room, the waiting time in the space ranges from 30mins and longer. Most people wear headphones, sleep or do the finger twisting, as there is no entertainment in the space. Some people start to talk with nearby strangers. This implies that people still have intention to communicate. About 30 minutes before boarding, some people start to wait in line. As the time passes, the line gets longer. Passengers waiting in line seem so bored; they look around or play with their phone. About 15 minutes before boarding, the staff starts to check the tickets.

I can make their standing line up time more fun and waiting experience better.

### 3.1.2.2 Audiences' needs



Figure 13. Waiting Experience

After the observation, I did some research on what customer can do while waiting. Basically the activities can be put into 4 categories: entertain themselves; get social connection with others; learn from surroundings; and rest.

The function for the installation should allow audience to have a fun experience and to entice their curiosity to learn and to attract multiple users to interact with each other. This experience allow them to have a chance to communicate.

## 3.2 Concept development

### 3.2.1 Early attempt



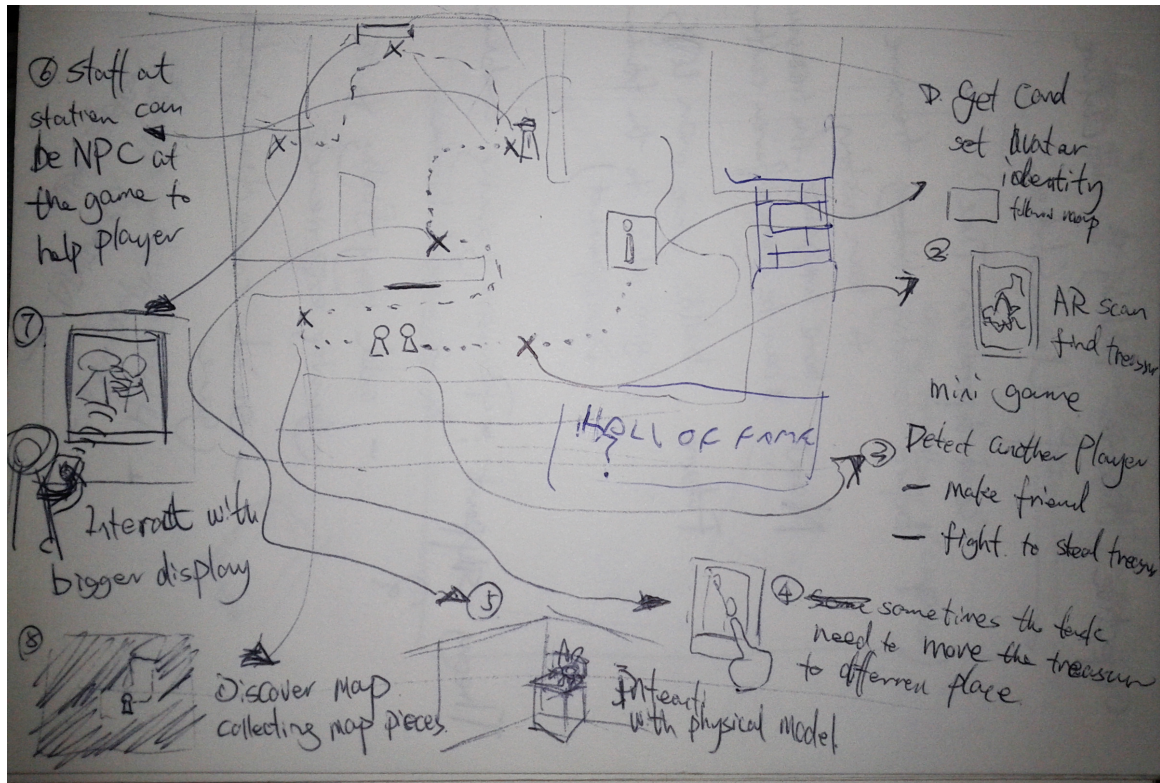


Figure 14. Game Design Sketch

At very beginning, I wanted to build a location-based game in Union Station, with the function of way finding and make the passengers' waiting experience better. Since then I started to train myself Unity 3D, and do the field observation to find what is the reasonable time for passenger to play. The game concept is a hunting game, passengers can use their phone to find the clue around the Union Station. The game have different levels, covering the background story of the history, and what is happening around Union Station, as well as the renovation part. After the first encounter, I got some negative feedback on the game content and its purpose. The problem is that there is no reason passengers will be engaged to play this game. The passengers have varieties of interests; game is just my personal hobby.



Figure 15. Early Concept - Memory Capsule

For the reason listed above I started to change the mindset by using the market research method to analyze the problem. To meet the requirement of MFA, I convert myself to be an artist. I like the saying from our professor David Macintosh “Designer is to solve problems, while artist is to cause problems.” Understanding and perceiving cultural difference was the concept that jumped to my head. I have been experiencing culture obstacles and changes in my life. Toronto, known as the “culture mosaic”, is the place where I found myself no longer an excluder. I want to find out why people cannot fit into this society. I started to research on the Toronto local history and multiculturalism.



Gradually the idea formed: a social platform that people can share their stories, to express themselves and to look through themselves.

### 3.2.2 Visualization of Concept

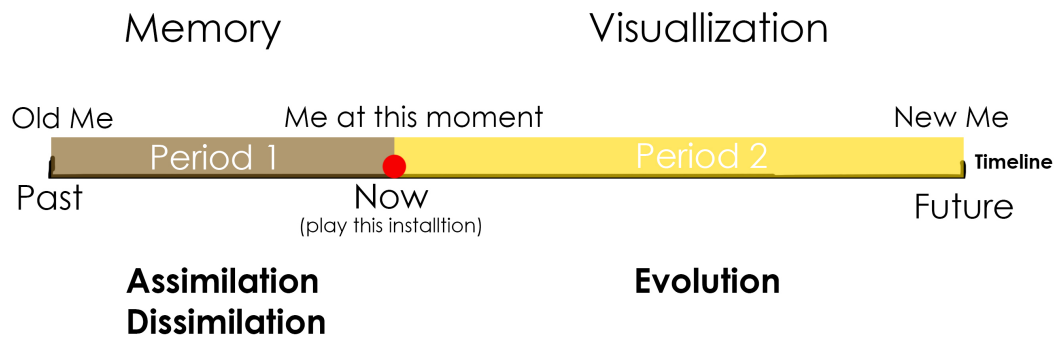


Figure 16. Concept Visualization

The image above is the ideation of “Assimilation, Dissimilation”. “Past” is the starting point of our new life here in this city. It implies that you were born here or immigrated from somewhere else. “Now” is the time that the participants play with installation, it is the time for them to look back of how they have changed by living in this environment. It triggers them to recall the memory of transforming the “old self” to “the current self” at this moment. Period 1 is the process of the players’ integration to this society. Then the players leave the installation after “Now”. Period 2 is the process of the evolution of identity. Afterwards, they gained new insights from observing and perceiving others’ memory of their changes; this will reshape their original memory. The reshaped original memory are “shared experience and memory” to form the dual identity.

Essentially, the installation allows participants to recall the memory of the “old self”, forming a “new self” with perceiving other’s cultures.

### 3.2.3 Interaction research

#### 3.2.3.1 Communication model

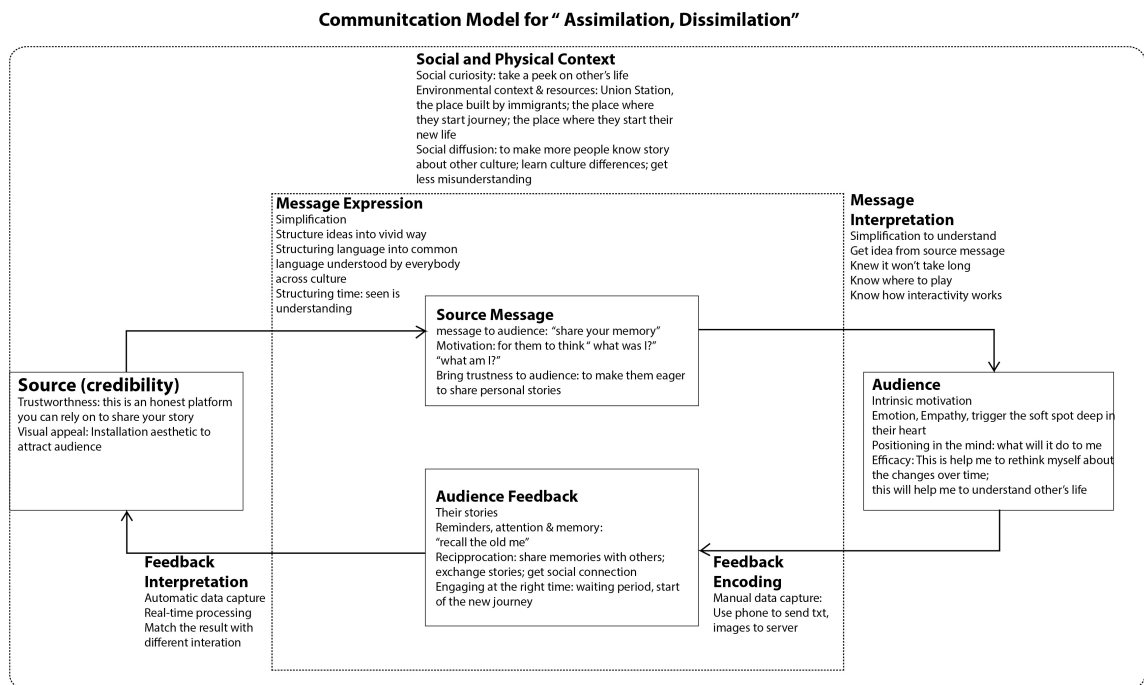


Figure 17. Communication Model for “Assimilation, Dissimilation”

The persuasive communication model is a tool to help people plan, analyze, and build technologies that influence how people behave. This model is unique in that it is designed for interactive, digital persuasion (Cugelman, 2009). I applied this communication model to my installation. The exchange of interaction is the main content of this interactive installation. Users’ preliminary inputs of text, voice, or gesture could

only obtain their attention for a short while. However, the most important process is when information are exchanged between users, where they start exchanging dialogues and communicating with each other's backgrounds. Based on my analysis, hidden message sending back and forth between the installation and among audiences is an encoding and decoding process.

### 3.2.3.2 EOU analysis

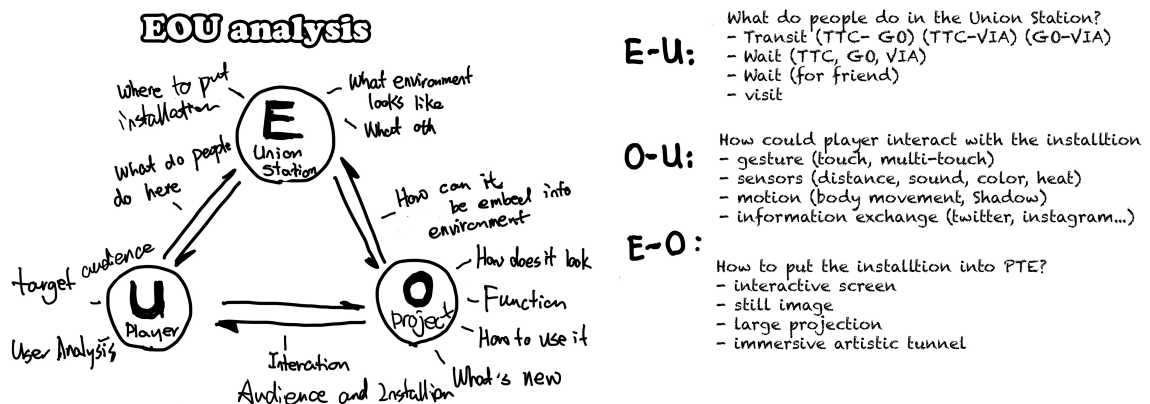


Figure 18. EOU analysis

EOU analysis is a common tool for the interaction design. It helps designer to find all the possible solutions for the interaction by investigating the interactions between the Environment, User, and Object. It helped me to find what is the best time to play, how the installation can interact with the audience and how the installation can fit into the environment. Figure 18 is illustrated after my first field trip to Union Station. From there I decided the waiting room was the site for installation.

### 3.2.4 Iteration of Design

### 3.2.4.1 First Round

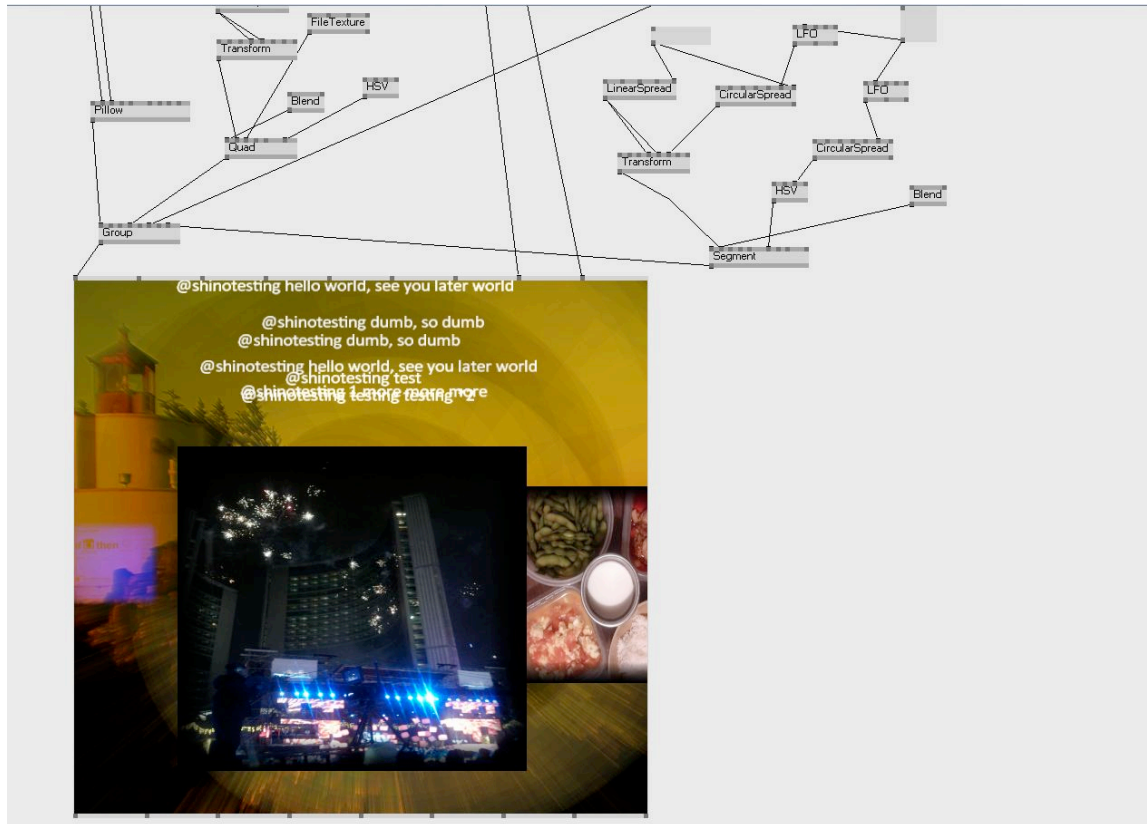


Figure 19. Early Prototype Built in VVVV

This is the prototype I built using VVVV (an open source software focusing on making visual interaction, see <http://vvvv.org/>), user can tweet the story and have it displayed. The instagram uploaded photo with #unionstation will be the slideshow at the bottom

#### Reflection

At first I only had the idea of using Twitter or Instagram as a tool for collecting memory. In my mind it would be used and presented as a twitter wall: everyone can post their stories; the stories would be updated and displayed with some visual effects. After

the encounter I got a lot of useful feedback that I needed to make it meaningful; it did not attract audiences, and it had no connection with Union Station, and most importantly the main concept was missing. Since then, I started to broaden my research on multiculturalism and immigrant history, to enrich my knowledge.

I learned the knowledge of using VVVV, now at least I can build a Twitter wall. The knowledge of loading and mapping data from Twitter and Instagram can be continued in the implementation stage.

## 3.2.4.2 Second Round

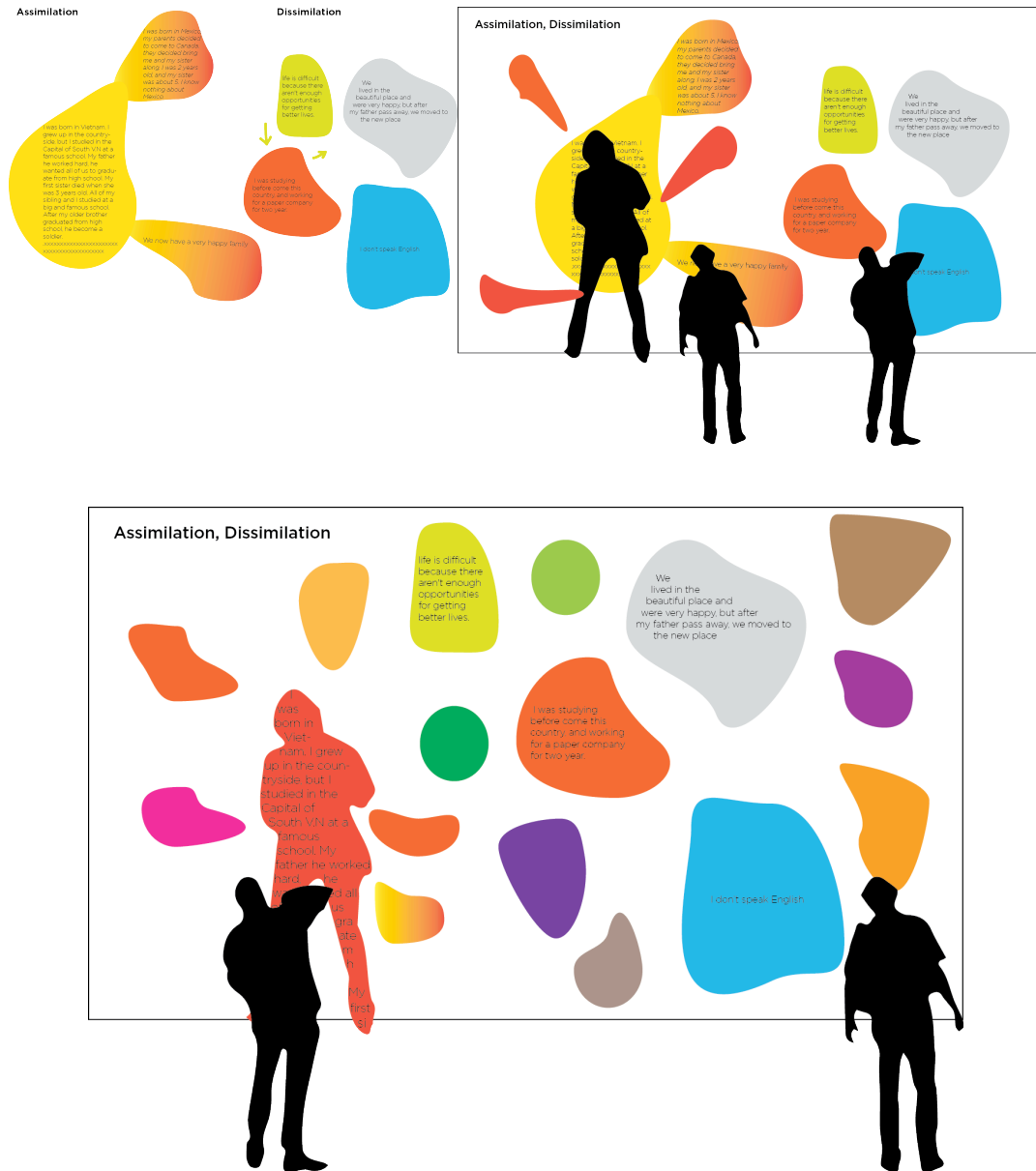


Figure 20. Digital Sketch in Second Round

Based on the immigrants' background, I came up with the idea of "assimilation, dissimilation, and evolution" that presented how immigrants fit into the society. I got inspiration from biological cells those could get merged or rejected; some cell merged

into a bigger cell, while others transformed into a different kind. I then applied the immigrants integration status into the cell merging process. People who considered themselves to be dissimilated into the society, cell of their story on a cell would go against each other. Conversely, the assimilated story was packaged in a cell and floated to audience when they play. The visual movement of cells represented the social integration process. When audiences stands in front of the projection, the story will be projected on them.

### **Reflection**

From the feedback from my Principle Advisor I understood that the concept had potential, but the interaction needed to be better defined. Following his suggestion, I needed other interaction design tools, like storyboard, flowchart and spatial diagram.

#### **3.2.4.3 Third round**

To refine my installation, I added the ticket part and road sign to lead passenger to the installation. Also I added components for interaction, which is to use Kinect to do body projection mapping and hand gestures. I designed two different ways of interaction for “Assimilation, Dissimilation”: body projection mapping and hand gesture.

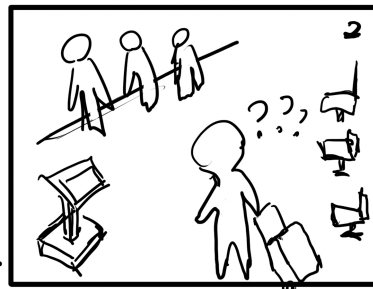
### **Storyboard**

The notes in white area is written from user point of view, the gray area is from developer.



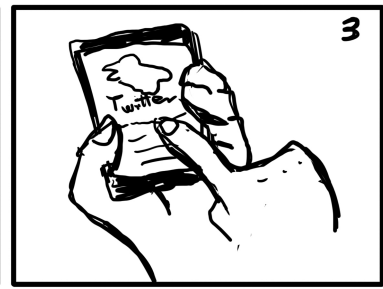
Take a trip to Montreal during break.  
Get ticket from the ticket box. See the sign in the main concourse leading the way to the waiting room, curious about "life journey".

Make a sign next to the ticket box, indicate there's a installation in the waiting room for passengers to play.



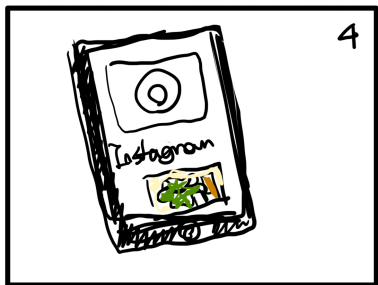
Get attracted to the installation where there're several people standing in front of. "Oh, here's the description of what's going on here." "Recall the transformation since you start your life here."

Set a sign of instruction of the installation.  
Address the question for audience themselves "what was I?" "what am I?" "How I adapt myself into Toronto?"



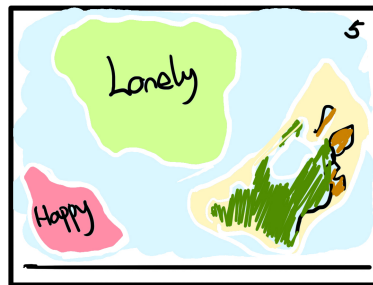
Follow the instruction, categorize myself as "Assimilation"/"Dissimulation" depending on whether I adapt myself to local culture. Sending the story of my process of change via twitter.

User also need to use the # to mark the keywords, then send the story either @A.. or @D..  
VVVV will read the tweets stream at real-time, get the text as strings saving to the resources.



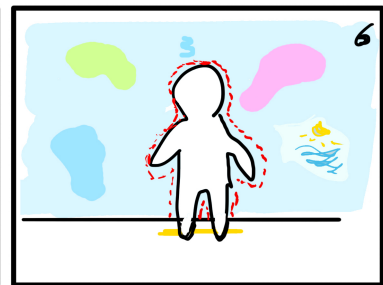
User also need to use the # to mark the keywords, then send the story either @A.. or @D..  
VVVV will read the tweets stream at real-time, get the text as strings saving to the resources.

Using IFTTT, can download user's photos with #A.. or #D.. to the local dropbox folder. Then VVVV could use "dir" function to locate the image resource to local dropbox folder, and make different interactions.



My story appears on the projection, it's pretty fast.  
It is living in the cell-like shape, the keywords I # with are the title of it. The image on the other hand are in a living cell either. All the story cells are floating around.

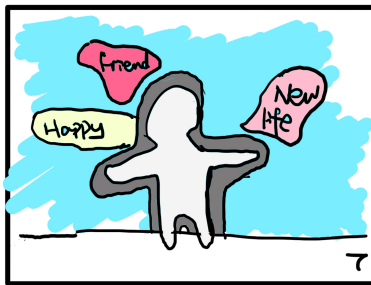
create cell-like shape for later use. When vvvv receives new data from twitter or dropbox, set them as texture, to fill the cell, make the cell visible. Set the rule for it to read the word with in ## to appear as Title.



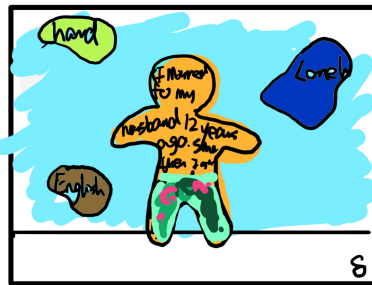
There's a yellow spot, let to stand on it.  
Ha, My body is detected with a contour shown on projection. Also there shows count down to make me stay still for a bit.

Lnk Kinect or webcam to VVVV, it keeps searching where there's participants joining the interaction. Set a boolean rule, whenever it detects body movement, show a count down of "3..2..1" indicates user to stay

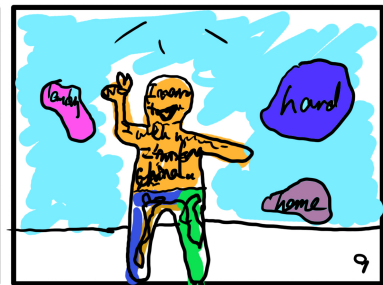




After count down, there's a shape of my body appears on the projection. Seems some story cells with positive keywords are floating towards my body contour, and then disappear. Looks they are merged into "my body".



wow, there's graffiti projected on my body, which shows the full story of others'. It's cool, I'm the one imprinted with other's memory.



Oh there's a camera in front of me, the led is blinking to remind me to look at it, it takes photo of me with my body graffiti.

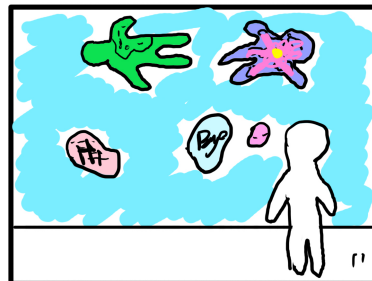
Using the "Freeframe" combining with node "contour" to read the body form from kinect, and translate it into the shape. set environment in 3D, make the "z" value of the surrounding cells lower than the 0, make the xy value getting closer to body, so they can be "merged."

The full text of the story will be set it into texture, filling half of body contour. The other half is picture. The rule will only set to text of @ Assimilation. The tweets stream are dealing separately with different rules. Assimilation is changing position towards body detected.

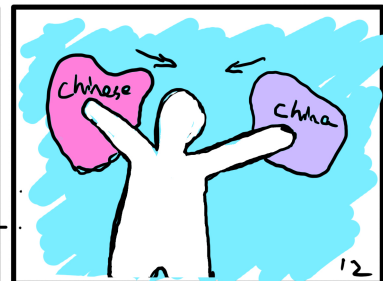
Another computer will be connected to take photos, it reads boolean data from kinect of the other computer with wireless communication (in the same wifi coverage). It will be set to focus on the yellow spot where player suppose to stand.



Here's my photo show's on the projection right beside the main display area. So many funny photos of different poses.



After I walk back a bit, the body graffiti moves away from ground, it starts to float like every other cell.



Here's two story seems related, let me try to combine them together.

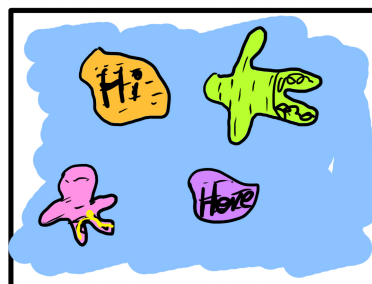
The computer 2 will have an output display either, this only deal with the taking photo part, and makes them the slide show next to the main projection. make the nodes of slideshow and automatic photo taking function.

During the body mapping process, a still body shaped will be formed (set time tulle), after the player leaves the interactive area. The shape filled with updated mixed text start to change position, (giving random XY value when detecting value is 0).

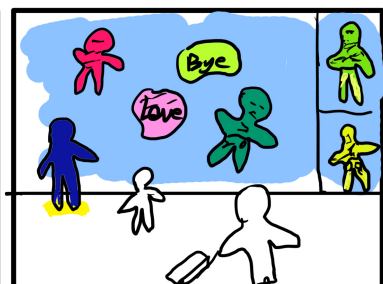
Set another kinect to reads the gesture (palm interaction library), make the cells position value map to the palm position. The gesture interaction will set to cell with "dissimulation" only.



The two cells merged into one. Seems these are two with "dissimulating" from society. Now they formed into one long story.



The whole screen shows the new cells with stories and the combination of new stories - body shape with assimilation, big cell with dissimulation, are all moving around. When I stand at interactive spot, the body shape and assimilation are flying to me.



some old story cells started to disappear, filling with new cells.

After the palm detection found two cells position are matching, VVVV adds these two unfolded story into one texture, pastes into a new big cell.

set the same moving rules to every object (old one, new one), and the combination rules. The body shape follows the "assimilation" rule, while the big cell of dissimulation stories are using palm detection.

Make VVVV counting time, every objects on the screen will only last for 2 hours, then it will be erased from display. While the slideshow part will keep updating and show the latest photo captured.

Figure 21. Third Round Story Board

## Flow chart

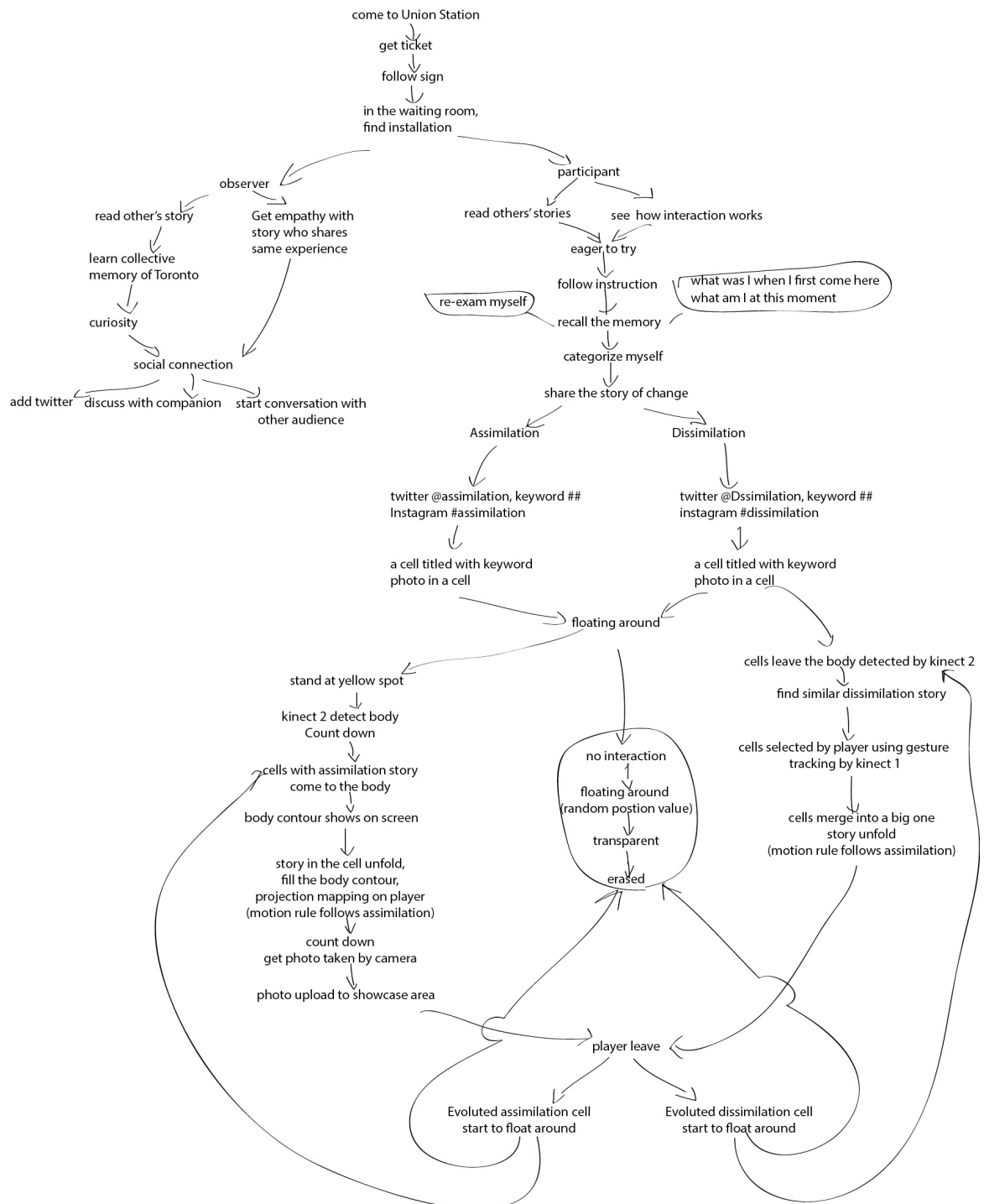


Figure 22. Third Round Flow Chart

## Spatial Diagram

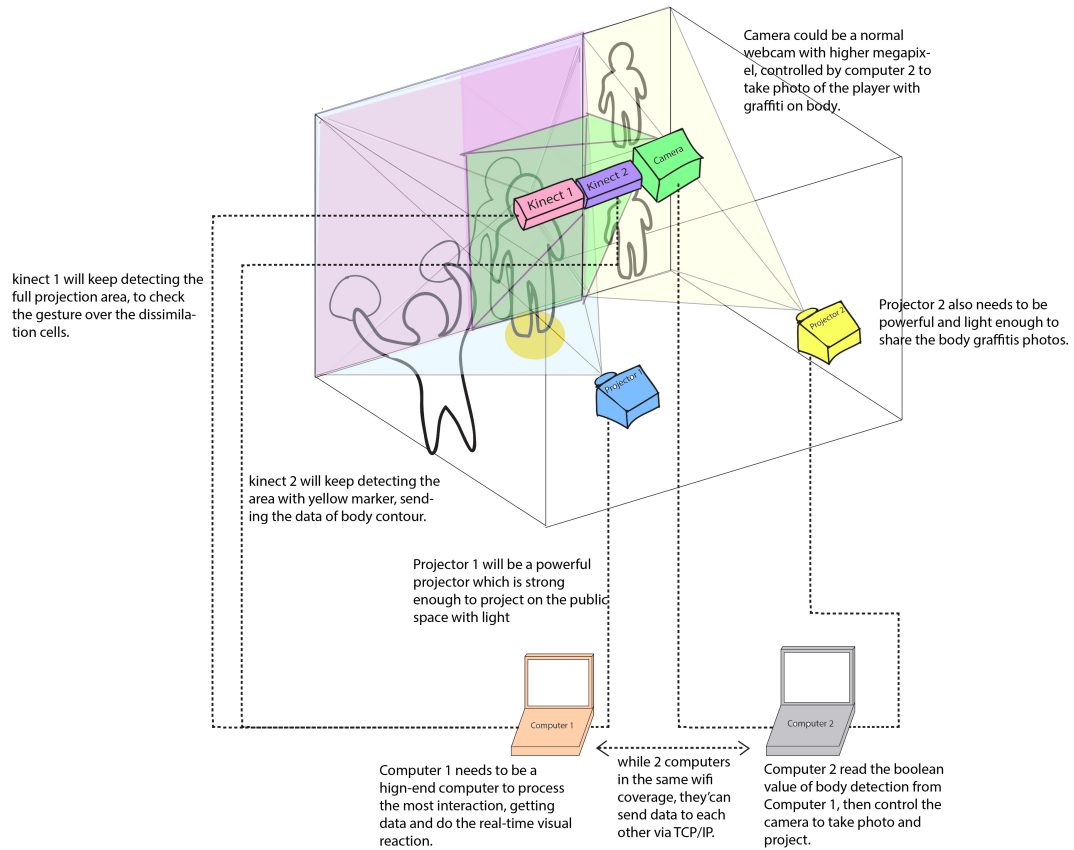


Figure 23. Third Round Spatial Diagram

As an installation in the public space, the measurement and structure of the working system is important. Artwork is not limited to aesthetic understanding, but also it needs to be feasible in an appropriate environment.

## Reflection

Feedback from this round included: the interaction was too complicated both for audience to understand and for me to develop; the display of body graffiti could be embed into the main content rather than be listed by side; the setting for installation could be

more simple. So then I decided to abandon the gesture interaction. Besides this, as I researched, the organic cell-like shaped was hard to make, not mentioning mapping the text and image in it and merging to each other. I would keep the form of body graffiti as my main interaction part, then look for a more practical way to fit it in.

#### 3.2.4.4 Fourth round

To make a practical work, I took another field trip to Union Station. Before I thought I just need a blank wall for display, but in fact every waiting room were separated from each other; most of passengers lined up along the two sides of the hallway waiting, which usually took around 30 minutes. Then I noticed there was a big pillar with two sides that could be seen for the waiting passengers. Then I decided to set my projection here, people waiting in line could be the observers of the memory collecting process, while the passenger walking by could play the installation.



Figure 24. Field Trip for the Fourth Round

## Story board

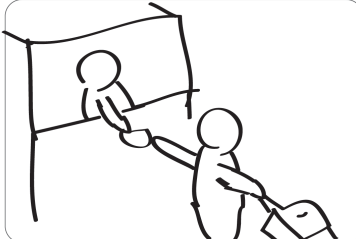
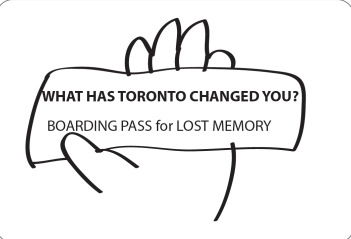
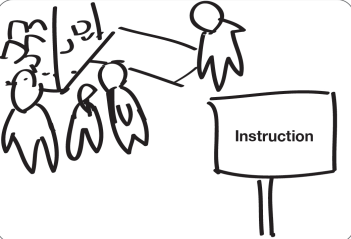
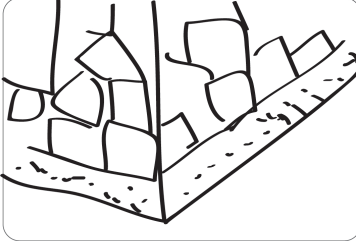


		
<p>An international student took a trip to Montreal during break by Via Rail. He got the ticket from ticket box at Union Station Concourse.</p>	<p>"What has Toronto Changed you? Boarding pass for LOST MEMORY Boarding gate: waiting room" is printed at the back of the train ticket.</p>	<p><b>Instruction</b> "Assimilation, Dissimulation" is the interactive installation set in the waiting room to collect your memory of CHANGE." Have a think of what Toronto has changed you so far. Feel as an outsider of this city, please tweet your story @Dissimulation; as an insider, tweet your story @Assimilation.</p>
<p>Engage the "collecting memory" into the overall experience in Union Station, from the moment the passenger got the ticket.</p>	<p>An installation image along with text is printed at the back of ticket. Bring passenger curiosity and also be a reminder of the location.</p>	
		
<p>There is a train projected on the two sides of the big culum, covered by collage photos, the train is running on the land of tweets, they are the stories of Changed by other passengers.</p>	<p>Besides the memory running on the land, the train itself is actually the collage of pictorial story with human portrait. This is the combination of that person and his own memory.</p>	<p>Take a closer look at the collage photos, the frontest one is a Indian guy, his body is fill with his story, "People in my hometown when you walk into a store people say 'hello' to you and while walking on the street people smile. In North America people kind of keep to themselves, is more individualistic." The background is a picture of his hometown.</p>
<p>Build a 3D model of train. Make the photos in the dropbox as the texture to render the train. Train itself doesn't move, it's tweets moving backwards, make the train look running on land of tweets.</p>	<p>The photo is updated in real-time from dropbox. There will be certain amount of images, old one will disappear. This will release the burden of computer.</p>	

Figure 25-1. Fourth Round Story Board 1

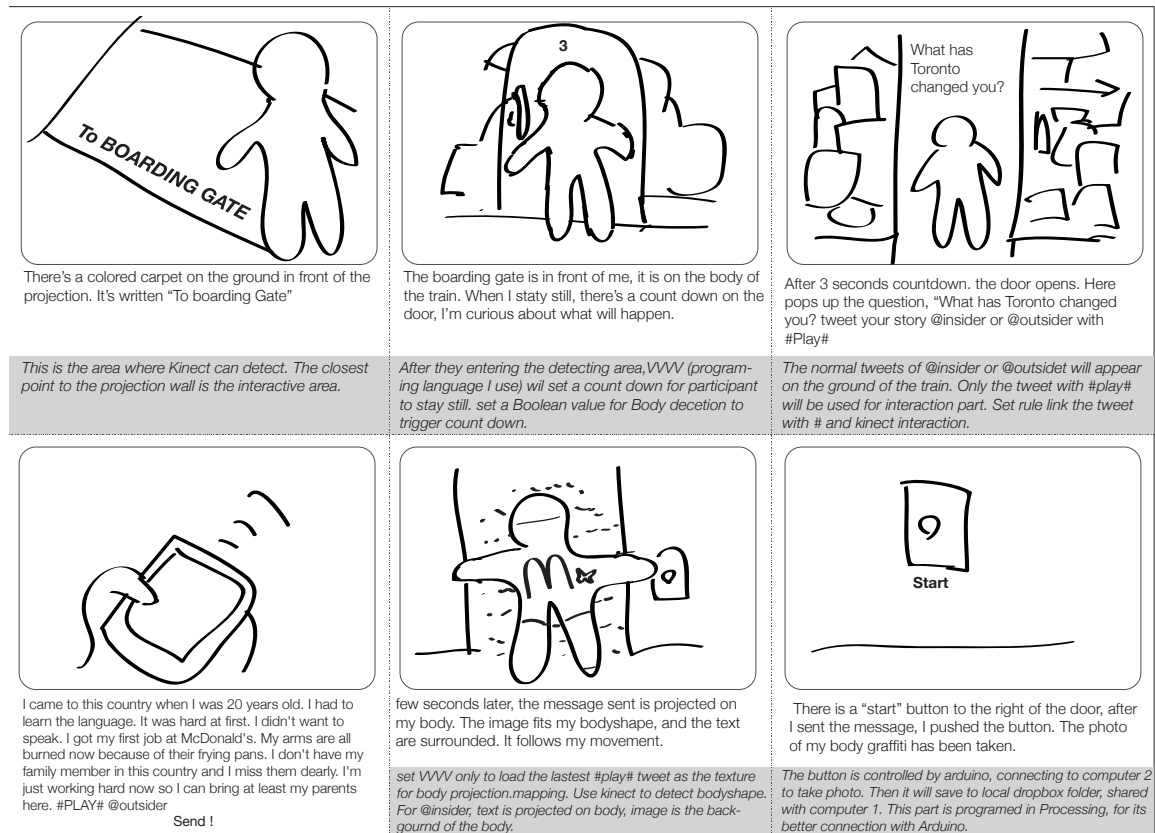


Figure 25-2. Fourth Round Story Board 2

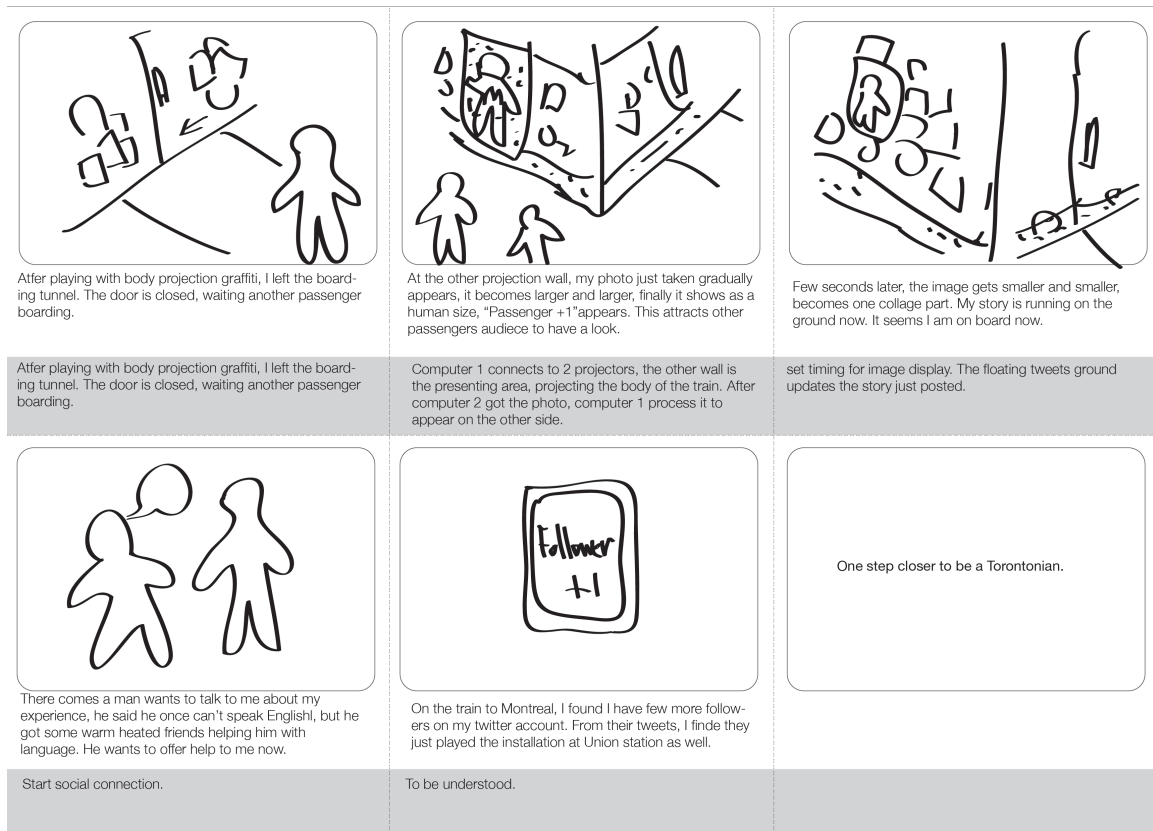


Figure 25-3. Fourth Round Story Board 3

## Flow chart

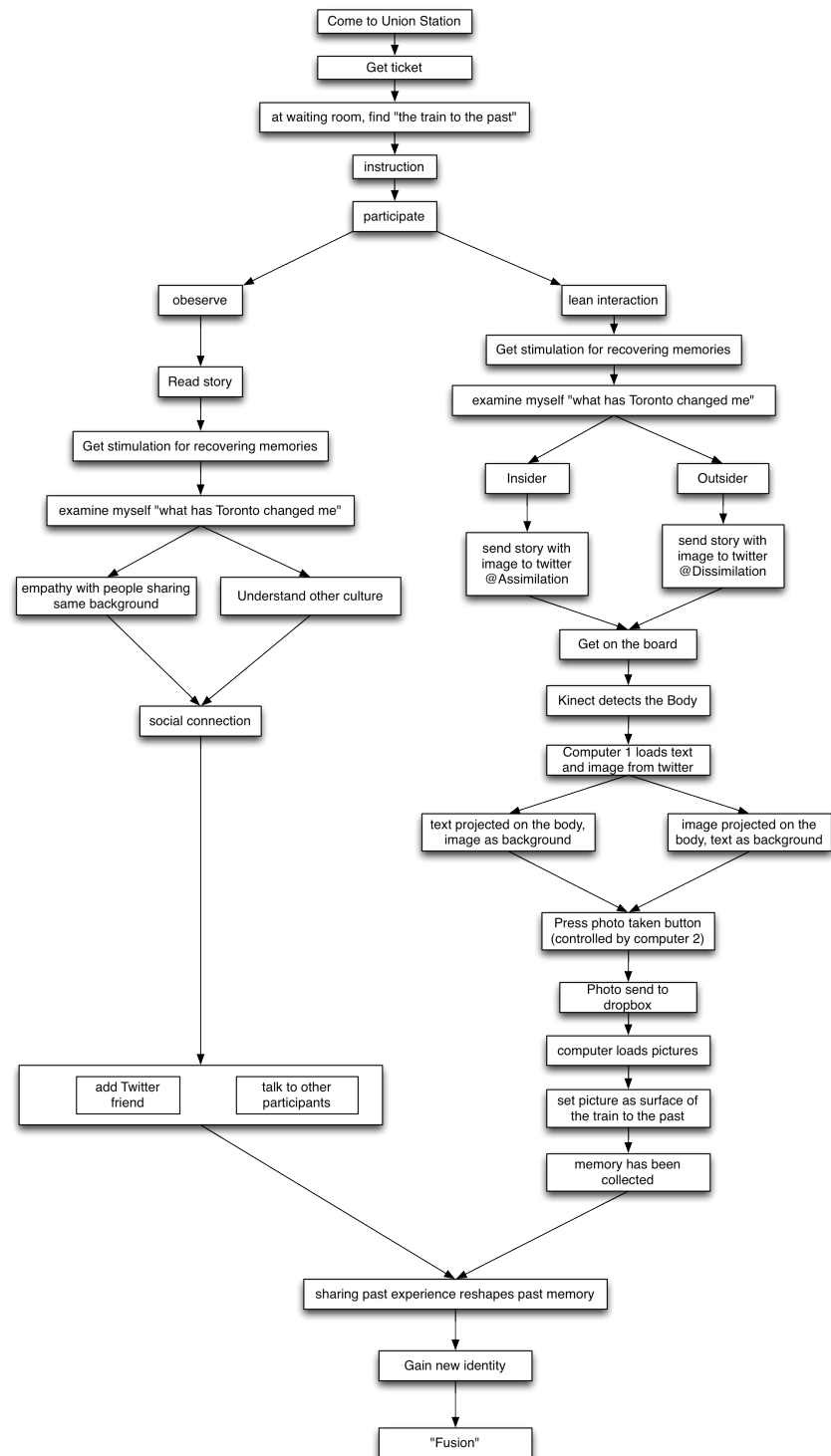


Figure 26. Fourth Round Flow Chart



## Photo Mockup Walkthrough



Figure 27. Mockup Walkthrough

After user purchases the ticket from the ticket box, the back of the train ticket will inform the passengers there is a installation at the waiting room, “What has changed in you, living in Toronto? Boarding pass for LOST MEMORY Boarding Gate: Waiting room”.

While user gets into the waiting room, they will find a standing board with instruction of the installation: “Assimilation, Dissimulation” is the interactive installation to collect your memory of CHANGE. Feeling as an outsider of this city, please tweet your story @Dissimulation; as an insider, tweet your story @Assimilation. The train LOST MEMORY will take you traveling back to our lost memories.

The “LOST MEMORY” is a train covered photo collages of passengers and their stories. The land shows all the related tweeted. There is a carpet in front of the Boarding Gate. When user steps onto the carpet, the Kinect detects the user’s motion. Then train on the projection screen stops in front of the user, and there pops up a countdown. The door of the train opens, showing “What has Toronto changed you? Tweet your story with image @assimilation or @dissimulation with #Play. Then press the red button to your right.”

The user tweets the story and push the button. The Kinect starts to track the body figure then mapping the tweeted story to the body figure. After three seconds, the camera takes a photo of the user automatically. For the “assimilated” people, the story will be projected on to their body, the image they upload will be shown as the background with

the hollow of body figure. For the “dissimilated” user, the text will be projected wrapping their body, while the image will fill the body contour.

On the other side of the pillar, the photo just has been taken will be presented on the train cargo. The previous photos will be squeezed to the side, leaving the center space for the latest one. Through this installation, they can get connected.



Figure 28. Mockup Body Graffiti



## Prototype

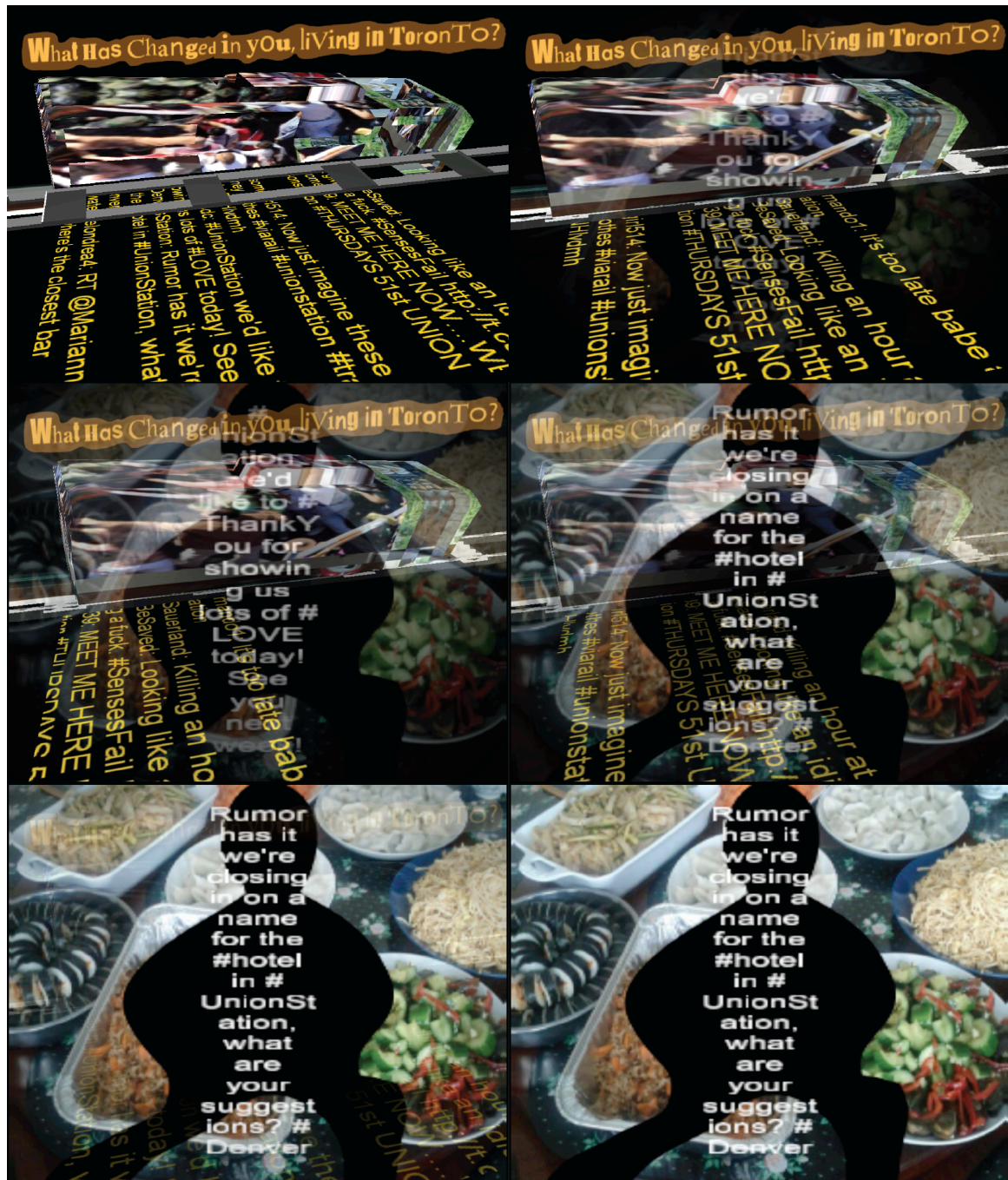


Figure 29. Screen 1 Interaction

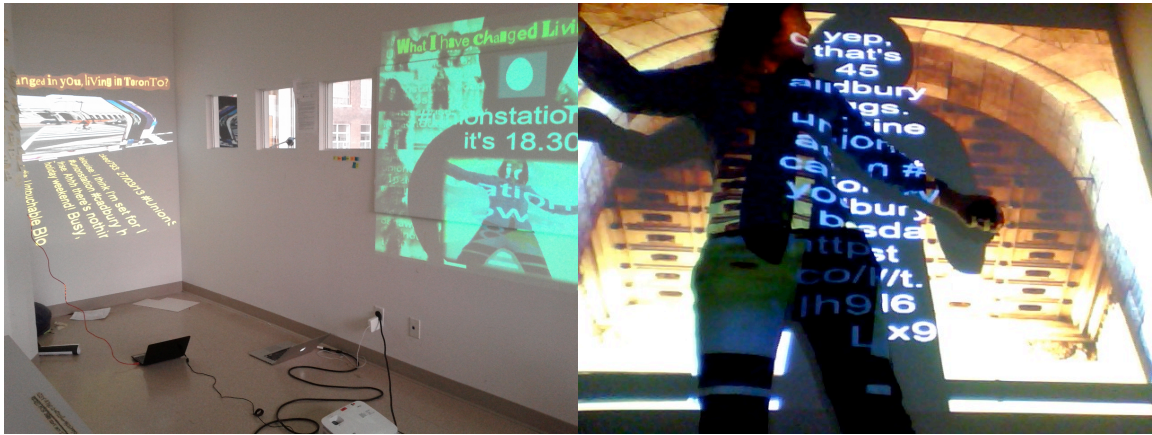


Figure 30. Prototype setup and the user's photo

Following the guideline of the walkthrough, I built a prototype with similar function and aesthetics: the installation has two projection screens, one is the interactive area, the other is the display area. Figure 30 shows the process of how user interacts with the screen: when there is no audience standing nearby the projection screen, the image is a train running covered by the Instagram photos uploaded previously, and the ground showed all the tweets.; when there is a participant getting closer, the image gradually changes to a human figure with the tweeted story and Instagram picture as background. (At that time I was not able to use Kinect, so I draw a human figure then lay the text in the center). The interaction part is using the ultrasonic sensor that detects the distance between user and projection screen.

In front of the projection, there is a button on the floor, that user could step on it and take a photo of user himself. This photo then will be displayed at the other side of the wall (see Figure 31), where other people could view what he has shared.

## Reflection

The feedback I got of this prototype can be concluded as: the interaction process is too complicated for user to understand; the layout is too messy, the audiences are hard to tell the main idea of the project. It is better to make it neater; the preset human figures are meaningless to the user, they would like to have different shapes; taking photo and showing it to public may offend privacy issue.

I then simplified the interface leaving only the human figure filled with story, which is most important idea among all my concepts. To make the interaction easier for user to understand, I solved the Kinect problem, so that the user could interact with the image in real-time. The benefit of this nature interface is that user does not need to learn or read anything. I also abandoned the original idea of taking photo of user himself, instead I created a shadow-like figure following the user's movement, and image of this shadow will be captured with the button.



## Chapter 4: Final Outcome



Figure 31. Final Concept

Figure 31 shows the ideal user scenario of the installation. The installation can be set at waiting room of Union Station as I researched earlier, or it can be set at any pedestrian access to public transit. Firstly, user walks along the gallery space, where he can take a look at other people's story living in this city and learn from that. As he reaches the interactive area, the Kinect starts to detect his movement, creating a shadow imitating user's movement filled with the last user's story. Then the current user sends a story of his own change via either Twitter or Instagram, which will gradually replace the

texture inside the body silhouette. When the user is happy with his image on the projection screen, he could step on the button on the floor to get it captured. Then this image will be transferred to the gallery showing to other passers-by.



Figure 32. Exhibition

The image above shows how I set up the installation in the graduate exhibition. According to the site that has been allocated to me, I use two projectors to create a wide projection screen: half is the interactive area; the other half is the gallery that displays the previous three images that has been captured. I put the Kinect on the right hand side of the interactive area, and I marked standing area with black square. Inside the square, I



put the button with a note “press with tenderness”. I stuck the instruction on the floor, “what has changed in you, living in Toronto? Share your story of change on Twitter or Instagram with #unionstation”. At the corner of the installation, there is also a monitor has slideshow of all the captured images running.

Through the three days Exhibition I found that the instruction on the floor was neglected by most people, because the site is too dark for them to read. They did not understand how installation works with out instruction. Learning from that, I would put the instruction onto the projection screen next time. The note for the button was not clear enough too, a lot of users bend down to press with their finger instead of using foot, so I would write “step on the button” instead.

Overall the exhibition is successful, the projectors however, have its own limitations. I have to put them far away from wall to project large images, which causes inconvenience for the audiences passing by. The user has to stand in the certain area that can be detected by the Kinect and not disturb the projection at the same time, which limits his action. Therefore, the short throw projector is the better choice. They could be mounted on the ceiling that will not block the way, and they could project large image in a much lower distance.

Figure 33 is the collection of the images that has been taken during the three days exhibition. The participants would love to play with the interactive shadow, and get their crazy figure captured.



Figure 33. The images captured during exhibition

## Spatial Diagram

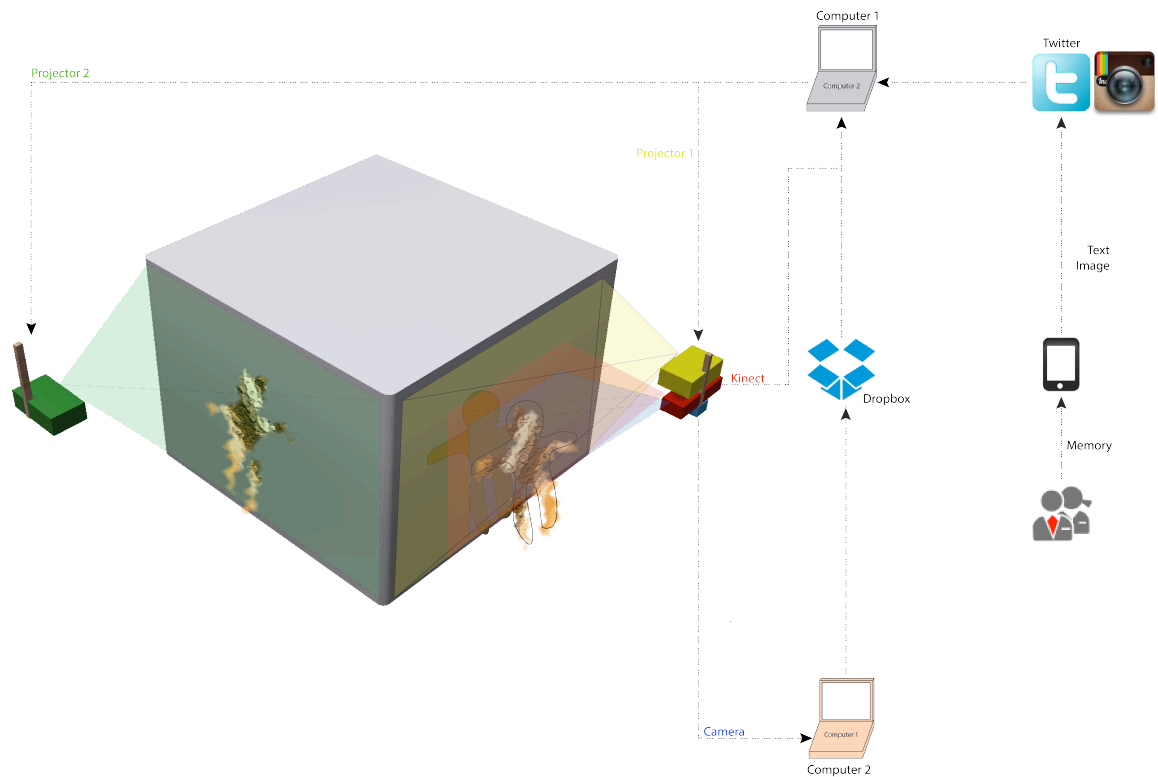


Figure 34. Spatial Diagram

User sends their stories on Twitter or Instagram with #Unionstation. Computer 1 controls two displays: Projector 1 and Projector 2. Projector 1 covers the main interactive area while Projector 2 extends the display of Projector 1 and it covers the presenting area. All the tweets will be set as the floating ground under the memory train. While Kinect detects body movement, it will start to draw the shadow, and make the texture move follow the body. While user finds he satisfies with the figure, he may push button, which is connected to computer 2. Then Computer 2 saves the photo to dropbox, which Computer 1 can also read from. After processing, Computer 1 will show this photo on Projector 2.

## **Chapter 5: Discussion and Future direction**

### **5.1 Discussion**

#### *5.1.1 Artist ? Designer?*

It is the very first time when making an art piece that I put myself into a position of the artist. It is a big challenge for me to convert my thinking from a designer who is used to solving problems to start to think in a more autonomous, abstract and innovative way. Identifying my own position between being an artist and a designer became a research question in itself.

At first I really felt lost when I started to investigate the project. Industrial design has a very effective system to develop a new product: we start by doing market research, find competitive products and benchmark to find out what is the drawback of them, then we set objectives to design a better product. At first I used this solution for finding what is missing at Union Station and I identified the need for a service or product to make passengers' waiting experience more convenient. The first idea that I arrived at was to create a mobile game since as I observed, most of the passengers play on their phones during the waiting time. Started from there I studied the form and technology for a game application to optimize the waiting experience from a functional point of view. From the feedback of my professors, this hardly reaches the requirement of a MFA degree.

Based on this feedback, I choose to investigate my project from a historical and cultural point of view. This is what most artists' do: to use art to introduce culture; to re-render history from a different angle. First I looked into Canadian, more specifically the

Toronto history, to see how this city had been formed. Some pieces of the history related to immigrants experience attracted me, as it provided me a strong bondage to my own experience. I then dig into the issues related to immigrants integration status and self-identity, as I have experience a similar kind of confusion: why do I miss my home town so much, while I have been away for almost 10 years; why did Australia make me feel excluded; why do I feel more comfortable to live in Toronto? Researching on immigrants culture and identity provided me some answers.

After deciding the direction of my project, I needed to find the way to combine the perspectives of being an artist and a designer. Overall I think I have found my own position between the position of an artist and a designer, where I define the project's rational and direction from an artist' point of view and finalize the concept, using the tools and methods from the discipline of interaction design.

#### *5.2.2 Input and privacy concern*

For now my installation is using Twitter and Instagram to enable participants to share their stories and images. Although these platforms are quite popular now, they don't provide access to everybody, like elders, children, and different culture communities. For example, myself, or any other Chinese use Weibo (Chinese Twitter) or QQ as a social platform communicating with each other, as opposed to using twitter. For sure, people from other countries have their own preferable social media.

To participate in the "Assimilation, Dissimilation" installation, the audience needs to have a Twitter account as a precondition, which may limit a large number of my ideal

users - immigrants who have identity problem. Therefore, Twitter will only be used as a temporary input choice. If this installation can run at Union Station for a long term, another embedded input function needs to be added to provide a wider access to include more audiences.

As a social platform, the system allows user to share their story with others as long as it is related to the main topic. For this experimental stage now, I am not obligated to define the safety rules for languages. According to twitter policy and rules, it has its own comprehensive requirement for the use of language. All the harmful, spam, violence post will be filtered. For long-term usage, I would have to work with the Canadian cultural department to set the specific rules for language.

## 5.2 Future direction



Figure 35. Ideal Site for Future Installation

During my last field trip I found an interesting phenomenon in the waiting room. The hall in the waiting area is spacious, but whenever trains arrive, passengers all crowd along the two sides, leaving a large empty area in the middle. As I observed many times, the traffic flow of people is not busy and usually the tunnel is quite empty. In a future version of the platform, I would use this empty space, to broaden the scale of my installation. Still passengers can share their memories and get body graffiti at the boarding gate, but the collected memory can be projected onto this large empty tunnel. That would require several projectors mounted side by side to present the consecutive memory gallery. Therefore, the installation could take the metaphoric format of a memory tunnel, enbales audiences to step into the past of collective memories.

The next topic addresses the future development and presents a refinement of the interaction. Currently, there is only one user who can participate in the body graffiti interaction, due to the technical limitations of Kinect, which can only track 1-2 players' body motions at the same time. As a social platform in a public space, the way to get more people engaged in the content is to allow access to more audiences to play.

## Chapter 6: Conclusion

This paper started with a background research on Multiculturalism in Canada. While Canada projects a vision of a cultural mosaic in which different cultural threads are interwoven together like a fabric, in many situations, New Canadians still live in culturally defined social circles, which are rather isolated from other ethnic circles and the mainstream society.

Starting from this realization, I defined the notions of “assimilation” and “dissimilation” as personal experience indicators for how immigrants or their descendants feel as an insider or outsider of the mainstream society. My project objective is to create a social platform in which people from different cultural backgrounds could express their experiences on assimilation and/or dissimulation. To make this general idea more specific, I refined the research question to “How to evoke people from different backgrounds to share their stories in Union Station and how to provide connections through this platform?”

I started to investigate issues related to social integration process of a multicultural society, refine the definition of “assimilation, dissimulation”, and understand that the ideal integration mode is “fusion”.

Union Station is a geological starting point for many immigrants, where they begin their new lives. This new social platform that I propose will facilitate an open debate on collective memories by asking the passengers and waiting audiences “what has



changed in you, living in Toronto?” where people can reflect upon their experiences on their perception of assimilation or dissimilation.

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## Appendix

### Appendix A: Graphic Thinking of The Project

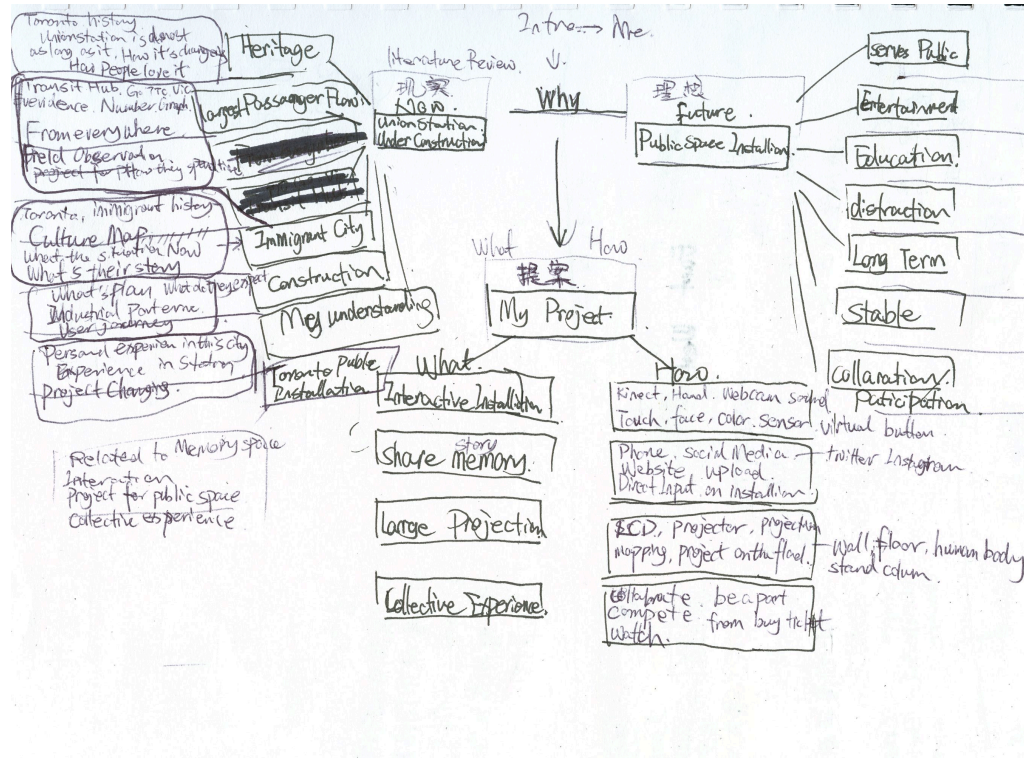


Figure 36. Graphic Thinking of The Project

I am not a logical thinker, sometimes I find it is really hard to organize my thoughts and put them into right order. Earlier when I prepared my thesis outline for writing, the feedback from professor is the structure lacks logic. Then I started to re-examine myself, found that, it is my personality's problem. I'm a emotional thinker, and always judge things on my intuition. To get the thoughts into order, I did some reading on the logical thinking guide book. It recommends the graphic thinking method to help with structure ideas. Then I use that method drew this diagram, to find out what is situation now, what is my objective for installation, and the possible solution for project itself. Use this diagram, I got a better thesis outline to work with, which is the foundation of the paper.





## Appendix C: Inspiration



Figure 38. Inspirations

I do not have any experience on creating art piece. At first I found it is hard to get inspiration, according to my advisor's suggestion, I started to look at other artists's work to inspired. The sketch above is the notes I took when I did research from online resources and book. I marked them in different color, according to either it inspired me on content, on form or interaction. From then I gradually realized what kind of interaction platform I could build.



## Appendix D: Concept Sketches

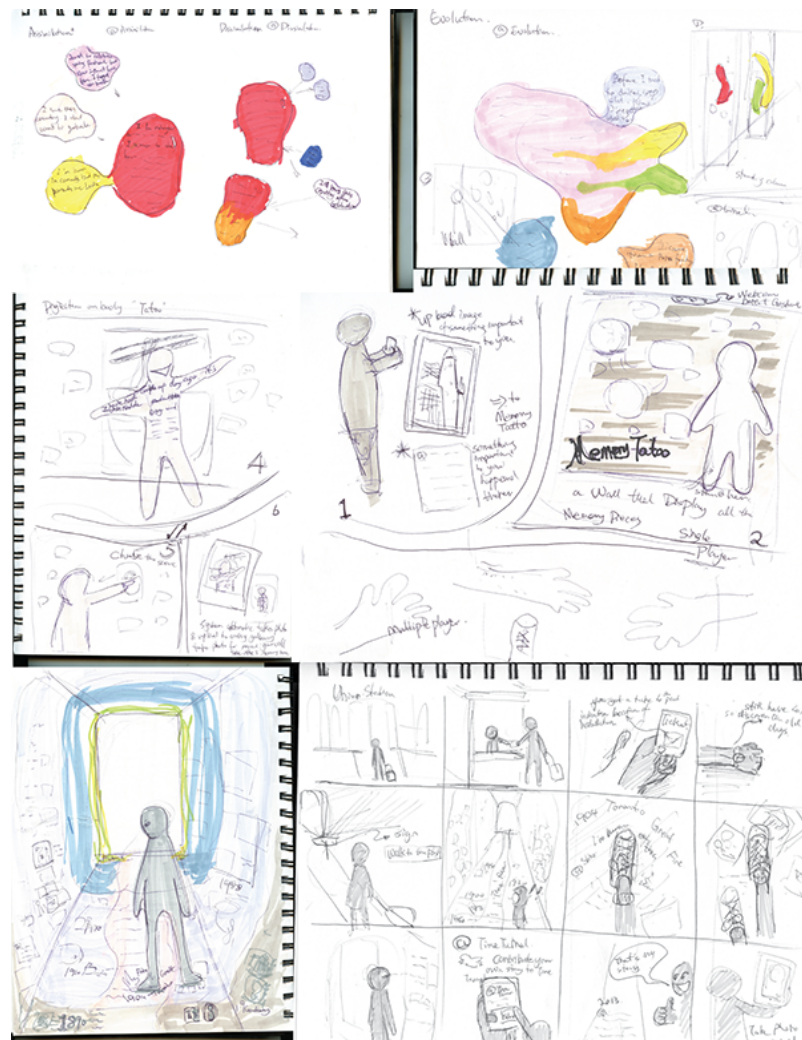


Figure 39. Concept Sketch

After the brainstorming and research on other's work, I formed three concept based on the same ideation, using collective memory to connect people from different backgrounds:

1. “Assimilation, Dissimilation, Evolution”, using the floating cell with organic shape to wrap the message got from audience. The assimilation cell will merge to each other over time, the dissimulation cell will bump off when they meet other cells. The process presents the evolution of the cells and also the stories has been formed in to a new one.

2. “Body Tattoo”. It can project the messages on to the user’s body, then use a slide show to present user and their story.
3. “Time Tunnel” creates a immersive environment for passengers to share and observe other’s memory. The stories are organized in chronological order. To trigger the people to recover their own memory during same time with other people.

After forming these three concepts, my advisor suggests me to somehow combine them together, since they all have their own advantages. Then based on these three concepts, I get a new idea (see Figure 36) is that put the story in the cell, when user get closer to it, the cell starts to merge onto human body, acting like a body graffiti. After user left that spot, the human figure will leave on the wall with stories inside. This new formed body shaped cell can also be interacted with audience.

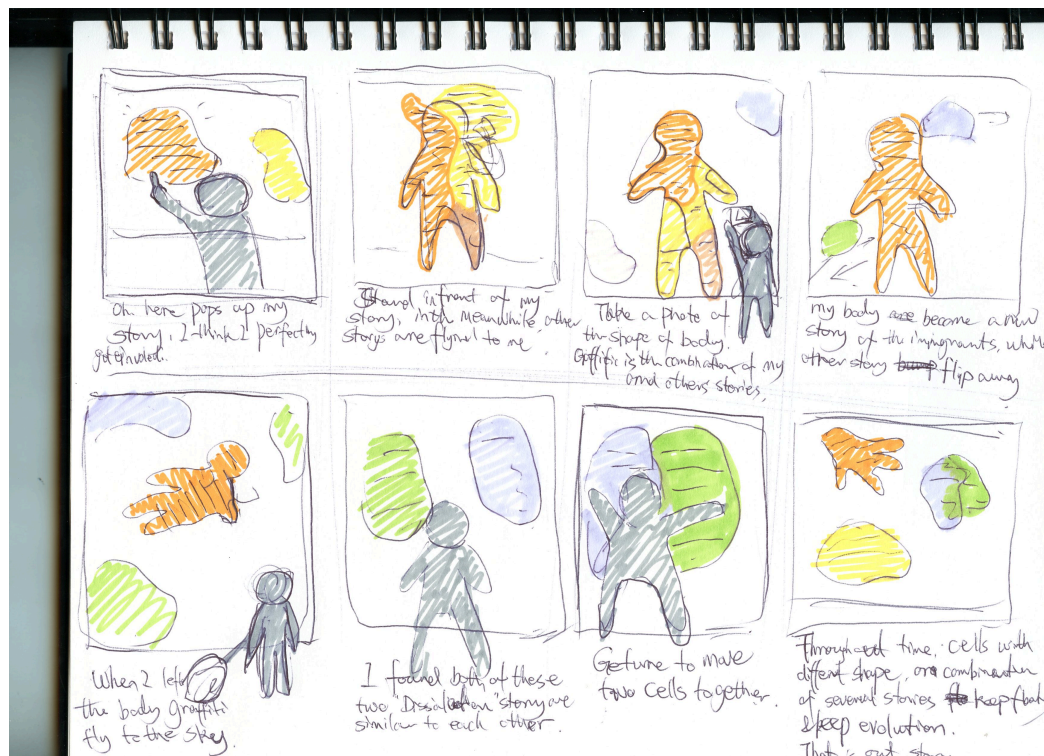
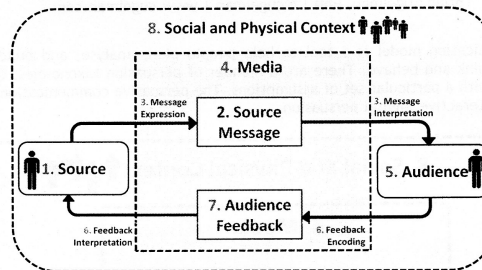


Figure 40. Rough Story Board

## Appendix E: Persuasive Communication Model

### Persuasive Design Cheat Sheet (version 2.1)



#### 1. Source (Credibility)

- Expertise
- Trustworthiness
- Visual appeal

#### 2. Source Message

- Message (proposition/request)
- Motivation
- Capacity
- Trust
- CTA

#### 3. Message Expression & Interpretation

- Simplification
- Structuring ideas
- Structuring language
- Structuring space
- Structuring time

#### 4. Media

- Single-media
- Multi-media

#### 5. Audience

- Goal setting
- Decision balance - Pros/Cons
- Intrinsic motivation - Emotion/Intellect/Trust
- Positioning in the mind
- Ability/Skills
- Efficacy

#### 6. Feedback Expression & Interpretation

- Automatic data capture
- Manual data capture
- Research-based feedback

#### 7. Audience Feedback

- Building a relationship over time
- Tailoring
- Personalization
- Targeting segments
- Personal action plan
- Provide feedback on performance
- Commitment and consistency
- Reciprocation (Social sharing)
- Reinforcement - Punishment / Reward
- Reminders, prompts, attention & memory
- Engaging at the right time (kairos)

#### 8. Social and Physical Context

- Social curiosity
- Concern for others
- Social support
- Social norms / learning
- Private & public
- Social structures
- Working with or against others
- Ethics & morality
- Environmental context & resource availability
- Social diffusion

Motivated

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Figure 41. Persuasive Communication Model

I used this communication model to design the interaction.

## Appendix F: Annotated Bibliography

### 1. How immigrants adapt to Canadian Multiculturalism

#### *A fair country*

Saul makes a strong case that Canadian culture owes more to its native roots than to the European settlers and their Judeo-Christian belief system (Saul 2009). He even says the idea of multiculturalism was alive and well centuries ago among the First Nations, where communities with different languages and traditions co-operated with one another and lived side by side (Saul 2009).

This is the first book I read about the Canadian multiculturalism, the other 3 parts are mainly talking about politics and government issues, not in the scope of my discussion. This give a vivid description on the “culture mosaic”.

#### *Union Station-Love, Madness, Sex and Survival on The Street of The new Toronto*

Toronto is the city that Canadians love to hate. But they don’t know this city, says Joe Fiorito (2007). Even local residents cannot tell what this city is, because it keeps changing everyday. It’s not ended yet, it’s still in progress. Union Station is Fiorito’s tour of how he adapted to this city, he depicts from his neighborhood to the suburban area where new immigrants settle as well as the shelters of homeless people. Fiorito’s Toronto exists on the street where diverse cultures jostle side by side.

This book etches a pictures of Toronto that kicks out all the stereotypes and misperceptions, and shows us a vibrant city with a full share of joy and misfortune, his subtle and thorough inspection of life in the city delivers the vivid, tender stories of the immigrants, the new comer, and the people we never pay attention to.

I agree with Fiorito when he describes Toronto in the end (Fiorito 2007) “Toronto will not be a fine town when it is finished. It is a fine town because it is unfinished.” The engrossing part of this city is that it never stop changing, the generations of immigrants keep pouring the new blood into the city vein. My installation will take a chance to look at ordinary people’s life, to listen to their story, to visualize the memory of those “nobodies” never shared with others.

#### *Toronto: A City Becoming*

These provocative essays debate the key issues facing Toronto today, including globalization of the economy, planning policies, environmental responsibility, ethnic diversity, land development, public transportation, and politics & justice .

As a non-Torontonian, it's bit hard for me to build an installation based on local culture and needs. It is necessary for me to know this city better. This book contains some forward-looking pieces with archival photos of Toronto, giving me glimpse of what has happened, what is going on, and what is to come.

### *Dirty Laundry*

In the video, Roger Kwong is on a trip crossing Canada. The train he takes is running on the tracks which originally set in the 19th century by immigrant Chinese labors, his great-grandfather included. While he's reading on the train, the documents of this history contain surprising accusations. These, combined with the discovery of an inexplicable photograph, and encounters with a spirited, tree-planting dyke and a hunky Chinese attendant, raise unsettling questions about Roger's great-grandfather and Roger's own connection to the past.

I like this kind of quasi-documentary form combined fiction and documentary, dramatic vignettes and real interviews together, it shows the lifelike history of the discover the past of Chinese immigrants. The train in this movie has metaphor, that it connects Roger and his great-grandfather together, the train leads him to the old times. There's a scene is so impressive to me that Roger is standing naked in front of some kind of projection, the poem writing about the history is projected on his chest. It's like the memory tattoo that imprint the experience that his great-grand father on his body, this represents inherit and lineage.

### *Getting There: Producing Photostories with Immigrant Women. Between the Lines*

*Getting There* is telling the story of Gloria and Aurora who are immigrant women. The series of photos render the life of how they survive in and adapt to a new culture. It brought up the social obstacles: the barrier of language, the lack of decent work. They are the typical ones that we can see everywhere. It also talk about how they struggling with the obstacles and how they broke down those difficulties.

The book come up with a dramatic and visual reminder of the difficulties society places in our paths. In the end of the book, it provide the methodology used in the production of the stories starts from the issues of everyday life and encourages people to talk to each other about their experiences. The basic

principle is simple: that people learn and take action best when they explore common issues together. That's the same intention of my thesis, let people talk aloud about their experience, their changes. To work out the social obstacles collectively.

*The Chinese in Toronto from 1878: From Outside to Inside the Circle*

The modest beginnings of the Chinese in Toronto and the development of Chinatown is largely due to the completion of the CPR in 1885. No longer requiring the services of the Chinese labourers, a hostile British Columbia sent them eastward in search of employment and a more welcoming place (Arlene 2011). Today, Chinese has become the second-largest minority in the city. In this book, it tells their stories through historical evidences, and narratives from old-timers and newcomers. Now the Chinese in Toronto are no longer outside societies circle. Their lives makes a vibrant part of the diverse mosaic.

*The Underground Railroad: Next Stop, Toronto!*

This is a thoroughly illustrated book, offering plenty of supportive points get readers to lean about Black history in Canada. It not only discovers the story of how black people courageously made the trip north to Canada for freedom, but also looks into what happened to them after they arrived. This book brings up the consciousness of our own past we've been neglected.

I'd like to dig into immigrants' stories of how they come here originally and how they adjusted themselves to the new society, in order to find the common part of process of changing, and the trigger for adaption. This will help me to build the platform that can cross the culture, bring up the collective memory of this city.

## 2. Collective experience

*Large displays in urban life-from exhibition halls to media facades.*

Lately there's an increasing widespread presence of large interactive displays in public space, like museums, libraries, public plazas, the architecture facades, etc.. Studies show the function of large interactive display installations includes educating, entertaining, and providing evocative experiences. This paper focuses on how to design large interactive display installations that promote engaging experiences of the audience that go beyond playful interaction, and how to analyze their impact.

I found in this paper the part "Designing for Engaging Experiences" are useful and quite relevant to my project, from the aspect of collective experience. Design large interactive installations that extend



people's attention past the initial 'wow factor' and direct their interest toward the presented information. Also, since public displays are located in environments where passers-by encounter them in a serendipitous way the support of 'pass-by/walk-up-and-use' interaction is an important factor(Hinrichs 2011). A visually aesthetic, metaphoric, and/or artistic representation of content can evoke curiosity and convey meaning while leaving room for open interpretation and discussions (Hinrichs 2008). The form factor of large displays invites for simultaneous interaction of multiple people that do not necessarily know each other. So the interactive large display can also get audience social experience.

### *Body Movies*

*Body Movies* transforms public square into a large interactive installation. Large numbers of photos, earlier taken on the streets, are shown inside the projected shadows of the passers-by. The scale of the silhouettes can change depending on the distance of the player positions himself in front of the light resource. Samuel van Hoogstraten's engraving "The Shadow Dance" (Rotterdam, 1675) is the main source of inspiration for this work.

*Body Movies*, which evokes a sense of intimacy and complicity. People on the ground play with the shadow, and the changing of shadow scale can create interesting interaction with other players. It triggers memory of childhood, we play with other's shadows, to step on it, to act some weird pose. This installation is successfully get audience play together, create social connection between strangers.



## Appendix G: Walkthrough of “Assimilation, Dissimilation”



Figure 42-1. Project walkthrough

“Assimilation, Dissimilation” asks one question to all the audiences, “What has changed in you, living in Toronto?”



Figure 42-2. Project walkthrough

User could answer the question with sending a photo present his/her change using instagram with #unionstation. The image I sent was the food I often eat at my hometown, but after I come to Toronto, I can not have them anymore, and I have to change my diet to western style.

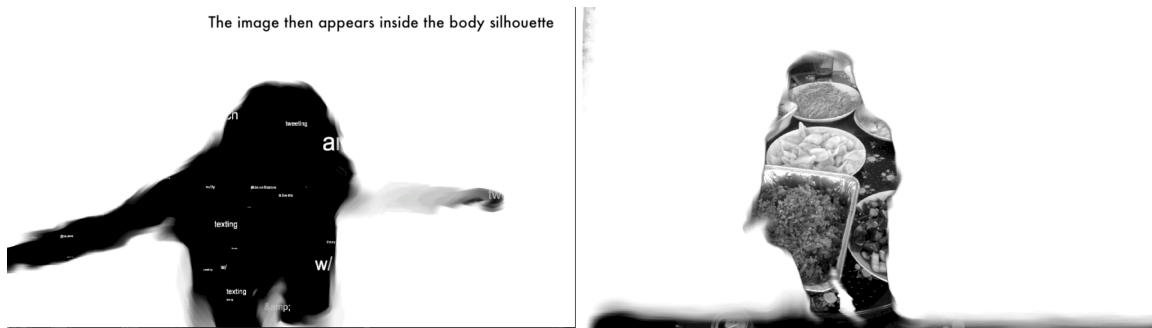


Figure 42-3. Project walkthrough

The picture then appears inside the body silhouette.



Figure 42-4. Project walkthrough

User could play with this shadow, and step on the button on the floor to get that image captured, which will be displayed at the other side of the projection screen.

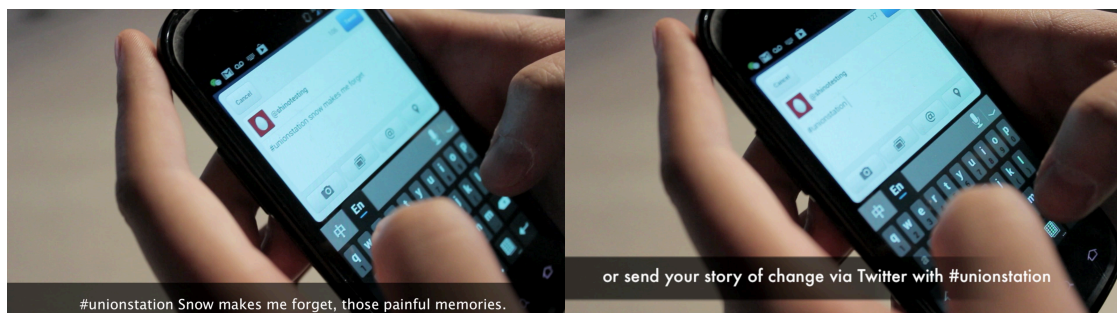


Figure 42-5. Project walkthrough

User could also choose to share his/her story via Twitter with #unionstation.

