Concordia University: Dept. Of Geography, Planning & Environment.

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Masters In Science Thesis of Tarrandath Maharaj

Title:

Continuing Conversations On The Socio-Pedagogical Role of Food Literacy & Food Kinship: An On-Going Project

CONCORDIA UNIVERSITY
School of Graduate Studies

This is to certify that the thesis prepared

By: Tarrandath (Tarran) Maharaj

Entitled: *Continuing Conversations On The Socio-Pedagogical Role Of Food Literacy & Food Kinship: An On-Going Project* and submitted in fulfillment of the requirements for the degree of *Masters In Science, Dept. of Geography, Planning & Environment* complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Thesis Abstract:

"*Gandhi had offered a talisman, to recall the face of the poorest, most defenseless person, and ask whether what we are attempting does help touch her life with dignity and worth. If it does, he suggested it must be the right thing to do – in policy and in practice*" (excerpt from Rampal & Mander, 2013)

This thesis is about introducing *food kinship* and redefining *food literacy* as per my approach. My goal in doing so is to support and give a voice to my fellow co-citizens, who regardless of poverty issues, wish to change their dietary habits and lifestyle, with *dignity and worth*. Using *food literacy* and *food kinship* as core principles, I apply a humanistic, holistic approach with an emphasis on self-reflective and experiential learning, offering empowerment to those who are less fortunate.

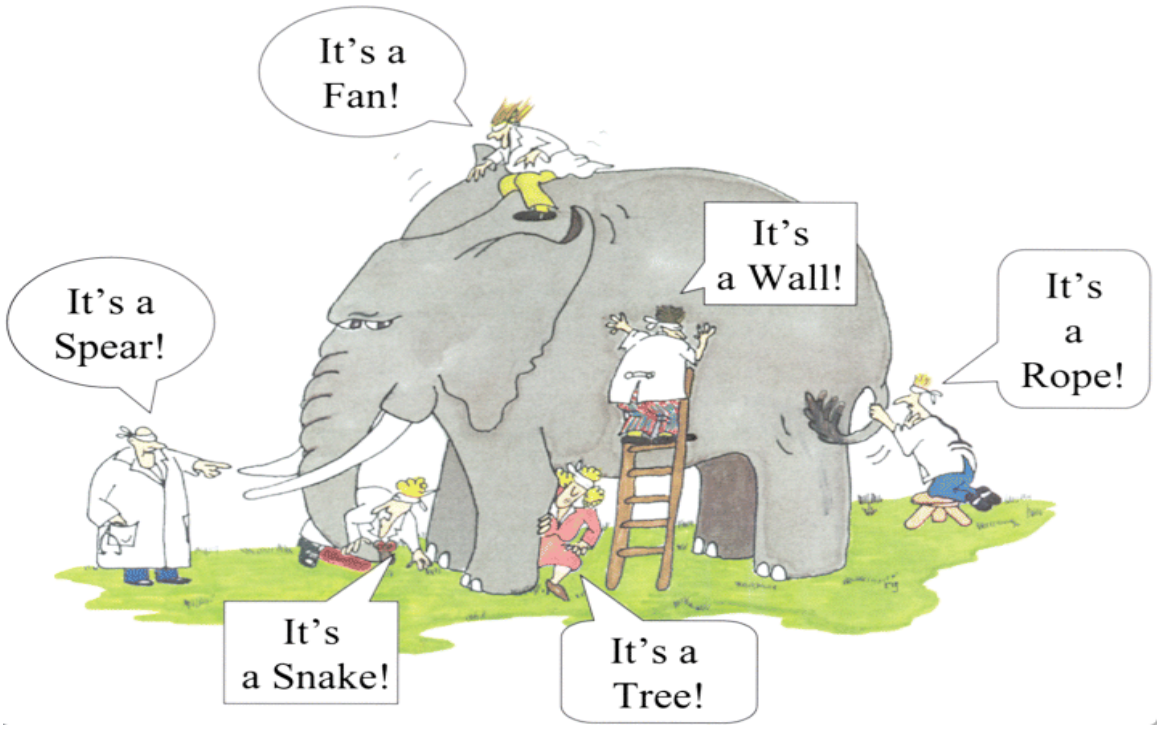
Poverty, like hunger, has held a significant and pronounced place in the industrialized society and will continue to do so. In this thesis, I will prove that if *food literacy* is introduced to those within this group, hunger can be **reduced**, not eliminated. Due to the inter-disciplinary approach to food systems within this thesis, I can confirm that there is no shortage of food on planet earth, just a lack of *food literacy*.

Based on my observations at food themed conferences where I have presented, and numerous food related articles that I have read, I must conclude that the targeted audiences are society's middle to upper class; those in the lower class, which contains many sub categories are socially excluded, rendering them even more vulnerable, invisible and less respected.

Another key food systems ingredient that I observed was quite obliterated was the situation of Canada's discoloured, migrant food system work force. There is a huge emphasis on process of procuring *food safety*, *food security*, and *sustainable food* for the general Canadian population; this is even greater amongst those who push for organic food. Unfortunately, there seems to be a huge disconnect in-between those who provide the labour, and the consumers. Hence, I have dedicated an entire chapter to bringing about awareness to this cause.

Additionally, I cannot justifiably condemn the consumption of processed industrial foods, nor can I promote the consumption of organic food, primarily because I do not believe that there is any such thing as organic food. I do, however, believe that it is possible to have naturally and humanely raised or grown food.

On a personal note, and in writing as objectively as I can, I am <u>*not*</u> against mass–produced, pre-packaged industrial foods'. These types foods are at the core of survival for my co-global citizens in rather unfortunate situations, such as civil wars, citizen and population displacement, and globalized famine. But Montreal is not in a war zone, and as a first ranked, first nation state, "we" at least owe proper nutrition to our future generation.



Ancient Elephant Parable: "*Respect Each Others Many Valid Perspectives*" http://profsoftware.com/bif/2016/05/06/ancient-elephant-parable-respect-each-others-many-valid-perspectives-2/

In considering the elephant to be the embodiment of food systems with many sub-topics, so too, depending on the individual sub-statuses such as socio-economic, geo-spatial, identity, sex / gender, age, level of education, etc., s/he will have a different perception of the same topic. Hence, to display how some of these elements are inter-related, is the reasoning why I have chosen this manuscript style thesis.

"*food literacy will **not** eradicate or eliminate hunger – but it will highly contribute to severely reducing it, whilst food kinship will provide the base for creating human support systems*"

Tarran Maharaj, reflecting on his programs.

"I cannot change the world, but I can change me…and I am a part of the universe" Tarran Maharaj

I dedicate this thesis to my dearly beloved and departed Dad, who taught me to be resilient, to be humble, and to always appreciate what I have. To keep striving for the better, but to always keep my ego in-check, and to never cause pain or suffering to another – human or animal. Wish you were here Dad…

To my dear friend Marie-Jeanne, who also now resides with the celestial beings, but with whom we shared so many food kinship moments – thank-you.

To NS78 – thank-you.

And to Avi – my precious four-legged inter-specie, ah, the joys!

<u>Thank-You:</u>

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Dept. of Geography, Planning & Environment, Concordia University, Montreal QC.

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Dept. of English, University of Goa, India.

Personal Reflection:

As in the series *Cutthroat Kitchen* hosted by Alton Brown on the food network, so to in the world of academics, it is pretty much a "cutthroat" environment. On the show, there are no lack of sabotages, many times resulting in severe challenges via numerous loops and hurdles in the process of preparing a simple meal. In my case, it is writing a thesis.

At the end of each meal execution, the contestants are judged by a fellow chef who has no knowledge of what sabotages and / or challenges the contestants endured, and really do not care. The judge, like the thesis committee, is only concerned with three mandated requirements: (1) does the dish *look* like what it is supposed to be, (2) does it *taste* like what it is supposed to be, (3) does it *remind* the judge of what it is suppose to be. These three requirements set the stage as a basic *general* guideline, (like a stereotypical, traditional thesis).

But, sometimes the lists of ingredients are simply bizarre, like having to use sauerkraut or pickles in a dessert. It is here that, in addition to the sabotages bestowed upon the chefs, the chefs simply cannot adhere to the binary coded box of coded recipes, and must therefore splurge into their creative side, infusing diverse ingredients, and / or experimenting with different cooking methodologies. By engaging upon a heterogeneous approach to the dish, they (sometimes) transport the judge, borrowing from Anderson's (1991) *imagined community* to an *imagined culinary geographical* journey, (sometimes) creating a masterpiece, and (sometimes) taking home the trophy.

Hence, it is here that I draw the comparison to my thesis research. The counselling and strong suggestions that I received when I entered this program left me with the feeling that the standardized approach to writing a MSc thesis was saturated: take one ingredient and write about it. As an adventurer and self-taught chef, who loves fusion food and engages in learning about people and cultures via my experimentations with various spices and cooking traditions, and using globalization as a source left me wanting more, I was merely seeking a challenge. I was neither satisfied nor contented with the one-ingredient-rule, which I felt rendered me in shackles, and therefore felt that change was necessary, at least in my work.

I imagine that the food connoisseurs were maybe sceptical in mixing hot chillies and chocolate, or sea salt and chocolate. I will, without hesitation, agree that the resulting marriage of these ingredients, when paired with a glass (or two) of Bordeaux red or an Armagnac *bien respire* is truly exceptional, and always leaves my palette wanting more.

Introduction:

During my university studies, I have been fortunate to have had the opportunity to research, create and implement three (3) socio-pedagogical food systems programs here in Montreal. These programs, which strongly integrated religious, ethnic, cultural and social issues to name a few, introduced me to, and taught me a lot regarding the harsh reality pertinent to the (un) affordability, (un) availability, (in) accessibility to food amongst Montréalais.

As these programs spanned to include elementary school aged students, university level students, and the general public, it really provided me with the raw reality of poverty and hunger. But I will prove that via *food literacy*, poverty does not necessarily equal hunger.

I refer to *food systems* as an umbrella term pertaining to numerous and diverse aspects of food related issues. Over the recent years, there has been no lack of interest in *food systems*, originating from substantial sources such as politics, academics, activists, to name a few.

In this diversified, manuscript style thesis, with *food kinship* and *food literacy* at the core, I will be presenting a few key and important food systems' issues. Some of the topics are very near and dear to me, and quite personal. Others are topics that were discussed during the programs that I had created and animated, hence the reasoning behind it being an *on-going project*; in case I decide to re-animate something similar in the future, I will be much better prepared.

As a humanitarian at heart, I have always had an attachment to food, education and humanity, but with a penchant for communication, empathy and

reciprocity. This thesis, in addition to being a continuation of my practical work with food-systems-program and humanity, is the official academic portion.

My program the *foodie green club,* lasted for three years and was geared towards elementary school aged children, most of who were from mono-parental homes. Some were first-generation migrant children, and yet others, even though being *Québécois de souche,* some were from families of inter-generational welfare recipients.

What was the common thread was the level of poverty, (poverty = hunger?), which amongst many other indicators was prominently displayed in the type and selection of food they consumed: some of their lunches were composed of a single slice of the cheapest white bread, (not even with butter), soup in a cup, (extremely high in synthetic sodium), a bag of the cheapest chips and a soda, (a double dose of synthetics – both sugar and salt), to name a few. Fresh fruit and vegetables were visibly absent. I would much prefer to teach these children and their families about the benefits of consuming fresh conventional fruits and vegetables, thereby creating and building an organic society (Durkheim 1971), as compared to trying to force feed the notion of organic food.

As we will see later on, there are minute nutritional differences between conventional and organic foods; however, there are maximum differences in the prices. I am working three jobs and cannot afford to buy organic food. Experientially and self-reflectively, I may be able to express empathy, but I know that I will not be able to fully understand what it is like being a (single) parent, living in poverty, and yet be *informed* by high-income academicians that it is bad to eat, or feed my off

springs non organic food. I think that this is socio-economic and social stratification, as it can be quite demeaning and insulting, if the individual(s) who cannot afford it, are portrayed as citizens who do not care about themselves and / or their families.

I do, however, believe that one way to promote social, communal and dietary inclusivity will be through *food literacy* and *food kinship*.

At the *foodie green club*, which was geared towards grades one to six, there was no lack of visual childhood obesity. I also encountered numerous physical, mental, and emotional issues from the participants, and as I will present in this thesis, most of these issues can be traced back to a severe lack of *food literacy* and a mass decline in *food kinship*, due to major contributors such as poverty, immigration, socio-economic-status, and level of education of the parents.

At my-open-to-the-public and university level program, *Dinner & Conversation*, which lasted for two years, the guests were of a higher calibre of education. Some were taking on the *activists*' label on issues such as food, immigration, sex / gender, human rights, equality, globalization, trans-national employment, queer identity, to name a few, which is why I have chosen many of these topics to integrate in this thesis.

However, there were still others with left over traces of poverty and poor dietary habits. There were recent graduates, and hence were no longer receiving any financial, governmental support in the form of loans and bursaries. Some were doing a minimum wage job, others were unemployed and attended the event as they expressed that it was an opportunity to network, and possibly find employment, or generate a lead.

I do live with a mental health issue, but being in a shared spatial environment with these two groups really left me feeling quite *bipolar*. Group (a) consisted of fascinating, exciting, enthusiastic and young activists: they were first or second year university students who were going to save and change the world. Group (b) were recent graduates: it was only two or three years preceding that they were similar, expressing the same attitude and vision. Unfortunately, they were now out of the university and unemployed: they were anxious and desperate for employment, any employment would do. The needed to be able to eat, they could no longer afford organic food or cared about it, they just wanted to be able to have the basic necessity of being able to access food. According to Maslow's theory, they were rendered on the bottom rung of the hierarchy of needs.

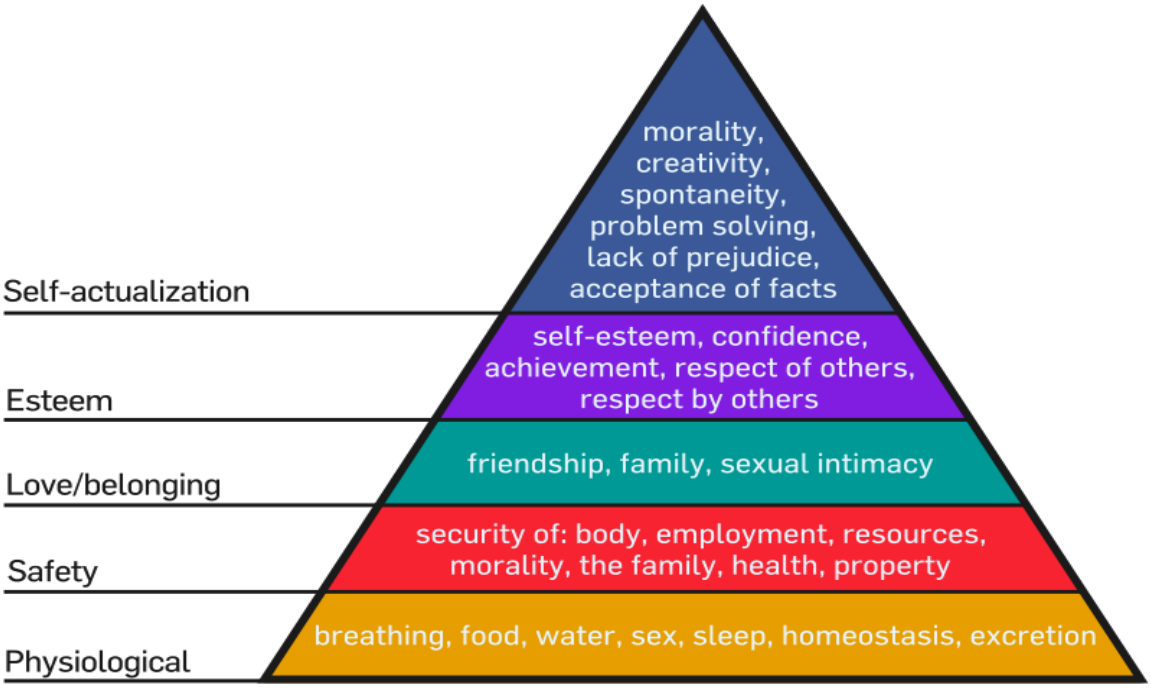

Figure 1: Maslow's Hierarchy Of Needs.

Hence, based on Maslow's psychosocial theoretical pyramid, I believe that it strongly indicates that *food literacy* and *food kinship* may not necessarily be priorities for those on the bottom rung. The concepts and notions of *food literacy* and *food kinship* will be more likely to engage the attention of those higher on the pyramid.

"*food is not a right, but a privilege…simply put, if it was right, then there would not be anyone hungry; child or adult, male or female, locally, cross-continent, or globally*"

Tarran Maharaj, – personally reflecting on his programs.

In Eastern Asian societies, and equally strongly represented within the North American aboriginal population, commensal eating, or the notion of sharing and / or consuming food as a community has been in existence and practiced for centuries (Simeone, 1998, Ratanapruck, 2007, Pope, 2014).

With the aid of modern technology and globalization as a major contributor, education is evolving as part of the process bestowed upon us in this spatially shared environment (Swaminathan, 2014). Constant modifications pertinent to labour laws, human rights, equality between the pluralities of sexes and genders, environmental issues, f*luidity* in legal, illegal, or eco-politically manipulated migration, and an increasing demand for *food security*, *food safety*, and *food sovereignty* issues has created for a much more ethnically diversified, trans-national, Canadian society. However, caution must be administered, as these elements do not

necessarily translate into a *fair* and *egalitarian*, or polite Canadian society, but more of a hegemonic one.

During this thesis I will not be presenting my opinion *per se*, but merely the academic facts, and in some cases, what I have personally experienced. These has facilitated for me to learn experientially and self-reflectively. I believe that in presenting the factual results of my research will allow for the reader(s) to engage in discussion, thereby empowering them to the render their own opinion(s), thought(s), and decision(s).

I now present to you my thesis: a humanistic and holistic, multifarious compilation of conference presentations, guest lectures and academic writings, all pertinent to the umbrella term *food systems*, but with two key main ingredients, *food kinship* and *food literacy*. In keeping up the times, modern elements such as social media and the Internet are included to offer for a geo-spatiality of socio-cultural-ethnic inclusion, fluidity in communications, and options for change.

Learning Objectives:

In my food programs and equally in this thesis, the objective is to bring about awareness to *food literacy*, the benefits of *food kinship*, and by default, offer support to those who are less fortunate. There are numerous contributors to being *less fortunate*: primarily socio-economic-status, level of education, immigration status, ethnicity, sex / gender, age but very important, the lack of having a human-support-system.

One of my life's goal has always been to present the devastating effects that these factors can have on some of my fellow co-citizens, and to present how *food kinship* and *food literacy* can be used to alleviate some of these hardships, rendering the individual with a feeling of being respected and *being human*.

In this thesis, I engage in applying an inter-disciplinary approach to research, with an emphasis on promoting self-reflective (Roser & Peck, 2009) and experiential learning (Kolb 1984), with the goal of leading towards living a meaningful life.

Just like there is good cholesterol and bad cholesterol, so too I will always treasure the memories of those whom paths I have crossed in good faith, and for those whom I have crossed in bad faith, thanks for the life lesson, but I will not you let keep me down, or prevent me from reaching out to those in need.

As a former banker, part café owner, spontaneous traveller, loves his dog, self-confessed foodie, enjoys the adrenalin rush of racing his car on the frozen-over lake, to name a few of my vices, this thesis encompasses all of the above and some.

Chapter One: **Introducing *Food Kinship*:**

Food kinship is deeply rooted in the notion and concept of sharing food. According to Mauss (1925), Service (1966), and Levi-Strauss (1969), there has been historical documentation regarding the beneficial characteristics pertinent to the social concepts and notions of sharing food amongst humans. Hames (1987, 1988) notes that the earliest known empirical evidence that connects humans and food sharing to *reciprocal altruism* were documented amongst the Yanomamo's.

Isaac (1978) indicates that sharing food has worked as key social evolutionary factor, and is also highly reflected in the division of labour as per the sexes. And whilst Kurland & Beckerman (1985) notes that food sharing has been pivotal in the transformation from hominoids to hominids, Isaac (1978) further contends that it has been an officiating force in the transformation from protohominids to modern day humans.

American lawyer and anthropologist, L.H. Morgan (1818-1881), "developed" the theory of kinship during his work amongst the Iroquois people (McGee and Warms 2004). In relying on the historical, centuries old, quintessential commensal religious and kinship societal practices of South America (Gurven, 2004, Koster et al., 2015), South Eastern Asia (Ratanapruck, 2007), and the potlatch of the aboriginal population (Simeone, 1998), I will be adapting Morgan's theory to introduce *food kinship*.

By incorporating modern day elements of food sharing, my goal in introducing *food kinship* is to display that as evolution endures, food continues to

foster relationships, at home, at work, and at educational institutions, providing us with the tools to live meaningful lives.

Using modern technology in the form of standard multilevel modelling software, Koster et al. (2015), reiterates that even in the pre-industrial society of the Ye'kwana horticulturalists of Venezuela, food sharing was highly present. As households collaborated and united, so too, were their meals distributed, maintaining familial relationships and promoting harmonious moments of eating together, or *food kinship*.

Gurven (2004), who used path-modelling research to determine the ecological behaviour relative to sharing food, notes that the *Hiwi* of Venezuela demonstrated *reciprocal food altruism* amongst non-biological kinship. These moments of eating together will be used to highlight the social interactions of humans, with food at the core.

As humans evolved, so too did their patterns of eating. Choices of food, size of plate / food portions, and eating habits, to name a few, were also altered (Farrell, 2003, Schultz, 2015). But what remained, regardless of the numerous and various types of relationships and evolutionary changes, was the social aspect of eating (Sobal & Nelson, 2003, Pachucki et al, 2011). We are born with the concept of *kinship* eating, being expressed in early childhood through making mud-pies or having tea parties (Pope, 2014). Unfortunately, and quite distressingly sad, due to poverty and hunger, there has been reports of children eating mud laced with silica as recent as 2010 in India (Rampal & Mander, 2013). These visuals were made public concurrent to the implementation of the Right to Education Act.

For some, these simple early infantile acts can be the beginning of something quite everlasting, as they result in the creation of long-term relationships, offering a lifeline of human-support-systems (Marion et al, 2013).

"*food consists not just in piles of chemicals; it also comprises of set of social and ecological relationships, reaching back to the land and outward to other people*"

Pollan, 2008, (p.144).

Figure 2: Artist Ludwig Knaus rendition of children Making Mud-pies.
Source: http://fineartamerica.com/featured/mud-pies-ludwig-knaus.html

Hence, *food kinship* can be used to not only create, but maintain meaningful relationships later along in adult life (Farrell, 2003, Crittenden & Zes, 2015). Additionally, it nurtures and nourishes the physical body, and contributes to strengthening personal, communal and societal ties (Counihan, 2007).

Morgan further contends that kinship is linked to "family" affinities: it is social and cultural, but as Ratanapruck (2007) adds, it is also highly religious and sometimes politically influenced. Hence reference to the word "family" here is not a reflection of those who are related only by blood, as "family" extends to include non-consanguine relations. These may include relations created through marriage, or a relationship built on trust, respect and love, thereby resulting in individuals *adopting* each other as their own family.

Using a multidisciplinary combination of classical social theory, social psychology and family sociology, Bengston & Roberts (1991) write that within the intergenerational familial structure, there are six core components, *(1) family cohesion, association, (2) affection, (3) consensus, (4) resource (food?) sharing, (5) the strength of familism, and the (6) the opportunity structure for interaction*, (p2), all very integral to the foundation in the construction of *food kinship* and long-term human support-systems.

Based on twelve years of ethnographic observation, and applying a qualitative methodological approach, Purnell & Jenkins, (2013), describe the success of the "*Family Dinner Night*" tradition, (which seems to coincide with a former program of mine, "*Dinner & Conversation*"), as having "an *increased sense of familial connections and social capital*", (p.1). Preceding their study, they were observing that the number of families who dined together continued to decline, with the numbers being especially high amongst families in the lower socio-economic status. This resulted in the creation of the "*Family Dinner Night*" program in the Seminole

Heights neighbourhood, Florida, which encouraged families to eat together once a week.

Many of us have a *companion*, with whom we may (or may not) be sexually intimate. But the English word *companion* is burrowed from the Latin *companionem*, which is a combination of "con" (with) and "pan" (bread). Hence, a companion was once the person with whom you would engage in the humanely *intimate* act of *breaking* and / or sharing bread (Morgan, n.d.), the early beginnings of *food kinship*.

Bread is also significant at some ethnic marriage ceremonies. At my marriage which was inter-ethnic, (Orthodox Ukrainian Catholic meets Indo-Caribbean Hindu), the presentation of *korovai*, traditional Ukrainian wedding bread was an integral part at the Ukrainian ceremony. On my end, the abundance of *roti,* the general colloquial name for different types of Indo-Trinidadian bread, was served open-buffet style with a host of other dishes.

This apparent simple act of breaking bread has much more deeper emotional, mental, physical and psychosocial benefits (Weinstein, 2005, Olson, 2012), as eating together regularly as a family has numerous and diverse benefits, and range to include the physical, the emotional, the intellectual and overall wellbeing (Schiefenhövel 2014). Additional factors ranged from better psychological disposition to higher academic achievements. Children and adults also appeared more positive and less stressed, with fewer cases of obesity and asthma also being documented (Purnell & Jenkins, 2013).

Generally, those in a low socio-economic bracket are exposed to numerous vulnerabilities, including being at a higher risk of incurring health issues. Youths in

this category are also less likely to have a companion or family to share a meal with, and by default, are more likely to engage in early age consumption of drinking, smoking, illicit / illegal drugs, or suffer from an eating disorder (Leider, 2009).

Engaging and practicing in the act of *food kinship* produces social capital; it facilitates for the building of trust and respect amongst and within a community. It contributes to health, societal and communal benefits, also enhancing self-identity, self-esteem, and ameliorating life and transferable communicative skills, resulting in the participants becoming more culturally diversified, and accepting of the "other".

Consumers are also families, and in this sense, families are unconsciously always sharing (Belk, 2010). Belk, (2010) continues that in most Asian countries such as Japan, China and Korea beer or sake are bottled and sold in large bottles; the rationale being that it is meant to be shared with family and friends, at home or in shared public spaces such as restaurants and bars. There may be a lesson here for Canadians; large bottles and cans of beer are sold here in Montreal, and elsewhere across North America, but it is for economic purposes and primarily for personal consumption.

Food kinship is also highly present in the restaurant world, as more and more families get together at a restaurant to celebrate an event. At these events, memories and identity are maintained and preserved, and sometimes culture is passed on, or a new one introduced.

In some situations, modification to the existing food and recipes creates a new hybrid (Hiroko, 2008), both in identity and recipes. Vaidhyanathan, (2015) writes that there are the "generic" Indian restaurants that serve food, and then are

the "authentic" ones that serve savoury dishes, like "*the food my grandmother made for me*" (p.1). These tend to be comfort food, taking the eater on a journey into their past, intricately weaving strong loving memories of eating with close family and friends.

"*as a child, I quickly learned that our family identity and our heritage were intricately tied to the food we ate*" Wahba, (2015).

The role of *food literacy* pertinent to ethnic food is in knowing the origins of the recipes and variations of the food served. For example, *food literacy* will inform the diner that South Indian restaurants are generally identifiable with a "vegetarian" sign (Vaidhyanathan, 2015).

Wahba (2015) recounting her personal food experience continues that upon entering college the focus of food as an identity item shifted to become food as a social item. Food became a *transferable* (Schiefenhövel 2014) commodity, as it facilitated for a shift in, and creation of a hybrid identity. At the university, the social aspect of eating together as a family was missing, and as way to fill the void of familial eating at home, the idea of a weekly potluck dinner was generated. Through this activity, the participants "fed-off" each other, creating and maintaining kinship relations through food ((Hiroko, 2008, Wahba 2015). This truly resonates with the goals and my passion in hosting the "*Dinner & Conversation*" series events at Concordia University.

In adding to Hames (1987, 1988), and reflecting on "The Gift" by Marcel Mauss, Schiefenhövel (2014) continues that when food is shared as a gift, it can be viewed as *reciprocal altruism*.

Whilst I somewhat agree with this, I also approach it with caution. I absolutely encourage engaging in *food kinship* activities, however, *food literacy* (see chapter two), will teach us that before inviting someone to share in a dish it will be wise to inquire about food allergies, food choices, (carnivore/ herbivore), religious restrictions – some members of the Muslim / Jewish faith and the non-consumption of pork, some Hindus and the non-consumption of meat. Hence, I firmly believe that it is important for both *food literacy* and *food kinship* to be juxtaposed to be fully effective.

When combined with *food literacy*, *food kinship* can inform and relate the struggles and hardships of those involved in the entirety of the food production chain, from the migrant food systems workers (see chapter seven), to those working at the cash register or stocking the shelves at the supermarkets after hours. When the meaning and concepts of food literacy and *food kinship* are intertwined a better understanding of where our foods comes from, the geographical origins of the food and the workers, the social, cultural, economic and living conditions are highlighted, leading to higher appreciation of food, and to living more meaningful lives.

As demonstrated, *food kinship* is prevalent in both private (the home) and public (the university, a restaurant) settings. It is also communal and societal, depending on the level of engagement of the individual.

Food kinship will allow for the creation, building, and sustainability of integral human support systems, hence, *food kinship* is also a network. The word *network* refers primarily to a virtual system, which consists of electrical components, wires, deciphering mechanisms, databases, etc. (Merriam-Webster). Recently it has been applied to human relations, but these relations are generally professional such as LinkedIn. So too, *food kinship* is a human network.

Food kinship allows us to explore the five senses, sight, touch, taste, smell and sound. Taking the time to eat together and exploring the senses produces social capital, resulting in harmonious familial relations and communities becoming stronger and more engaged (Hourigan, 2007, Purnell & Jenkins, 2013). When food camaraderie is present, people "temporarily lose" their identities as the geo-social elements of sharing food and eating together take precedence (Wahba, 2015). Traditions are passed from one generation to another, and reminiscence of comfort food takes place (Vaidhyanathan, 2015). And in incorporating all of the above ingredients, *food kinship* can also lead to new hybrid recipes and identities (Hiroko, 2008).

I will now discuss on one of my programs, *Dinner & Conversation*, (see comments and attached poster). My purpose in single-handedly, creating and hosting *Dinner & Conversation* was to promote *food kinship* and *food literacy*, and in the process, serve students a freshly prepared meal. The students were a melange of Quebec, Canadian, and international students, most of whom had very limited finances. I soon found via student confessions that this program greatly contributed to reducing isolation and depression amongst the student population.

"*Thanks Tarrran…I have been looking forward to this dinner – I don't really drink or like going to bars, this program gives me the opportunity to go out, mix and mingle, and connect with fellow students in a safe environment – and with food*" JP

"*Tarran – I really appreciate you doing this…I am a very shy person, but you made me feel welcome the minute I walked in, you took away my "fear of the public". The food was simple but amazing, they say that you can tell a lot about someone from their food, all I tasted was love*" MM

"*Hi Tarran, I just wanted to say thanks…Its financially difficult being an international student, and while most of my friends are at Reggie's, I am not as I don't have the cash. Your program is my opportunity to be able to get out, and not sit alone in my room…I really appreciate this, and hope that it will continue forever*" GL

Based on the above comments that I received, I am confident in saying that *Dinner & Conversation*, which lasted for two years, (the first year at the downtown campus, and the second year at the Loyola campus), offered a safe and convivial environment, riddled with laughter and conversation, but very important was the creation and construction of a human support system, all through a combination of *food literacy* and *food kinship*.

Pre, during and post serving the food, this *food kinship* program facilitated for deep and intimate sessions pertaining to the exchanging of information and learning

about “the other”; diversities of culture, ethnicity, and religious traits, to name a few, and as Long (2004) notes, learning about what is (a) community.

At *Dinner & Conversation*, (which is currently still in existence under the banner Sunday Dinner at the multi-faith chaplaincy), I celebrated a host of cultural, ethnic, and religious specific events, ranging from Canadian Thanksgiving, Divali, the Hindu festival of lights, Nawrooz Persian New Year, Chinese New Year, Eid-Ul-Fitr the end of Ramadan fasting amongst the Muslim cohort, and the Jewish holiday of Rosh Ho’Shannah.

Academically speaking, a pedagogue refers to “the teacher”. In my *food kinship* program, *Dinner & Conversation*, all the participants were, what Goffman (1959) refers to as *hermeneutical food pedagogues*. As they told their stories regarding ethnicity, geographical origins, religious beliefs and observances, cultural traits and heritage to name a few, it facilitated for direct learning - as they learnt off and about each other.

Dinner & Conversation also served to introduce Concordia students who were from the same geographical origin to each other. At the session that celebrated Chinese New Year, two Chinese students who were from the same province, same village, and attended the same high school in China, met for the first time; it was simply magical.

This program also had inter-generational guests. At one of the sessions, a student celebrated her birthday with her parents, grandparents and great grandparents. To be able to host such an event is more than words can describe. It

truly demonstrated the individual, familial, communal and societal benefits of *food kinship*, via *food literacy*.

But, "*no pain no gain*". Sometimes I use to think that the program *Dinner & Conversation* had caused me a bit of pain and suffering, as it most certainly took a lot out of me, physically, mentally, emotionally, and quite often involved my personal finances to engage in researching, creating and hosting. But as I am self-reflecting and writing this, it was not the program, it was a few rogue volunteers who created problems.

These volunteers were quite narrative as they told some attractive tall tales, whilst others did not show after reassuring me that they would be there, leaving me with a lot of tasks to be completed. It also left me questioning myself as to "why am I doing this?'

"*must we have a good understanding with one another's palates? as foolish people who have lived long together, know when each other wants salt or sugar. I pray my companion, if he wishes for bread, to ask me for bread, and if he wishes for sassafras or arsenic, to ask me for them, and not hold out his plate, as if I knew already" R. W. Emerson, 1844*

Some days I felt that it was nothing but hell. At one point I had incurred a back injury and was left with reduced mobility. I had a skeleton budget, and was once hunted down by one of the administrator's from the Multi-Faith Chaplaincy and insulted for buying an espresso on a cold wintery day, which cost $2.25. I look back on that today with a smile, it was a small price to pay.

I was also accused of not listening and /or integrating ideas: but when the idea is to make a kale salad, (kale at the time was $5.00 a bunch) and serve quinoa (which was $7.50 a pound), and I had $75.00 to make a three course meal for twenty guests, well clearly this was not financially feasible. I can only assume that the volunteers who created the problems and accused me of not integrating their ideas had a high sense of self-entitlement, and that they were from a higher socio-economic class; hence, they had no idea of what it meant to be poor, or live on a budget, so maybe I cannot really blame them for creating a difficult situation.

Having said that, there were people who stood by my side and supported me with pure love; we are still friends, and I cherish these relationships.

As mentioned above, I will always treasure those whom paths I have crossed in good faith, and for those whom I have crossed in bad faith, thanks for the life lesson, but I will not you let keep me down, or prevent me from reaching out to those in need.

On the date of these events, upon hearing the joy and laughter as the guests engaged in building kinship through the food I had prepared transported me to utopia; based on that, I will not hesitate to do it all over again. As a child, my Dad taught me that whatever I do, to do it from the heart and that everything will be OK, – merci papa.

Whilst a minority may have created the majority of problems, I am thankful for these moments. It pushed me to do more, and to understand that what I was doing was not for a selective group of students, it was for those who truly enjoyed

and appreciated it. These were the moments that allowed for me to truly self-reflectively and experientially learn about empathy.

Figure 3: Poster of one of my programs, *Dinner & Conversation* (Loyola Campus)

Ch. Two: (Re)Defining Food Literacy-The Role Of Food Safety

The first rhetoric question that I will begin with is "what is *food literacy*?" According to the Merriam-Webster online dictionary, "food" is demarcated as any edible material, and literacy is pertinent to one's knowledge of and / or relating to a specific subject. Therefore, I would propose that *food literacy* is rooted in one's knowledge of edible material.

In considering contributors such as food allergies, food choices, (herbivore / carnivore / omnivore), cultural, ethnic and geographic origins, the Harvard College Food Literacy Project which was established in 2004, describes *food literacy* as "*a mission to educate students about their food choices and continue the conversation around nutrition, sustainability, food preparation, and community*…(and)… *see education as vital to the dining experience"* (Harvard College, 2012).

From the United States to Britain, in September of 2000, an Advanced Level (A-Level) Food Technology course was introduced to the curriculum at both Wales and England as a means to augment and expand education on food and the numerous sub-contributors of food education (Farrell, 2003).

Some of the key points of interest of the syllabus are:

*to use design and technology (D&T) to develop innovative, creative and sustainable food programs.

*to encourage students to engage in critical thinking and awareness regarding food products.

*to consider elements such as a social, moral, spiritual, religious and cultural values regarding food.

*to use food to nurture positive attitudes of co-operation, co-citizenship and harmonious relationships for life.

*to develop key transferable skills, such as communication, problem-solving, analytical thinking, and to be flexible and adaptable, as per the situation.

Reflecting on this mention, the testimony of one of the first students to have graduated from the A-Level Food Technology Course reiterates the importance of being introduced to and learning about *food literacy* via this course at her age. The student notes that even though she was considering a career in medicine, the multidisciplinary approach, (which has been highly influential in writing this thesis), of the course material, exposed her to wider range of food products and recipes. She contributes this as an advantage in being able to easier develop and amplify her *food literacy* skills, and also encouraging her to delve into a deeper self-reflective engagement of the her personal and sensory evaluations (Farrell, 2003).

Food literacy addresses food safety issues from many angles, as Franchi (2012) writes the choices of food consumption, can be influenced by the interpretation of food. For example, a restrictive approach to food choices may result from factors such as economical, current market prices, but most importantly, the cognitive approach – where meanings and values are attached to the decisions when purchasing food. I feel that the cognitive approach is heavily interconnected to *food kinship*.

Additionally, safe food handling practice is a global, growing concern. A food borne disease, or bad bacteria, (as there is good bacteria), arising out of improperly handled food is a "*major social and economic problem*" (Meadows et al., 2014).

Foodborne diseases arising out of poor food handling as a result of insufficient literacy and / or training can generate both short and long term illnesses, individual, familial and societal discomforts, and in the process, weight down heavily on the healthcare administration and equally result in economic drawbacks (Di Renzo et al, 2015).

Lange et al, (2014), writes that Sweden's approach to address and curb the over half a million yearly reported cases of foodborne bacteria, has been to educate young people about food-safety concerns via a course entitled *Home and Consumer Studies* (HCS). This course had previously existed, but was further developed and expanded into the compulsory school system. The compulsory school system is a nine-year education span for students aged from seven (7) to sixteen (16). To learn what was missing so as to better teach the food safety aspect of *food literacy*, the Internet was used to distribute a web-based-questionnaire, which was sent to educators within the school system (Lange et al, 2014).

According to an article in Harvard Men's Health Watch (2010), foodborne diseases are more "deadly" than an actual case of food poisoning. Whilst in the scarce instance of food poisoning via Botulism can be detrimental, due to advanced medicine, food poisoning poses less of a threat in modern day society. Foodborne diseases can result in live (bad) bacteria living within the intestinal tract. These bacteria are quite resistant to most antibiotics, and can lead to long-term discomfort and health problems. To connect this to Franchi's (2012), the economic drawback may very well be the result of a job loss due to a food borne illness, which suggests that economic drawbacks may very easily result in the consumer being forced to

apply a restrictive approach to the consumption of their food choices based on their income.

The rapid increase in the reported cases of chronic non-communicable diseases (CNCD's), see figure 4, has also contributed to a global reviewing process of safe food handling. The World Health Organization, (WHO), estimates that globally between 2010 and 2020 there will be a fifteen per cent increase in deaths due to CNCD's. In 2015, to bring about awareness to this growing problem, the World Health Organization celebrated World Health Day by serving as its main course, the topic of food safety under the title '*Food safety – from farm to plate, make it safe*' (Di Renzo et al, 2015, Gavaravarapu & Nair, 2015,).

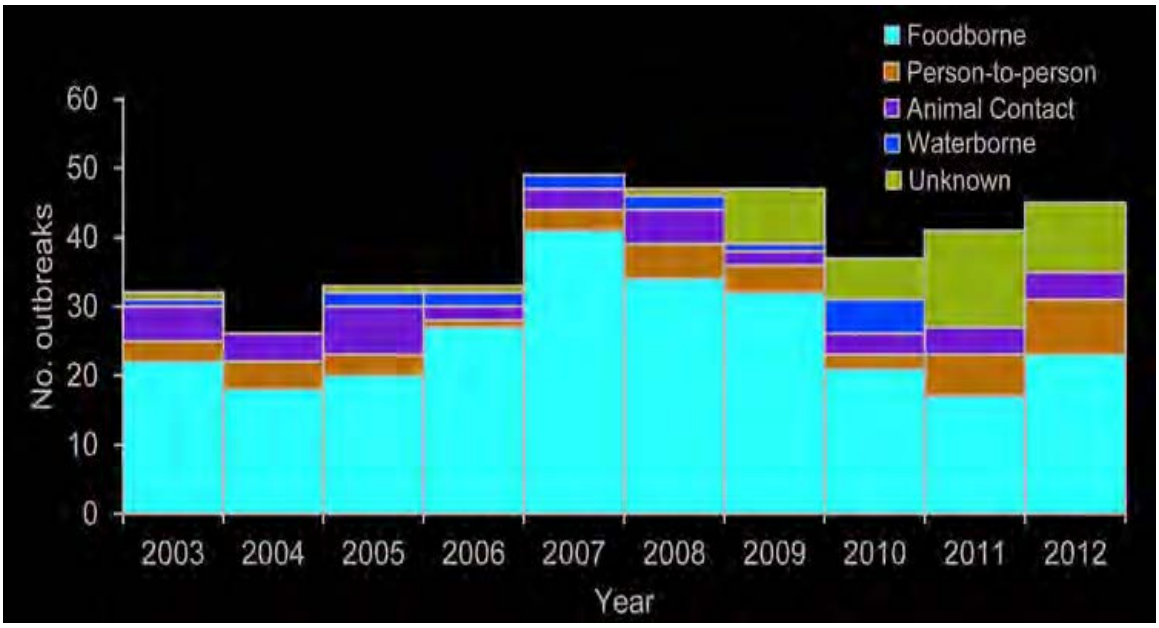

Figure 4: Emerging Infectious Diseases Source: (As Appearing In): • www.cdc.gov/eid • Vol. 21, No. 8, August 2015

These elements lead to a further web of *food literacy* entanglement as they have a direct effect on eating behaviours (Franchi, 2012). Amongst other things,

these behaviours are at the epicentre on analyzing how the consumption of food is portrayed via social media.

The following excerpt is solid example of *food literacy* and *food kinship*:

"…food choice(s) can be considered a result of a complex social construction. Food is an embodied good (as it enters the body) and is also a relational good (as it is interwoven into everyday relationships)…the importance of the emotional aspects of food choice…are shown by the presence of food in daily conversations" Franchi, 2012.

Unlike medicine, which carries universal scientific terms, *food literacy* has societal, cultural, geo-spatial and linguistic components, as the semantics used by food academics can be sometimes quite confusing. For example, in the food world, according to Di Renzo et al., (2015), the English word "control" generally means "management off and or to manage food". However, in German or in Italian the words "Kontrolle" or "Controllo" are more in alignment to "inspection" or "monitoring". Hence, it is extremely important to always consider and integrate culture, society, ethnicity, geography, and as demonstrated here, linguistics when addressing *food literacy*.

Some primary keys aspects that were present pertinent to the *literacy* on safe food handling at the HCS and the WHO, were: (1) personal hygiene, (2) food being cooked at the correct temperature, (3) cross-contamination of foods, (4) properly storing foods, and (5) being able to recognize safe / unsafe sources of food (Lange et al, 2014, Meadows et al, 2014, & Gavaravarapu & Nair, 2015).

Whilst the general stereotype is that most of the foodborne diseases were generally present at public venues, restaurants entertainment centres, theme parks,

etc., Lange et al. (2014) notes that there was only a one per cent statistical difference of confirmed food related diseases; from thirty-four per cent at the restaurant to thirty-three per cent at the home. Heiman et al, (2015) also provides similar numbers via their compiled chart, see table 1.

Transmission source	Outbreaks (% of all outbreaks)	Illnesses (median outbreak size)	Hospitalizations (% of all illnesses)	Physician-diagnosed HUS (% of all illnesses)	Deaths (% of all illnesses)
Food	255 (65)	3,667 (6)	1,035 (29)	209 (6)	25 (0.7)
Beef	78 (20)	1,144 (7)	316 (28)	67 (6)	5 (0.4)
Poultry†	1 (0)	60	5 (8)	0	0
Other meat	7 (2)	39 (4)	12 (31)	4 (10)	0
Dairy	16 (4)	140 (6)	52 (37)	22 (16)	0
Leafy vegetables	29 (7)	922 (16)	321 (35)	53 (6)	7 (0.8)
Fruits	6 (2)	57 (8)	20 (35)	5 (9)	6 (10.5)
Sprouts	3 (1)	35 (13)	4 (11)	0	0
Nuts	1 (0)	8	3 (38)	0	0
Other foods‡	29 (7)	580 (11)	123 (21)	24 (4)	0
Food unknown	85 (22)	682 (5)	179 (26)	32 (5)	10 (1.5)
Animal contact	39 (10)	552 (6)	127 (23)	51 (9)	2 (0.4)
Person-to-person	39 (10)	322 (5)	45 (14)	24 (7)	2 (0.6)
Water	15 (4)	154 (6)	NA	NA	1 (0.6)
Other or unknown	42 (10)	233 (4)	65 (28)	15 (6)	3 (1.3)
Total	390 (100)	4,928 (6)	1,272 (27§)	299 (6§)	33 (0.7)

*HUS, hemolytic uremic syndrome; NA, not available.
†Poultry was thought to be cross-contaminated by ground beef (http://www.ct.gov/dph/lib/dph/infectious_diseases/ctepinews/vol29no5.pdf).
‡Outbreaks transmitted from other foods were 2 each of: guacamole, pico de gallo, salsa, and potato salad; and 1 each of: cookie dough; alfalfa sprouts and iceberg lettuce; baked beans and unknown fruit; meatballs, steak and green salad; cantaloupe and hamburger; lamb and beef; lettuce and green grapes; lime and bean dip; macaroni; Mexican wheat snack; sandwich; seafood; vegetable-based salad; pepperoni; jerky; multiple foods. Agencies sometimes report >1 food vehicle when epidemiologic evidence cannot distinguish between them even when it is likely that only one was the source.
§Excludes 154 illnesses from the denominator that were associated with waterborne disease outbreaks because no data was collected for hospitalization and physician-diagnosed HUS cases for this transmission mode.

Table 1: Escherichia coli 0157 outbreaks from 2003 – 2012 in the United States. (As Appearing In): Heiman, K. E., Mody, R. K., Johnson, S. D., Griffin, P.M., & Gould, L.H. (2015).

A key correlative socio-economic-status factor that contributes to the under-representation in childhood education is the level of education of the parents. Children whose parents possess a lower level of education are at a higher risk of receiving failing grades, as a low education reduces the ability of the parent(s) to participate and engage in the learning process of the child / children. The parents' level of education, ethnicity, and immigration status are also reflected in their lower

income bracket, which also hinders the affordability of supplemental courses and / or extra curricular activities. First generation migrant children are also at a higher risk, as there may also be language and cultural issues, in addition to systematic and / or ethnic discrimination (Leslie et al, 1998, Stevenson et al, 2016, Yerdelen et al, 2016 & González-Betancor & López-Puig, 2016). Additionally, a lower education translates into less knowledge of healthy food choices, or *food literacy*, and a lower income affects the means of *affordability*, resulting in less *accessibility* to, and *availability* of fresh produce, such as meat, grains, fish, fruits, nuts, and vegetables.

Hence, *food literacy* can be highly pertinent to teaching "kitchen survival skills", as I did in the food program of mine, the *foodie green club* which was targeted at an elementary school audience, and hosted in less fortunate neighbourhood here in Montreal. Additionally, it also contributes to expanding ones tolerance and knowledge regarding cultural, ethnical and religious traits, customs, and practices.

One of the earliest life lessons that children living in poverty learn is how to live with hunger (Rampal & Mander, 2013). Using critical food pedagogy to assist in educationally addressing the issues of hunger and poverty at an early age, was my reasoning in researching, developing and implementing the elementary school level program, the *foodie green club*. This program was animated once a week, and once again, heavily dependent on funding from my personal finances.

The students were from grade one to grade six, and I promoted and encouraged a hands-on approach. I counseled and guided them, but allowed them to be independent and complete the tasks on their own. Sometimes they worked in dyads or triads, which allowed for the employment of the Social Group Work Theory

and Practice as presented by Wilson (1956). Additionally, via these activities, I was also able to introduce and apply Piaget child development and Erikson's eight-stage lifespan development theories, thereby facilitating for an early introduction to building self-esteem, self-confidence, learning to work independently and equally in a group.

Additionally, the students were also exposed to learning about emphatically addressing diversities pertinent to their ethnic, religious, cultural and social differences (Giroux, 1989).

For every session, two of the average fifteen participants took turns in selecting one ingredient of their choice, which I would then incorporate in the preceding meal preparation. Each session began with two participants effectuating personal hygiene; they ensured that upon entering, and before touching any food item, all the participants washed and dried their hands.

Other participants would then engage in preparing the meal, and finally the remainder of the participants who had not yet engaged in any tasks was responsible for serving *equal* portions. Serving equal portions had a very important significance; it meant that as a that societal cohort, equality in serving portions meant that they should see each other as equal human beings.

Secondly, this food literacy program allowed for the introduction and practicing of Emile Durkheim's (1972) theory of *organic society*. It allowed for everyone who participated to have an equal share, demonstrating they were all independent yet inter-dependent contributors in every aspect, and that their spirit of harmony and collaborative and collective work resulted in benefits for everyone.

The participants in this program also learnt how to shop wisely, for example, buying extra non-perishable goods, such canned fish, canned beans, rice, pasta, etc. when it was on promotional sale at the supermarkets, (see chapter five).

In addition to what the participants had asked for, I also integrated foods that were *foreign* to them. Sometimes it was simple as black-eye peas, (which most thought was a musical group), or watercress. I also taught them how to make a fresh salad dressing with simple ingredients such as an apple and some olive oil. At the end of the semester, I did a compilation of all the recipes, and gave it to them for future reference and / or use.

The greatest self-reflective and experiential learning reward moment that I received from this program was one day a student, who lived in a mono-parental home, came to me said that she had made dinner for her Dad…I was very proud of her, but also remembered to thank my Dad for reiterating to me that whatever I do, to do it from the heart. My goal had been accomplished.

Figure 4: Rampal & Mander: Lessons on Food and Hunger Pedagogy of Empathy for Democracy

In reality, poverty and hunger has no colour, sex, gender, age, ethnicity or religion. However, due to social construction, stereotyping, and labelling, it is, and

will continue to be ever-present, unfortunately affecting certain cohorts more than others (Kazemipur & Shiva, 2000, Harell et al., 2014, Kaida, 2015).

In addition to my *food kinship* and *food literacy* programs, *Dinner & Conversation* and the *foodie green club*, I also created a bursary at Concordia University, which is accessible to all full-time undergraduate students enrolled in either the Dept. of Sociology & Anthropology or the Dept. of Geography, Planning & Environment. I calculated the amount of bursary based on a slightly over-estimated food semester budget, which meant that the recipient would have enough food for the entire semester.

I am confident that with a little academic support via *food literacy* programs, and the humanitarian act of *food kinship*, a difference can be made. This is not my opinion, but based entirely on my self-reflective, experiential learning from my programs *Dinner & Conversation* and the *foodie green club*. Both these programs have caused me pain and suffering, and financial losses, which resulted in me missing my brother's wedding, and which I deeply regret. But, I simply cannot turn my back and walk away from a situation when someone needs assistance, and for this reason, maybe with some caution, and so as to protect myself, I will (re)consider another program in the future.

A quick resume of **why** *food literacy* is important will tell us that even though educational programs regarding safe food handling practices are available at some institutions, in some countries, they are primarily situated in Europe. In North America, foodborne diseases continue to be prevalent. As demonstrated above, the Internet can be used to gather information from both those employed in the field of

teaching food, and from the public at large. This information can then be easily transferred into *food literacy*, which will allow for enhanced literature and training regarding guides on safe and proper handling procedures. Information can range from the source of the food to the way food is prepared, from the risks of cross-contamination of foods, to appropriate cooking time and proper food storage.

Food literacy will also display the draining and exhaustive effects that food waste can have on natural resources, and equally the negative impact on the environment, see chapter four.

The benefits of *food literacy* can result in better health and reduced long-term stomach complications, (see chapter eight), which comes with a heavy financial and societal cost. *Food literacy* will also introduce and expand learning on diversity to cultures, recipes, ethnicities, languages, religions, and provide means for experiential, self-reflective learning, whilst incorporating transferable life skills. The role of the Internet is a proven prominent way to conduct research, provide answers, and monitor outbreaks of foodborne diseases due to a lack of sufficient *food literacy*.

One of the main components of food literacy in this thesis is to teach those in precarious situations that it is possible to eat fresh and healthy. I must clarify here that when I mention fresh and healthy, I am **not** referring to organic, sans GMO, gluten free (unless you have a medical condition), and the other entire hippie and hype stuff that has become so academically cool and central to food studies within the past few years. I am referring to conventional foods.

Chapter Three - The Great Debate On Food Hierarchy: Organic v. Conventional v. Industrial v. My Budget

When I commenced this thesis, I was very much leaning towards the promotion of organic food consumption; however, this has changed. Throughout my university studies I have worked an average of three jobs, and even with that, there have been times when I had severe difficulty in being able to afford fresh conventional fruits and vegetables.

I still do believe in organic; it is just that I now firmly believe in promoting an *organic society* (Durkheim), which facilitates for me to teach about fresh, alternative, healthy eating, via *food literacy* programs, and in the process promote *food kinship*.

Based on my research, the food hierarchy that I have created is as follows: at the top are those with **no** financial restriction, and by default, organic (?) consumers. Following this cohort, are those with **some** financial restrictions, but still have a desire to eat healthy. I place them in the *slocalized* category, (see chapter five), as they are primarily conventional consumers. Finally, at the bottom rung and an ever-expanding category, are those with **severe** financial restrictions. This cohort is the highest consumer of mass-produced-industrial foods, generally at the low end of the *food literacy* scale, and practices little of no *food kinship* activities.

Based on my research thus far, I honestly believe that "eating organic" is in reality a hip, pop-culture trend. It is just another addition to the list of hierarchizing society. As factually displayed in table 2, organic is sold at a premium cost, which most of the population cannot afford.

Table 2: Pillsbury, (2017): Price per Unit for Non-organic and Organic Foods at Five Waterville Grocery Stores: (based on data collected by Colby College students)

Product	**Average Price Non-organic**	**Average Price Organic**	**Percent Difference for Organic**
Dairy and Eggs			
Yogurt	$0.06/oz.	$0.13/oz.	117%
Milk	$3.79/gal.	$7.36/gal.	94%
Cheddar Cheese	$0.28/oz.	$0.57/oz.	104%
Eggs	$2.59/doz.	$4.18/doz.	61%
Grain Products			
Oatmeal	$0.17/oz.	$0.16/oz.	-6%
Cereal	$0.23/oz.	$0.25/oz.	9%
Brown Rice	$0.10/oz.	$0.09/oz.	-10%
Bread	$0.14/oz.	$0.17/oz.	21%
Produce			
Romaine Lettuce	$1.78/head	$3.54/head	99%
Carrots	$0.77/lb.	$1.51/lb.	96%
Bananas	$0.57/lb.	$0.89/lb.	56%
Tomatoes	$2.82/lb.	$4.05/lb.	44%
Red Peppers	$2.76/lb.	$5.89/lb.	113%
Yellow Onion	$0.93/lb.	$1.57/lb.	69%
Apples	$1.57/lb.	$2.34/lb.	49%
Protein Products			
Peanut Butter	$0.12/oz.	$0.27/oz.	125%
Tofu	$0.15/oz.	$0.19/oz.	27%
Frozen Chicken Breasts	$3.46/lb.	$5.07/lb.	47%
Beef Burgers	$3.58/lb.	$8.39/lb.	134%
Other Products			
Canned Tomatoes	$0.06/oz.	$0.14/oz.	133%
Grape Juice	$0.05/oz	$0.07/oz	40%

http://www.mofga.org/Publications/MaineOrganicFarmerGardener/Fall2011/PriceDifferences/tabid/1966/Default.aspx

Additionally, as noted in the following, (table 3), there is a minute difference, in some cases none, regarding the nutritional value in-between organic and conventional foods.

References	Study design	Compounds analyzed	Compounds contents		Units	Statistical comparison
			organic	conventional		
García-González *et al.*, 2014	16 samples of extra virgin olive oil of 4 Spanish cultivars taken from cooperative societies.	palmitic acid, palmitoleic acid, oleic acid, linoleic acid, linolenic acid, arachidic acid.	0.28±0.06	0.28±0.07	Means ± SD of PUFAs in mg kg^{-1}	No differences in PUFA content
Samman *et al.*, 2008	59 certified organic and 53 conventional oils purchased from markets in Sydney. Edible oils considered: Coconut oil (1), Olive oil (2), Canola oil (3), Mustard seel oil (4), sesame oil (5).	palmitic acid, palmitoleic acid, oleic acid, linoleic acid, linolenic acid, arachidic acid.	(1) 2.63±0.86 (2)10.59±3.26 (3)25.73±9.08 (4)46.07±0.45 (5)48.2±1.09	3.86±0.46 12.09±9.6 29.51±0.53 28.21±13.79 44.18±3.8	Means ±SD % of PUFA on total fatty acids content	No differences in PUFA content
Anastasopoulos *et al.*, 2013	Virgin olive oil (Koroneiki variety) produced in Messinia, Peloponnesus, Greece from different harvesting periods: season 2000(1) and 2004(2).	palmitic acid, palmitoleic acid,oleic acid, linoleic acid,linolenic acid,arachidic acid.	(1)77.43±1.95 (2)79.25±0.18	77.90±1.40 79.05±0.18	Means±SD% of PUFAs on total content	Higher PUFA content in organic olive oil
Rouphael *et al.*, 2015	Perilla plants grown under conventional and organic farming in a typical Mediterranean area such as Southern Italy,season 2005.	palmitic acid oleic acid linoleic acid linolenic acid stearic acid	6.3 13.5 14.7 61.9 1.9	6.3 13.9 14.6 61.6 1.9	Means% of PUFAs on total content	No differences in PUFA content

Table 3: Bernacchia, R., Preti, R., & Vinci, G. (2016). Organic And Conventional Foods: Differences In Nutrients. *Italian Journal Of Food Science*, *28*(4), 565-578.

Hence, based on the following statistics, I would much prefer to promote the consumption of conventional fresh fruits and vegetables to my co-citizens via *food literacy*. Based on my observations regarding the content of presentations at food themed conferences across Canada, I also found that most food academics seemed to continuously neglect the majority of the population: those who live within or below the line of poverty.

"*the first tier, with a poverty rate of 12%, excludes Indigenous, racialized and immigrant children. This is three to four times the rate of the best- performing OECD countries. The second tier of child poverty includes racialized children who suffer a poverty rate of 22%, immigrant children whose poverty rate is 33%, and Métis, Inuit and non-status First Nations children at 27%. Most shocking, however, is that fully half — 50% — of status First Nations children live below the poverty line. This number grows to 62% in Manitoba and 64% in Saskatchewan*" Macdonald & Wilson, (2013).

When the statistics for Canadian childhood poverty are so astoundingly high, I find it personally difficult to present research on childhood obesity due to high sugar intake via extensive consumption of soda's.

Poverty, like hunger, has held a significant and pronounced place in industrialized society and will continue to do so. However, if academic material via *food literacy* is introduced to those within this group, hunger can be **reduced**, not eliminated. Due to the inter-disciplinary approach to food systems within this thesis, I will confirm that there is no shortage of food on planet earth, just a lack of *food literacy*.

I believe that when most food academics chose not to address such a prominent core societal issue as poverty in their research, they are *catering* (no pun intended), to a specific socio-economic-status group. This lack of inclusion contributes to numerous health, (mental, emotional and physical) and personal negative side effects (Bengston & Roberts, 1991, Counihan, 2007, Franchi, 2012, Purnell & Jenkins, 2013). My co-citizens should not be made to feel like second-class citizens because they *cannot* afford organic food, but still have a desire to feed themselves and their family fresh food.

As noted in the above tables, when organic food is compared to conventional foods, there are, in reality, minimum nutritional differences. In my opinion, this truly reinforces the need for *food literacy*, pertinent to healthy, but affordable eating.

I would therefore use *food literacy* and *food kinship* as an approach to create food programs so as to introduce and suggest dietary changes to the high percentage of consumers of mass-produced-industrial foods.

Ch. Four - Food Poverty:

An Environmental Impact Assessment On Canadian Food Waste

Figure 6: Chavich, C. (2015). How to solve the food waste problem. Maclean's. http://www.macleans.ca/society/life/how-to-solve-the-food-waste-problem/

"*the United Nations' Food and Agricultural Organization (FAO) estimated that the cumulative cost of associated wastes (energy, water, land, labour, capital investment, infrastructure, machinery, transport, etc.) is approximately two and a half times greater than the "face value" of wasted food. Using FAO's formula, the overall cost of* ***annual food waste in Canada exceeds $100 billion***" Gooch et al (2014).

I refer to this massive exodus of food waste as *food poverty*.

Contrary to popular belief, but as confirmed below, almost fifty per cent of Canadian food waste originates from the household. I therefore firmly believe that this is also a key indicator as to why *food literacy* is extremely important. Personally, I can also hypothesize, that based on my existing research, if *food kinship* is present, it will equally most definitely contribute to reducing food waste.

But who, if anyone, is to (be) blame(d)?

Figure 7: As Appearing in Maclean's http://www.macleans.ca/society/life/how-to-solve-the-food-waste-problem/

Food Waste by the Numbers – Toronto Food Policy Council

- $31 billion worth of food is wasted in Canada each year.[i] This is approximately 40% of food produced yearly in Canada
- The accumulative cost of associated wastes (i.e. energy, water, land, labour, capital investment, infrastructure, machinery, transport) has been estimated by the United Nations' Food and Agricultural Organization at 2.5 times greater than the "face value" of wasted food, making the overall cost of food waste in Canada exceed 100 billion[ii]
- Land filled organic matter creates methane gas which is 25x more damaging to the environment than carbon dioxide[iii]
- Approximately 47% of food wasted in Canada occurs at home. The other 53% of wasted food is generated along the value chain when food is produced, processed, transported, sold, and prepared and served in commercial and institutional settings[iv]
- Households in Canada on average waste $28 worth of food each week ($1456 annually)[v]
- According to Statistics Canada, in 2007 Canadians wasted the equivalent of 183 kilograms of solid food per person between retail level and the plate, amounting to over six million tonnes
- Approximately 80% of consumer food waste was once perfectly edible[vii]
- Food waste was highlighted in the Environmental Commissioner of Ontario's Annual Report (2011/2012) as an emerging issue that may be escaping broader public attention and has the potential for significant environmental impacts.

Figure 8: http://tfpc.to/food-waste-landing/food-waste-theissue

To reiterate, at the core of my thesis, are two key components: (1) *food kinship* and (2) *food literacy*. Via my research and food programs, I was able to experience and live the lives of some of my fellow co-citizens who had minimum availability, accessibility and affordability to food. Based on the preceding inserts,

clearly the problem is **not** a shortage of food. I am not interested in finding someone to blame or to find the culprit of food waste: my goal is to promote how the concepts and notions of *food literacy* and *food kinship* can reduce *food poverty*.

Additionally, I will also be presenting how the direct effects of Canadian (food) waste contribute to a larger socio-economic, globalized discomfort via hunger, poverty and destitution of some of our fellow co-citizens.

As per the pollution incurred via the emissions of greenhouse gas (GHG) in the production of meat and fruits and vegetables, the Food and Agriculture Organization (FOA) in their 2013 Summary Report notes that global food waste produces the highest amount of greenhouse gas emissions. So, as consumers, regardless of if we are herbivores, carnivores or omnivores, we all contribute to generating food waste and GHG, hence the importance of teaching *food literacy*.

Decomposing food waste produces the gas methane, which is twenty-one per cent more toxic and dangerous than carbon dioxide. The effects of methane gas are extreme as it is a major contributor to global warming, resulting in severe planetary destruction (Environment Canada).

Methane gas is an asphyxiate, and unprotected exposure to it can lead to immediate health emergencies, such as shortness of breath, a sudden and accelerated heart rate, a state of confusion, nausea, vomiting, convulsions, losing consciousness, a coma and in same cases, death. Externally, methane is neither an eye nor skin irritant, meaning that you will not feel a burning / itching etc. However, as it is a liquefied gas, it does have the potential to cause frostbite, which can result in loss of limb(s), or permanent eye injury, which can lead to blindness (CCOHS).

Whilst the Canadian Centre for Occupational Health and Safety (CCOHS) note on their website that chronic and long-term exposure to methane has **no** harmful human effects, I find it a fascinating contrast to the immediate human effects, (which in some cases can lead to death).

Contradictory to the Canadian findings, but in alignment with the immediate side effects, researchers in the United States (US) has identified some of the possible long-term health problems of methane exposure: they extend to include respiratory, cardiovascular and an acute risk of neurological. Additionally, in most cases there is an elevated level of stress, which causes mechanisms in the body to generate unnecessary generic inflammation. This in turn diminishes the body's natural immune system, rendering it vulnerable to negative physical and biological organisms (Vuong, 2016).

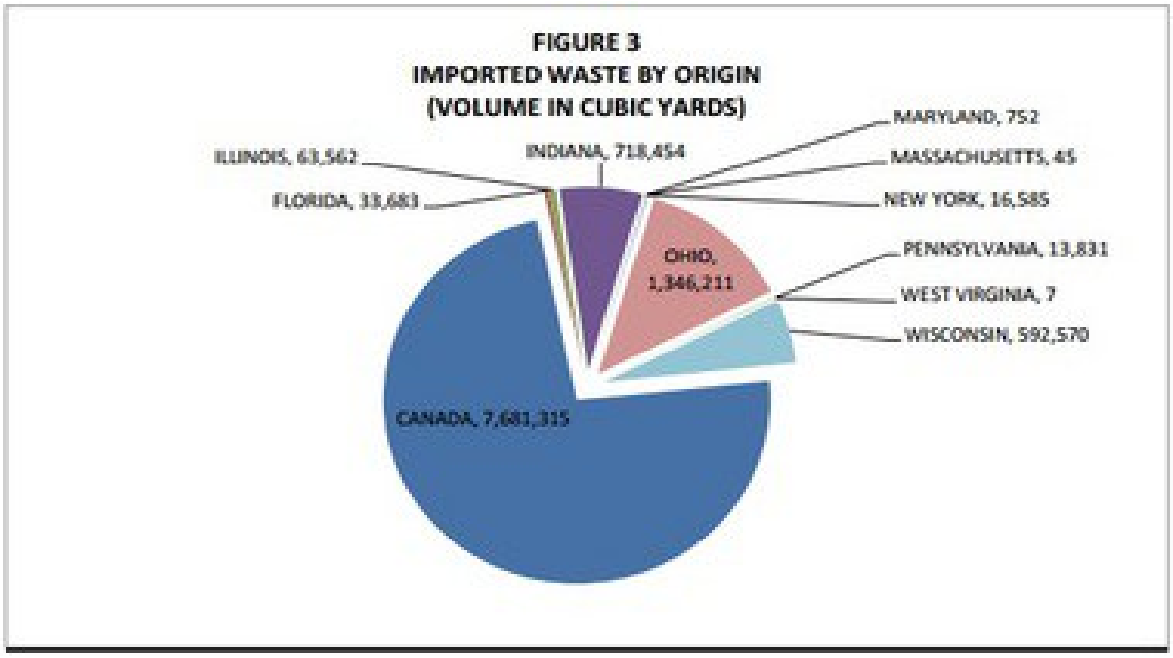

Figure 9: Riaz, A. (2016). Developing Countries: Electronic Waste Landfills of America. http://chicagomonitor.com/2016/10/e-waste-and-economic-viability-why-do-we-blame-developing-countries/

In 2006 over 1000 kg of waste was produced per Canadian. Canada also generates the largest amount of waste per municipal capita, having produced more annual waste than Americans in 2000, (see figure 9), and surpassing Japan by almost doubling the amount of their waste in 2005. By 2010, more than a quarter of Canadian landfills sites had exceeded their capacity, resulting in more garbage being exported (Hird, 2013).

Landfill sites are a major source of methane gas, emitting more than twenty per cent of environmental methane, the approximate emissions equivalent of 5.5 million cars (Environment Canada). I think this is a clear indication that *food literacy* pertaining to the Environmental Impact Assessment (EIA) of food waste is extremely imperative.

Figure 10: http://beta.philstar.com/tags/chronic-plastics

Figure 11: Pickles,K. Filipino children making the best of the worst – "playing" in toxins as they collect recyclable material from a water-based dump site. (Canadian garbage?)

Figure 12: Canadian Children Playing Outdoors (having fun playing in a mud-puddle – sorry, but not a waste dump site which contains toxins and expels methane)

Figure 13: Pilipino Children "Playing" Outdoors, (the garbage was graciously gifted by Canada), exposed to toxins and ingesting methane – rendering them extremely vulnerable to high-risk health issues. http://www.huffingtonpost.ca/2015/03/20/canadian-waste-angers-fil_n_6910828.html

But, Canada also imports a lot of food, and as we will see, once the food has been consumed in Canada, the garbage is somehow *returning* the geographical location when the food originated. These countries are eco-politically dubbed as "developing counties", based on their lack of and / or non-existent written environmental protection policies or laws as per Canadian comparison, or as I prefer, the Western world that lives in a 'social' prison, extensively governed by rules, regulations, laws and policies.

Quite contrary, the citizens of these countries absolutely do care about the environment; unlike Canada, where a sign or a law is required for everything, (including that food handlers wash their hands after using the toilet), the citizens, despite sometimes living in extreme poverty, take a certain personal and patriotic pride in maintaining their environment and beaches.

Figure 14: Pickles, K. A Pilipino boy submerged in the waters of the Philippine coastline collecting PCB laden plastics.

The EIA of immigrant food waste is intricately tied to the destruction of natural resources, primarily that of foreign countries, labelled as *developing* country. The statistics regarding the import of immigrant and / or ethnic foods are increasingly on the rise (Campbell et al, 2016), and as we will see, once the food has been consumed in Canada, the garbage is somehow being *returned* to some of the geographical countries of origin.

Across the globe, there are numerous countries including Vietnam and the Philippines who are major producers and exporters of coconut water, coconut milk, and adult diapers (Pitney Bowes), products that are in growing demand in Canada. There is waste generated in the manufacturing process, then the air pollution incurred in the transportation. But, after having consumed the canned coconut

water and / or milk, and utilising the diapers, Canada is then shipping the waste back to some countries, in this example, the Philippines.

Such is the case regarding the current fifty containers of Canadian waste, contributing to human, ecological and environmental poisoning sitting at port in the Philippines (Goodman, 2015). Whilst the stench is directly affecting the people, the run-off is finding its way into the earth, and as the port is on the sea front, also polluting the ocean. This not only deprives a nation of their natural resources, but forces further poverty and despair upon its citizens, leaving them vulnerable to numerous risk factors, including forced into being disposable Canadian migrant food-systems-workers, (FSW's), see chapter eight. This leads to a host of negations, ranging from accumulation of environmental waste, environmental pollution, depletion of natural resources, and depletion and displacement of families, severely reducing *food kinship* practices.

Figure 15: Phillipinos marching in solidartiy at Christmas in an attempt to right the wrong, and have Canadian garbage returned to its rightful owner, Canada!
http://www.greenpeace.org/seasia/ph/press/releases/Make-our-Christmas-Toxic-Free/

I can only imagine that the garbage dumpsites will discretely extend, eventually encroaching upon the land used for coconut production, taking away precious land space. Holistically, this sets the precedence for severe individual, communal, and societal repercussions, from contaminated water, reduced agri-land space, reduced coconut production, and loss of employment, to name a few, as it slowly poisons the land and people in the process.

In cross-comparing meat v. fruits and vegetables, and the pollution incurred via the emissions of greenhouse gas (GHG) in the production of meat and fruits and vegetables, the Food and Agriculture Organization (FOA) in their 2013 Summary Report notes that global food waste produces the highest amount of greenhouse gas emissions. As displayed on the food waste map and chart, clearly the notion that meat is major greenhouse gas polluter is clearly a myth, as fruits and vegetables produce more that five times more greenhouse gas than meat, leaving a much larger effect on the Environmental Impact Assessment (EIA) of food wastes. As consumers, regardless of if we are herbivores, carnivores or omnivores, we all contribute to generating food waste and GHG, reiterating once again the importance for *food literacy*.

Meat is very often seen as an environmental polluter (Macdiarmid et al, 2015), and (probably) carcinogenic to humans (Domingo et al, 2016). But the issue is not the meat *per se*, as meat has always been, and continues to be beneficial to humans. The role of food literacy will be to teach that reducing the consumption of industrialized processed meat, and consuming unsafe meat, (sanitary process at the abbatoir, sanitary process at the meat packing plant, sanitary process at the butcher

/ supermarket – this includes primary handling and storage), and finally safe cooking practices, cooked at the right temperature, can result in living a healthy and environmentally sustainable lifestyle, (Tobler et al, 2011, Macdiarmid et al, 2015, Siegrist et al, 2015 & Domingo et al, 2016). Therefore, it can be safe to say that eating less of mass produced industrialized meat products, and selectively choosing and buying a fresh cut of meat, results in a better quality of meat, a healthier lifestyle, which in turn further diminishes the overall carbon food footprint of meat.

Additionally, a banana has a water weight of eighty-five per cent, (University of Kentucky), which means that every time a banana is thrown in the garbage, we are indirectly disposing of a percentage of the natural water resources from the country of origin of that banana but we are also contributing to environmental food waste within Canada. Based on these premises, I am of the solid opinion that this really just screams the need for *food literacy*.

Locally here in Montreal, thanks to modern technology, the app Ubifood, can be downloaded and saved on most mobile devices. This apple app available for iphone, ipad, and ipad touch, and recently expanding to include non-apple products, allows for food retailers to post their promotional products for sale on-line, at a discounted price. This immediately ties in to the promotional aspect of eating *slocal*.

There are many benefits to be had here: (1) it allows for a really fun, exciting and affordable way to be able consume products that may normally be out of ones budgetary range, (2) it allows for the exploration of the taste buds, (3) it is a subtle form of socio-economic and social inclusion, (4) I will argue that technically it is a

form of *electronic food kinship*, and (5) it incorporates the aspect of promotional eating derived from *food literacy*.

In addition to providing normally expensive food to those with budgetary restrictions, the result of this app means that there will be higher levels of safe food consumption, and by default, less food waste. This in turn can have an immense contribution pertinent to decreasing globalized environmental levels of methane gas. I also stress the word safe, as this app is not dumpster diving, which is seen as hip and cool for one ethnic cohort, but embarrassing and demeaning for another.

Ch. Five: Slocalization:

Figure 15: Source: Henry, A. (2014). http://lifehacker.com/why-eating-seasonally-and-locally-is-better-for-you-an-1563025065

Maintaining the inter-disciplinary approach, I will be exploring the importance of pedagogical awareness pertinent to the subject of eating seasonal and promotional. For clarification on what I refer to as *seasonal*, I will be applying the definition of Brooks et al, (2011); "*seasonal is not limited by geography but encompasses any food produced in its natural growing season anywhere in the world*", p.449.

Once again, as I did with the theory of kinship, I will be modifying this definition, and the term that I have created that best describes this, is "*slocal*".

Slocal refers to all food items, originating from local and international sources, seasonal produce and promotional products, available at local open markets, such as Marché Atwater / Marché Jean-Talon, and equally at supermarkets.

As a Socio-Cultural Geographer with a focus on humanity, I also refer to seasonal as it applies to food *designated* for specific events, which are relative to cultural, societal, religious and ethnic occasions and celebrations. A stereotypical Canadian example would be the traditional Canadian Turkey dinner at Thanksgiving or Christmas. Whilst Turkey may be consumed during the year, it does not, as Franchi (2012) reminds us, have the same meaning, or promotes and facilitates for the same *food kinship* ambience (Wallendorf & Arnould, 1991) that is has at Thanksgiving.

To commence on a personal note, and reflective of practicing what I am presenting, a positive benefit of globalization is that I am able to enjoy produce from an international origin, such as the sweet, tender, juicy Fuyu Persimmons, which are cultivated in Japan and some parts of China, or the Mackinaw peaches as portrayed on Seinfeld by Kramer (https://www.youtube.com/watch?v=xrUgKQyL6R4)), which are available during a specific window of time every year. Locally, I also look forward to that short period of time when Quebec fiddleheads are sold at the markets in Montreal.

Seasonal fruits and vegetables benefit the local population due to availability, accessibility and affordability, and also extend to include fruit tourism. Fruit tourism facilitates for visitors, (foreigners, urban / city dwellers) to get an opportunity to sample a gross variety of exotic fruits (malaysia.travel). Additionally, the visitors get the live the reality of harvesting their own fruits (easterntownships.org), or delve into the geographical, seasonal favourites such as the famous “cabane à sucre” (Samaha, 2015). This activity is also a very unique method, as it can contribute to

quality, inter-generational family time. The “cabane à sucre” menus are now quite diversified, including halal for the Muslim cohort and also catering to vegetarians (Ghaya, 2015).

Quebec Seasonal Produce Calendar

Here is a non exhaustive list of local fruits and vegetables available each month in Quebec.*

Vegetables	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Asparagus					✓	✓	✓					
Bean							✓	✓	✓	✓		
Beet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Broccoli							✓	✓	✓	✓	✓	
Brussels sprouts								✓	✓	✓	✓	✓
Cabbage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carrot	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cauliflower								✓	✓	✓	✓	
Celery							✓	✓	✓	✓	✓	
Celery root	✓	✓	✓	✓	✓					✓	✓	✓
Chicory	✓	✓	✓								✓	
Corn							✓	✓	✓	✓		
Cucumber			✓	✓	✓	✓	✓	✓	✓	✓	✓	
Eggplant							✓	✓	✓	✓	✓	
Fennel						✓	✓	✓	✓			
Leek	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lettuce								✓	✓	✓		
Mushrooms	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Onion	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Parsnip	✓	✓									✓	✓
Pepper							✓	✓	✓			
Potato	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pumpkin									✓	✓	✓	
Radish				✓	✓	✓	✓	✓	✓	✓	✓	
Rhubarb	✓	✓	✓	✓	✓	✓	✓	✓				
Rutabaga	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spinach					✓	✓	✓	✓	✓	✓	✓	✓
Squash	✓	✓				✓	✓	✓	✓	✓	✓	✓
Sunchoke	✓	✓			✓						✓	✓
Swiss chard						✓	✓	✓	✓	✓		
Tomato			✓	✓	✓	✓	✓	✓	✓	✓	✓	

* Seasonal fruits and vegetables may vary each year and between regions.

Legend: ✓ = product is available during this month in Quebec.

Table 4: http://trousseals.org/pdf/english/documentsutiles/quebec_seasonal_produce_calendar.pdfi

Eating *slocal* also facilitates for the importance of *food literacy*. Wagner et al, (2016) notes in the findings of their longitudinal study that a ten week course on the health and nutritional benefits of fruit and vegetable consumption contributed to influencing positive dietary changes amongst the participants, whom were obese / overweight adults. Hence, it reinforces the prominent role of *food literacy* on *slocalization*, and how pertinent it is to ones overall better health and wellbeing.

Slocalized food consumption also plays a major role on sustainable food systems, in addition to contributing to health, socio-economic, community and environmental practices (Macdiarmid, 2013, Macdiarmid et al, 2016). Depending of the socio-economic-status of some members of some communities, Kral et al (2016) suggests that financial support may affect the dietary attitude towards promoting the consumption of a higher percentage of fruits and vegetables. Whilst I agree that reduced access to finances affects purchasing power, I also believe that this must be juxtaposed to *food literacy* before an individual, a community, or society as a whole can experience any successful changes, as indicated by Wagner et al, (2016).

Hence, my hypothesis, (or one of them), is that a heightened educational awareness regarding the consumption of *slocal* produce, can lead to a reduction in the consumption of mass-produced industrial foods. I believe that *slocalization* via *food literacy* will bring about a greater awareness towards food choices, thereby generating a higher population interest in consuming fresh fruit and vegetables. It will also allow for the population, current and future, to have a better understanding of why certain products are available at certain times of the year (Siegrist et al., 2015).

According to Bishwajit et al., (2017), depression, which can lead to many *side diseases*, is a major global health concern, and is often seen as the "common cold" of psychiatry. Without being specific of organic / non-organic, they note that an intake of five or more servings of fruits and vegetables per day results in a huge decrease in depression statistics. Higher cases of depression were found among those who had a lower level of education, unemployed, and / or single, i.e. not having access to a human support system. They also consumed higher quantities of alcohol and cigarettes. I propose that *food literacy* and *food kinship* will not eradicate this problem, but most definitely reduce it.

Globalization and food literacy has allowed for the discoveries of *new* edible plants and facilitated for the introduction of ethnic, cultural and socially diverse foreign foods and recipes into the North American diet.

Whilst genetically modified organisms, (GMO's) may be condemned by some, these may also be the same group who *demand* that they have access to a product year round, or creative variations of existing foods, some of which are (were) seasonal. On a positive note, GMO's allows for shelf–life longevity.

However, the resulting products are not necessarily available, accessible or affordable to everyone – as these products become quickly restricted to a specific socio-economic-class; those who can afford it, and who are literate of its benefits.

Whilst these advances provide diversity in choices to those who can afford it, there is also a human cost involved. Produce that were once seasonal and local, such as quinoa originating from Bolivia, Chile, etc., a produce that was once referred to as the "poor-man's food", was easily accessible, available and affordable to the local

population. As the health benefits of quinoa were introduced to North American consumers, it resulted in high demands. These demands have resulted in genetic research to modify the grain (Zurita-Silva et al, 2014). Additionally, the resulting human cost involved is extreme, as it has placed restrictions on the accessibility, availability and affordability of quinoa towards the local farmers and population, making a once local product now seem foreign (Blythman, 2013).

Another seasonal but local Caribbean product, dasheen or taro, a highly nutritious tuber grown in the marshy swamplands of the Caribbean amongst other tropical places, also fell victim to GMO. According to researchers at the Caribbean Agricultural Research and Development Institute (CARDI), the new "smart" dasheen will look and taste the same, but will be able to mature in semi-arid conditions (http://www.jamaicaobserver.com/news/-Smart--dasheen-resistance-to-drought, Robin, 2000).

What happened to quinoa and dasheen are both the negative and positive side effects of *food literacy* and globalization. As foreign demand for quinoa increased, it was straddled and led into the realms of GMO's. Dasheen was also GMO'd due to changing meteorological conditions and also the continuous demand for the product, which has been greatly influenced by its nutritional discovery via *food literacy*, and also human migration supplemented by trans-globalization.

As these products and their health benefits were introduced to the North-American market, the demand has forced the focus to shift away from traditional seasonal farming, to genetic modification for an all-year-round access, mass production for exportation purposes. This, then, results not only in mass-produced

industrialized (fresh) foods, but also deprives an entire population of its own food resources and production, depleting their natural resources and food systems.

As I was conducting research on *food literacy* in the Caribbean last year, it took me a long and expensive journey to find fresh yams, cassava, breadfruit and taro, yet, upon my return to Montreal, I very quickly and easily found these products in the regular supermarket, and at a much cheaper cost than what I had paid for it in the Caribbean, where it is grown.

CARDI is currently conducting research on these food items with the goals to create a superior product and increase the production yield. Based on my personal experience regarding the accessibility, availability and affordability when I was in the Caribbean, I am not hesitant to infer that the desire to conduct this *research* /or genetic modification is drawn heavily on the foreign demand and supply to export these products, with little or no concern for the local population.

But, I must also think self-reflectively and experientially; the diet of the local population is extremely, highly Americanized, which then renders the question: "how much of the local population are really missing these items?"

Buying *slocal* has dietary, health, environmental and social benefits, whereas just buying because it is there and you can afford it is the total opposite. I firmly believe that *food literacy* pertaining to *slocalized* produce will allow for a heightened appreciation of food, from farm to plate, and all the hands involved in the production of the food item. This sense of pride will thereby facilitate for the longevity of local farms, and by default, employment. It will also provide the means to educate the future generation on and about where our food originates. Eating

slocal contributes to a heightened knowledge of seasonally available, locally grown and produced foods; it highlights the socio-economic and health benefits (Macdiarmid, 2013),

To conclude, the importance of *food literacy* towards *slocal* produce is highly pertinent to the entire globalized population. *Slocal* is not restricted to a specific geographical location or socio-economic cohort. Eating little or no fruits and vegetables, or a high consumption of meat, or an over demand for specific fruits and vegetables all year round will all have equal negative results on the individual, a community, and across the globe.

Key contributing components interwoven in this presentation are food literacy, globalization and socio-economics, and how these factors promote genetically modified organisms (GMO's) via consumer demand.

Based on this premise, I am of the solid opinion that *food literacy* regarding the benefits of consuming seasonal and local produce is highly imperative. I have chosen this as one of the topics to be included in my thesis, as I most definitely believe that it will be beneficial to future dinner programs and guests in attendance. By linking *slocalization* to *food literacy*, a clearer picture regarding the globalized cause and effects of the over-extensive demand for seasonal fruits and vegetables and meat, can result in increasing the awareness and reducing the Environmental Impact Assessment (EIA) of food waste (Tobler et al, 2011, & Röös et al, 2013).

Ch. Six – Virtual Empowerment Via Food Systems:

The Internet, when used selectively, with care and caution, can be extremely beneficial to the distribution of education and knowledge, in this case, *food literacy*. Globalization has permitted for the massive expansion in modern media and technological advances, and as Conover & Miller (2013) writes, allowing for a strong augmentation in "*critical pedagogy, geographic education, information literacy skills, representation of place, (and) Web-based learning*", (p1). They also note that to be effective at the task of distributing knowledge, as geographers, a multi-disciplinary, pedagogical approach is highly imperative.

The Internet, via online *food literacy* academic courses, also facilitates for the progression of education from a diverse population. For example, here at Concordia University, on-line courses are designed to accommodate a wide range of individuals, from full-time to part-time, adult, independent and students, and also extending to include fulltime employees who have chosen to continue their education.

Robinson et al, (2014), notes that massive open online course (MOOC), has simplified to process of following and continuing education to students worldwide, making it a lot easier to advance academically. This advancement in global e-learning, was inspired in the 1990's by GIS scholars.

Clarke, (2006), lists five key points that contribute to successfully teaching transferable geography in contested landscapes: they are (1) geographical skills, (2) geographical themes, (3) places and locational knowledge, (4) issues, and (5)

contribution to cross-curricular educational themes, (p.6), all of which contribute to both *food literacy* and *food kinship*.

Lemke & Ritter (2000), contribute that geographers, like modern technology, continue to evolve, quickly adapting to accepting the Internet an educational sharing instrument. They use a quote from Watson, (1995), who refers to the internet as: "….*a sort of power loom, providing the framework and resources from which is being woven an enormously complex tapestry of new information, relationships, services and–potentially-ways of working and interacting within a global society*" (p.2). The web-based environment is a two-way learning / teaching platform for both the student and the teacher (Ritter & Lemke, 2000).

This tapestry of relationships in a globalized society, has, within recent years, expanded to include *virtual* food production (Holloway, 2001). Virtual food production allows for someone who is financially capable, has an *authentic* connection to, and is interested in local farming, to be a virtual farmer. S/he can virtually *grow* and *produce* his or her own food, including domesticated farm animals, see figure sixteen. The parties involved, the *actual* farmer and the *virtual* farmer are generally from two different geographical locations, and connected electronically through modern media via the Internet (World Vision).

I feel that this activity, even though driven by finances and an e-world, also contributes significantly to virtual *food kinship*. In addition, as both parties have the desire to grow their own food, I will argue that conversations on *food literacy* will be present. Furthermore, it facilitates for member(s) of one ethnic cohort to learn about the "other", thereby creating a globalized e-community, and in the process,

sharing and / or exchanging cultural, ethnic, religious and social traits (Lemke & Ritter 2000, Conover & Miller, 2013, World Vision).

Figure 16: The perfect picture: a magnificent collage of springtime farm animals, (which consists of one sheep, three rabbits, five ducks and eight chickens cost $360 USD. Courtesy of World Vision.

The internet, via social networking apps, such as Facebook, Reddit, Twitter, etc., when combined with geo-located specific data, offers a goldmine of information on topics such as restaurant reviews, ethnic supermarket locations, and also extend to include areas where to avoid due to outbreaks of health epidemics and / or foodborne diseases.

Scanning spatial data is exceptionally important when distributing information pertaining to the outbreaks of food related health issues (Widener & Wenwen, 2014). Using geographic information system (GIS), data collected from social networking sites were divided into two sub-categories: (1) general exploratory data, and (2) applied science research. Subsidized information with key

words was gathered from Twitter to accelerate the distribution of information on food and health (Widener & Wenwen, 2014).

Yom-Tov et al, (2015) used the following collection of tweets with filtered key words, (see table 4), which were then combined with global positioning systems (GPS) coordinates to identify areas under siege by severe acute respiratory syndrome (SARS).

Bad cough	Bed flu	Chest infection
Chesty cough	Cold flu	Cough
Cough syrup	Coughing	Feel sick
Flu	Food feel sick	Headache night
Illness	Man flu	Shivering
Throat cough	Vomit	Vomiting
Waking headache	Worst cough	

Table 4: Yom-Tov, E., Johansson-Cox, I., Lampos, V., & Hayward, A. C. (2015). *Influenza & Other Respiratory Viruses*, Estimating the secondary attack rate and serial interval of influenza-like illnesses using social media.

Due to the complex intricacies of the human body, the variation in responding to the same illness, to better identify and track foodborne illnesses, Tegetmeyer et al (2012) used *dashboard*, (which is a combination of a social media stream, tag cloud, location map, timeframe graph, and an on-line form to submit reports). These components allowed for a very virtually interactive session, offering clarity, reducing unnecessary crowding at medical institutions and possibly relieving unwanted anxiety and stress.

Web 2.0 is yet just another system that works as a tracking system to incorporate data on Internet users and restaurant visitors. It considers factors such as type of Internet connection and ethnicity, socio-economic status (Baginski et al, 2014), see table 5 and figure 17.

Franklin County, Ohio		
	2010	1,163,414
	2000	1,068,978
	Growth rate	8.8%
Race/ethnicity (2010)		
	White	69.2%
	Black	21.2%
	Asian	3.9%
	Hispanic	4.8%
Median household income (2010)	$49,087	
Internet use		
	Home broadband	72%
	Internet use away from home	9%
	Home dial-up	8%
	Don't use Internet	7%
	Unsure if dial-up or broadband	4%

Note: Columbus Internet usage data were collected from Connect Ohio (2011).

Table 5: Baginski, J., Sui, D., & Malecki E.J. (2014) Exploring the Intraurban Digital Divide Using Online Restaurant Reviews: A Case Study in Franklin County, Ohio

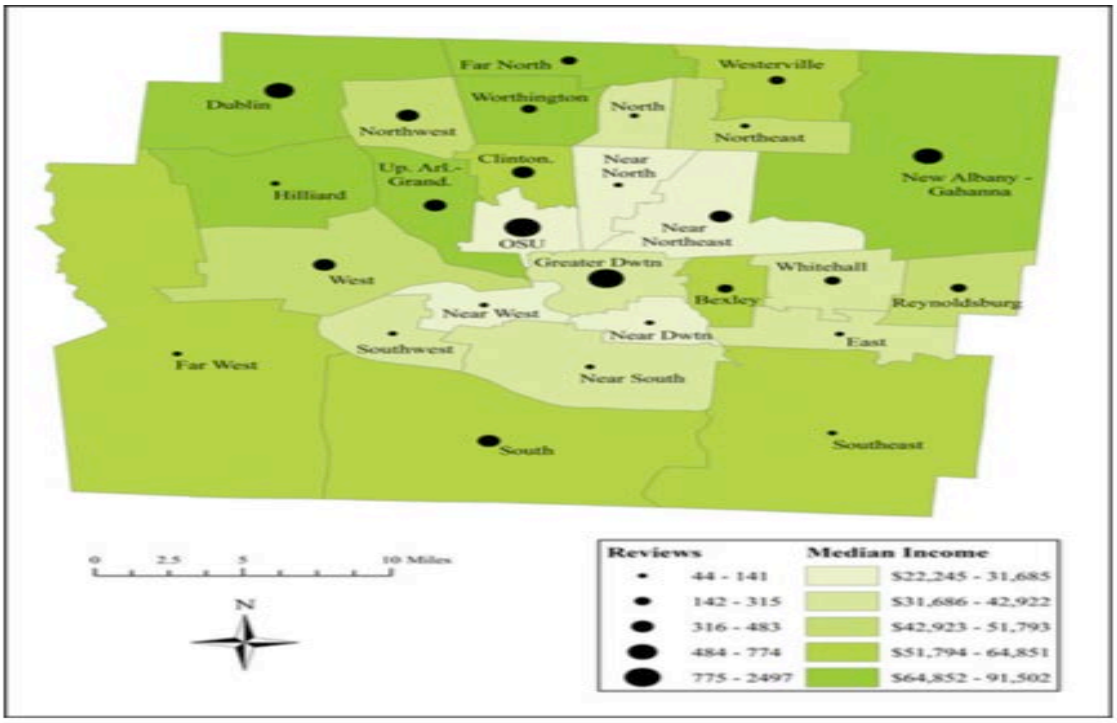

Figure 17: Baginski, J., Sui, D., & Malecki E.J. (2014) Exploring the Intraurban Digital Divide Using Online Restaurant Reviews: A Case Study in Franklin County, Ohio

Using the electronic language of Twitter and GIS software, Fried et al, (2014) were able to identify the names of foods in high demand to specific states across the US.

Figure 18: Fried, D., Surdeanu, M., Kobourov, S., Hingle, M., & Bell, D. (2014). Analyzing the language of food on social media.

Digitalized new media applications are ever evolving; some such as Meerkat, (available on iTunes and Android) offer a hands-free feature which allows for restaurants to live-stream and communicate globally from their kitchens (Bercovici, 2015). The penchant is so strong regarding restaurant reviews, that review sites are entering into financial acquisitions in a bid to gain control over fellow competitive sites in an effort to control this domain (Geron, 2013, *FRPT- FMCG Snapshot*, 26-27, 2015, Yahoo News, 2015).

Wahba (2015) mentioned that food was used as a means to project identity. Whittaker & Gillespie, (2013) also indicates that, like food, social networking sites (SNS) can be used to negotiate identity, especially amongst teenagers. Adolescents

use SNS to communicate, but also to meet at specific eateries, (to engage in *food kinship*?) be it ethnic or not. SNS can also be used as a form of mediation between the self and communities. Twitter, Facebook, Blogs, and other SNS provide the means for the development and expression of the multi-variance of human personalities.

SNS and modern media apps has also been experiencing a growing presence among the middle aged and seniors, (Resor, 2010), as they surf the Internet seeking new recipes in a bid to learn more of *food literacy*, looking up past acquaintances, or seeking new ones, so that they can engage in *food kinship*. New and advanced digital communication technologies also facilitate for the modification and metamorphosis of individual, collective, communal and global continuation (Marshall & Notley, 2014).

Social networks are also used to share and promote knowledge on *food literacy*. Recipes on how to best cultivate blueberries, incurring minimum lost and maximum crop production are circulated via social networks, (Attaway et al, 2012). Furthermore, the e-language of food via tweets, facebook posts, and other social networking sites can identify ethnicity and dietary habits.

The Internet is a whole new electronic world, ever evolving with social media networks, apps, software, programs, games, and virtual interaction. It can be used to teach about *food literacy* and *food kinship* and bring about awareness to foodborne diseases.

It can be used to facilitate for advancement in education within a city, province or the country, but it can also be expanded to include global citizens, all

being students in one virtual classroom. The Internet in geographical studies can be coupled with GIS to conduct research in one geographical location and present the findings in another.

The Internet via apps / software as facetime, skype, e-mail, to name a few, etc., will facilitate for the student who is miles away from home, to be virtually at home, and engage in *food kinship* with their families and friends during auspicious times or religious observances.

The Internet can be the globalized tool that sets the stage for the free flow of *food literacy* information, thereby allowing for us to be more aware of where our food comes from, and also giving us an insider view of international *food kinship* practices. Knowledge is power, and by having this knowledge gives us the power to better understand and offer mutual respect to those working in the food chain. This will lead to an elevated appreciation of food, leading to living much more meaningful lives.

I refer to the e-role of globalized modern media in food systems and trans-nationalities as “virtual empowerment”.

Ch. Seven: The Commodification Of Canadian Food-Systems-Workers

According to the Merriam-Webster online dictionary, the etymology of commodification is commodity, which primarily refers to "*something like a product…everyone has a right to it…it can be bought and sold – i.e. it is disposable*". Hence, it would be accurate to say that food products can be categorized as commodities, but ***not*** people, as this would strongly indicate something along the lines that modern day slavery is existent, alive and well in Canada.

With this information, the mere thought that migrant food-systems-workers (FSW's), who are primarily responsible for Canadian(s) *food security*, *food safety*, and *food sovereignty* issues can be labelled, and treated as commodities, would be simply ridiculous. Canada, after all, is a first ranked, first nation(s), (no pun intended) state, with strict labour laws and equality regarding human rights, immigration laws, and sex and gender issues, etc., to name a few.

I feel that it is necessary to begin with a brief history of FSW's in Canada, as this will allow for a better understanding of the systematic discriminated meted out against this cohort. In 1966, the government of Canada introduced the Seasonal Agricultural Workers Program (SAWP). This government-sanctioned program was simply a post-war, low skilled, labour intensive program designed to "employ" *invisible and racialized* (Lim, 2015), non-white men, from post-enslaved, colonialized Caribbean countries, and later Mexico to work on farms in Canada (Otero & Preibisch, 2015). The program branched out in 1973 to include Temporary Foreign Workers Program (TFWP), and in 2002 expanded further to integrate the "low-skilled-workers" (L-S-W) category. According to Basok et al, (2014), most of

the "employees" in these programs, are placed in "*the four D category*", (dirty, dangerous, difficult and demeaning); they are socially and economically ignored and abused. Since 1966 to now, the option of permanent migration and settlement in Canada, such as landed-immigrant-status or citizenship and the accompanying benefits does *not* exist for FSW's (Engelen, 2003, Castles, 2004).

According to the United Farm Workers of Canada, (UFWC), migrant farm workers, have always been, and continue to be predominantly non-white and immensely invisible (González, 2015, UFCW, 2016), marginalized, extremely exploited (Knott, 2016), and "*prone to abuse*" (Kauri, 2012). They earn less than minimum wage (Choudry & Thomas, 2013), and live in deplorable housing conditions (UFCW, 2013), with limited access to healthcare (Barnetson, 2012). Yet they are the ones who are primarily responsible for the growing, harvesting, and producing of most of the food choices that we are privileged to eat, providing Canadians with daily *food security*, *food safety*, and *food sovereignty*.

In Alberta, an average of eighteen workers die each year in farm related accidents (Huffington Post, Alberta 2012), yet it was only as of January 01st 2016 that legislation was passed effectuating the Occupational Health and Safety (OHS) Act on Alberta farms (Alberta Gov't). The loophole to this is that the employers have to provide a "*reasonably practicable*" working environment, leaving the onus on the employees to ensure a safe workplace, which reverts to placing the blame on the employees if they are injured, or die on the farm. As Stastna (2012) notes, due to lack of enforcement regarding compliance and regulations, (most) employers decide if they want comply with the rules and regulations, and to what extent.

"*Danger is defined in the Code as any hazard, condition or activity that could reasonably be expected to be an imminent or serious threat to the life or health of a person exposed to it before the hazard or condition can be corrected or the activity altered [s.122(1)]*" (WHSC)

In the neighbouring province of Manitoba, the Worker Recruitment and Protection Act, which highly focuses on foreign agricultural workers was introduced and modified in 2016. This act gives precise and specific details regarding workers rights and status, and is also available in Spanish (Gov't of MB). But, what is missing is the farm workers knowledge and accessibility this document, it's benefits, and how to proceed with a claim and / or report abuse. Unfortunately, most workers are not aware that this act exists, and / or how to manoeuvre through the process.

Every year, depending on the severity of the injury, most of the workers lose their work visa, and by default, lose their minimal access to health care. Ironically, while approximately eighty-one per cent of these workers have a health card, for most it is simply just another card, as there are only a minute seven per cent who are aware of the benefits, and know to proceed with a claim (McLaughlin & Hennebry, 2011). Additionally, over fifty-five per cent of workers are discouraged from reporting injuries and / or illnesses, as this results in the *ouvert* practice of being reprimanded and incurring a loss of pay (Hennebry et al, 2016). Furthermore, upon incurring an injury, depending on the severity, a high percentage of farm workers are sent home under the title of *medical repatriation* (Orkin et al, 2014).

"Between 2001 – 2011…more than two-thirds of repatriated workers were aged 30-49 years. Migrant farm workers were most frequently repatriated for medical or surgical reasons (41.3%) and external injuries including poisoning (25.5%)"

Orkin et al, p.E192, 2014.

I will be presenting and cross-comparing the end results of three cases of farm workers, all of whom who died on the job. All these workers died in the process of procuring *food security*, *food safety*, and *food sovereignty* for the general Canadian population.

My goal in presenting these three cases is very simple: to primarily highlight the extreme discrepancies between the labourer and the consumer. The *food kinship* activities that is practiced and taken for granted within the Canadian society, and the accessibility to *food literacy* available to Canadians, are not relative or pertinent to the discoloured, commodified food systems workers, the said cohort who provide Canadians with *food security*, *food safety*, and *food sovereignty* issues

The first case is that of Sheldon McKenzie, a twelve-year veteran of SAWP. Mr. McKenzie suffered a major head injury while working on a tomato farm in Leamington, Ontario. Immediately following the incident, the priority of the *liaison* – the individual between the government and farm owner – was to cancel all immigration and health accessible resources, and ship Mr. McKenzie back to Jamaica, stripping him of all / any human rights (Marchitelli, 2016). His family had to retain the services of a lawyer who filed a claim on humanitarian grounds, which resulted in a temporary stay, so that he could receive medical care and treatment, he had been contributing to Canadian health care for over twelve years.

Mr. McKenzie's injury included a swollen brain with internal bleeding, and resulted in partial removal of his brain. Unfortunately, due to the severity of the incident, he succumbed to his injury before a decision was made regarding his immigration status. Mr. McKenzie was the soul breadwinner for his family who lives in Jamaica. The farm(ers) was never identified, and the name of the farm was never made public; they were not charged nor did they face with any repercussions. The media never disclosed the details pertinent as to how Mr. McKenzie was injured.

Exposure to chemical poisoning is also very imminent in the daily lives of immigrant farm workers, which leads to dire and severe long-term health effects. According to McCauley et al, (2006), while more correlative research is needed, some initial health problems that have been identified due to organophosphate poisoning, extend to include, but is not limited to, *respiratory problems, memory disorders, dermatologic conditions, cancer, depression, neurologic deficits and birth defects* (p.953), to name a few.

The second case that I will be presenting is that of Vietnamese mushroom farm workers Ut Tran, Jimy Chan and Ham Pham. Having no knowledge or training in machinery maintenance, and unprotected exposure to hydrogen sulfide led to their horrific deaths. When officials measured the level of hydrogen sulfide in the area where these men worked, it was registered at the highest that such as meter could recognize, a massive five hundred parts per million. Hydrogen sulfide will directly suck all the oxygen out of the body; the tragedy of their deaths has been compared to that of dying in a gas chamber. In addition to their deaths, two other farm workers, Michael Phan and Thang Tchen, were left permanently brain

damaged. An inquiry revealed that the plant was a 'make-shift' structure, and that the owners did not have the appropriate permit build, much less to operate such a farm (Sinosky, 2011, Theodore, 2012).

In this case, the name of the mushroom farm and all its affiliates was made public. The owner, who was identified as a non-white immigrant via newspapers, radio and television broadcasts, incurred a hefty fine. The money collected via the payment of this fine was deposited into the coffers of the Canadian government. Once again, as in the case of Mr. McKenzie, the family of these men did ***not*** receive any compensation. In my humanistic approach, I felt that a fine was appropriate - if it was paid to their family of the victims.

The third and final case is that of Kevin Chandler, a white farm worker who was killed in a farm accident at a grain elevator in Calgary. Mr. Chandler was in the process of cleaning grain build-up that had been stuck to the sides of a silo, when a few tonnes of grain suddenly fell, burying him alive (CBC 2008). An inquiry found that he was not wearing a safety-harness, *but* it was also noted that there was no place to secure a harness.

After a six-year legal battle, Mr. Chandler's widow received a *substantial* amount of financial compensation. The owner(s) of the farm was never identified, nor was the name of the farm made public. In all three cases, the only apology expressed to the victim families, originated from the owners of the mushroom farm.

A brief review of these cases begs a few self-reflective questions: (1) why were the names of farms owned and / or operated by white farmers never made public? (2) Why were the white farmers never identified? (3) Why was it that the

only victims' family to receive compensation was white? There have been, and continue to be no lack of government sanctioned inquiries. For these inquiries, there is no lack of financial allocation; unfortunately, in the cases involving non-white immigrant farm workers, none of the allocated finances ever reach the injured workers, and in the case of death, their families.

As clearly demonstrated in these tragedies, in this first-ranked, first nation state of Canada, non-white farm workers, some with language barriers, most with no knowledge of the law and / or their rights, continue to be punished and left to fend for themselves after incurring an injury. In the scenario of death, they are disposed off like expired food, rendering their families in a further state of despair, destitution and poverty.

According to the Canadian Labour Code as listed on the Federal government Worker Health & Safety Centre website, workers can refuse to engage in dangerous work if there is any doubt or indication that they will be at risk, or place someone else in danger (WHSC). Clearly, this does not apply to migrant farm workers.

In 2001, the UFCW (2002) presented a detailed report to the then Federal Minister of Human Resources and Development Canada, Jane Stewart. The report included a list of some of the sufferings endured by the SAWP employees, and recommendations regarding changes. An entire year had elapsed with zero consideration given to any of the recommendations, much less the implementation of any political changes. Fast-forward to 2009, former Auditor General of Canada, Sheila Fraser, *subtly* notes in her report:

"*2.139: Overall, we found that current practices of Citizenship and Immigration Canada (CIC) and Human Resources and Skills Development Canada (HRSDC) do not ensure that foreign worker programs are delivered efficiently and effectively*".

Firstly, the report addresses the *current practices* of the programs administered by CIC and HRSDC, it does not include the human element; the living and working conditions of the workers. Secondly, it appears to be nothing short of a political reminder indicating that there is nothing improper pertinent to the living and working conditions of SAWP / TFWP workers.

In 2013 the Harper's government created and implemented laws that could result in farmers who abused workers under to TFWP to face a fine from $500 to $ 1 million dollars. When the Liberals under Trudeau took power, they *politically promised* to re-examine the TFWP; unfortunately no time frame or direction was given to the standing committee (Friscolanti, 2016).

The charade of Canadian policies and politics expressed and displayed on non-white SAWP, TFWP, and L-S-W workers has created the perfect environment to be compared to Bhaktin's (1895-1975) theory of *carnivalesque and grotesque realism*.

While new laws encourage the workers to report abuse, this is easier said than done. For example, the process of reporting an injury to the Workers Compensation and Safety Board (WSIB) in Ontario is quite complicated. When an injured farm worker requires medical attention, the worker must first report to the supervisor, who then advises the employer, who then submits a Form 7. If the employer refuses to sign the form, on the condition that the employee has existing

knowledge about how to proceed with a claim, s/he has to submit a Form 6 – which s/he must request from the employer, (the same employer who refused to sign the Form 7). When a medical practitioner is involved, the physician must submit a separate form, Form 8 (Basok et al, 2014).

In most cases of farm workers who report abuse, it ends in a negative ripple effect. Due to *employer exclusivity* they are quickly blacklisted, and disposed off via deportation, which results in the complainant being banned from the program (Vosko, 2016). This is meted out not only the worker who laid the claim of abuse, but their accompanying family and / or friends (UFCW, 2013).

"*Workers may be repatriated or denied future employment within this program for a number of reasons: low productivity, conflict with other workers, assertion of their rights, interest in joining labour unions, engaging in intimate relationships with other workers or Canadian residents, becoming pregnant, or health problems*" (Basok et al. p.1400, 2014).

The exploitation of international migrant workers in Canada is increasingly taking on the visage of *human trafficking* (Straus & McGrath, 2017). These workers also find themselves in extremely precarious situations when their employers misrepresent them by presenting distorted or false information to immigration.

From farm to fast food, where most fast food labourers are also statistically composed of non-white ethnicities, you can equally find these atrocities in existence. Generally, Canadians would refrain from engaging in these jobs, as the pay is minimum wage, and there are no social or health benefits.

The stereotypical division in and of societal cohorts are still ever present in modern day Canada, as it is quite common for a non-white person to be asked: "where are you from?" For a white immigrant, it is standardly assumed that they are "Canadian" - with the option of identifying to / with their immigrant country. This *socio-inclusive* offer also extends to include job application forms for governmental institutions and private enterprises, as the applicant must identify to their ethnic cohort, including the autochthone population. The premise for this is that it allows for the adherence as per meeting the requirements regarding employing laws and statistics of employing minorities. Can it be assumed then that if the law did not dictate that non-whites be employed, their options would be to rely on state handouts, or engage in criminal activities? According to a report made public by the Correctional Services Canada, (CSC), the inmate prison population of non-white men "*are (highly) disproportionately (overly) represented*" (Trevethan & Rastin 2004).

"*Current research on the position of racialized groups in Canada has suggested that racial discrimination is a fundamental factor in the class formation of Canadian society, to the extent that a "colour-coded vertical mosaic" or social hierarchy of race has emerged*" (Preibisch & Binford, 2007 p.7-8)

Hence, it can be easily hypothesized that even if a (dis)coloured migrant happens to *escape* the clutches of being a farm / food labourer, success in Canada has been, and continues to be primarily hierarchized based on ethnicity and skin colour, what Preibisch & Binford (2007) refers to as "global apartheid".

The continued increase of outsourcing has been blamed on globalization and capitalist greed, amongst other factors, but how does this compare to *insourcing*? I

refer to Canadian migrant farmworkers as *insourced employees*, and am of the opinion that *insourcing* is worse than outsourcing. At the very least, the outsourced employee works and lives in their "home" environment, where s/he has access to a human support system via friends and family. They engage and indulge in *food kinship*, exploring the five senses as they partake in sharing a meal with their loved ones. Additionally, they maintain and can easily expand their *food literacy* knowledge via the Internet.

Within the confines of *insourcing* pertinent to immigrant food workers in Canada, there is no human support system. As noted in the case above, Mr McKenzie left his family in good health, only to have a disfigured corpse shipped back to them, with no financial support for funeral.

In Montréal, it is quite normal for the average Canadian, (student, employee, un-employed) to attend a "cinq à sept" (5 à 7) or "happy-hour", thereby engaging in *food kinship*. At this event, some attendees may even order sweet potato fries, as they proudly display their knowledge of *food literacy*.

Migrant food systems workers are at the forefront of this "cinq à sept" (5 à 7) or "happy-hour" operation, toiling the soil, harvesting the produce, working factories, and preparing the food behind the scenes in the kitchens.

This sentiment as highly reflected in the words of the spokesperson for two advanced greenhouses in Leamington, ON, who notes "*SAWP has been the lifeblood of our industry*" (Harrison, 2016). But, as noted so many times, the focus is on the program, *not* on the workers, who continue to be "invisible".

Rather unfortunately, SAWP farm workers are highly restricted from engaging in such an activity. They may huddle and eat a meal together, but as Inouye (2012) reminds us, according to the Temporary Foreign Workers Program Act (TFWPA), should these farm workers decide to go the restaurant for dinner or a drink after work, it is sufficient grounds to (threaten) deportation (Basok et al, 2014).

"*When people talk about buying organic, buying local, I think it's a really short-sighted viewpoint because it doesn't factor in who is doing the work," Lee says. "Yes, it's important to buy local, but also to think about labour issues. Are the people in the local farms and local work sites being treated properly?*" Min Sook Lee –

Documentary filmmaker, *Migrant Dreams*.

Hence, I will argue that policies, ranging from healthcare coverage to freedom of mobility, EI and pension refunds, and immigration status must be changed and / or put in place, thereby protecting and offering equality to our co-citizens who continue to work the land, and in some situations risking life and limb as they continue to produce *food security*, *food safety*, and *food sovereignty* for Canadian consumption.

I firmly believe that a socio-pedagogical approach to food systems workers will facilitate for a better understanding of the complex human rights issue of "*who produces my food, and under what conditions*". It will also allow for Canadians to re-think (and hopefully appreciate) the societal food kinship activities that are taken for granted.

Chapter Eight: Food Systems & Post-Diagnosis Cancer Care Management

This is by far the most humbling and memorable chapter of my thesis. I wish I had access to this *food literacy* knowledge and information pertinent to cancer care when my Dad or my dear friend Marie-Jeanne from Avignon France were still alive and first diagnosed with cancer; maybe my Dad would still be around to see me present this thesis.

Hence my goal here is not to simply write another academic paper, but primarily to present information in simple language, regarding navigating the process of patient-care and management, post-cancer diagnosis available to the public. I will be strongly focussing on the role of *food literacy* and *food kinship* in this process.

Taking a pedagogical approach, this chapter will be divided into three sections. Firstly, it will respond to and provide a working knowledge in simple terms of what is cancer, and what are some of the causes. Secondly, it will address the psychosocial and psycho-emotional elements, (e.g., biomedical, governmental, cultural, stress, depression, etc.), of post-cancer diagnosis. Thirdly, it will engage on exploring the beneficial effects of *food literacy* and *food kinship* on post-cancer care with an emphasis on living a meaningful life.

After cancer diagnosis, patients navigate cancer care management with little control. Hence, it is important to thereby emphasize the importance of food choices in the daily rituals of food consumption. Post-cancer care food decision-making is influenced by multiple and often confusing sources (e.g., psychosocial,

governmental, cultural, biomedical. Hence, I want to look at using food as a form of individual and collective self-management therapy among cancer survivors.

As the statistics for cancer diagnosis and cancer-related mortality rates increases across the world, (considerably higher in developing nations), globalization and modern media has, and continues to provide valuable and up-to-date information pertinent to cancer diagnosis and post-cancer care.

Food systems in cancer care extends to include, but are not limited to food ingredients, *food literacy*, (which is knowledge regarding the health and nutritional benefits of certain types of plant foods), the benefits of *slocalized* eating, and engaging in *food kinship*. On a broader spectrum of food systems, globalization and socio-economic status plays a significant role in the availability, affordability and accessibility to the diversity in food choices and selections, while the use of modern technology and electronic media play a relatively pivotal role regarding education and awareness. I believe that when these *external* factors are combined, the resulting *internal* benefits can be astronomical to the patient and their family.

As previously mentioned, I will begin by communicating and addressing the following two concerns; (1) what is cancer and (2) what are some of the causes. I believe that this is very important as it will facilitate for the reader to have a better understanding of this *disease*, and how it affects' the human body.

According to the National Cancer Institute, (NCI-1), cancer is "*the name given to a collection of related diseases…that affects the body cells*". Cancer is a non-communicable disease, meaning that it is not physically transferable from person to person. However, cancerous cells can be genetic, meaning that it is inter-

generational and can therefore be passed on from grandparents and / or parents to their children and / or grandchildren via deoxyribonucleic acid (DNA) (NCI-2). These are known as *indirect* risk factors. This information can be beneficial in seeking early and preventive cancer screening.

There are also many external contributors that increase the risk of cancer; cancer can be brought on by environmental factors, such as prolonged, unprotected exposure to the sun via its ultraviolet (UV) rays, dietary factors, obesity, occupation, genetic susceptibility, infectious agents, reproductive factors, socio-economic-status, environmental pollution, ultraviolet light, radiation, prescription drugs, electric and magnetic fields, chemicals used in the mass-production and packaging of industrially processed foods, improperly prepared / cooked foods, industrial and air pollution, to name a few (Harvard Report On Cancer Prevention, WHO, Deakin University, NCI).

Exposure to these contributors is referred to as *natural* risk factors. Ironically, these elements are primarily what Canadian migrant food systems workers are daily exposed to as they procure *food security*, *food safety*, and *food sovereignty* for Canadian consumption, facilitating for *food kinship* practices.

The NCI also identifies the chemicals found in cigarettes and cigarette smoke, (this includes second-hand cigarette smoke) as one of the most common, and probably highest sources' of direct human-to-human risk factor.

All of the above factors, direct, indirect, and environmental can have a negative effect on our DNA, thereby altering our genetic structure, and, as we all

possess individualized DNA, our bodies will respond differently to different risk situations.

According to Li et al., (2010), the breakdown in population statistics of patients diagnosed with cancer in North-America as of 2008 were five to ten per cent genetically related, ninety to ninety-five per cent of the cases were linked to environment and lifestyle, and thirty to thirty-five were connected to the patients diet, which reinforces the conclusion of scientists David and Zimmerman (2010) that cancer is a *man-made disease*.

The following is a listing of the top five cancers by sub-regions in Asia.

	Age-standardized rate (per 100,000 person-years)											
Region	Eastern Asia			South-Eastern Asia			South-Central Asia			Western Asia		
Cancer site	Inc	Mor	MIR	Inc	Mor	MIR	Inc	Mor	MIR	Inc	Mor	MIR
Both sexes												
All cancers	186.0	117.7	0.63	138.2	94.8	0.69	100.1	69.3	0.69	168.2	103.0	0.61
Male												
All cancers	225.4	159.3	0.71	147.6	114.1	0.77	98.4	74.8	0.76	192.8	129.3	0.67
Lung	50.4	44.8	0.89	29.6	26.6	0.90	11.9	10.7	0.90	37.6	34.0	0.90
Stomach	35.4	24.0	0.68	8.2	7.3	0.89	9.2	8.5	0.92	11.8	10.2	0.86
Liver	31.9	29.9	0.94	22.2	21.4	0.96	3.7	3.6	0.97	5.0	4.9	0.98
Colorectum	22.4	10.2	0.46	15.2	9.7	0.64	7.0	5.1	0.73	17.6	10.0	0.57
Oesophagus	16.9	14.1	0.83	3.6	3.3	0.92	6.5	6.0	0.92	2.9	2.7	0.93
Female												
All cancers	151.9	80.2	0.53	132.6	79.5	0.60	103.3	64.7	0.63	150.2	81.3	0.54
Breast	27.0	6.1	0.23	34.8	14.1	0.41	28.2	13.5	0.48	42.8	15.1	0.35
Lung	19.2	16.2	0.84	10.5	9.4	0.90	3.4	3.1	0.91	7.1	6.2	0.87
Cervix	7.9	3.3	0.42	16.3	7.9	0.48	19.3	10.9	0.56	4.4	1.9	0.43
Colorectum	14.6	6.8	0.47	10.2	6.4	0.63	5.2	3.8	0.73	12.4	7.1	0.57
Stomach	13.8	9.8	0.71	4.1	3.5	0.85	4.2	3.9	0.93	7.3	6.2	0.85

Table 6: Chirk et al, (2015). Cancers In Asia By Sub-Regions.

There are two types of tumours, *benign* and *malignant*. According to the Canadian Cancer Society, (CCS), tumours are formed when there is an abnormality in the growth of cells, resulting in lumps.

Benign tumours are sometimes confused with cancer. A *benign* tumour is not cancerous; it is more of a growth. A *benign* tumour poses a threat of growing to be quite large, but it is normally restricted to one area of the body. A patient diagnosed and treated for a *benign* tumour is less-at-risk regarding the return of the tumour. The tumour once surgically removed, very rarely returns.

With the exception of blood cancers (such as leukemia), most cancers are in the form of a distinct type of a *malignant* tumour. *Malignant* tumours are very invasive and spread as the cancer cells grow; as a *malignant* tumour grows, so to does the cancerous cells, spreading and dispersing themselves as they travel to different parts of the body.

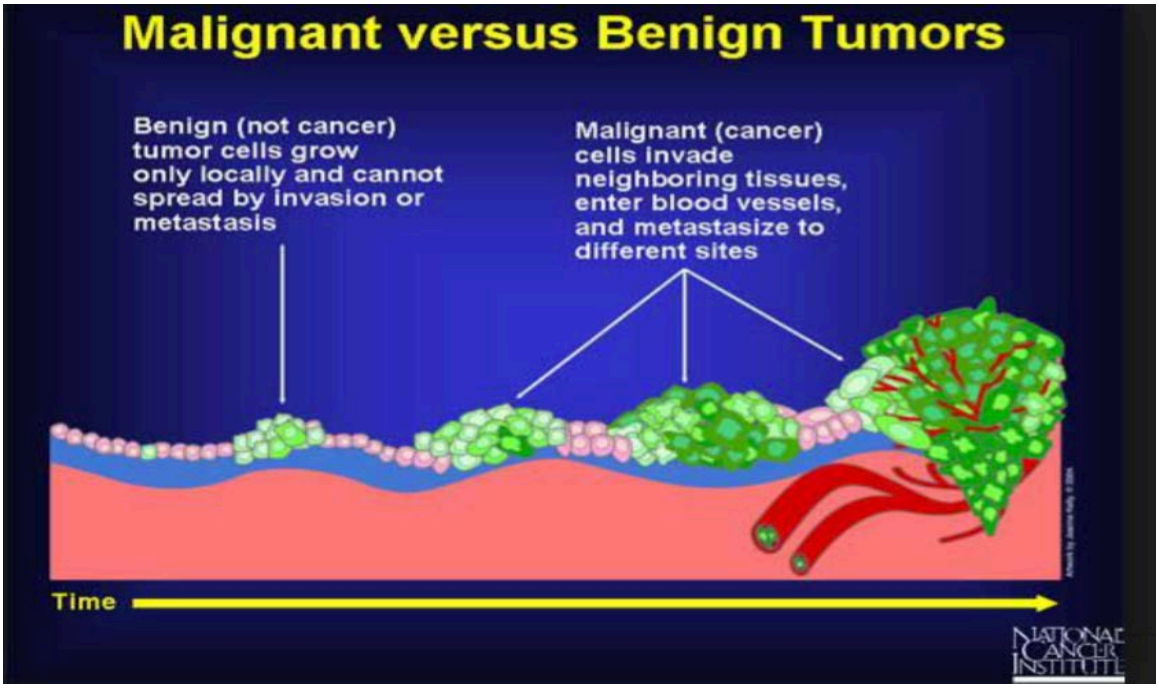

Figure 19: National Cancer Institute (2016) - Malignant v. Benign Tumours.

Unfortunately, in the case of a *malignant* tumour, the patient is at a much higher risk of the cancer "returning" after being diagnosed and treated. Sometimes the cancer may return in a different part of the body due to the fact that the nucleus of cancer cells are larger and more dominant, allowing the cells to *metastasize* - thereby traveling and spreading to remote parts within the body.

When a patient is first diagnosed with cancer, s/he is categorized in one of the four *stages of cancer*. This diagnose is hypercritical and allows for the most appropriate way to treat the cancer. Stage "0" primarily refers to where the cancer has started. At stage "1" the cancer has become invasive, treatable, but life is at risk. At stage "2 & 3" starts invading the blood cells, possibility having an adverse effect on the body's natural immune system. Finally, stage "4" – the cancer cells *metastasize* as they travel and spread to remote parts within the body.

Figure 20: National Cancer Institute, (2016) - The 4 Stages of Cancer. Source:

The Cancer Institute applies the TNM methodology (T = tumour, N = lymph nodes, and M = metastases) to systematically classify, diagnose and treat cancers.

Cancer is seen as a massive *killer* in South-East Asia (UN, 2012), hence I would like to reiterate the importance of education, knowledge and awareness

regarding the causes of cancer, as this allows firstly in identifying what are some of the common causes and risk factors of cancer. I would suggest that by presenting information of how cancer develops and its stages of classification, can lead a better understanding of what is this disease, and promote for an earlier screening process. This results in a better understanding of how to cope and manoeuvre post-cancer diagnosis care and management. Hence, I firmly believe that the more information available and accessible to the general population, can immensely contribute to the delay, (or prevention?).

The psycho-social and psycho-emotional elements that are related to both pre and post cancer-diagnosis has a tremendous effect on ones' Health-Related-Quality of Life, (HRQoL), A key ingredient that simply cannot be overlooked and greatly influences ones' pre-cancer risks and post-cancer care is the patient and their family's socio-economic-status. Kimman et al, (2014) notes that this factor directly affects the HRQoL. Minimal or limited financial resources have a tremendous effect regarding the availability, accessibility and affordability of food items, but also education and healthcare (Bishwajit et al., 2017).

In addition to socio-economic-statuses, there are a number of wide-ranging factors that affect the HRQoL, such as; level of education, (which is why I have chosen to take a pedagogical approach), sex and gender, (as listed in table six), the tumour and / or level when cancer the cancer has been diagnosed, (see figures 19 and 20), age, (patients over the age of 65 experienced a further reduction in their daily life activities), sensory, (primarily taste and smell, Ilpma, et al, 2016), ethnicity, (which coincides with, and extends to include geography), and the geographical

location of the patient and food ingredients, which I will address and link to globalization later on.

As a result of one or more of these elements, anxiety, stress and depression have been identified as major contributors to both pre and post cancer diagnosis (Hopkinson 2016, Yen et al, 2016). Furthermore, most, if not all cancer patients experience and suffer from Cancer Cachexia Syndrome, (CCS) also known as Cancer Anorexia Cachexia Syndrome, which primarily refers to weight loss and / or eating problems (Hopkinson, 2016). According to Fearon et al, (2011) as quoted by Hopkinson, (2016), CCS is:

"a multifactorial syndrome characterised by an ongoing loss of skeletal muscle mass (with or without loss of fat mass) that cannot be fully reversed by conventional nutritional support and leads to progressive functional impairment. The patho-physiology is characterised by a negative protein and energy balance driven by a variable combination of reduced food intake and abnormal metabolism"

CCS harshly compromises the body's natural immune system, greatly reducing ones' quality of life. CCS causes metabolic changes that are brought on by cancerous tumours: the more aggressive the cancer, and / or a later stage of diagnosis, leads to a higher level of severity regarding the possibility of the patients' survival.

Another prominent sub-component of food systems is *food literacy*, which can contribute to an improved personal immune health via its application and understanding of the importance of personal hygiene pertinent to food handling at an early age. Lange et al, (2014) writes that paradoxically while access to food is a

must-have for survival, this very food can also be the origin of foodborne diseases, which can be sometimes fatal. Di Renzo et al, (2015) supports this by indicating that "*deciding whether a food is safe or not is a difficult task. Food can never be proven to be entirely safe nor entirely hazardous*" (p.2). They do emphasize that what is necessary is the need for more literacy so as to be able to make more informed decisions.

To reiterate, whilst the scarce instance of food poisoning via Botulism can be detrimental, due to advanced medicine, food poisoning poses less of a threat. Foodborne diseases can result in live (bad) bacteria living within the intestinal tract. These bacteria are quite resistant to most antibiotics, and can lead to long-term discomfort and health problems (Harvard, 2010). One of the leading causes of worldwide-cancer-related deaths is stomach caner. A major instigating culprit in the determinant of duodenal and stomach ulcers have been identified as *Helicobacter pylori* (Sitas, 2015). *Helicobacter pylori*, is a direct result of poor dietary habits, and can also be associated with poor food handling. Patients with *Helicobacter pylori* are at an extremely higher risk of being diagnosed with stomach cancer. I cannot stress the pivotal importance of *food literacy*.

A key psychosocial intervention that was identified as extremely helpful to patients coping with CCS, and directly linked to *food literacy* and *food kinship*, was the emphasis of spousal / partner interaction and communication (Hopkinson, 2016). Females in a relationship, (married and / or cohabitating with someone), and young single females with a higher education were identified as those needing the most psychosocial support (Faller et al, 2015). Adler & Page (2008), notes, that the

reduction in social support is a major psychosocial problem; women who were diagnosed with breast cancer, but socially isolated, were at a 66% higher risk of dying within 6 years.

Mental health issues in the form of psychiatric disorders resulting as an adjustment of depressive disorders, and other neurotic disorders have also been reported to be on the increase in patients diagnosed with breast and prostate cancer. For female patients who have been diagnosed with breast cancer, the rate of incidence pertaining to major depression is two to three times higher than non-cancer patients (Izci et at, 2016). Unfortunately, for men, the statistics regarding the rate of suicide is ever-increasing (Fall et al., 2009), see table seven.

For testicular cancer patients (TCP's), a reduction in the sensorial traits of taste and smell were identified as two significant psychophysical elements that the patients faced during chemotherapy (Ilpma, et al, 2016). And while the patients in this study were also rendered at a higher risk for being obese, there was, however, a decrease in the lean mass of their bone density.

Whilst the percentages of cases of comorbidities such as cardiovascular, diabetes, asthma, emphysema, and ulcers to name a few were notably higher in patients post-cancer diagnoses, though it was not clear if these were existing pre-diagnosis, and to what extent did they contributed to cancer.

Food literacy can contribute to better understanding what dietary composition will best aid and assist during this period, whilst *food kinship* will provide the setting for the creation of a human support system.

Category		Suicide	IR per 1,000 person-years	RR[a] (95% CI)
Totals	Cancer-free	31,822	0.3	1.0
	PCa	136	0.9	2.6 (2.1–3.0)
Time since diagnosis (wk)				
1		11	3.0	8.4 (1.9–22.7)
2–4		9	1.0	2.7 (1.3–4.8)
5–26		69	1.0	3.0 (2.3–3.7)
27–52		47	0.7	1.9 (1.4–2.4)
Age at follow-up (y)				
≤54	Cancer-free	20,687	0.3	1.0
	PCa	14	1.5	4.6 (2.6–7.4)
55–64	Cancer-free	5,524	0.3	1.0
	PCa	23	0.6	1.9 (1.2–2.8)
65–74	Cancer-free	3,862	0.4	1.0
	PCa	62	0.9	2.6 (2.0–3.4)
≥75	Cancer-free	1,749	0.4	1.0
	PCa	37	1.1	2.5 (1.8–3.4)
Calendar year of follow-up				
1961–1970	Cancer-free	7,818	0.4	1.0
	PCa	24	1.5	3.4 (2.2–5.0)
1971–1980	Cancer-free	8,174	0.4	1.0
	PCa	24	1.0	2.3 (1.6–3.1)
1981–1990	Cancer-free	7,452	0.3	1.0
	PCa	37	1.1	2.8 (1.7–4.2)
1991–2004	Cancer-free	8,378	0.3	1.0
	PCa	51	0.7	2.3 (1.8–2.8)

Table 7: Fall et al., (2009): Incidence rates and related risks of suicide during the first year after diagnosis of prostate cancer in Sweden, 1961-2004.

One key psychosocial intervention, which addresses the physical, mental and emotional that I will be introducing as a form of coping methodology, will be the notion and concept of *food kinship*, which is heavily dependent on *food literacy*.

The consumption of food serves not only to nourish us physically, but also to nurture us mentally, emotionally, and sometimes, spiritually. Additionally, the ability to engage in eating diverse food ingredients, with no health restrictions, is a major contributor to our social lives. Quite unfortunately, however, the choices regarding our food consumption suddenly changes after cancer diagnosis, thereby

restricting our *freedom* to engage in eating what we were accustomed eating, or what we would like to eat; and it is here that *food literacy* plays a pivotal role.

As noted above, our lifestyle choices are predominated by our socio-economic-status, and by default, directly connected to availability, accessibility and affordability of food choices, level of education and access to healthcare. Therefore, it is safe to say that depending on ones' socio-economic-status, s/he may be at a greater danger of the *natural risk* factors regarding the disease of cancer. However, easy (or free) access to education and pedagogy on *food literacy* can contribute to a revision of and on our food choices and consumption. To support this claim, epidemiological research has suggested that modifications to ones' dietary choices can, therefore, contribute to reducing some of the menacing cancerous agents (Hussain et al, 2016, Stepien et al, 2016).

As a humanist, I do not believe that because someone lives in poverty, s/he should be dietary discriminated against. In my role as an academic here in Montreal Canada, I have, and will continue in the future to hold workshops and informational food sessions on healthy and alternative eating lifestyles and choices.

Mass–produced, pre-packaged industrial foods, such as those with extensively long shelf lives*, processed meat, dark / red meat, improperly prepared food, such as raw meat / meat not cooked properly, long-term abuse of hard alcohol has all been identified as probable risk causes.

On the flipside, the consumption fresh fruits, nuts and berries and green leafy vegetables, which are high in phytonutrients work to counteract dietary risk contributors. Phytonutrients are the beneficial nutrients found in plants, and

includes but is not limited to anti-oxidants, fibres, vitamins, etc. The molecular structure found in these ingredients has been clinically proven to prevent and / or reduce carcinogenesis (Li et al, 2010, Hussain et al, 2016). Additionally, citrus fruits and berries were also identified as possessing high anti-carcinogenic benefits (Asad et al, 2016).

Fish that are high in omega-3 content has been identified as an alternative source of protein. Eltwerti et al, (2015), have noted that there are connecting indicators that an-interlink exists between Omega-3 and the strengthening of the human immune system. Omega-3 acts as a preventive protector against gastrointestinal cancer thereby resulting in an improved HRQoL. However, as I am writing in a North-American setting, and most of the fish available here in the supermarkets are farm raised, (some containing a high mercury content), I feel that it is imperative to mention that it was not distinct if the consumption of farm-raised fish contributed to an overall HRQoL.

Many areas in South-Asia are highly tropical, and information, knowledge and awareness via *food literacy* on eating *slocal* can be very beneficial to the population, both pre and post cancer diagnosis due to the diversity and availability of fresh fruits and vegetables. Due to globalization, fruits and vegetables from these geographical are easily *available*, *accessible* and *affordable* in the Western hemisphere.

Globalization and food literacy has allowed for the discoveries of *new* edible plants and facilitated for the introduction of ethnic, cultural and socially diverse

foreign foods and recipes; the term I have created for this is our "*cross-mopolitan*" diet.

Phytonutrient	Proposed Benefits	Food Sources	Fun Facts
Beta-Carotene	Immune System Vision Skin Health Bone Health	Pumpkin Sweet Potato Carrots Winter Squash Cantaloupe Apricots Spinach Collard Greens Kale Broccoli	Think orange and dark, leafy green veggies
Lycopene	Cancer (Prostate) Heart Health	Tomatoes Pink Grapefruit Red Peppers Watermelon Tomato Products	The heating process makes lycopene easier for the body to absorb
Lutein	Eye Health Cancer Heart Health	Collard Greens Kale Spinach Broccoli Brussels Sprouts Lettuces Artichokes	This phytonutrient is found in the macula of the eye
Resveratrol	Heart Health Cancer Lung Health Inflammation	Red Wine Peanuts Grapes	1 cup of red grapes can have up to 1.25 mg of resveratrol[1]
Anthocyanidins	Blood Vessel Health	Blueberries Blackberries Plums Cranberries Raspberries Red Onions Red Potatoes Red Radishes Strawberries	Think red and purple berries
Isoflavones	Menopause Cancer (Breast) Bone Health Joint Inflammation Lower Cholesterol	Soybeans	½ cup of boiled soybeans offers 47 mg of isoflavones[2]

Table 8: Benefits Of Phytonutrients. Source: http://www.fruitsandveggiesmorematters.org/what-are-phytochemicals

Fresh seasonal fruits and vegetables benefit the local population in two ways: (1) these seasonal products are highly perishable, and therefore it works counter-clockwise in benefitting those who are in a lower socio-economic-status; cost will soon be minimal and thereby facilitate for easy availability, accessibility and affordability. (2) It also extends to include the *social aspect* of *fruit tourism* (Malaysia Travel). To clarify seasonal, see the chapter on *slocalization*.

Wagner et al, (2016) reported in the findings of their longitudinal study, that a ten week course on the health and nutritional benefits of fruit and vegetable

consumption contributed to influencing positive dietary changes amongst the participants, whom were obese / overweight adults.

Reducing meat consumption, especially processed meat, and improperly cooked meat were presented as major contributors to living a healthy and environmentally sustainable lifestyle, (Tobler et al, 2011, Macdiarmid et al, 2015, Siegrist et al, 2015 & Domingo et al, 2016). Therefore, it can be safe to say that eating less mass-produced meat, and eating seasonal means that the animal will be fed more natural foods', which results in healthier, better quality of meat, which in turn is better for us.

As per the pollution incurred via the emissions of greenhouse gas (GHG) in the production of meat and fruits and vegetables, the Food and Agriculture Organization (FOA) in their 2013 Summary Report notes that global food waste, not cars, produces the highest amount of greenhouse gas emissions. Regardless of if we are herbivores, carnivores or omnivores, a lack of *food literacy* will unconscientiously provide the source of contributing to generating food waste, resulting in increased GHG's, and contributing to natural risk and environmental cancer causing factors.

I make mention of this for as noted earlier, environmental pollution is a major contributor to the natural risk cancer factor. Based on this premise, I am of the solid opinion that *food literacy* regarding the benefits of consuming seasonal and local produce is highly imperative, thereby resulting in an increased awareness regarding reducing the Environmental Impact Assessment (EIA) of food waste (Tobler et al, 2011, & Röös et al, 2013).

The effects of globalization and modern media also play a pivotal role in both food literacy and in bringing about awareness to, and of cancers. The recent emission of *Stand Up To Cancer* brought together world-renowned international artistes who performed but also shared their personal stories of battling cancer directly. Indirectly they shared stories of their loved ones, some of whom survived, and also, unfortunately, some of whom who had passed on. There were also regular members of society who shared their stories, which contributed to creating the atmosphere of a virtual but *real* community.

Figure 21: One of Stand Up To Cancer Logo. Source: http://www.standup2cancer.org

A major roadblock that affects South Asian patients in North America and South Asia, is the screening process (Glenn et al, 2009, Lobb et al, 2013, Sutter, 2015). Additionally, "Asians" in North America, also refers to a large and diverse assortment of sub-ethnicities, cultural variations, religious observances, food choices and geographical origins (Glenn et al, 2009). On the surface they may be

politically portrayed as being an advantaged group, but the reality is this is very synthetic due to a host of both internal, (within the cohort), and external factors, such as education, socio-economic status, language, cultural and religious barriers, societal norms, etc. (Ahmad, et al, 2012, Allford et al, 2014).

According to Dr Aisha Lofters, (CCS) a family physician and clinician scientist at St. Michael's Hospital's Department of Family and Community Medicine in Toronto:

"*Only about 20% of older South Asian women living in poor neighbourhoods have been screened for cervical cancer…in contrast, among Canadian-born women living in the highest-income neighbourhoods, almost 80% have been appropriately screened*".

A high population South-Asian migrants in Canada work as migrant farm workers, and in food processing factories or other mediocre jobs, which may not always provide medical insurance of health benefits. This population is then rendered very vulnerable in many aspects. One of the primary and most significant changes that they undergo are the *Americanized* of their diet. There is a significant change from a daily consumption of fresh, healthy fruits and vegetables to pre-packaged industrial, and in many cases, sometimes out of convenience, fast foods. Hence, they incur debilitating losses to both their existing *food literacy* and *food kinship* practices.

It is here that cautionary measures regarding free-trade agreements, globalization and modern media must be applied. Whilst these components can be beneficial, without care, it can be equally, or more detrimental in South-Asia than North America.

Free trade in South-Asia has been a double-edged sword. Firstly, it has allowed for the introduction and expansion of fast-food restaurants, exposing the South-Asian population to the free flow and mass consumption of the Americanized diet, high in mass-produced industrial foods, synthetic sugar, synthetic salt, and trans fat, which has contributed to an increase in health deficiencies. Secondly, it has lured away some of the best doctors and researchers with lucrative salaries and state-of-the-art research facilities in the West. Unfortunately, these factors have resulted in a severe reduction and degradation in health services.

In this final part, I will be focussing on introducing *food kinship* and its benefits. As presented earlier, a major contributor to cancer care, management and survival, is the psychosocial element of human interaction, which contributes to an improved physical, mental, and emotional state of wellbeing. As humans, we have been actively involved in the notion of sharing food and / or eating together since time immemorial, a practice that is quite prevalent in South Eastern and lower South-Central Asia.

Eating together regularly as a family has numerous and diverse benefits, and range to include the physical, the emotional, the intellectual and overall wellbeing Schiefenhövel (2014). Additional factors ranged from better psychological disposition to higher academic achievements. Children and adults also appeared more positive and less stressed, with the case percentage of obesity and asthma also being less (Purnell et al, 2013). *Food Literacy* will therefore definitely contribute to health, social and communal benefits, but will also enhance self-esteem and ameliorate transferable life and communicative skills.

As noted earlier, similar symptoms of stress, obesity asthma, etc., were prevalent in post cancer diagnosed patients, yet, we see that the notion and concept of *food kinship* can work as a cancer prevention tool for children, (i.e., the future generation) and adults.

On a personal note, and in writing as objectively as I can, I am ***not*** necessarily against mass–produced, pre-packaged industrial foods'. There are a lot of civil wars, citizen and population displacement, and these types foods are at the core of survival for my co-global citizens in these rather unfortunate situations.

Conclusion:

If I were to be asked what did I do in the last eight (8) years of my life, I could easily say that I received three (3) university degrees. But, with keeping my ego in check, I think its fair to give myself a pat on the back, and opt for the following.

In the last eight (8) years, I have researched, created and implemented the following *food literacy* / *food kinship* programs: *the foodie green club*, (elementary school level), *Dinner & Conversation*, (university level, which expanded in the second year to include the public), *Food For The Hungry Soul*, (a fundraiser which contributed to the Emergency Student Food Fund at Concordia University), and finally, the *Maharaj Family Student Bursary*, (a bursary in memory of my Dad).

Whilst the university degrees speak of an academic / professional achievement, my programs are very much nearer and dearer to me, as they are my humanitarian accomplishments. These programs are what set the stage for my thesis: based on my interactions with the guests and / or participants at these events, the discussions that originated and the questions that were raised are what pushed me towards the diversity of my research.

As I am writing this conclusion, I know that I am much better situated to host a discussion, give a lecture, or respond to various questions regarding the different sub-topics of food systems. Another goal of mine via this thesis was to write a syllabus, and I am happy to say that I have also accomplished this task, the eight (8) chapters consist of the syllabus. For now it is virtual, but maybe one day someone will see the authentic value of it, and like a fairy tale come true, it will become a reality.

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