AREPAS, FUFU, AND GADO GADO

How future immigration might impact Canada's culinary landscape

Janice de Jong

AREPAS, FUFU, AND GADO GADO

How future immigration might impact Canada's culinary landscape

Janice de Jong

Submitted to OCAD University in partial fulfillment of the requirements for the degree of Master of Design in Strategic Foresight and Innovation

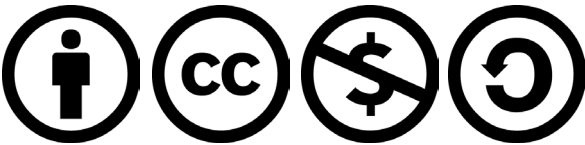Toronto, Ontario, Canada

December, 2016

COPYRIGHT NOTICE

DECLARATION

I hereby declare that I am the sole author of this MRP. This is a true copy of the MRP, including any required final revisions, as accepted by my examiners.

I authorize OCAD University to lend this MRP to other institutions or individuals for the purpose of scholarly research.

I understand that my MRP may be made electronically available to the public.

I further authorize OCAD University to reproduce this MRP by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

ABSTRACT

Canada's food culture is strongly shaped by its immigrant populations. While numerous studies have explored the future of food, and others have projected the future of global migration, few, if any have combined these insights to determine how future immigration will affect the future of food. Using horizon scanning and branch analysis of emerging global and policy issues, three scenarios were generated to explore where Canada's immigrants may come from in the next five years. These scenarios were then enriched with a horizon scan of emerging food trends to envision how these new cuisines might be adopted by Canadians in fifteen years. This research concludes with a selection of "recipes from the future" which envision a possible evolution of cuisine in Canada in an experiential manner. By anticipating these potential cuisines, this research aims to establish a shared understanding between Canadians and these future immigrant communities, helping these communities feel at home in Canada, and helping Canadians be more open to new cultures coming to the country.

Keywords: Futures, Foresight, Cuisines, Foodways, Food, Immigration, Migration, Branch Analysis, Experiential Futures

ACKNOWLEDGEMENTS

*Dedicated to those
who bravely explore
new lands and strange
flavours.*

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF FIGURES (CONTINUED)

"There is a
communion of more
than our bodies
when bread is broken
and wine drunk"

–M.F.K. Fisher in
The gastronomical me, *1989*

CHAPTER 1

Introduction

How might future immigration to Canada shape our culinary landscape?

RESEARCH OVERVIEW

The Canadian culinary landscape is highly influenced by its immigrant communities, and as a result its composition has evolved significantly as newcomers have contributed their culinary heritage (Kenneally, 2008; Smart, 2003). Dishes that were seen as exotic several decades ago, such as kimchi from Korea, pho from Vietnam, or even produce like mangoes and dragonfruit, are relatively commonplace today. This research explores which immigration groups Canada will receive in five years, and how these groups'

cuisines might intersect with future food trends to shape the Canadian culinary landscape in fifteen years.

Global turmoil has put human migration in the spotlight[1]. The shocking image of over a million spontaneous refugees – largely from Syria and the Middle East – arriving by boat and land to Europe's shores made headlines worldwide in 2015 (Maiani, 2016). This surge of refugees caused crises at border crossings and shores, and border closures that compromised long-standing treaties such as Schengen agreement (Heltz, 2016). Canada

responded to the Syrian crisis by taking in over 25 000 Syrian refugees between November 2015 and February 29, 2016 (Citizenship and Immigration Canada, 2016). Indeed, from the Organisation for Economic Co-operation and Development (OECD) to the United Nations (UN), migration is considered a major global concern of our century (UNFPA & International Organization for Migration, 2013; OECD, 2016). Whether it is refugees fleeing from climate change or conflict, or workers searching for job opportunities, Canada has remained a leading destination for these migrants (Duncan, 2012).

As these immigrant groups arrive and integrate into Canadian life, they will in turn have an influence on Canadian culture, including its culinary landscape. As a country with a rich immigration

history, one only needs to look to the popularity of various cuisines across the country to see the impact immigration has on the food we eat. For example, the streets of Ottawa, with its high Lebanese and Vietnamese populations, are lined with pho and shawarma shops. Meanwhile Kitchener, Ontario – with significant Salvadoran, Serbian and German populations – has pupusas, chevaps and schnitzel on its menus[2]. Grocery store shelves across the country are stocked high with foods from China and India, two of our largest immigrant groups (Chui et al., 2013). Therefore, by understanding which future groups will be coming to Canada, we might determine which foods that are "exotic" today may become "everyday" in the future.

---

1   Immigration and Migration are often used interchangeably in the vernacular. Therefore for the purposes of this report, the following definitions will apply:

Immigration - the act of moving permanently to a foreign country. This report will only explore foreign communities who might become permanent residents to Canada in the future (and who may not necessarily become citizens). Temporary foreign residents, such as those holding work visas, are not included under this definition.

Migration - movement of peoples from their home to elsewhere, be it within their home country or abroad. This term does not provide detail into the motivations behind migration (e.g. for work, fleeing conflict, etc.)

---

2   Pho is a Vietnamese beef noodle soup; shawarma is a Lebanese wrap filled with spit roasted meat and garlic sauce; pupusas are Salvadorean corn flatbreads filled with beans, cheese or vegetables; chevaps are Serbian grilled minced meat seasoned with spices; and schnitzel is Austrian/German breaded veal pounded thin and pan fried.

Immigration and food are at the forefront of many futurists' minds, with numerous studies exploring the future of food and global migration. Surprisingly, despite their strong interconnections, few have combined these insights to determine how future immigration will affect the future of food, and this research aims to bridge that gap. In particular, this research will explore the following lines of inquiry:

- Where might Canada receive immigrants from in five years, considering immigration policy and emerging migration hotspots?

- What are the emerging trends in food in fifteen years (that is to say, ten years after the five year immigration timeframe)?

- How might these new communities' cuisines and future food trends intersect in fifteen years?

It should be noted that the intent is to discover new cuisines that may become commonplace in the future, rather than highlighting continued growth of established cuisines. For example, while immigration from China and India will likely remain robust (Malenfant et al., 2010), these cuisines were not the focus of this research.

Trends were an important consideration throughout this research as any adoption of food by a new country involves some degree of adaptation. For example, Canadians in the past have adapted new foods to reduce spices, fats, or to use produce that is more readily available. Understanding which trends might influence Canada's food in the future provides insight into how these new foods might be adapted.

It should also be noted that the five year immigration timeframe was chosen as it allows for foresight into both large scale, global issues and local, acute changes such as policy shifts. The timeframe

for cuisine adoption is fifteen years from today, as it takes approximately ten years after immigration for an individual to become established in their new country (Yssaad, 2012). However cuisine adoption may be a longer term process and might extend beyond the fifteen year timeframe, or it may be shorter due to an increasingly connected and food-curious culture.

CONTRIBUTION

Given its multi-sensorial nature, rich with social and cultural connotations, food plays a significant role in creating an understanding and sense of belonging between immigrants and the native born (Knowles, 2016; Koc & Welsh, 2002; Mintz & Du Bois, 2002; Weller & Turkon, 2014). Put succinctly, food studies researchers Carole Counihan and Penny Van Esterik stated that food "links body and soul, self and other, the personal and the

political, the material and the symbolic" (Counihan & Van Esterik, 2012). By discovering potential new communities that may arrive in Canada, and exploring their culinary traditions, this research will help build cultural awareness and understanding between readers from Canada and future newcomers. In turn, future newcomers may feel more "at home" in Canada, and Canadians may be more open to these new cultures, allowing for a smooth transition into the community. Moreover, this research may also expose newcomers to the variety of foods consumed in Canada, both in the breadth of cultures and how they have been adopted by Canadians. This exposure may encourage these newcomers to try other cuisines available in Canada, helping them also understand and embrace their new home.

By extension, this research may also have tangible impact on the food industry. For example, food retailers

will be informed of which cuisines they should begin sourcing, and producers will gain insight into which crops to consider planting. This provides the additional benefit of reducing cost of familiar food to new immigrants, a significant barrier to food security in these groups (Koc & Welsh, 2002). Finally, local governments may also find this research useful in terms of establishing different cultural events to welcome future newcomers to their community.

Finally, this research's methodology contributes to the Foresight community, particularly in its use of branch analysis. While branch analysis is typically used for short-term foresight (Rhydderch, 2009), this research extends this approach, examining several cause-and-effect relationships to envision potential futures in five and fifteen years. This unique methodology is discussed further in Chapter 3, and may be of interest for Foresight researchers wishing to explore alternative approaches to developing future scenarios.

FURTHER RESEARCH

As a complex topic touching on many nuanced issues, there are several questions that are beyond the scope of this research, and should be considered for further exploration:

- Specifics surrounding how food can be used to integrate a new culture.

- Factors influencing the adoption of immigrant groups' foods within Canada, including the general processes of adoption.

- Regional differences in food adoption across Canada (such as urban and rural differences).

- Future Canadian attitudes towards immigration groups, which may affect adoption of certain cuisines.

In addition, throughout the process of researching several new areas of further research were revealed. These opportunities are discussed throughout this paper.

STRUCTURE

This paper intends to summarise the research conducted through the following structure:

- Chapter 1 aims to provide a brief introduction to the research question.

- Chapter 2 discusses the context surrounding immigration and food in Canada including Canada's immigration history, drivers of worldwide migration, how immigration has shaped Canada's food, and the role that food plays in uniting immigrant and native-born communities.

- Chapter 3 outlines the methodology for this research and its three distinct research phases.

- Chapter 4 describes the emerging issues affecting Canadian

immigration policy and introduces the three scenarios that form the basis of the research.

- Chapter 5 examines global migration hotspots through the lens of these three scenarios to form a "top ten" list of future communities that may come to Canada.

- Chapter 6 explores the cuisines of these hotspots as well as future food trends that may shape these cuisines, and indicates some preliminary implications of the research.

- Chapter 7 serves as the final output, synthesising this research into a selection of "recipes from the future".

- Finally, Chapter 8 concludes this paper, including a summary of areas of further research.

"*You have to taste a culture to understand it*"

–*Deborah Cater*

Figure 2, right: Syrian refugees preparing dessert for the Newcomer Kitchen program.

CHAPTER 2

Context

BUILT BY IMMIGRANTS: AN OVERVIEW OF IMMIGRATION IN CANADA

Canada, as a modern nation, is a country largely formed by immigrants. From the early European settlers at Pier 21 in Halifax to the Vietnamese boat people in the 1970s and 1980s, Canada's history, development and identity is infused with influence from its immigrant people (Knowles, 2016; Conference Board of Canada, n.d.). On the global stage, Canada has been noted for its progressive and welcoming immigration stance, particularly with the introduction of the points-based selection system in 1967, where applicants were approved based on scores for a variety of skills (Conference Board of Canada, n.d.). This practice has translated to a significant immigrant population. As of 2016, approximately 22–23% of Canada's population is foreign born, with approximately 250 000 newcomers arriving every year (Marcoux, 2016). This places Canada at the top of G8 nations, and second globally only to Australia in terms of foreign born residents (Chui et al., 2013).

As a country largely made up of immigrants, as well as Indigenous peoples, Canada is also notable for its diversity. In 2011, the National Household Survey reported over 200

ethnic origins across Canada, and 13 different ethnic origins had surpassed the 1 million mark, with most living around large urban centres such as Vancouver, Toronto, and Montreal (Chui et al., 2013). Yet over the years, the quantity and origins of immigrants have shifted dramatically, in turn shaping the profile of Canadian diversity. While early immigration consisted primarily of Europeans – only 2% of immigrants came from Africa or Asia in 1961 – nowadays, more than 50% of immigrants come from the latter two regions. With Statistics Canada projecting that 64.9% of immigrants will originate from Asia or Africa by 2031, and 26–27% of Canadians will be foreign born (Marcoux, 2016), Canada's ethnic makeup will continue to evolve well into the future.

A WORLD ON THE MOVE: DRIVERS OF MIGRATION

Generally, Canada "has not had problems attracting immigrants so far; on the contrary, the issue has been how to limit the number of people coming in" (Duncan, 2012). However, with populations ageing across developing nations, and facing a strong demand for talent, Canada is finding itself in the unfamiliar position of having to compete for top skills (Conference Board of

Canada, n.d.). Some parts of Canada are reacting to this competition by engaging in active recruitment programs. For example, in 2008 the Government of Manitoba signed an agreement with the Phillippines to streamline the immigration process, attracting skilled immigrants (particularly care workers) to fill the skills gap in urban Winnipeg and rural areas alike (Kuzmin et al., 2015). Government policies play a significant role in shaping immigration and later in this paper Canada's current policies, and how it interplays with global migration drivers and hotspots, is explored in depth.

Global migration is a hot topic at the moment, frequently making headlines around the world. The United Nations High Commissioner for Refugees (UNHCR), the UN's refugee body, estimates the world's displaced population at 60 million individuals, of which an astounding 20 million are stranded outside their own countries. But what drives this migration? At a high level, research has found that socio-political, economic and ecological factors are the main forces driving migration (Piesse, 2014). However, academic literature has struggled to devise a general social theory or framework of migration because it is highly complex and unique to each individual (Massey, 1993; Castles, 2010).

According to sociologist Stephen Castles "we still lack a body of cumulative knowledge to explain why some people become mobile while most do not, and what this means for the societies concerned."

Nonetheless, some themes have emerged. Piesse of Future Directions International (2014) points to several key factors that influence international migration in the report *Factors Influencing Migration and Population Movements*:

- Rising violence and wars worldwide, often as a result of ethnic or religious intolerance.

- Political turmoil, including lack of political freedoms, turbulent transitions from authoritarian rule to democracy, and the politicisation of religious and ethnic identities.

- Economic disparity between developing and developed economies encouraging the movement of skilled labour from the former to the latter.

- Changes in the ecological environment, in turn increasing food and water insecurity.

These drivers were considered when exploring future migration hotspots which are discussed later in this paper.

CANADIAN CUISINE: A SMORGASBORD SHAPED BY IMMIGRATION

Canadian cuisine is notoriously difficult to define beyond a few cliché dishes like tourtière, poutine and nanaimo bars (Kenneally, 2008; Voinigescu, 2013; Dawdy, 2016). However, one notable characteristic is its blend of food shaped by its immigrants. A simple stroll down the aisles of a grocery store finds Canada's immigrant groups reflected prominently, from Vietnamese sriracha to Chinese bok choy. This multicultural characteristic is not a recent development. The buffet in Canada's Pavilion at Expo 67 featured cabbage rolls (representing the Ukrainian population in the Prairies) alongside Digby scallops and Niagara peach cream pie. Meanwhile, the Tundra restaurant featured a range of Indigenous dishes such as the fish dish "Ojibway Kee Wee Sen", demonstrating that Canada has a "remarkably flexible set of national culinary criteria" (Kenneally, 2008).

Unfortunately Canada hasn't always been all-inclusive to ethnic foods. During that same era, there was significant pressure for some immigrants to conform to the "Canadian" way of eating, with the government distributing a book called "Food Customs of New Canadians" (published in 1959 and reissued in 1967), criticising the practices of some communities and praising others for fitting with the "Canadian way of doing things" (Kenneally, 2008). This movement was likely rooted in underlying racism towards certain cultures, and in the future racial tensions would likely affect the adoption of new cuisines. It would be prudent to explore how these potential future attitudes towards immigrants would impact Canadian cuisine, as it is highly relevant. Nonetheless, Canada has generally been open to foods of other cultures throughout its history. Canadian cookbooks from mid-to-late 20th century showed "Canadian cuisine was also multicultural in derivation—built from the food cultures of Greece, Italy, Germany, China, Japan and so on" (Kenneally, 2008). Indeed, as former Prime Minister Joe Clark put it, Canadian cuisine is a "smorgasbord" of flavours from around the world (as quoted in Voinigescu, 2013).

This trait is not unique to Canada. Immigrant communities have a significant impact on the types of food consumed by the "native-born" around the world. Researchers D'rozario and Choudhury observed that as immigration from specific groups increases, so does the consumption of their food among the general population (2003). This finding seems obvious when looking at popular foods from other immigrant-friendly countries. In the early 20th century, Italian and Germans immigrants led to the adoption of the ubiquitous pizza and hotdogs in the United States. Meanwhile, chicken tikka masala, a distinctly UK dish, was highly influenced by its Indian population and colonial roots (D'rozario & Choudhury, 2003; Slater, 2015; Morgan et al., 2011). These days, as immigration patterns have shifted from Europe to Latin America and Asia, in turn there has been an explosion of food from these areas: chiles, tortillas, coconut milk, sesame oil and so on. (D'rozario and Choudhury, 2003). Thus, by studying which future groups Canada might encounter, one may extrapolate which foods will define the Canadian culinary landscape.

However, immigration does not always translate to adoption. For example, despite Filipinos being Toronto's second largest immigrant group (NHS Profile, 2011), and being hailed as Toronto's "next big cuisine" in 2012 by bloggers (Grigorescu, 2012), Filipino food is relatively under-represented in the city. The factors that affect the adoption of immigrant food are complex, and while D'rozario and Choudhury discuss US-based factors in their 2003 paper, little has been explored with respect to Canada or a specific cuisine's propensity for adoption. While some of D'rozario and Choudhury's factors appear well-established in Canada, such as "open mindedness" and "eagerness to learn about food from other cultures", the most flexible factor is "depth", or number of interactions with the community. Depth is characterised by the size of the immigrant population and the spread (or dispersed they are in the community), thus a significant influx an immigrant group's population will certainly impact its likelihood of adoption of its food, but not guarantee it.

In addition to D'rozario and Choudhury's factors, the entrepreneurial nature of immigrant groups could play a role in the adoption of its cuisines. In Canada, the rate of entrepreneurship among immigrants five to eight years after settlement surpasses that of the native born. For example, in 2010 immigrants owned over 16 000 businesses in the accommodation and food industry, representing about 11% of all immigrant owned businesses (compared to approximately 5% of the Canadian born population) (Green et al., 2016). This increased exposure to foods

through the service industry could be a catalyst to adoption by Canadians.

As observed with the pizza, hot dogs and chicken tikka masala examples above, adoption often involves some form of adaptation (Jamal, 1996). In Canada, "a typical vision of a rural town in Alberta is that it has a grain elevator, a hockey rink and a Chinese restaurant (plus the Chinese family that runs it)" (Smart, 2003). Yet these dishes are "Chinese Canadian" cuisine, a unique type of food that doesn't exist in China, and is adapted to Canadian tastes and ingredients. Moreover, immigrants' food culture is not limited to the 'old' and 'new' country, but influenced by many countries worldwide – a globally-influenced diet that is "*creolized*"[1] (Koc & Welsh, 2002 a and b). Thus, adoption and adaptation of food goes both ways: Canadians adopt and adapt the food of new immigrants, but immigrants also adopt and adapt the food in Canada. It is fascinating to learn that adaptation is a natural part of adopting food from other regions, and the inherent flexibility of food shows that future food trends may shape how immigrant community's foods are adapted in the future.

The food industry has taken notice of the role of immigration in shaping Canadians' tastes. According to John Scott, president and CEO of the

Canadian Federation of Independent Grocers and interviewed by La Rose in the Huffington Post (2012), "we're embracing other foods: Thai food, Malaysian food — and we have no idea how to cook it...as mainstream Canada embraces this, they also need to be able to acquire it." Farmers are also taking note. In 2013, Farm Credit Canada called for for Canadian food processors and producers to adapt to the dietary changes that new immigrants will bring to Canada (Farm Credit Canada, 2013). As immigration patterns shift, the food industry is eager to offer foods accordingly, thus influencing what will be on future Canadian tables.

It is important to note that Canadian food has not been solely defined by its various immigrant groups. In fact, many ingredients that are common to Canadians, such as maple syrup and wild rice, have its origins in Indigenous cuisines. However, the traditional foodways of Indigenous peoples have largely been overlooked, and their dishes and ingredients have not made their way to the Canadian table. For example, one would rarely see Three Sisters Soup – a Southern Ontario Iroquois soup made of squash, beans and corn (Bodirsky & Johnson, 2008) – on any restaurant menu. In the spirit of decolonization, there are movements to encourage food sovereignty of

Indigenous peoples in Canada (i.e.: to provide access to sustainable, healthy and culturally appropriate food (Desmarais & Wittman, 2014)). If these movements are successful, Canada may very well experience an Indigenous food reawakening in the coming years, which would in turn influence the diet of everyday Canadians. The unique intersection of Indigenous food with newcomer cuisines warrants further exploration, as its findings would certainly be welcome and exciting. In the same vein, it is important to note that the recipes and adaptations considered in this paper are viewed through a settler's lens, and not through an Indigenous one.

FOOD'S PROFOUND ROLE

Food has greater meaning beyond the daily bread of Canadians; it is a reflection of our culture, beliefs and identity (Koc & Welsh, 2002 a and b; Weller & Turkon, 2014). Indeed, the presence of food from communities around the world seems to be a hallmark of a global cosmopolitan city. From the vast array of Asian restaurants in Vancouver, to food festivals such as Taste of the Danforth in Toronto, these diverse foods seem to be baked into the identity of Canadian urban

residents. Food has a wonderful power of solidifying a community (Mintz & Du Bois,2002), and by adopting cuisines of immigrants, we are in fact embracing their culture, and giving a "symbolic welcome" (Koc & Welsh, 2002 a and b).

Unfortunately, lack of access to "food from home" can have an opposite effect on new communities. New immigrants may only find their food in the specialty aisles and markets, prohibitively expensive options, increasing food-insecurity and making them feel less welcome in Canada. The local availability of food for all – native born and newcomers – is crucial for making new communities feel at home.

The critical role that immigration plays in shaping our food, and in turn food's role in building community, leads to the ultimate purpose of this paper. Where Canada might receive immigrants from in five years? What are the emerging trends in food in the next fifteen years? How might these new communities' cuisines and future food trends intersect in fifteen years? By experiencing these futures through their unique flavours, we might open our hearts and minds to these newcomers, begin to foster a cultural understanding, prepare for these newcomers to Canada, and use food to build stronger Canadian communities and identities.

---

1   "Creolized" food, according to Koc and Welsh, is food that includes "a bit of everything: local and global, traditional and modern, old and new" (Koc & Welsh, 2002 b)

> # *"The future depends on what you do today"*
> *–Mahatma Gandhi*

Figure 3, right: Tools for Foresight thinking. Image by Tim Gouw from Unsplash under Creative Commons Zero license.

CHAPTER 3

Methodology

METHODOLOGY OVERVIEW

This research touches on a wide range of topics – from immigration policy to food trends to evolving geopolitical issues – and most importantly, examines the unique confluence of these topics through a Foresight lens. To provide a comprehensive and robust series of possible futures, the research was broken up into a series of phases, each designed to build on the last, leveraging scanning and branch analysis techniques throughout (see Figure 4). Before these phases are explained in detail, a discussion surrounding the the general techniques is warranted.

The role of scenarios

To those unfamiliar with the practice, one might assume that Foresight involves a crystal ball or reading tea leaves, as no data from the future exists. On the contrary, Foresight is not sorcery, and definitely does not claim to predict the future. It focuses on envisioning a wide range of possible futures – not just the most likely, and certainly not just the most preferable – rather than trying to find a "right" or "wrong" answer about what the future might hold.

Scenarios are a common tool to help illustrate these possible futures. They are narratives that help capture the range of possibilities "if certain trends were to strengthen or diminish, or various events were to occur" (Rhydderch, 2009). It is important to note that while scenario writing is a creative process, it is strongly grounded in extensive research of the trends and shifts happening in the current day. By understanding what is happening now, scenarios can help understand what might be in the future, and thus foster an informed discussion on how to create resilient strategies for the future.

Branch analysis as a methodology

There are several methodologies in a Foresight practitioner's toolkit to help develop future scenarios. One of the most familiar is the Two Axes method (Rhydderch, 2009), which uses two critical uncertainties (i.e. the most unknown and important factors defining the future) to form the basis of developing four orthogonal scenarios of the future. Another popular tool is the "Four Generic Images" method, as designed by Foresight practitioner Jim Dator (Dator, 2009). In this method, scenarios are constructed around four basic archetypes of what the future might hold: growth, collapse, discipline and transformation.

While these methods can be considered "classic" tools for developing future scenarios, their downside is that they create scenarios at a single point in time in the future. Because this research looked at multiple points in time – five years for immigration and fifteen years for food – these foresight tools seemed limiting; they did not allow for the possible shifts that might happen over several time frames.

This led to an exploration of branch analysis as a potential methodology. This approach creates scenarios surrounding different "turning points", where each turning point has a variety of potential outcomes that builds on the previous. This method was most popularly used in the Mont Fleur scenarios, which envisioned possible futures in a post-apartheid South Africa (Kahane, 1992). While branch analysis tends to be used for the short term, usually up to five years (Rhydderch, 2009), the Mont Fleur scenarios did look across a ten year timeframe, indicating that this methodology was an appropriate choice given the timeframe of this research.

In this research, each "turning point" in the branch analysis is represented as a phase of research: what types of immigrants Canada may accept (Phase 1), where they might come from (referred to as "Migration Hotspots", Phase 2), and what future food trends would affect the adoption of these cuisines (Phase 3). Each of these phases of research resulted in a series of scenarios that evolved from one phase to the next, and their process will be described in detail later in this section.

Scanning

As mentioned earlier, scenarios must be informed by research of shifts happening today. This activity is called scanning, or "information seeking", and ecompasses a range of approaches from a general, undirected exploration to a more formal search (Choo, 1999). Different approaches were employed throughout this research based on the type of information required. Given that the first and second phases were very specific in nature (e.g. future immigration policy and migration hotspots), the research was very targeted, leveraging research from known experts in the field.

However, the exploration into the future of food in Phase 3 was inherently more broad-reaching in nature, and thus required a different approach. For this phase, the STEEP-V framework for scanning was utilised. A commonly used Foresight tool, STEEP-V is the acronym for the range of categories explored to pinpoint shifts in the macro environment: Society, Technology, Environment, Economy, Politics and

Values. Using this approach ensured that the research was appropriately broad in nature, capturing all of the elements that might shape that future of food. Once this scan was complete, and the future food trends understood, it was possible to understand how the cuisines of the migration hotspots might be adopted and adapted in the future.

Experiential futures

Simply describing scenarios in a narrative can provide participants with limited insights on how the future might unfold. Experiential futures are a method to allow participants to see, touch, and even taste the results of scenario research, and in turn help participants better understand the possible futures in a more engaging way. Experiential futures can take on variety of formats – from designed spaces to future products to documents – all of which immerse participants into a world that simulates what life might be like in the future (Keliher & Byrne, 2015; Candy, 2010; Candy, 2014). Most importantly, these experiences leave participants better equipped to discuss the future in a meaningful way (Candy, 2010). Given this research focuses on such a sensorial topic – food – it seemed appropriate to use the findings to create

a small-scale experiential future. This is represented in the Output phase in the form of a cookbook of "Recipes from the Future". This cookbook can be considered the final scenarios for the future, building off of the research developed in the first three phases of research.

With these techniques established, the following outlines the different phases of research in greater detail (see Figure 4).

PHASE 1: CANADIAN IMMIGRATION POLICY AND EMERGING ISSUES

Net immigration is dictated by a balance of two factors: *Push* (drivers pushing immigrants from their home countries) and *pull* (drivers causing the receiving country to pull them in) (Fleras, 2015). For the first set of scenarios, or set of "branches" in the branch analysis, the research focused on understanding the pull side of the equation: understanding Canada's current immigration policies and emerging challenges within the historic and global context. This is a logical place to begin exploration, as Canada sets its goals for immigration numbers every year (Knowles, 2016), thus setting the stage for which types of immigrants Canada might prioritise.

While these goals may be informed by external factors (such as global humanitarian crises), they are primarily driven by the needs within Canada first.

This phase began with an overview of Canada's historical stance on immigration policy in order to gain a contextual understanding of its overarching principles and beliefs. It was then followed by an overview

of the drivers that might shape Canada's future policies. Referring to documents from government groups such as Citizenship and Immigration Canada, as well as notable academics in the field, this research captured the challenges and complexities that Canadian immigration might face in the near future. Through researching these drivers it was discovered that the main factoring influencing future scenarios
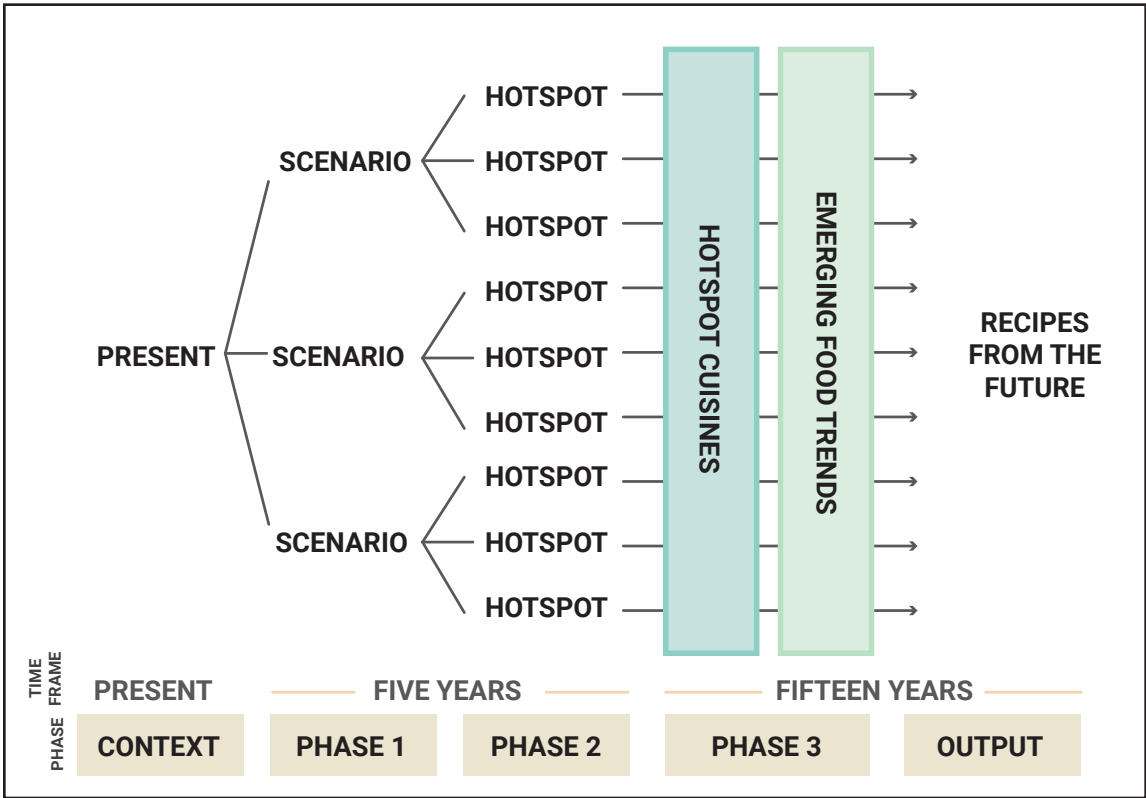
Figure 4: Methodology diagram outlining the research phases and evolution of scenarios through branch analysis

was the various immigration classes that Canada accepts: economic, social, and humanitarian. These classes could be seen as "levers" that can be pulled to define future Canada's demand for immigrants. By increasing one class of immigrant – essentially "pulling a lever" – one can infer future influxes of immigration groups that Canada might experience.

Once this research was complete, three scenarios were developed to envision possible future policy directions Canada may take. Each scenario focused on increasing the numbers of one of the immigration classes, and was enriched with a discussion of the drivers that would prompt the scenario to occur. These resulting scenarios formed the foundation for research in the subsequent phases.

PHASE 2: FUTURE MIGRATION HOTSPOTS

While Phase 1 focused on the "pull" side of the immigration equation, this phase focused on "push": where future communities may come from in the next five years given the possible future scenarios. These were referred to as "migration hotspots", countries that might face significant migration in the future. However, before these countries were considered, it was important to understand which communities were already established in Canada. Because purpose of this research was to uncover cuisines from "new" communities, the largest communities in terms of immigration communities and ethnic origin were eliminated from the potential hotspot candidates.

To understand future global migration hotspots, a targeted scan was conducted. Given that global issues are highly complex and difficult to tackle from scratch, this scan stood on the shoulders of giants, relying on research from established international bodies such as the OECD, the World Economic Forum and the UN; domestic government reports from groups such as Citizenship and Immigration Canada and Policy Horizons; as well as reports from well-reputed foresight organisations, popular media and academic papers. The findings were then downsampled to a "Top Ten" list of likely future migration hotspots. This downsampling was determined based on the relative strength of data supporting a hotspot, its relative newness to Canada, and its relevance across multiple scenarios.

The findings from this scan were then applied to the scenarios developed in Phase 1 to create an evolved set of scenario branches that detail which communities might arrive to Canada in five years. Interestingly, the evolved scenarios did not have equal numbers of hotspots attributed to them. Specifically, Scenario 2 rendered only one hotspot, while Scenarios 1 and 3 had much greater numbers, and thus implies that the latter two scenarios would have greater influence on the Canada's culinary landscape. This discovery is not a weakness in the research, rather it implies that the research revealed a diverse range of futures, where some are more in line with the status quo than others.

Finally, to supplement each scenario, a description of the scenario's approach to food was included (i.e. whether the communities would prefer more traditional or modern interpretations of their cuisine). Derived from the research findings, these approaches were included to determine how the hotspots' cuisines of each scenario might be adapted in the future.

PHASE 3: HOTSPOT PROFILES AND EMERGING FOOD TRENDS

The final phase of branch analysis involved examining how the foods of these future hotspots might converge with food trends to shape Canada's future culinary landscape in fifteen

years. This phase began with the development of comprehensive profiles of the hotspots defined in Phase 2, including their unique circumstances driving migration, approaches to food, ingredients and dishes. Research into their specific cuisines was informed by secondary research of cookbooks, recipes, and food blogs in order to determine key dishes, ingredients, and rituals of these groups. Signposts were also listed for these hotspots; indicators to watch for in the future to monitor the progression of a scenario, and hence track the likelihood of a hotspot becoming a key immigration group in Canada.

Once these hotspot profiles were generated, a scan of the future of food was conducted to understand the trends that might influence how the food of these new immigrant groups may be adopted. This research drew primarily from the work performed by OCAD U's full time Strategic Foresight and Innovation cohort's work in 2015–2016. This semester–long project for the Foresight course involved in–depth exploration into the futures of food, including an extensive trend scan that utilised the STEEP–V framework. While this existing research proved

instrumental in informing this phase, the findings were also supplemented with additional scanning research to include any recent developments. This scan was captured in a series of trends, outlined in–depth in Appendix A, which summarise the trend, its STEEP-V categorisation, its maturity and breadth of impact, the signals (or specific occurrences that point to this trend), and the implications of each trend on food's future.

Finally, these trends were compared to the hotspots, including their approaches to cuisine, to determine which trends would be most applicable for each hotspot. Armed with this knowledge, it was possible to synthesise these findings into the final experiential output.

OUTPUT: RECIPES FROM THE FUTURE

The research up to this point informed a final evolution of the scenarios that envisioned how food trends might impact the adoption of each hotspot's cuisines in fifteen years. Leveraging the knowledge of the hotspot cuisines, their approaches to food, and future food trends, a collection of "recipes from the

future" were created as an experiential futures tool.

The process of defining these recipes was not a linear one. It involved a complex synthesis of the data to ensure that the recipes were appropriate representations of the hotspot cuisines, that the trends were incorporated, and that the recipes were adapted in a way that reflected Canadian tastes. In some cases, "typical" dishes from these hotspots were passed by in favour of ones that better aligned with the food trends, which rendered some surprising results[1]. Further complicating this process was the fact that, as a cookbook, it was important to include a variety of dishes from salads to desserts. Finally, lacking any formal food training, these recipes were quite challenging to develop. Several recipes required major adjustments because the results were so disastrous that they simply had to be misprinted in the original source. In any case, the final outcome intended to capture the results of the full research

process – from future immigration to food trends – in a way that encourages readers to immerse themselves in these potential futures, and open their minds to potential future groups that might come to Canada.

Given that this topic of research is little explored, and the subjects broad and complex, a creative approach to Foresight methodology was required. By utilising a combination of Branch Analysis and Scanning methodologies in a systematic way, the research brought clarity to an otherwise daunting topic. Moreover, given the multisensorial, affective nature of food, the research demanded an evocative closing. Synthesising the findings through an experiential manner (i.e. a cookbook) allows readers to immerse themselves in the possible futures in a way academic text alone cannot convey. While the approach to this research may be novel, its methodology led to a result that is equally rigorous and imaginative.

---

1   For example, typically meat-heavy Brazilian dishes were not included and instead a more obscure fish recipe from the Amazon was chosen (see "Fish and Chips" on page 92), as it seemed to capture how we might react in an animal-protein scarce world.

Vision:

A stronger Canada − a safe and secure country with a shared bond of citizenship and values; a country that continues to support our humanitarian tradition and draws the best from the world to help build a nation that is economically, socially and culturally prosperous

−Citizenship and Immigration Canada, 2014

Figure 5, right: Syrian refugees preparing dinners for the "Newcomer Kitchen" program

CHAPTER 4

Phase 1:

Canadian Immigration Policy and Emerging Issues

Net immigration is dictated by a balance of two factors: *Push* (drivers pushing immigrants from their home countries) and *pull* (drivers causing the receiving country to pull them in) (Fleras, 2015). This chapter focuses on the pull side of the equation by providing an overview of the drivers that might shape Canada's future policies and their influence on the classes of immigration that Canada accepts. These classes can be seen as "levers" that can be pulled to define future Canada's demand for immigrants. By increasing one class of immigrant – essentially "pulling a lever" – one can infer future influxes of immigration groups that Canada might experience.

Immigration policy is a highly complex topic, influenced by numerous economic, political, and social factors. While often portrayed in simplistic terms (e.g. "good" policy or "bad" policy), it is often far more nuanced. Authors Valerie Knowles and Augie Fleras have both written extensively on this topic, and the issues they raised served as primary sources for this phase of research. This section attempts to capture the nuances covered by these and other authors on the subject, but specifically focuses on the debate about which classes of immigrants Canada may prioritise in the future. Starting with a brief analysis of immigration policy history, this section will then delve into some of the drivers that may influence future immigration policy. This is followed by a definition of the potential future "levers" of immigration classes, and concludes with three scenarios that will prompt future communities to come to Canada (see Figure 6).
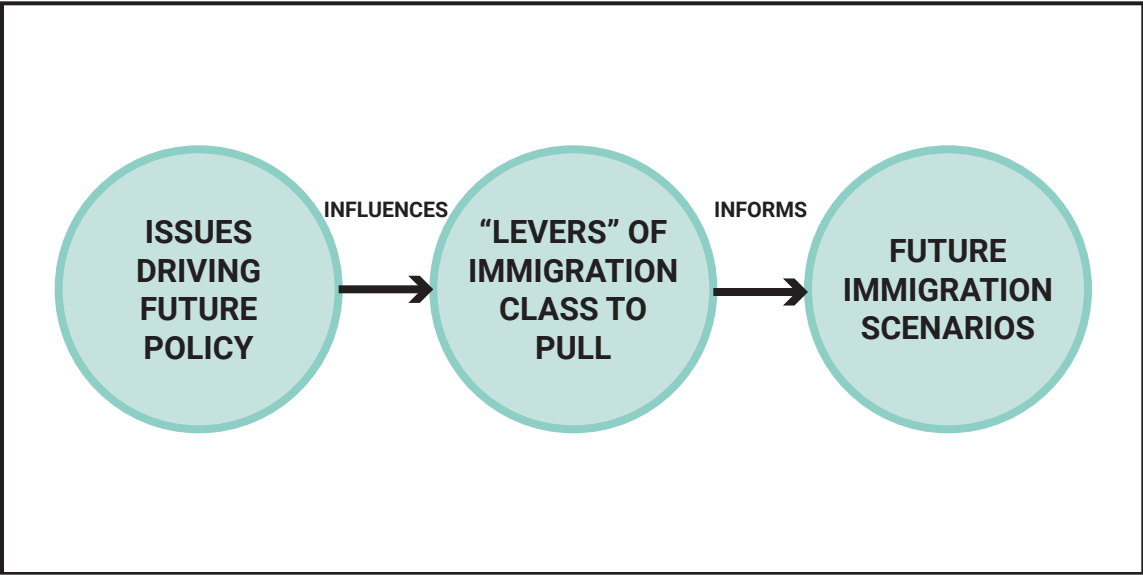
Figure 6: Process of developing future immigration scenarios through understanding emerging issues and immigration class "levers"

A HISTORY OF FLEXIBLE POLICIES

Throughout its history, Canada's annual intake of immigrants has waxed and waned, from its peak at 400 000 in 1913, to a post–confederation low of 16 000 in the 1930s, to approximately 250 000 in 2016 (Marcoux, 2016). These numbers are strongly influenced by the attitudes of the government in charge, and thus the world of immigration policy is relatively fast-moving (Boucher and Cerna, 2014). Canada experienced this rapid shift most recently after the 2015 federal election. Within the first month of being elected, the new Liberal government announced its plan to increase the resettlement of Syrian refugees to 25 000, more than doubling the number that the previous Conservative government had allocated just months before (The Canadian Press, 2015). Within a few months' time, this goal was achieved. Despite government's sluggish reputation, this was a significant policy change that went from ideation to implementation in a remarkably short time period.

While compassion has been a driver of immigration policy change, policies are defined primarily based on economic need. This practice has been observed throughout Canada's history, from a pre WWI policy that focused on agriculture and settling the West, to the current focus is on increasing skilled labour in a modern global knowledge economy (Fleras, 2015). Recent examples are the introduction "express entry" program to fast track the applications of skilled workers (Knowles, 2016), and the continuous modifications to the controversial Temporary Foreign Workers program in an effort to reduce abuse (such as employers prioritising foreign workers over Canadians) (Curry, 2014). However, despite the relatively rapid implementation of these programs, their impacts are difficult to anticipate (Ferrer et al., 2014). Will these policies in fact fulfill our economic need for skilled labour? Or will the falter due to unforeseen consequences? In the longer term, how will the system have to change in keeping to a shifting labour market (ageing population, automation of labour, etc.)? What role will the children of immigrants play in Canada when they grow up?

All of that is to say that the flexibility of Canada's immigration policy inherently creates an uncertain future. While its roots will likely continue to be tied to economic and compassionate grounds, policies are subject to the attitudes of governments, can change relatively quickly, and their long term impacts are difficult to determine. While this uncertainty may seem daunting, a Foresight approach can play a useful role in reducing this uncertainty. With the ultimate goal of envisioning plausible future policy directions, this phase of research examines emerging issues that may drive future immigration policy.

EMERGING ISSUES DRIVING FUTURE POLICY

Striking balance between immigration classes

Canada has three main classes of immigrants: economic, social and humanitarian. These classes will be profiled in the following section, but in essence the economic class focuses on those coming to Canada to work, the social class focuses on reunifying families in Canada, and the humanitarian class focuses on those who face extreme hardship and persecution in their homeland, such as refugees (Knowles, 2016).

Canada is constantly adjusting the numbers in each class, and with each change comes a debate over what the "right" balance is. When numbers in the family reunification plan are increased, which often involves bringing in parents and grandparents of current immigrants, concerns are raised that these new Canadians will not contribute and only be a burden on the system (Neborak, 2013). Meanwhile, critics note that a growing focus on economic migrants has led to a "bimodal" system, where young, educated immigrants take a far higher priority over the "less desirable" immigrants such as refugees (Fleras, 2015; Lenard, 2015). Therefore, a major future driver will be what future policymakers, as well as Canadians, determine is the "right" balance of these classes (Knowles, 2016).

Postnationalism and the permanent state of being temporary

The concept of postnationalism is a critical issue affecting immigration policy and is the overarching driver that Augie Fleras discusses in his book *Immigration Canada* (2015)[1]. This term relates to the phenomenon that in a globally mobile world, migration is becoming less of a permanent, singular move and more an ongoing, "zigzagging" process between various countries. Migrants are in a "permanent state of being temporary", maintaining strong roots to their homeland. Indeed, researchers argue policy makers should look beyond the three classes and examine the balance in temporary and permanent immigration as well, particularly in the economic class (Boucher & Cerna, 2014). This concept creates uncertainty for Canada's immigration system, because immigrants are no longer a long-term guarantee and their economic benefits may be quickly lost as migrants move onto greener pastures. Indeed, some predict that there may soon be a "reverse migration wave" of Asian immigrants moving from Canada to their homelands to seek growing opportunity there (Duncan, 2012).

Ageing population, population stagnation and job shortages

A major driver shaping immigration policy is compensating for Canada's ageing population and a low national birth rate by attracting a working population required to sustain our social systems (Fleras, 2015; Duncan, 2012). As a result, Canada has employed a variety of programs to attract skilled workers in the economic class. Examples of these are the Foreign Credentials Recognition Program, which offers financial assistance "to facilitate the recognition of credentials obtained in other countries" (Knowles, 2016), and the Express Entry program, where employers "pick skilled applicants out of the queue for processes" and "only the highest ranking candidates are invited to apply for permanent residence" (Knowles, 2016). Programs are also in place to make up for labour shortages in specific fields, such the Federal Skilled Trade Program, which accepts workers from one of 43 skilled trades that reflect labour market needs (Ferrer et al., 2014). There are also fields with low-skilled labour shortages, such as agriculture, and programs such as the Labour Market Opinion in the Temporary Foreign Worker category attempt to supplement these shortages (Curry, 2014).

These policies have dramatically increased the number of immigrants from the economic class. Since the 1990s, the ratio of economic migrants

---

1   The definition of postnationalism bears strong overlaps with the term "globalisation", and indeed in many papers the terms are used interchangeably. However, scanning the literature of these topics it appears that the term "globalisation" is more strongly related to - and used by - the economic and business fields, while "postnationalism" is more often used in the fields of sociology and culture.

has skyrocketed from 20% to 69% in 2012 (Fleras, 2015). As a result, Canada's immigrant workforce is younger and more educated. While this favouritism of the young and educated is not without controversy (Fleras, 2015; The Economist, 2015), they are also "more likely to bring capital with them and to pay more in taxes than they consume in publicly provided services" (Ortiz, 2015). As Canada seeks to make up for population and labour shortages and find a stable source of tax revenue, it will have to adapt its policies to favour one skill over another.

Global competition for talent

Alluded to earlier in the discussion of Postnationalism, Canada is facing increasing competition for talent. While Canada is currently ranked seventh among the preferred migration destinations in the world, it cannot rest on its laurels (Asia Pacific Foundation of Canada, 2014; Conference Board of Canada, n.d.). Canada is facing growing competition from other countries who present attractive programs for migrants seeking new opportunities, such as fast tracked permanent residency (Duncan, 2012). While developed nations such as

the United States and countries of the European Union are certainly attractive to migrants, developing nations are also drawing people. This situation has arisen "because many developing countries are seeing their economies grow significantly and offer much more lucrative careers than even twenty years ago" (Duncan, 2012). As global competition heats up, Canada will have to continue to adapt its policies to continue to be a primary destination for the most promising migrants.

Growing corporate influence

As noted earlier, several programs designed to encourage skilled immigration rely on employers demanding and selecting desirable candidates. However, with this increased corporate role comes controversy surrounding the influence they hold over government decisions (Boucher & Cerna, 2014). There are additional concerns that unlike the previous points-based system, the new employer-led system opens the door to discrimination where younger applicants with English or French sounding names are preferred. As stated in The Economist's 2015 article No Country for Old Men, "Canada's

new dream immigrant is younger, more polyglot, has already worked longer in Canada than the older version and, unlike him or her, has a job offer". In the future, policymakers may have to address the role employers play in selecting future immigrants to ensure a fair and equitable balance is maintained.

An additional, and somewhat opposing, concern that could be argued is that foreign companies with offices in Canada may prioritise hiring those from the company's country of origin with limited English or French skills. This may lead to the formation of ethnic enclaves, much like the Chinese-dominated Toronto suburb of Markham, who are unlikely to integrate with the rest of the community. However, upon closer inspection this concern is unfounded. These ethnic suburbs – or "ethnoburbs" (Li, 2009) – are in fact more ethnically diverse than the "ghettos" and Chinatowns of the past (Qadeer et al., 2010), and are not as socially exclusive as one might fear (Qadeer & Kumar, 2006). Therefore, it is unlikely that a corporate-driven immigration policy itself limits community integration and cohesion.

Managing the backlog

While immigration policy may change quickly, it is not surprising that the process of immigration itself is a lengthy process, and backlogs of applications in the queue are significant (Knowles, 2016). In the early 2000s, the government faced a massive backlog of applicants, yet did not have the power to adjust the numbers of applications to reduce the strain on the system. This practice was reversed with Bill C-50 in 2008, which allowed the Citizenship and Immigration Minister to annually adjust the number of applicants to each class (yet not without concerns that immigration could be adjusted based on a politician's will). In any case, as policies shift to increase numbers of certain migrants in the future, Canada will also have to put measures in place to prevent any overwhelming backlogs from occurring.

Social attitudes and tolerance

As a nation built largely by immigration, Canada has a relatively favourable opinion of immigrants (Duncan, 2012; Heitz, 2016). However, Canada may not be immune to social intolerance, such as what Europe is experiencing with their

influx in refugees (Heitz, 2016), and is also at risk of heightened social tensions between various groups in Canada (Duncan, 2012). Moreover, the fact that politics plays a role in determining immigration policy means that they are strongly influenced by public opinion. It may only take one serious terrorism event to reverse the relatively favourable attitude Canadians have for refugees and other groups, and in turn have a dramatic impact on our immigration system.

As mentioned earlier, in a Postnational world immigrants who move for economic reasons are more fluid, and less likely to integrate with their new home. This fluidity could present potential tensions with the local community, who would see this as a resistance to "fitting in" (Fleras, 2015). There is also a risk of homogenisation. Because of the current focus on English and French skills for economic immigrants, there is also a greater likelihood that more immigrants will come from countries with similar attitudes and cultural backgrounds and histories, thus decreasing diversity (Fleras, 2015; Suhanisi, 2012). These movements could present a two tier

world where those from similar cultures are welcomed openly, and those from other backgrounds are less welcomed and pushed to move on.

Monitoring remittances

Immigration is not only about the individual that comes to a new country, but also about those who are "left behind" (Fleras, 2015). Many immigrants, oftentimes alone, send money home to their families in the form of remittances. In 2012 nearly $24 billion USD in remittances were sent from Canada, making it the highest rate per capita worldwide (Nekola, 2014). Remittances are not necessarily seen as troublesome to the government, as the workers have already paid taxes (Todd, 2014), and remittances are seen as potentially more effective than foreign aid (Westwood, 2013). Nonetheless, those sending remittances are often "circular migrants", who often move between their high-income host country and low-income homeland, making their long term prospects in Canada more uncertain (Todd, 2014). Surprisingly, unlike many other countries, Canada does not

monitor remittances. Looking ahead, Canada may have to consider setting up a central monitoring agency similar to other countries (Westwood, 2013). Central monitoring could be provided by FINTRAC (The Financial Transactions and Reports Analysis Centre of Canada), the federal organisation that monitors for money laundering and terrorism, to understand where money is being sent, and to ensure that those sending remittances do not fall victim to predatory practices such as exploitative commission fees.

New forms of migration

Climate refugees have hit the headlines recently, predicting that in a world of climate change, many people will have to flee their homeland for safety or economic reasons. However, despite the hype, there are very few systems in place to accommodate these refugees (Asia Pacific Foundation of Canada, 2014). The current refugee system is based on whether individuals face persecution or torture in their

homeland, and there is no governance process for those fleeing climate hardship (Martin, 2010). Put succinctly by the Asia Pacific Foundation of Canada in a 2014 report for Policy Horizons, "Canada will need to consider how to incorporate the notion of climate-induced migration into its existing immigration and refugee policy framework."

Overcoming poverty

Despite the measures in place to bring in skilled economic migrants, immigrants in Canada still face a poverty rate 2.7 times higher than the average Canadian. One of the major factors influencing the potential for poverty is language skills, despite the fact that the current system strongly favours English and French speaking individuals. In any case, this demonstrates there are still shortcomings in the immigration system, and Canada will likely have to address how to fix this problem in the future (Ferrer et al., 2014).

IMMIGRATION CLASSES: THE LEVERS OF FUTURE POLICY

As discussed earlier, Canada has three main classes of immigrants – economic, social, and humanitarian. Each of these classes has their own annual target numbers, which are updated on an annual basis. For example, the balance of classes proposed for 2016 are as follows (Mas, 2016):

- 151,200 to 162,400 under the economic class (such as skilled workers).
- 75,000 to 82,000 under the social class for family reunification.
- 51,000 to 57,000 refugees, protected persons and others admitted in the humanitarian class.

These classes directly influence which immigrants would be coming to Canada, and therefore are considered "levers" that, when pulled, can shape a variety of futures. For example, if a government were to "pull a lever" for the humanitarian class, thereby increasing their target numbers, that would increase the number of refugees that come to Canada in the following year. While the government may designate country-specific quotas for the Humanitarian class (a recent example is the resettlement target for Syrian refugees (Citizenship and Immigration Canada, 2016 a)), generally Canada does not specify the countries of origin for the other classes.

The following briefly outlines each of the classes:

Economic (Focus on High skilled)

While this class incorporates multiple categories including high-value investors and entrepreneurs, the bulk of its members are skilled workers brought to Canada for the purposes of work (Citizenship and Immigration Canada, 2015). Many of these migrants start as temporary, and as their work experience grows they switch to permanent status (Boucher & Cerna, 2014; Fleras, 2015). In order to attract these skilled workers, the government has several programs in place to expedite the paperwork of the more desirable applicants who best fulfill Canada's labour market needs. These workers are evaluated for their potential to succeed in Canada, assessed on qualities such as language skills, education, age and work skills (The Economist, 2015). Since their skills are in high demand, they may also be considered "Transnational" citizens, and readily move jobs worldwide (Fleras, 2015). As a result, many may leave Canada just as quickly as they arrived.

Social (Family Reunification)

This class focuses on reuniting family members in Canada. Many solo workers working abroad have a lonely experience and long to return home (Todd, 2014). The social class program focuses on bringing these workers' families to Canada, ensuring their long-term stay. Some critics of the program argue that these family members – often parents and grandparents – are a larger burden on the system than they contribute. However, a counter argument suggests that these older relatives can help care for children, and therefore increase the financial well-being of the family (Neborak, 2013). The current government has recently increased the numbers admitted under this class, stating that "when families are able to stay together, their integration to Canada and ability to work and grow their communities all improve" (Minister John McCallum, as cited in Mas, 2016).

Humanitarian (Such As Refugees)

Part of Citizenship and Immigration Canada's mandate is to "maintain Canada's humanitarian tradition by protecting refugees and people in need of protection" (Citizenship and Immigration Canada, 2014). With this legacy in mind, Canada has long attracted refugees worldwide, and promises to take in over 50 000 refugees in 2016 alone (Mas, 2016). Yet as discussed earlier, Canada will have to take measures to adapt its policy for a new generation of refugees, specifically with regards to climate change. Moreover, with global refugee numbers growing annually, from 16.5 million in 2013 up to 19.5 million in 2014 alone (Knowles, 2016), Canada will have to debate "the controversial topics of who is a refugee, how we found out, whether the current system works, whether it's fair, and what alternatives are for processing persons who need protection" (Fleras, 2016).

A note on low skilled economic migrants:

It should be noted that while low-skilled workers are also categorized under the economic class, they are nearly always in Canada on a temporary basis, and therefore were excluded from this research. This category is in hot debate, and perhaps is best known for recent headlines surrounding systemic abuse and unfair pay (Curry, 2014). Nonetheless, details of this group are difficult to obtain beyond high level statistics and it is difficult to perform meaningful foresight in this area. Further research among this "invisible" group is advised, especially regarding their potential to become permanent residents.

PHASE 1 SCENARIOS: FUTURE IMMIGRATION POLICY

Using each immigration class as the foundation, and fleshing them out with the potential policy drivers discussed above, three future scenarios were generated to illustrate the immigration groups Canada may wish to attract (see Figure 7). Because this paper focuses on communities that might grow, this exploration focused solely on potential scenarios that occur when the government increases the numbers of a certain class (i.e. when a lever is "pulled"). It's important to note that Canada may increase several classes at once, or increase one class while maintaining or reducing the numbers of another. For the sake of simplicity each class was considered in isolation.

In each scenario potential tension points for each scenario are noted, which must be acknowledged by the government to prevent any rifts from forming in the community. Certainly, as discussed earlier, food can be a useful tool to encourage mutual understanding and help to mend these rifts. These resulting scenarios formed the basis of subsequent branch analysis of which communities might come to Canada, which is discussed in the following chapter.

It is worth considering the implications on the other classes when one is increased. While the other two classes may be less susceptible to criticism from the general public as they are less of a focus, that lack of focus may also compromise their access to funds for important programs such as healthcare. For example, in 2012 the Harper government, which placed a strong focus on economic immigration over other classes, cut healthcare services to refugees (Webster, 2015). While this was later overturned by the Federal Court, it demonstrates the negative impacts of prioritising one immigration class over another. Thus, it is not unrealistic to infer that increasing the numbers of one class might decrease access to resources, and thus might increase hardship, alienation, or even emigration, of the other classes.
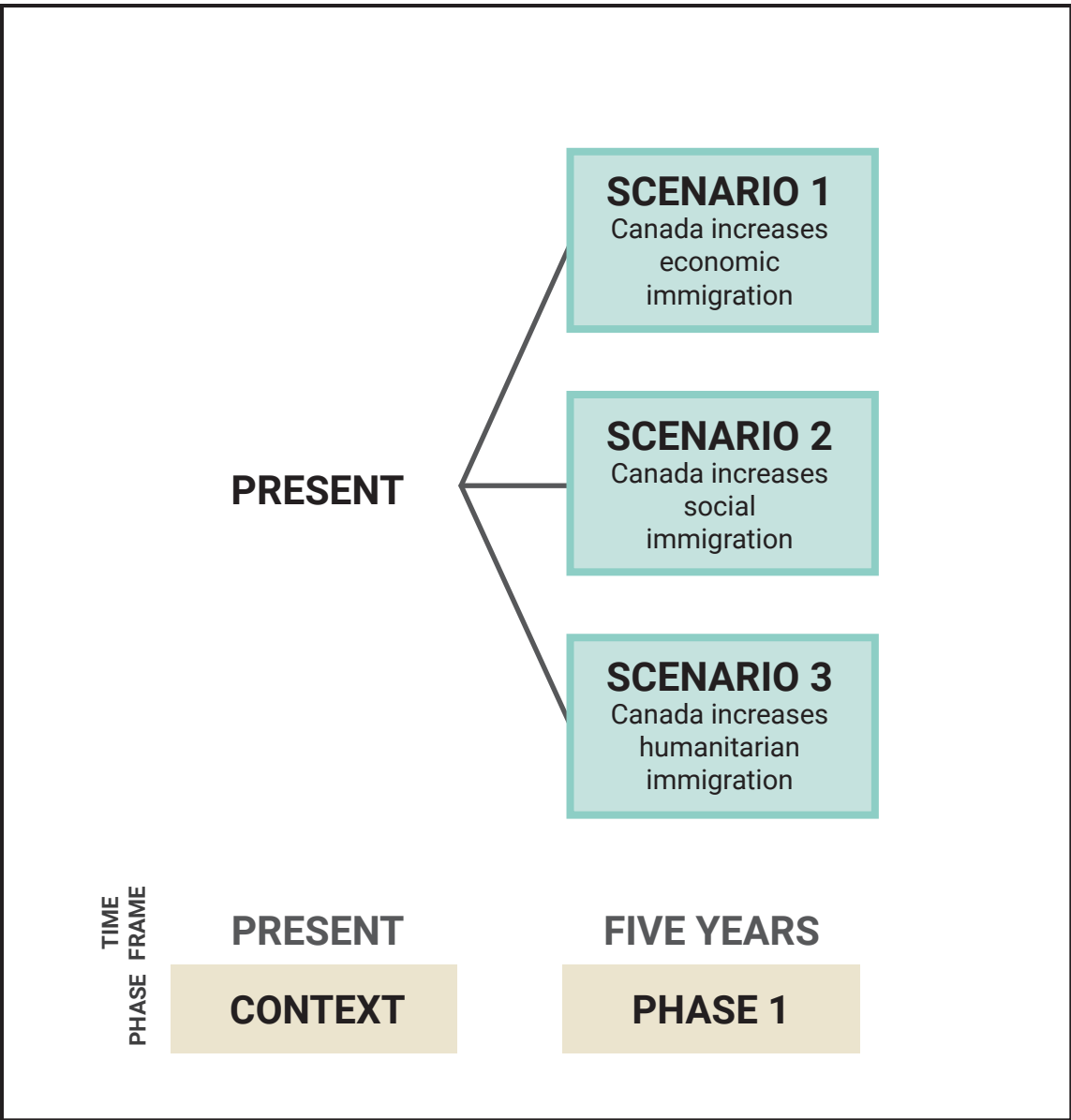
Figure 7: Overview of three scenarios from Phase 1 research

Scenario 1: Canada increases economic immigration

In this scenario, the government places a priority on attracting the best and brightest skilled workers from around the world to boost the Canadian economy. To compete on the world stage, the application process is streamlined and simplified for both employers and employees: incentives are given to employers who hire individuals from diverse backgrounds, and a simplified transition to permanent residency encourages employees to stay. A stream of highly skilled workers comes to Canada, with global experience and worldly views to match. These workers are fully integrated into the Canadian workforce – seen as "peers" and not "others" – as Canadians have long adapted to working with people from different backgrounds. While some workers bring their young families, others end up starting families with Canadians. However, by increasing the number of these economic immigrants, there is also be growing resistance amongst those who fear that jobs are being "taken away" from Canadians (however unfounded that might be).

Scenario 2: Canada increases social immigration

With many temporary solo migrants leaving for jobs elsewhere, Canada takes an active role in trying to secure their permanent residency, and therefore Canada's long-term economic future. One measure is increasing family reunifications, which expedite applications for spouses, children, and parents of these workers. As more members arrive, they unite with families, and create their own communities. The grandparents stay home with the children and the potential for income grows in the family. However, as these family members have less of a direct impact on the Canadian economy, they also experience some resentment from other Canadians who feel that they are a "drain" on the system.

Scenario 3: Canada increases humanitarian immigration

In this scenario, political unrest, conflict, and climate change disasters are causing mass migrations worldwide. Canada sees it as its duty to take in these refugees, and given the success of the recent Syrian program, Canadians embrace these migrants with open arms. Canada creates a new class of climate refugees, which leads to an influx of people fleeing hardship brought on by extreme weather. As refugees, Canada provides some financial assistance to help these families establish themselves in the first year, although their budgets are still tight. However, some Canadians may disapprove of the number of refugees admitted and the services they receive, believing that money would be better spent solving Canadian issues first.

"More important than the drilling of armies, more important than the construction of navies, more important than the fiscal policy of this country is the question of who shall come to Canada and become part and parcel of the Canadian people"

–William Scott, Superintendent of immigration from 1903 to 1924 from "Immigration and Population" from Canada and Its Provinces, *1913.*

Figure 8, right: Woman holding a globe. Image by Slava Bowman from Unsplash under Creative Commons Zero license.

CHAPTER 5

Phase 2:
Future Migration Hotspots

While the previous section focused on the *pull* side of the immigration equation, this section focuses on *push*: where future communities may come from in the next five years given the possible future scenarios. Looking to academic journals, international organisations, government research, foresight reports, and media articles for indicators led to a list of potential "global migration hotspots" for each scenario, and will be detailed in the following section. Once these hotspots were identified, they were downsampled to a smaller list of communities that are relatively unknown to Canada and cover a range of scenarios. The cuisines of this final list were then studied and measured against future food trends to create potential future cuisine profiles, which will be discussed in later chapters.

NOTING ESTABLISHED COMMUNITIES

Because this research centred on discovering new communities that may arrive in Canada, it was first important to acknowledge which communities are already well-established and therefore not the focus of this research. According to the National Household Survey from 2011 (Statistics Canada, 2013), the following table lists the top twenty immigrant groups in Canada:

Table 1: Top twenty immigrant groups in Canada, 2011

1. India	11. Portugal
2. China	12. Sri Lanka
3. United Kingdom	13. Jamaica
4. Philippines	14. Iran
5. United States	15. South Korea
6. Italy	16. The Netherlands
7. Vietnam	17. France
8. Pakistan	18. Guyana
9. Germany	19. Romania
10. Poland	20. Lebanon

Table 2: Top 20 reported ethnic origins of Canadians, 2011

1. English	11. Polish
2. French	12. Filipino
3. Scottish	13. Russian
4. Irish	14. Welsh
5. German	15. Norwegian
6. Italian	16. Portuguese
7. Chinese	17. Spanish
8. Ukrainian	18. Swedish
9. East Indian	19. Hungarian
10. Dutch	20. Jamaican

Moreover, it was important to acknowledge groups that immigrated to Canada in the past, and are therefore well-established communities. These "ethnic origins" were also sourced from the National Household Survey, with the top twenty most populous shown in Table 2 above.

Looking at these lists, many of these countries' foods are already very familiar to Canadians. Italian pasta, Indian curries and Chinese stir frys are already standards at the Canadian dinner table. Therefore, this data significantly reduced the potential countries that were targeted for this research. For example, while Chinese and Indian populations will surely increase over the coming years (Duncan, 2012; Malenfant et al., 2010), because their populations are already significant, they were excluded from the final analysis. Moreover, the established communities, which included countries such as the UK, France, Italy, Germany and the Ukraine, were also excluded.

Notably, there are some countries in these lists, such as the Philippines and Iran, whose cuisines are not yet well-established in Canada. For the sake of consistency, these communities were still excluded from the future migration hotspots. That is not to say that these cuisines will not be popular in the future – indeed, with popular chefs like Yottam Ottolenghi embracing Iranian food (Kramer, 2014) and restaurants like La Mesa in Toronto championing Filipino food, their popularity is likely – but their adoption may be due to factors beyond immigration.

SCENARIO 1: SOURCES OF ECONOMIC CLASS IMMIGRANTS

The first scenario projected that Canada would increase the number of economic immigrants. From scanning a variety of references from global organisations, academia, and analysts, the following two indicators led to a possible list of economic migration hotspots.

Primary indicator: Economic Development

Counter intuitively, the primary driver for economic emigration is not hardship at home, but economic development (Massey, 1988). Noted academic Douglas S. Massey, who has studied international migration and economic development for several decades, put it best in the chapter "The Political Economy of Migration in the Era of Globalization" from the 2009 book *International migration and human rights: the global repercussions of US policy*:

Studies consistently show that international migrants do not come from poor, isolated places that are disconnected from world markets, but from regions and nations that are undergoing rapid change as a result of their incorporation into global trade, information, and production networks. In the short run, international migration does not stem from a lack of economic development, but from development itself.

Therefore, emerging economies provide a strong indicator for future economic immigration to Canada. The World Bank monitors and forecasts development in emerging economies worldwide in its Global Economic Prospects Report, and serves as a useful starting point for analysis. This list was then weighed against "next big economy" reports created by analysts and academics to find patterns. The lists are provided in Table 3. Countries that appear more than once are highlighted in white (excluding existing immigration communities) in order to indicate which countries are stronger hotspot candidates.

Table 3: Comparison of emerging economy lists from various experts

World Bank Emerging Market and Developing Economies[1]	Global Business Policy Council at AT Kearney's 2020-Seven Countries[2]	Professor Mauro Guillen, Wharton management professor and director of Lauder Institute at University of Pennsylvania[3]	Jim O'Neil (economist who coined the term BRIC)[4]
China	China	Vietnam	Mexico
Indonesia	Malaysia	Philippines	Indonesia
Thailand	Chile	Bangladesh	Nigeria
Russia	Poland	Nigeria	Turkey
Turkey	Peru	Kenya	
Poland	Mexico		
Brazil	Philippines		
Mexico			
Argentina			
Saudi Arabia			
Iran			
Egypt			
India			
Pakistan			
Bangladesh			
South Africa			
Nigeria			
Angola			

1: The World Bank, 2016
2: Global Business Policy Council, 2015
3: Knowledge @ Wharton, 2016
4: O'Neill, 2014

Secondary Indicator: Education

Education levels is an additional indicator for economic migration, as increasing rates of tertiary-level education implies greater economic development (International Migration Institute, 2011). Moreover, tertiary education means a more skilled population, which is attractive for Canada's economic immigration class (The Economist, 2015). While education levels were considered in the emerging economies lists above, a richer picture can be achieved when examining current international student groups in Canada. These groups may be more more likely to find jobs here, and thus point to potential immigration to Canada within five years. The following table derived from Statistics Canada's *Postsecondary enrolments, by student status, country of citizenship and sex* (2015) highlights the top twenty countries, with the countries that are not currently an established community in Canada highlighted in white to indicate potential hotspot candidates:

Table 4: Top 20 international postsecondary students in Canada by country of citizenship

1. China	11. Brazil
2. India	12. United Kingdom
3. France	13. Hong Kong
4. United States	14. Bangladesh
5. Saudi Arabia	15. Vietnam
6. South Korea	16. Germany
7. Nigeria	17. Mexico
8. Iran	18. Russian Federation
9. Pakistan	19. Taiwan
10. Japan	20. Morocco

(Statistics Canada, 2015)

Looking at the patterns that emerge in countries highlighted above, the following candidates appear to be promising future economic immigration hotspots due to their repeated appearance across multiple categories (as highlighted in Figure 9):

Hotspots: Mexico, Brazil, Nigeria, Turkey, Bangladesh, Indonesia

Figure 9: Map of targeted hotspots for Economic Class immigration sources (Scenario 1)

SCENARIO 2: SOURCES OF SOCIAL CLASS IMMIGRANTS

The social class scenario, which focuses on family reunification, was perhaps the most straightforward group to identify. The primary indicator for this class is remittances, or money that is sent back to an immigrant's country of origin. Remittances indicate that a family is separated (Todd, 2014; Westwood, 2013), and as such indicate potential hotspots for near-term future family reunification.

Using data from the World Bank (Knowmad, 2016 and Nikola, 2014), the countries in Table 5 receive the most money (in USD) in the form of remittances from Canada, with the countries that are not established communities highlighted in white as potential candidates.

Most of these countries have already appeared on the list of immigrant or established communities. However, Nigeria and Bermuda are exceptions. Bermuda is a particularly puzzling addition to the list, especially since it is not part of targeted foreign worker programs such as the Seasonal Agricultural Worker Program (Citizenship and Immigration Canada, 2016). As a well-known tax haven, these remittances are perhaps more dubious in origin (Boffey, 2016), and not reflective of the type of remittances that are the focus of this study. As a developing nation, Nigeria appears to be the more credible of the two countries highlighted, and is the only country continuing forward in this analysis (see Figure 10).

Hotspot: Nigeria

Table 5: Top 20 remittance receiving countries from Canada (in USD)

1. China	$4,179,000,000	11. Pakistan	$491,000,000
2. India	$2,706,000,000	12. Sri Lanka	$479,000,000
3. Philippines	$2,075,000,000	13. Nigeria	$403,000,000
4. France	$1,183,000,000	14. Belgium	$395,000,000
5. Italy	$1,112,000,000	15. Hungary	$393,000,000
6. Vietnam	$923,000,000	16. Portugal	$350,000,000
7. Lebanon	$769,000,000	17. Poland	$348,000,000
8. Germany	$726,000,000	18. South Korea	$340,000,000
9. United Kingdom	$719,000,000	19. Jamaica	$294,000,000
10. United States	$709,000,000	20. Bermuda	$269,000,000
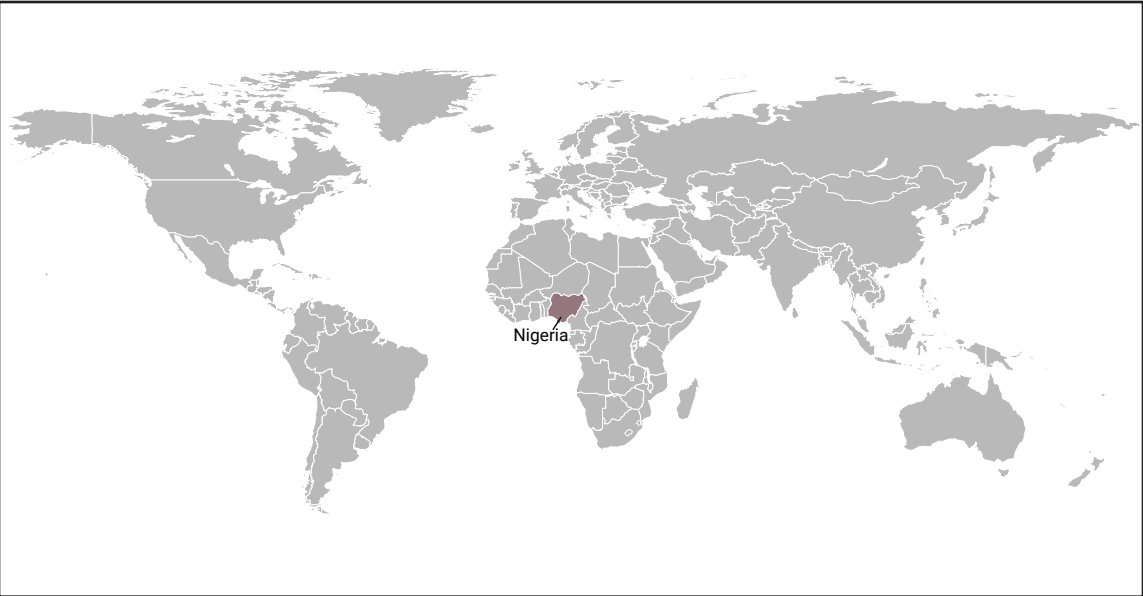
Figure 10: Map of targeted hotspot for Social Class immigration sources (Scenario 2)

SCENARIO 3: SOURCES OF HUMANITARIAN CLASS IMMIGRANTS

In this scenario, Canada would increase the number of immigrants for humanitarian reasons. There are numerous challenges worldwide that could prompt humanitarian migration, and endless reports declaring nations and regions that could be impacted by climate change, political instability and conflict. These factors made this a challenging immigration class to identify succinctly. Scanning through these reports, the most thorough analysis comes from the World Economic Forum's Global Risks Report of 2016. Thoroughly researched, it provides an extensive view of the most pressing concerns that could impact citizens worldwide over the next 18 months to 10 years, and thus prompt migration. While the report does not go into details of specific countries affected by climate change (rather, it highlights regions such as South Asia, East Asia, the Middle East and North Africa), it does highlight conflict displacement hotspots: Syria, Iraq, Somalia, Myanmar, Colombia, Nigeria, Philippines, Turkey, Libya, Sudan,

South Sudan, Central African Republic, DR Congo, Yemen, Afghanistan, and Pakistan.

These nations are all currently facing conflict, however that does not mean that these conflicts will be over in five years. In fact, the report notes that conflicts are lasting longer, projecting that 80% of global conflicts will last more than 10 years' time, and therefore are likely to be relevant in this report's time frame. Moreover, the notion of "zombie conflicts", or conflicts that are technically resolved yet still simmer beneath the surface (Ricks, 2014), implies that even if conflicts are resolved in this area, they may soon spark up again. For example, while the conflict in Colombia may be relatively resolved since the time of research, it may be vulnerable to conflict in its future (Brodzinsky, 2016).

Additional research explored further nations facing climate change and political turmoil. It seems that no country is safe from climate change, however some of the conflict hotspots noted above appear particularly vulnerable, such as Bangladesh, Sudan and Nigeria (CNBC, 2014; Harris, 2014), strengthening their potential as a

migration source for Canada. The coastal areas of Bangladesh and Nigeria are highly susceptible to flooding, with their coasts densely populated, while Sudan and Nigeria are part of the Sahel region which faces significant drought (The World Bank, 2013).

Further research also revealed potential migration hot spots in the Americas as well. Increasing violence in Honduras, Guatemala, and El Salvador has led to a fivefold increase in asylum cases since 2012 (UNHCR, 2015). Meanwhile, the human rights concerns and recent food and energy crises in Venezuela has led to mass migrations out of the country (Associated Press, 2016; Human Rights Watch, 2016 b). Ironically, among those

fleeing are Colombians who fled years before and are now returning home (Otis, 2015). If political and economic turmoil continues in Venezuela, it may well be a future source of immigrants to Canada.

All of these findings combine to create a lengthy – but by no means exhaustive – list of potential new immigration sources in the Humanitarian Class (see Figure 10):

Hotspots: Syria, Iraq, Somalia, Afghanistan, Bangladesh, Myanmar, Colombia, Nigeria, Turkey, Libya, Sudan, South Sudan, Central African Republic, DR Congo, Yemen, Venezuela, Guatemala, Honduras, El Salvador
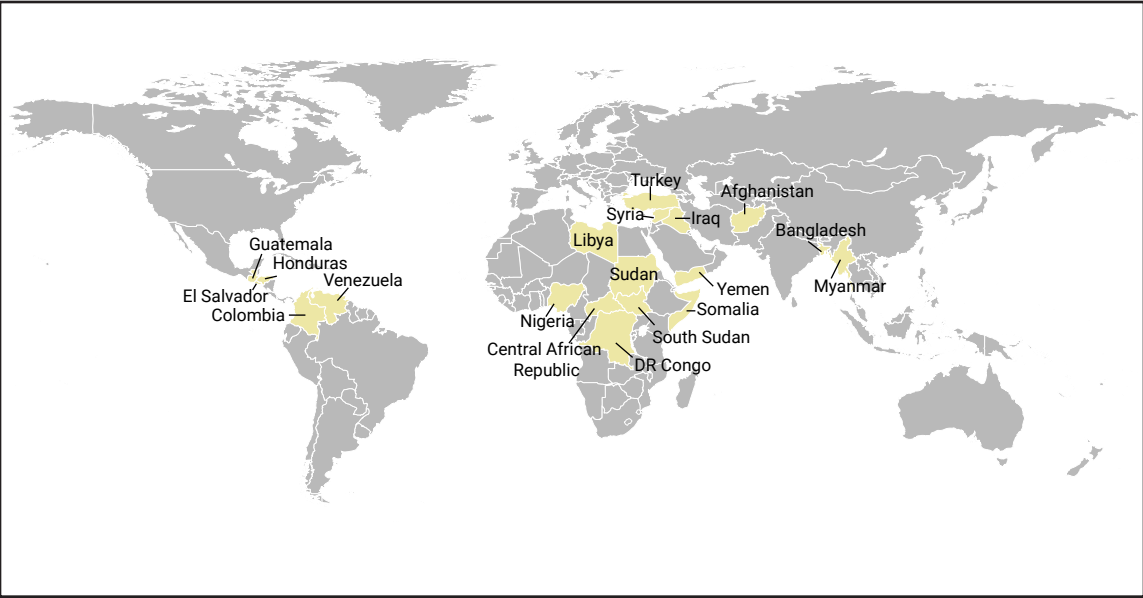
Figure 11: Map of targeted hotspots for Humanitarian Class immigration sources (Scenario 3)

SUMMARY OF HOTSPOTS, NARROWING THE FIELD, AND SCENARIO UPDATE

The list of migration hotspots was extensive and required downsizing in order to have a manageable group moving to the next phase of research. Working from the hotspots list above, the source countries were downsampled to a "Top Ten" list based on regional diversity, identification across multiple categories, and relative recency of each country's migration (see Figure 12). For example, while Central African Republic is on the list of refugee hotspots, it is a long term conflict whose migrants have not made it to Canada, and thus are less likely to in the near future. Nations which were omitted from the list may be considered further research, as they may indeed be sources of future immigration.

Top Ten: Mexico, Brazil, Venezuela, Nigeria, Sudan, Syria, Turkey, Bangladesh, Myanmar, Indonesia

Notably, Scenario 2, where Canada increases social immigration, only has one country as a hotspot (Nigeria). This indicates that in this scenario, the evolution of Canada's culinary landscape may not be strongly driven by immigration groups. Meanwhile, the number of hotspots in Scenarios 1 and 3 show that immigration may have a much greater influence on food in Canada. This discovery is not a weakness in the research, rather it implies that the research revealed a diverse range of futures, where some are more in line with the status quo than others.

Given these hotspots, the scenarios from Phase 1 have evolved into the scenarios shown in Figure 13 (see page 57). Each of these hotspots are unique, with their own circumstances driving migration, approaches to food, ingredients and dishes. These particularities are explored in the following chapter, Hotspot Profiles. In a general sense, each immigration class's approaches

toward food were extrapolated in each scenario. While these approaches were derived from the research, these attitudes should be considered assumptive, and further research is required to confirm these directions. In any case, their approaches appear to lie on a continuum, where the economic

immigrants in Scenario 1 have the most modern, globalised approach to food, whereas the humanitarian immigrants in Scenario 3 take a more traditional approach. These characteristics will be considered in the development of the final "recipes from the future", which closes this research.
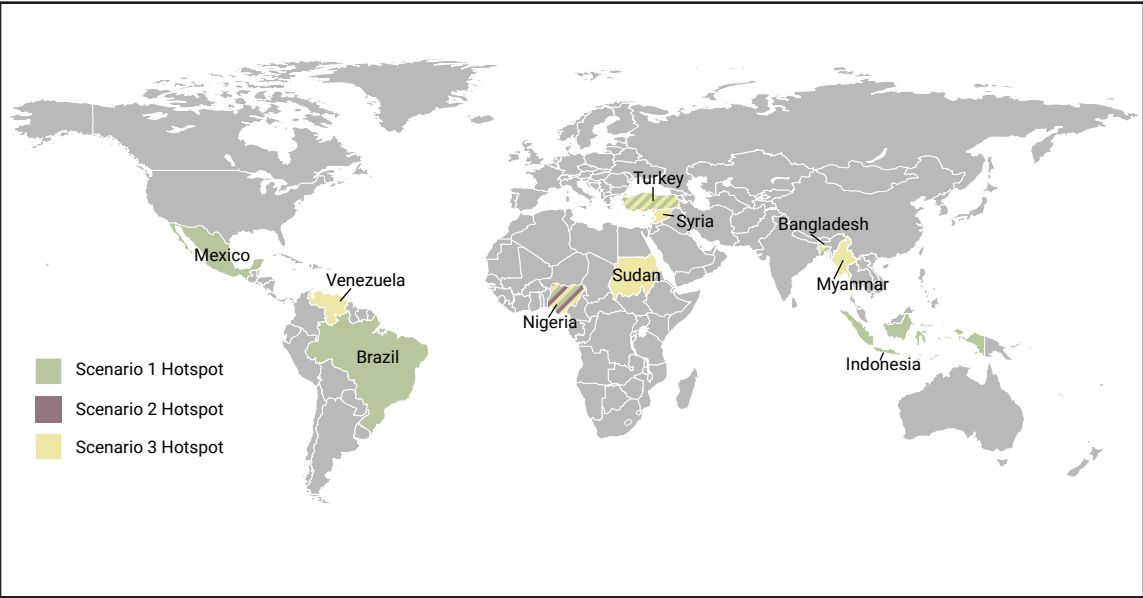
Figure 12: Map of top ten hotspots, colour-coded by scenario

Scenario 1: Canada increases economic immigration

As Canada increases the number of economic immigrants it admits, we see an influx in people from Mexico, Nigeria, Bangladesh, Indonesia, Turkey, and Brazil seeking skilled work in Canada. With their wealth of global experience, having worked and studied around the world, these immigrants have a global, "creolized" view of food. They experiment, mix and match flavours from around the world, particularly those that remind them of where they've been. As high-paid employees, they are willing to pay a premium on hard-to-find ingredients, purchasing them in gourmet markets or online boutiques.

Scenario 2: Canada increases social immigration

As Canada increases the number of social immigrants it admits, we see an influx in people from Nigeria wishing to reunite with their families. With the family brought back together, there is renewed focus in making family-style

meals from home. However, with some family members long established in Canada, they also experiment with some of the flavours they have encountered in Canada,

Scenario 3: Canada increases humanitarian immigration

As Canada increases the number of humanitarian immigrants it admits we see an influx of people from Venezuela, Nigeria, Sudan, Syria, Turkey, Bangladesh, and Myanmar fleeing persecution, war and climate change. These newcomers focus on family style, affordable meals as they establish themselves in Canada. There is a strong desire to keep dishes as authentic as possible in order to stay connected to the life they have left behind (Benjamin-Pace, 2016). At first arrival, when finances are tight, dishes are adapted with ingredients readily available in local grocery stores and ethnic markets (if they are settled in a large urban area). As they become more established in Canada and their income grows, they are able to spend on more authentic ingredients.
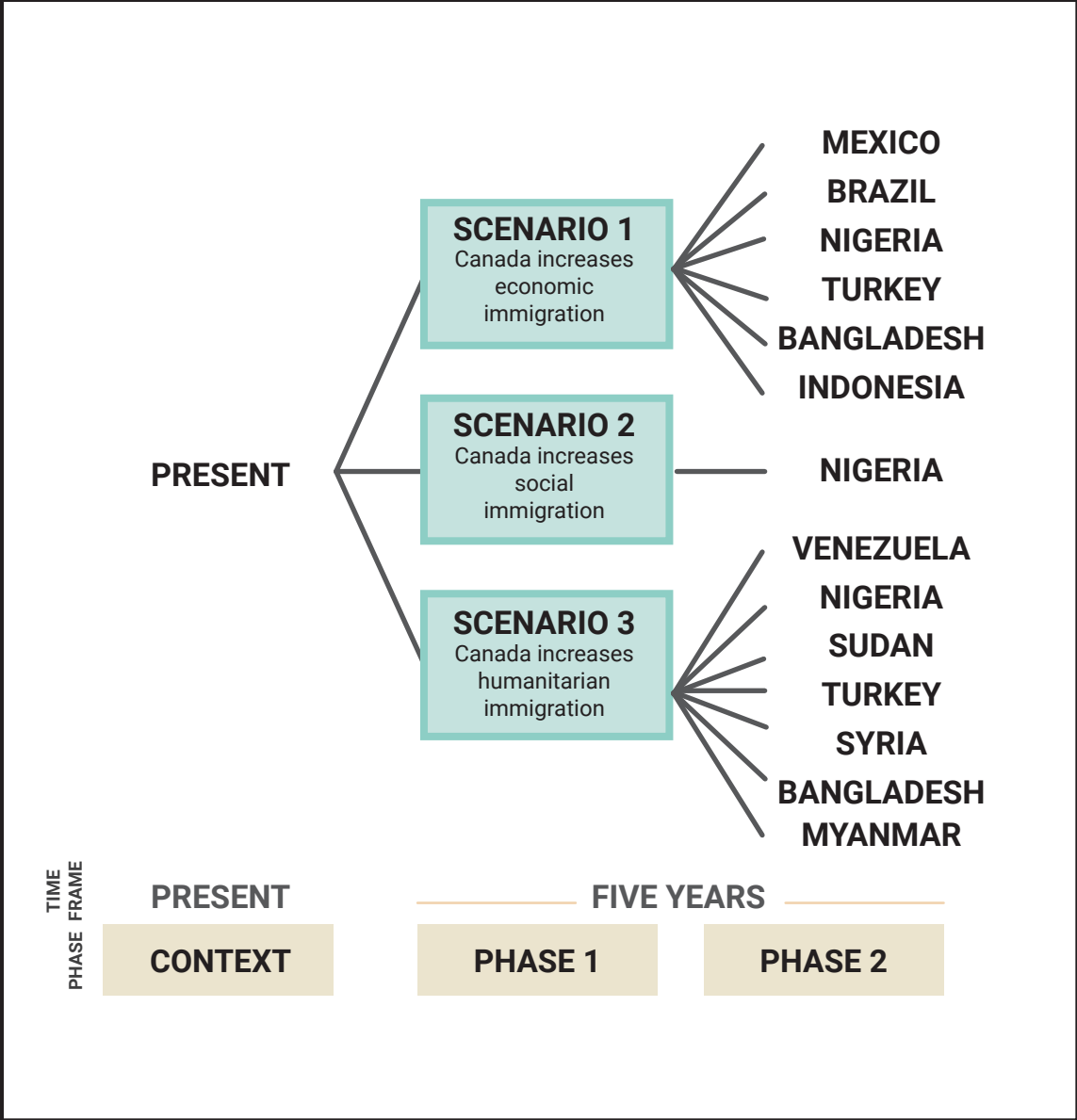
Figure 13: Diagram outlining evolution of scenarios from immigration class to hotspot countries

> ## *"Tell me what you eat, and I will tell you who you are."*
> –Jean-Anthelme Brillat-Savarin

Figure 14, right: Image of a range of cookbooks from the Toronto Reference Library

CHAPTER 6

Phase 3:
Hotspot Profiles and Emerging Food Trends

HOTSPOT PROFILES

The research to this point focused on answering the first research subquestion: where Canada might receive immigrants from in five years. Conducting foresight on the future of immigration in Canada was a complex process, and involved numerous global and national factors to determine the future immigration "push" and "pull" factors. Up to this point, the research revealed some obvious candidates – such as Syria – and some surprising candidates, such as Nigeria and Bangladesh. While more research is certainly required to validate the futures of these immigrant groups, the range of potential communities shows an exciting future for Canada. In this phase, the focus shifted to food and how these new communities might shape Canada's culinary landscape in fifteen years. To begin this exploration, a profile of each hotspot country including its immigration context, signposts to monitor its validity as a future hotspot in the coming five years, and cuisine characteristics was conducted, and are outlined in the following pages.

For the purposes of clarity, hotspots are presented in order from west–east around the world, starting in North America and moving eastward to Asia. Note that in each profile, ingredients and dishes that served as inspiration for the final recipes in Chapter 7 are indicated in **bold.**

Table 6: Mexico hotspot and cuisine profile

MEXICO

Immigration Class	Economic
Context (why this is considered a hotspot, elaborating on scenario)	Because of recent media coverage, especially during Donald Trump's presidential campaign, one might think of low-wage illegal migrants from Mexico. However, Mexico is poised to become a source of economic immigration. It has been cited by many as an emerging economy, including the World Bank, analyst group AT Kearney, and noted economist Jim O'Neil.
Signposts (to monitor status as a potential hotspot)	Student visa applications, economic growth, crime levels (especially with respect to drug cartels) which may trigger high-skilled workers to leave.
Cuisine Characteristics	While one might think that Mexican food is already established in Canada, we have only been exposed to a small portion of this mature and complex cuisine. It's not just about burritos and tacos; rich soups and stews, bright herbaceous salsas, and even insects make this a cuisine ripe for new discoveries.
Key Ingredients	Tomatoes, chiles, chocolate, corn (including masa for tortillas), beans, fresh cheeses, slow cooked meat, cilantro, **insects**.
Notable Dishes	Mole poblano (a rich sauce made of chocolate and chiles), **elote** (corn on the cob), cemitas (sandwiches made with a sweet bread roll), chapulines (grasshoppers roasted with chile and lime), pozole (a traditional hominy soup).

Cuisine research from: Gritzer, 2014; Presilla, 2012

Table 7: Venezuela hotspot and cuisine profile

VENEZUELA

Immigration Class	Humanitarian
Context (why this is considered a hotspot, elaborating on scenario)	Venezuela's socialist government has been widely accused of human rights abuses, especially against the protesting public and political opponents (Human Rights Watch, 2016 b). The energy crisis of 2016, and the resulting food and economic crises, has led to migrants fleeing the country (Associated Press, 2016). If these troubles are to continue, Canada may be a future home to these refugees.
Signposts (to monitor status as a potential hotspot)	Stability of socialist government, human rights accusations.
Cuisine Characteristics	Venezuelan food is a rustic blend of European, African and Indigenous influences.
Key Ingredients	Corn, beans, rice, plantains, braised shredded beef (carne frita).
Notable Dishes	**Arepas** (thick corn cakes, sometimes stuffed, and served throughout the day), chicha (corn-based beverage, sometimes fermented), empanadas (made with corn flour, unlike its Argentine counterpart), pabellon criollo (shredded beef with fried plantains, rice and beans).

Cuisine research from: Presilla, 2012

Table 8: Brazil hotspot and cuisine profile

BRAZIL

Immigration Class	Economic
Context (why this is considered a hotspot, elaborating on scenario)	Despite recent political turmoil and economic stumbles, Brazil is still noted as an economy to watch worldwide. Indeed, some consider the recent corruption scandals as a sign that it is cleaning up its act, paving the way for significant growth (The Economist, 2016). It has a growing middle class, and is ranked 11th for populations of international students in Canada.
Signposts (to monitor status as a potential hotspot)	Economic recovery, student visa applications, corruption scores.
Cuisine Characteristics	A dynamic blend of European, African, Asian, and Indigenous influences, Brazilian food is exciting (and infamously meat-heavy).
Key Ingredients	Fish, beef, **cassava**, beans, rice, tropical fruits such as mangoes and bananas.
Notable Dishes	Feijoada (a meat and bean stew), moquecas (fish stew), pao de queijo (cheese bread) **fish skins** (while not common across the country, is eaten in the Amazon region).

Cuisine research from: Carlos Alberto Doria in Castanho and Bianchi, 2014

NIGERIA

Immigration Class	Economic, Social, Humanitarian
Context (why this is considered a hotspot, elaborating on scenario)	Nigeria is the only country to appear in each of the scenarios. With significant oil reserves, it is a rapidly growing economy and the most populous in Africa (BBC News, 2016). It is a major sender of remittances abroad, and also has a significant student population in Canada. Given that English is an official language, economic and social immigrants may find Canada an attractive home. However, troubles with Boko Haram in the north and risk of climate change (both in desertification and rising sea levels) (Akpodiogaga & Odjugo, 2010) means that Nigeria may also be a hotspot for refugees in the future.
Signposts (to monitor status as a potential hotspot)	Economic growth, oil prices, droughts and flooding, increased terrorism from Boko Haram, remittances.
Cuisine Characteristics	Nigeria is an extremely diverse country, and in fact, many of its key ingredients can also be seen in South American foods. Dishes rely on local starch-based staples and often have a spicy twist.
Key Ingredients	Rice, beans, plantains, yams (the white variety), seafood (along the coast) palm oil and fruit, tropical fruits, cassava.
Notable Dishes	**Jollof rice** (a spiced rice dish laced with tomato, and a source of huge national pride and debate), **fufu** (a sticky white dough made with cassava or other starch), pepper soup (may be made with meat or fish), zobo (a spiced iced hibiscus tea), **kunnu aya** (tiger nut milk).

Cuisine research from: Adewunmi, 2015

SUDAN

Immigration Class	Humanitarian
Context (why this is considered a hotspot, elaborating on scenario)	A long lasting civil war has led to widespread displacement of Sudanese people. Moreover, climate change is putting the country at high risk of desertification, putting local agriculture at risk (Vidal, 2011).
Signposts (to monitor status as a potential hotspot)	Crop yields and climate changes, continued war, activities in current refugee camps.
Cuisine Characteristics	Sudanese food has elements of Middle Eastern food - feta cheese, tahini, garlic, yogurt - but with richer, African flavours such as peanuts.
Key Ingredients	Sorghum, wheat (especially semolina), peanuts, broad beans, garlic, tomatoes, onions.
Notable Dishes	Kissra (a bread made of durra or corn), tamayya (fried broad bean balls similar to falafel), porridge (made of wheat or sorghum), pasipasi kpedekpede na passio (beef stew made with spinach and peanuts) kajaik (a stew made of dried fish), **ful sudani** (peanut macaroons).

Cuisine research from: SBS Food, n.d.; Embassy of the Republic of Sudan, n.d.; Sudanese Kitchen, n.d.

Note on Sudan:

Sudan and South Sudan were both identified as potential hotspots due to continued civil war and climate change in both countries. However, Sudan was ultimately selected simply because the cuisine research was more abundant, albeit still lacking.

Table 11: Turkey hotspot and cuisine profile

TURKEY

Immigration Class	Economic, Humanitarian
Context (why this is considered a hotspot, elaborating on scenario)	Turkey is an interesting case as it has been highlighted as an emerging economy, but with ongoing political turmoil under president Erdogan, an attempted military coup in 2016, plus an ongoing conflict with Syria, Turkey may also be a source of humanitarian immigrants (BBC Monitoring, 2016 b).
Signposts (to monitor status as a potential hotspot)	Political turmoil, economic prosperity, impact of refugees from Syria, conflicts and terrorism flare ups.
Cuisine Characteristics	Turkish food, such as shish kebabs, is already quite familiar to Canadians. Moreover, some dishes, such as patlican salatasi and cacik are similar to the familiar dishes from other lands (baba ghanoush and tzatziki, respectively). However, Turkish cuisine seems earthier than its other Mediterranean counterparts, using ingredients such as allspice and raisins in meat dishes, for example.
Key Ingredients	**Eggplant**, phyllo, yogurt, pine nuts, raisins, beyaz penir (a feta like cheese), labneh (a drained yogurt), bulgur (or cracked) wheat, lamb, apricots.
Notable Dishes	**Lahmacun** (a topped flatbread), rice pilafs, shish kebabs, cacik (a yogurt cucumber sauce), kofte (ground meat kebabs).

Cuisine research from: Roden, 2006

Table 12: Syria hotspot and cuisine profile

SYRIA

Immigration Class	Humanitarian
Context (why this is considered a hotspot, elaborating on scenario)	The ongoing war in Syria shows little sign of resolving. With 4.8 million refugees scattered across the Lebanon, Turkey, Egypt, Jordan and Iraq (UNHCR, 2016) and 6.1 million internally displaced (OCHA, 2016), it is likely that Canada will continue to bring in refugees from this country.
Signposts (to monitor status as a potential hotspot)	Activities in refugees camps, ceasefires and continuing conflict in Syria, tensions between Syrian immigrants and Canadians and success of current resettlement programs.
Cuisine Characteristics	Syrian food is part of the Levantine style of the Eastern Mediterranean, so many dishes will be familiar to Canadians (such as hummus and stuffed grape leaves). Bright fresh salads offset rich hearty grains and meats.
Key Ingredients	Bulgur, lamb, garlic, parsley, tomatoes, eggplant, mint, lemon, dates, yogurt, pistachios, **Aleppo chiles**, za'atar spice (a spice blend of thyme, sumac, and sesame seeds), **seven spice mix**.
Notable Dishes	**Kibbeh** (meatballs in numerous different styles), mezze (appetizers) such as hummus and ful medammes (fava bean salad), tabblouleh, kousa mahshi (marrow or zucchini stuffed with meat), jazmaz (eggs poached in tomato sauce).

Cuisine research from: Carlos Alberto Doria in Castanho and Bianchi, 2014

BANGLADESH

Immigration Class	Economic, Humanitarian
Context (why this is considered a hotspot, elaborating on scenario)	A surprising addition to the list, Bangladesh is noted as an emerging economy to watch by the World Bank and Wharton professor Mauro Guillen. Moreover, Bangladeshis have a significant presence in Canadian universities. However, it is also highly vulnerable to climate change, particularly due to rising sea levels on the coast (Harris, 2014; Asia Pacific Foundation of Canada, 2014).
Signposts (to monitor status as a potential hotspot)	Economic growth, student visa applications, flooding and storms due to climate change, increasing terrorist activity.
Cuisine Characteristics	Bangladeshi food is quite similar to northern Indian or Bengali cuisine, but with a greater emphasis on fish and spicier curries. Happily, this makes many of the ingredients more accessible to Canadians, and the dishes perhaps more approachable.
Key Ingredients	**Panch phoran** (a five spice blend), coconut milk, ginger, garlic, onion, chiles, ghee, rice, hilsa fish, **beresta** (fried onions).
Notable Dishes	**Bangladeshi chicken roast** (fried chicken in a spiced yogurt sauce and rose water), biryanis (mixed rice dishes), cham cham (paneer balls cooked in milk syrup).

Cuisine research from: Thurman, 2016; Hossain, 2014; Hossain, 2016

MYANMAR

Immigration Class	Humanitarian
Context (why this is considered a hotspot, elaborating on scenario)	Myanmar has seen some progress in the past few years, especially under the de facto leadership of Aung San Suu Kyi. However, there is still widespread persecution of the Rohingya Muslim minority, and growing numbers of political prisoners. Thousands are in refugee camps in Thailand, and many more migrants are being refused entry or detained upon arrival in Thailand, Malaysia and Indonesia (Human Rights Watch, 2016 a).
Signposts (to monitor status as a potential hotspot)	Removal of sanctions, returning of refugees from abroad, improvement in human rights violations.
Cuisine Characteristics	Highly aromatic, food from Myanmar is similar to its Southeast Asian neighbours in that it focuses on a balance of savoury, salty, sour and spicy. However, because diners add their own spices at the table, it is easily adapted to the Western palate.
Key Ingredients	Fried shallots, dried chiles, roasted chickpea flour, dried shrimp, fish sauce, lime juice, fish and seafood, turmeric, rice and rice noodles.
Notable Dishes	**Laphet thoke** (fermented tea leaf salad) is a national dish, as is mohinga (like Vietnamese pho but with fish broth). The rice meal is a traditional feast, with various meat or fish curries, stir fried vegetables, condiments, salads, and soups.

Cuisine research from: Duguid, 2012

Note on Myanmar's name: Also known as Burma, the name "Myanmar" is not recognised by several countries, such as the US and the UK due to its associations with its military regime (BBC News, 2007). However, as Myanmar is the name officially recognised by the UN (United Nations, 2016), it is the name that is used throughout this report.

Table 15: Indonesia hotspot and cuisine profile

INDONESIA

Immigration Class	Economic
Context (why this is considered a hotspot, elaborating on scenario)	The world's largest Muslim population, and Southeast Asia's biggest economy (BBC Monitoring, 2016 a), Indonesia was highlighted as an emerging economy by the World Bank and economist Jim O'Neill.
Signposts (to monitor status as a potential hotspot)	Economic growth; international pressure to improve palm oil, paper and rubber plantation sustainability (and the resulting impact on the economy as they are major industries) (Arshad & Fogarty, 2016); Islamic fundamentalism and terrorism that could stall economy.
Cuisine Characteristics	Indonesian food is richer and heartier than other Southeast Asian cuisines. As a predominantly Muslim country, pork is a rarer ingredient, with chicken and beef far more popular meats. Native land for many popular spices, ginger, cloves, and nutmeg are often used.
Key Ingredients	Peanuts, eggs, rice, ketjap manis (a sweet soy sauce), **sambal oelek** (a fiery chile paste), tempeh, coconut milk, **cubeb pepper** (a type of black pepper)
Notable Dishes	Nasi goreng (fried rice), satay (meat skewers with peanut sauce), beef rendang (dry beef curry), **gado gado** (a salad of vegetables in peanut sauce).

Cuisine research from: Oselund, 2016

EMERGING FOOD TRENDS

Now that the first research subquestion is has been addressed, specifically through determining ten future migration hotspots which may arrive in Canada in five years, it is appropriate to address the second subquestion: what are the emerging food trends in fifteen years?

Food is not stagnant, rather it is shaped by the context of the world that it exists in. Indeed, much like the fashion industry, it thrives on change (Fox, n.d.). Therefore, the cuisines of the hotspot nations identified in the previous section will be shaped by the future of the Canadian food context. In particular, emerging trends may inform which dishes become popular, which ingredients are adapted, and how it it blended with current Canadian food.

To gain greater understanding of these trends, the following section presents a scan of food trends shaping Canadian food over the next fifteen years (or ten years after the arrival of the hotspot communities) with further details included in Appendix A. This research was largely informed by the discussions from OCAD U's Strategic Foresight and Innovation work for the 2015-2016 Foresight course, which explored the future of food. Building off this work, a refreshed scan was conducted to determine the trends that would most likely influence the future immigrant cuisines of Canada. It is important to the note that this section explores food trends in general, not ones solely related to ethnic food or immigration.

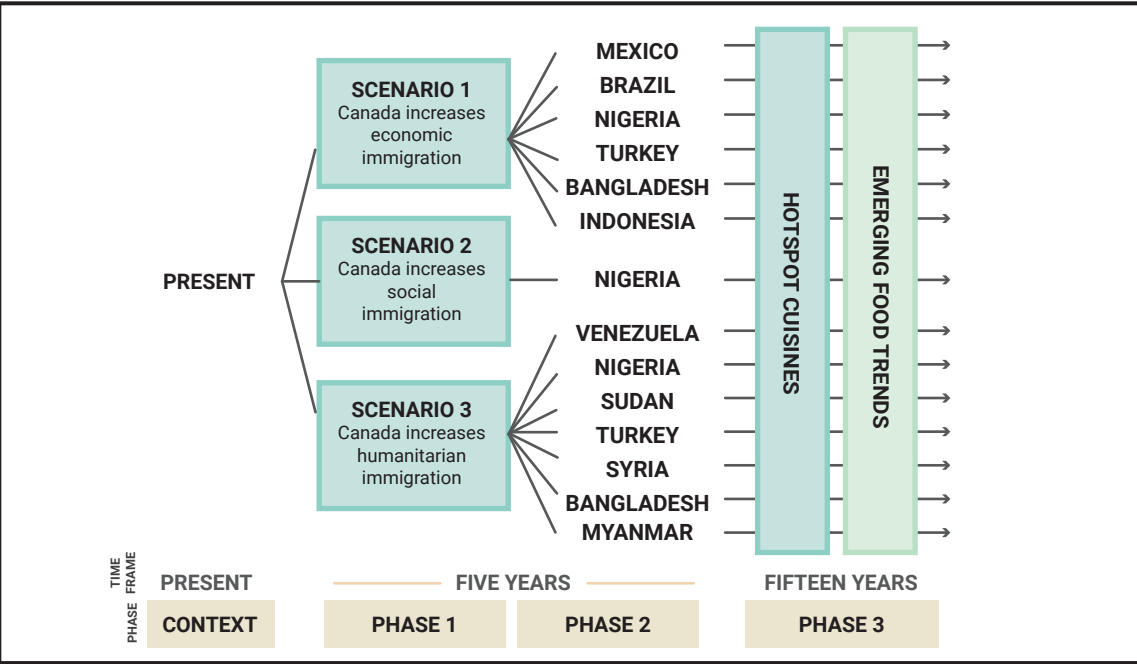While the trends cover each element of the STEEP-V framework, this is

Figure 15: Diagram outlining the current research phase in the context of this report

certainly not an exhaustive overview of all food trends that might impact future cuisines. Nonetheless, they appear to have a strong influence on the future of the hotspot cuisines that the research revealed. At the root of these trends lie the overarching drivers of searching for sustainable proteins, designing a resilient food system against climate change, leveraging high technology food production, and optimising and personalising nutrition for well being.

The trends that follow are presented in order of STEEP-V, and include their title, STEEP-V categorisation, and a brief summary. Appendix A further elaborates on these trends by listing the potential signals and implications. These implications in turn were used to develop the final recipes at the closing of this report.

To understand the degree of impact for each trend, trends were ranked according to its maturity and intensity. Maturity, indicating how advanced the trend is, was indicated on a scale of emerging to mature. Trends that are emerging are in their early stages of development, and may only be known in a particular field or require further research and development. Mature trends are more established, oftentimes already implemented by mainstream culture. Intensity indicates the degree of impact that a trend may have on the culinary landscape, and was indicated on a scale of low-medium-high. Low impact trends may have influence on a smaller scale or in a particular niche, whereas high impact trends will have

broader and perhaps more profound influence. In all cases, these trends are likely to have relevance in the fifteen year timeframe.

As mentioned in the previous section, not all immigration classes or cuisines will adopt the trends equally. Those who are more likely to adhere to traditions (i.e. the Humanitarian immigrants) may not adopt these trends as readily as Economic immigrants, who are more likely to be experimental with their foods. These factors will also be considered for the final outcome of this report.

Creolization
(Social; mature, high intensity)

This new global cuisine is based on blending elements from around the world. Unlike the "fusion" cuisines of the past, this food is not watered down, rather it is globally aware and fearless.

Alt-Proteins: 'ick'-less crickets
(Social, Environmental; emerging, low intensity) (based on work by Roxanne Nicolussi, 2015 a)

Seaweed, algae and insects are being reinvented to provide a sustainable - and more palatable - protein source.

Forever Fresh
(Technological; emerging, low intensity) (de Jong, 2015 a)

From High Pressure Processing to food powders, innovative methods for long-

term food preservation are increasing food security, minimizing waste, and boosting food safety.

My Biome
(Technological; emerging, medium intensity) (name inspired by Laughlin & Rees, 2014)

A growing understanding of how our unique gut bacteria affects health is leading us to rethink our approach to food and customise diets to our unique microbiome.

Disaster Proof Dining
(Technological; mature, medium intensity)

Securing our food system against natural and human-driven disasters, such as enhancing crop resilience and preserving unique strains.

Digital Gastronomy
(Technological; emerging, medium intensity) (de Jong, 2015 c)

From digital assistants to 3D printing to cognitive cooking, computers are having a greater influence over what and how we eat.

The Protein Lab
(Environmental, Technological; emerging, high intensity) (based on work by Donna Klaiman, 2015)

The continuing promise of cultured meat and dairy as a sustainable vegan food source.

Fishing on Land
(Environmental, Economic; emerging, high intensity) (based on work by Roxanne Nicolussi, 2015 b)

The worrisome overfishing of the seas has prompted the birth of sustainable aquaculture in land-based systems.

The Next Greenhouse
(Environmental, Technological; emerging, high intensity) (de Jong, 2015 b)

Developments in aero and aquaponics are helping to create a local, low-impact food resource.

Waste Not Want Not
(Environmental, Values; mature, medium intensity) (based on work by Jenny Whyte, 2015)

The movement to reduce the unsettling degree of water and food waste with creative solutions.

Food Fraud
(Political; emerging, high intensity)

Increasing awareness of false labelling is leading to a push for clarity, transparency and stricter food regulations.

Functional Foods
(Values; mature, high intensity)

Our continuing obsession with nutritional content and health benefits is leading us to prioritise nutrition, sometimes over flavour or experience.

SUMMARY: TREND AND CUISINE MATRIX

With an understanding of future migration hotspots and food trends in place, the final phase of research addresses the third subquestion: how the hotspot cuisines and future food trends might intersect in fifteen years. The trends on the preceding pages will shape how the hotspot cuisines might be adopted by Canadians, however, each trend will hold a different weight for each cuisine. Table 16 explores the possible interaction between the hotspot cuisines from each scenario and future food trends, with the sections shaded in blue indicating the trends with the most influence. The primary driver for determining the impact of each trend is immigration class. As mentioned earlier, economic immigrants could be more open to experimentation, and therefore the trends will have a larger effect. On the converse, humanitarian immigrants, wishing to maintain a connection to their home land, could be less likely to alter their cuisines based on the trends. Social immigrants, who are more open to experimentation than humanitarian immigrants, could fall somewhere in the middle.

While some trends – such as The Protein Lab and Waste Not Want Not – apply to all scenarios and hotspots, others do not. Hence, there are a few decision points are worth mentioning. While humanitarian and social immigrants may be reluctant to adopt lab-grown meat and dairy (The Protein Lab), perhaps with the rising prices of these goods in the future, they will have no choice. Moreover, while all cuisines consume fish in some form, the relevance of "Fishing on Land" was limited to those cuisines which are strongly reliant on fish. In addition, several trends – such as The Next Greenhouse and Waste Not Want Not – applied to all cuisines as their implications appeared universal across all cuisines. Finally, Disaster Dining was limited to the humanitarian class, as their crops would be most likely to need revival. Of course, further exploration is required to validate these assumptions, such as the factors that affect adoption and each community's perception of the food trends.

Note that Scenario 2 has the same trends indicated as Scenario 1. This is due to the fact that these immigrant households may have a blend of newcomers and established residents, and therefore some (particularly the established residents) may have a similar approach to food as an economic immigrant. However, this may also be counterbalanced by the newcomers – often parents and grandparents – wishing to make traditional food. Therefore, while the trends relevant to Scenario 2 are the same as Scenario 1, it may be to a lesser extent.

Table 16: Comparison of scenarios, hotspots and relevant trends

	Creolization	Alt-Proteins	Forever Fresh	My Biome	Disaster Proof Dining	Digital Gastronomy	The Protein Lab	Fishing on Land	The Next Greenhouse	Waste Not Want Not	Food Fraud	Functional Foods
SCENARIO 1: Canada Increases Economic Immigration												
Mexico	■	■	■	■		■	■	■	■	■	■	■
Brazil	■	■	■	■		■	■	■	■	■	■	■
Nigeria	■	■	■	■		■	■	■	■	■	■	■
Turkey	■	■	■	■		■	■	■	■	■	■	■
Bangladesh	■	■	■	■		■	■	■	■	■	■	■
Indonesia	■	■	■	■		■	■	■	■	■	■	■
SCENARIO 2: Canada Increases Social Immigration												
Nigeria	■	■	■	■		■	■	■	■	■	■	■
SCENARIO 3: Canada Increases Humanitarian Immigration												
Venezuela			■	■	■		■	■	■	■	■	■
Nigeria			■	■	■		■	■	■	■	■	■
Sudan			■	■	■		■	■	■		■	■
Turkey			■	■	■		■	■	■	■	■	■
Syria			■	■	■		■	■	■		■	■
Bangladesh			■	■	■		■	■	■	■	■	■
Myanmar			■	■		■	■	■	■	■	■	■

Shaded box = trend that is relevant to specific hotspot cuisine

Armed with this knowledge, it was possible to further develop the scenarios by envisioning possible "recipes from the future", as outlined in Figure 16 and Table 17. These recipes are presented in the Chapter 7 with each community given one recipe to represent how their cuisine might enter the Canadian culinary landscape in fifteen years. Hotspots that fall under multiple scenarios – or multiple classes of immigrants (e.g. Nigeria, Turkey and Bangladesh) – have two or three recipes.

Each recipe is an adaptation of a traditional dish, and these alterations are derived by a selection of the relevant trends for each cuisine and scenario. As described in Chapter 3, this process was not a linear one, but involved complex synthesis to ensure that the final recipes adequately acknowledged each cuisine's characteristics, the approaches to food, that they represented a balance of trends, and that the recipes were adapted in a way that was reflective of both the trends and of Canadian tastes. Table 17 shows those selected dishes, as well as the trends that they represent (indicated by an "x"), overlayed with the results from Table 16. Moving into Chapter 7, these recipes will be outlined in detail.
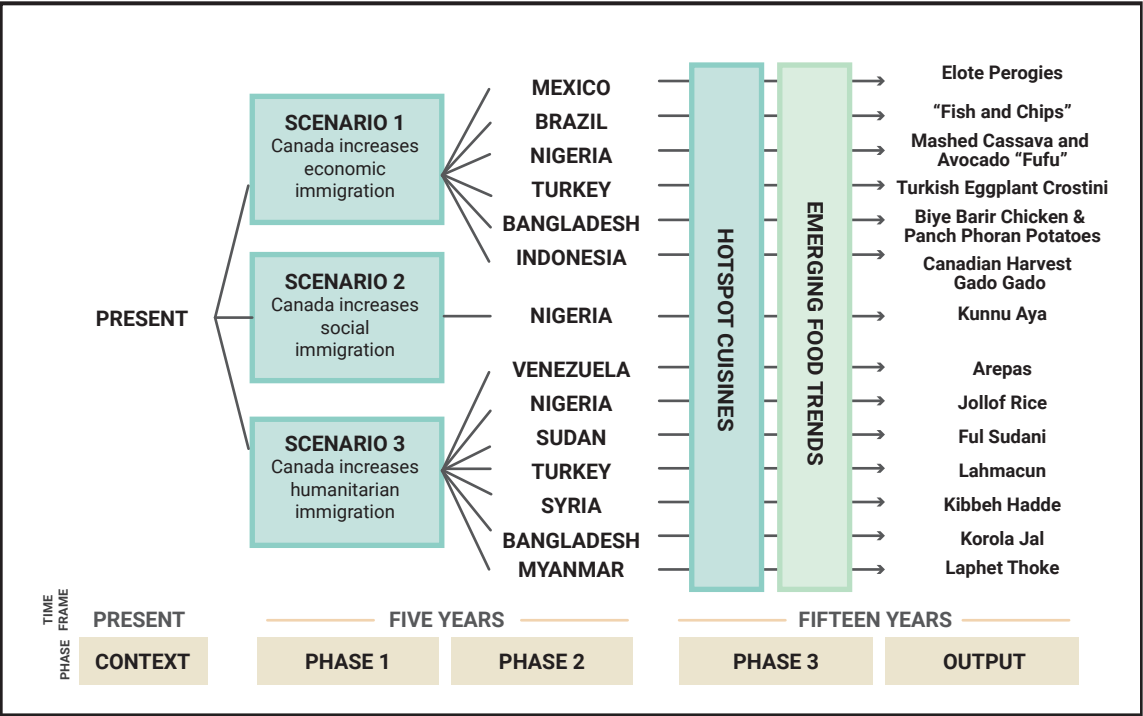
Figure 16: Final diagram outlining the research process and final recipes

Table 17: Summary of hotspot recipes and selected trends

	Creolization	Alt-Proteins	Forever Fresh	My Biome	Disaster Proof Dining	Digital Gastronomy	The Protein Lab	Fishing on Land	The Next Greenhouse	Waste Not Want Not	Food Fraud	Functional Foods
SCENARIO 1: Canada Increases Economic Immigration												
Mexico - Elote Perogies	x	x					x				x	
Brazil - "Fish and Chips"	x		x					x		x	x	
Nigeria - Mashed Cassava and Avocado "Fufu"	x									x		
Turkey - Turkish Eggplant Crostini	x		x			x					x	
Bangladesh - Biye Barir, Panch Phoran Potatoes	x											
Indonesia - Canadian Harvest Gado Gado	x								x	x		
SCENARIO 2: Canada Increases Social Immigration												
Nigeria - Kunnu Aya	x	x										x
SCENARIO 3: Canada Increases Humanitarian Immigration												
Venezuela - Arepas				x							x	
Nigeria - Jollof Rice									x	x		
Sudan - Ful Sudani				x							x	
Turkey - Lahmacun								x			x	
Syria - Kibbeh Hadde				x				x			x	
Bangladesh - Korola Jal										x		
Myanmar - Laphet Thoke			x							x	x	x

Shaded box = trend that is relevant to specific hotspot cuisine
X = Trend selected to adapt recipe

IMPLICATIONS THUS FAR

At this point in the research, with an understanding of the first two research subquestions established, and a preliminary exploration into the final subquestion conducted, it is worth taking stock of the implications of the research findings. The first series of findings relate to the future immigration hotspots which may arrive to Canada in five years, and are of relevance primarily to immigration policymakers and government bodies. The second series of findings relate to the cuisines of these hotspots, and are of particular importance to food producers and distributors. These various actors play a significant role in determining how these future immigration hotspots and their food might be incorporated into Canada's culinary landscape.

Prepare for the Hotspots

First, within the five year timeframe immigration policymakers should begin monitoring the hotspots' signposts to determine their viability as a potential immigration source. With this knowledge at hand, strategic planning can commence in terms of establishing programs and resources required to accommodate these newcomers. Governments at all levels can begin preparing community programs for these groups, such as funding and program generation for various community centres (e.g. translation services, welcoming committees), to ensure that these hotspot communities have the resources that they need upon their arrival to Canada. By performing these actions, we might ensure that these newcomers have more successful transition from their old land to their new.

Explore the Potential in Future Foods

Looking ahead to the fifteen year timeframe, the potential shifts in food noted here have significant impact on the food industry, particularly producers and distributors. These food trends appear to be united by several key themes: searching for sustainable proteins, designing a resilient food system against climate change, leveraging high technology food production, and optimising and personalising nutrition for well being. Embracing these themes will be critical to the food industry, regardless of future immigration groups, to maintain relevance in the future. In the following section, several examples of potential future ingredient categories are posited, and producers and distributors may wish to use these as a starting point, but further exploration is encouraged. Members of the food industry should also monitor the status of the hotspots as indicators to potential foods to further explore. While the following section explores how some of these hotspots' foods might become part of the Canadian culinary landscape, they are simply a provocation, and certainly further research will be required.

Begin the Welcome

Citizens have a responsibility across both timeframes of this research. They may monitor these hotspots and consider how they might wish to welcome these newcomers to Canada within the five year timeframe. Moreover, they may also wish to become early adopters of the hotspot cuisines and emerging food trends, encouraging their growth in the fifteen year timeframe.

Moving to the next chapter, the recipes from the future will help the key actors indicated above, as well as citizens of all walks of life, experience the potential future of food in Canada, and hopefully be compelled to act on the strategies listed here.

If you don't know it, you can't love it

–Indonesian Folk Saying

Figure 16, right: Fresh produce in a market. Image by Julian Hanslmaier from Unsplash under Creative Commons Zero license.

CHAPTER 7

Output

Recipes from the Future

The following comprises a selection of recipes that may become commonplace in Canada's future in fifteen years (2031). Informed by the future migration hotspots and food trends, and inspired by the hotspot cuisines, these recipes aim to give a taste of recipes which, while little-known in 2016, might become regular fixtures at the Canadian dinner table.

As with any cookbook, these recipes are grouped by dish type: snacks and little bites, side dishes, main dishes, and desserts and drinks. In addition, a list of keywords to explore the cuisines further is provided at the end. Each recipe provides as summary of the dish, the scenario that it applies to, the country of origin, and the applicable trends. In addition, adaptations from the reference recipe were noted, primarily in terms of ingredients specified. These adaptations were based on the trends outlined in Table 17, but also in terms of adapting to Canadian local ingredients. As some of the trends pointed to potential new ingredients, a summary on page 84 describes some of these future ingredient types. It is also worth mentioning that most recipes were also adapted for clarity and style, either due to omission or better align with Canadian cooking styles. Recipes from Scenario 1 had more significant adaptations, with Scenario 2 having fewer, and Scenario 3 recipes remaining most true to tradition.

Happy cooking!

RECIPES FROM THE FUTURE

INGREDIENT NOTES

The recipes that follow contain some unique terms and characteristics of ingredients that may become common in Canada's future. Some of these terms are explained as follows:

Agri Revival certification:

In response to climate change and conflict putting unique regional crop strains at risk, the Agri-Revival group was founded to preserve these crops and promote agricultural diversity. They certify products that use strains that are deemed "at risk", with a portion of proceeds going towards preserving unique crop strains worldwide. This certification may become the equivalent of "organic" or "free-trade" certification that we see on products today, which give consumers a sense of "doing good" with a slight increase in product price.

CFIA certified lab-cultured meat and dairy:

In this future, lab grown (or cultured) meat and dairy will become a viable alternative to consuming animal products. However, because there are food safety concerns with this new product category, as well as increasing food counterfeiting, the CFIA (the Canadian Food Inspection Agency) has begun a certification program that ensures that the lab grown foods are safe.

Local, land farmed fish:

In response decreasing wild fish stocks and unsustainable fish-farming, in the future land farmed fish products will become more commonplace. These farms have a smaller environmental footprint than traditional fish farming, and since it can be done anywhere, land-locked regions can access fresh fish without relying on expensive and polluting transportation.

Local greenhouse produce:

In an effort to reduce resource consumption, vulnerability to climate change, and food sovereignty, in the future local greenhouses may become a fixture in rural and urban Canada alike. Using low-water aeroponic technology in a controlled environment can allow a far wider variety of crops to be grown and sold locally.

Low-water produce:

In response to the high water use of certain crops, in the future new genetic modifications could lead to the development of low-water consumption alternatives. Farmers who grow these varieties may be eligible for tax breaks, and consumers will find these products appealing as they attempt to reduce their environmental footprint. Some varieties may be grown in local greenhouses.

Personalised microbiome probiotic culture:

As our understanding of the role an individual's unique gut microbiome plays in health, in the future consumers may have the ability to create their own unique probiotic strains. These may be obtained through an online DNA kit - similar to DNA testing kits widely available today - and the company would develop a unique strain designed to optimise consumer's health.

Snacks and Little Bites

Elote Perogies

Perogies Stuffed with Corn, Cheese and Lime

Elote is a type of Mexican corn on the cob that is slathered with cotija cheese, chile and lime. In this recipe, this street food is blended with the ubiquitous pierogi to make a delicious, bite sized snack that crosses culinary borders. Cricket flour increases the protein content of the dough and is a nod to the fried chile and lime spiced grasshoppers commonly served in Oaxaca called chapulines. Serve with a cerveza and, if you're craving a crunchy shot of protein, a dish of chapulines.

Note: Those with a shellfish allergy may be allergic to cricket flour. Simply substitute regular flour.

Adapted from "Elote Pierogis" by Iliana Regan for Lucky Peach (Regan, 2016). Adaptations included the specification of CFIA certified lab-cultured dairy and the addition of cricket flour and Aleppo chile flakes.

Scenario and Hotspot: Scenario 1 (Canada Increases Economic Immigration), Mexico

Trends: The Protein Lab, Alt-Proteins, Food Fraud, Creolization

---

Makes 50, approximately 8 servings

Filling:

3 tbsp butter, divided

2 ears corn, husked, kernels sliced from cobs

1 tsp salt

½ onion, minced

½ cup of heavy cream, preferably CFIA certified lab-cultured

1 lime, juiced

Aleppo chile flakes to taste

Sugar to taste

¼ cup grated cotija cheese, preferably CFIA certified lab-cultured

Dough:

4 cups all purpose flour

¼ cup cricket flour

½ cup water

¼ cup sour cream, preferable CFIA certified lab-cultured

3 eggs

1 tsp salt

Black pepper to taste

Make the filling

Melt two tbsp of butter over medium heat in a skillet. Add the corn kernels, salt, and onion and saute. Once the corn is bright yellow and the onion is transparent, about 5 minutes, add enough cream to cover, approximately ½ cup.

Let the cream reduce by about half, until thickened, about 8 minutes. Add the lime juice and chile flakes, taste, and add a tablespoon of sugar if the mixture needs sweetness.

Turn off the heat and add remaining butter, making sure not to overheat so that it doesn't break. Let it cool to lukewarm, then add in the cotija cheese and stir. Refrigerate the mixture overnight (or until thoroughly chilled) to ease the stuffing process.

Make the dough

In a large bowl, mix together the flour, cricket flour, water, sour cream, eggs, black pepper, and salt. Knead until incorporated and somewhat smooth, then cover and refrigerate for at least half an hour.

Prepare the Pierogies

Roll the dough out to approximately 1/8-inch thick. Use a biscuit cutter (or anything about 2.5–3 inches in diameter) to stamp out the wrappers, gathering scraps and re-rolling once. Place on sheets of flour-dusted parchment until ready to fill.

Place a teaspoon of corn filling into the center of each wrapper, then pinch each wrapper into a pillow. Repeat with all the wrappers and filling. At this point, they can be frozen on a tray, then once frozen placed in an airtight bag in the freezer for up to 3 months.

Bring a pot of salted water to boil the pierogies in batches of 6 or 12 for 2–3 minutes per batch. Meanwhile, melt a couple tablespoons of butter hot in a skillet over medium-high heat and fry the boiled pierogies for 3 minutes per side, until the skins are golden and crisp. Serve hot.

Figure 17: Elote Perogies

Arepas
Venezuelan Corn Cakes

Arepas are corn cakes, thicker than a tortilla, which are a staple in Venezuelan food. Eaten at breakfast and dinner, they can be stuffed or topped with a variety of fillings, or simply taken hot out of the oven and smeared with some butter. Venezuela long resisted using GMO corn, and thus had their own unique varieties. However, with the recent water crisis and the collapse of the agricultural system, these unique strains were at risk of getting lost forever. Thankfully, there are efforts to preserve these strains through mass market cultivation. For this recipe, I use Agri-Revival certified Venezolanos corn meal, which helps ensure the long-term survival of these heirloom strains.

Adapted from "All Purpose Venezuelan Arepas" by Marciel E. Presilla in *Gran cocina Latina* (Presilla, 2012). Adaptations included the specification of Agri-Revival corn meal.

Scenario and Hotspot: Scenario 3 (Canada Increases Humanitarian Immigration), Venezuela

Trends: Food Fraud, Disaster Proof Dining

Makes 13 arepas (a baker's dozen)

2 cups precooked Agri-Revival certified Venezolanos corn meal for arepas

1 ¼ tsp salt

2 ½ cup water

1 tsp corn oil, plus additional for brushing the pan

Preheat oven to 350° F. Combine corn flour and salt in a large bowl, and sprinkle 1 tsp corn oil and water over the flour. Shake bowl back and forth to mingle the ingredients. Set bowl aside for one minute until all the liquid is absorbed.

Knead the dough until smooth and let rest another five minutes. Knead once again until dough doesn't stick to the sides of the bowl or your fingers. Cover with a damp towel and let rest for another minute.

Divide dough into 13 2-ounce balls. Flatten them lightly with your hand into 3-inch wide patties.

Heat griddle or heavy 10-inch skillet over medium heat and brush with oil. Place the arepas, four at a time, in the pan and cook for three minutes per side, until a golden crust forms in the centre. Repeat with the remaining arepas, then transfer to oven and bake for 15 minutes, or until arepas sound hollow when tapped at the bottom.

Serve immediately with lots of butter. For a more authentic main course, try topping with guasacaca (a Venezuelan guacamole), roasted chicken and cheese.

Figure 18: Arepas

"Fish and Chips"

Brazilian Fish Cracklings and Cassava Fries with Sambal Oelek Mayonnaise

This dish may not be the most quintessentially Brazilian (feijoada would take the crown there), but it takes two staples of the Brazilian diet, fish and cassava, and adds a modern twist. Using the fish skin is a great way to stretch a whole fish and your dollar. I like to add dried lime powder ('loomi") from the Middle East for a sour zip. It is a great way to add fresh lime flavour when it is out of season. Sambal oelek – the fiery chile paste from Indonesia – is blended with mayonnaise to create a spicy dipping sauce, creating a dish that has it roots in Brazil, but a global spirit.

Adapted from "Fish Cracklings with Acai" and "Shoestring Cassava" by Thiago Castanho from *Brazilian food* (Castanho & Bianchi, 2014). Adaptations included the addition of sambal oelek mayonnaise and dried lime powder, and the specification of local land-farmed fish.

Scenario and Hotspot: Scenario 1 (Canada Increases Economic Immigration), Brazil

Trends: Forever Fresh, Waste Not Want Not, Fishing on Land, Creolization

---

Serves 4 as a snack

Sambal Oelek Mayonnaise:

¼ cup Mayonnaise

1 tsp sambal oelek, or to taste

Water

Fish Cracklings:

1 pound (500 g) skin from local land farmed fish, such as salmon

½ cup coarse rock salt

1 cup water

Vegetable oil for deep frying

Dried lime powder (loomi)

Cassava Shoestring Fries:

1 pound (500 g) cassava, peeled

Vegetable oil for deep frying

Salt

Dried lime powder (loomi)

Prepare the sambal oelek mayonnaise

In a small bowl, combine mayonnaise and sambal oelek. If mixture seems thick, add a few drops of water until sauce has a yogurt-like consistency. Set in refrigerator until ready to use.

Prepare the fish cracklings

Clean fish skin, removing the scales. Combine water and rock salt in a bowl to create a brining solution, and soak fish skins in solution for 20 minutes.

Bring some water to a boil in a saucepan, remove fish skin from brine and scald briefly in boiling water. Drain and cool.

Using a sharp knife, gently scrape any remaining flesh from the skin and cut skin into 4-inch/10 cm slices. Place skins on a cookie sheet and dry in 150° F oven (or lowest possible setting) for 1 ½ hours. Alternatively skins may be dried in a food dehydrator for the same amount of time at the same temperature.

Preheat oven to 200° F. Reheat vegetable oil to 350° F in a deep fryer or heavy saucepan. Fry fish skin in batches until golden brown. Sprinkle with salt and dried lime powder. Keep fish warm in the oven until ready to use.

Prepare the cassava shoestring fries

Reheat vegetable oil to 350° F in a deep fryer or heavy saucepan. Cut cassava lengthwise into fine, rectangular slices, then cut crosswise into fine strips (slightly thicker than a julienne). Soak in cold water for 1 minute, drain and pat dry.

Working in batches, fry cassava chips until golden brown. Remove, drain on paper towels, and sprinkle with salt and dried lime powder.

Serve fish cracklings and chips together, with mayonnaise on the side.

Figure 19: "Fish and Chips"

Turkish Eggplant Crostini

This recipe inspired by a evening playing around with my cognitive cooking app Chef Watson. While it might seem like a cop-out to include a computer generated recipe in a cookbook, it was such a delicious example of Creolization that I had to include it. It takes typical Turkish ingredients like eggplant, sumac, and oregano and reinvents it in an Italian-style crostini. Vegetable powder made from food waste - such as beet or carrot - works so well in this recipe. Not only are these powders a great way of preserving nutrients over the long term, but they adds a colourful hit of flavour to this dish.

Interested in experimenting? Choose a few ingredients and enter it in your own digital cooking assistant! There are suggestions at the end of this chapter.

Adapted from "Turkish Bruschetta" from *Cognitive Cooking with Chef Watson from IBM and the Institute of Culinary Education* (IBM & Institute of Culinary Education, 2015). Adaptations included the addition of vegetable powder in place of carrot pearls originally included in the recipe, as well as clarifying the preparation method.

Scenario and Hotspot: Scenario 1 (Canada Increases Economic Immigration), Turkey

Trends: Forever Fresh, Creolization, Digital Gastronomy

Makes 24 crostini

Eggplant puree:

Approximately 2 lbs eggplant (Japanese or other small variety)

1 bunch green onions, roots and green tops trimmed

1 tbsp sumac

½ tsp dried oregano

2 tsp paprika

1 ½ oz parmesan cheese

2 tsp sunflower oil

1 tbsp basil, sliced in chiffonade

2 tsp salt

Preheat oven to 350° F. Char the eggplants over a flame until black on all sides. Place on a baking sheet lined with parchment and roast in oven until tender, about 45 minutes. Set aside to cool.

Meanwhile, char the green onions on a grill until tinged with black on all sides. Chop and set aside.

Once eggplants are cool enough to handle, split open and scoop flesh into a bowl (a few bits of charred skin are okay). Add sumac, oregano, paprika, and parmesan cheese.

Heat oil in large pan over high heat and saute eggplant mixture for one minute. Transfer to food processor, add basil and salt, and blend until smooth.

To finish:

24 slices of baguette

Olive oil for brushing

Vegetable powder (such as beet, carrot or spirulina) or Aleppo chile powder

Preheat broiler. Drizzle baguette slices with olive oil and toast on both sides until crispy. Spread eggplant mixture on toasts, then top with grilled onions. Top crostini with vegetable powder or Aleppo chile powder. Serve on a platter.

Figure 20: Turkish Eggplant Crostini

Kibbeh Hadde

Stuffed Kibbeh Florets

Kibbeh – a meat and bulgur wheat dish – is a popular dish in Syria. While best known in meatball form, there are in fact endless ways to prepare it: plain, in a flat cake which is then sliced, or even tartare. In this recipe, kibbeh are stuffed with onion, spices and nuts for a pretty presentation. It pairs well with a tabbouleh or other salad of your choice.

Syria's local wheat has suffered greatly in the recent war. However, efforts have been made to revive their unique strain of wheat. To help these conservation efforts, and to achieve the most authentic flavour, I recommend purchasing only Agri-Revival certified Syrian Bulgur. Lab-cultured ground beef, while not traditional, is a perfect and humane substitute that I recommend. Be sure to choose CFIA certified lab-cultured meat to ensure a quality, meat-free product.

Adapted from "Kibbeh Hadde" recipe from *Flavours of Aleppo: celebrating Syrian cuisine* by Dalal Kade-Badra and Elie Badra (Kade-Badra & Badra, 2013). Adaptations included the specification of Agri-Revival bulgur and CFIA certified lab-cultured ground beef.

Scenario and Hotspot: Scenario 3 (Canada Increases Humanitarian Immigration), Syria

Trends: The Protein Lab, Food Fraud, Disaster Proof Dining.

Makes 40

Filling:

½ cup butter

3 medium onions, diced

1 tsp salt

2 tsp seven spice powder

1 tbsp chile pepper paste

1 cup walnuts, roughly chopped

¼ cup sesame seeds

Halved walnuts, whole pistachios and/or pine nuts

Make the filling

In a large pot, melt the butter over medium heat. Add the onions, salt, seven spice, chile pepper paste, walnuts, and sesame seeds. Mix, and cook for five minutes. Remove from heat and cool in the refrigerator for one hour.

Make the kibbeh

Preheat oven to 350° F. In a bowl, add the onions, bulgur and salt. Knead in the bowl while gradually adding water. With wet hands, continue to knead while gradually adding the meat until an easily workable dough is obtained. Make little meatballs the size of golf balls, then push a little well in each ball with your finger. Press lightly, being careful not to pierce the meat, and pivot until it forms an egg cup shape. Place 1 tsp of filling in the well.

Kibbeh:

1 medium onion, grated

2 ½ cups Agri-Revival certified Syrian #1 bulgur, rinsed well in cold water

1 tsp salt

¾ cup water

1 lb CFIA certified lab-cultured beef or lamb

Arrange the stuffed kibbeh in a greased baking dish. Decorate with walnuts, pistachios or pine nuts. Bake for 45-60 minutes, and serve with tabbouleh or other salad of your choice.

Figure 21: Kibbeh Hadde

Side Dishes

Mashed avocado and cassava "fufu"

Fufu, a mashed cassava, plantain or yam side dish, is essential in Nigerian cuisine. Often balled up by hand and used as a "scoop" for sauces and meats, it can be intimidating in its traditional form. Here the classic is updated with avocado and spices by celebrated chef Marcus Samuelsson. And according to him, you can use a fork to eat it if that makes you more comfortable!

Avocados have been heavily criticised as a water–hungry crop. However, recent strains have been developed to reduce its water footprint. Look for "low water" varieties in the grocery store.

Adapted from "Cassava-Avocado Mash" by Marcus Samuelsson in *The soul of a new cuisine: a discovery of the foods and flavours of Africa* (Samuelsson, 2006). Adaptations include the specification of low-water avocado.

Scenario and Hotspot: Scenario 1 (Canada Increases Economic Immigration), Nigeria

Trends: Waste Not Want Not, Creolization

Serves 8

3 cups 2-inch cubes peeled cassava

3 tbsp olive oil, divided

2 shallots, finely chopped

4 garlic cloves, minced

2 tomatoes, diced or 1 cup chopped canned tomatoes

2 jalapeno chiles, seeds removed, diced

½ cup coconut milk

½ cup dry white wine

½ cup chicken stock

4 avocados, preferably low-water

1 tsp salt

2 tsp chopped cilantro

Juice of 2 limes

Preheat oven to 350° F. Rinse cassava and toss with 1 tablespoon of the olive oil. Spread on a baking sheet and roast until tender, about 25 minutes. Set aside and cool slightly.

While the cassava is roasting, heat the remaining 2 tablespoons of olive oil in a medium saute pan over medium heat. Add the shallots, garlic, tomatoes and jalapenos and saute until the shallots are translucent, about 5 minutes. Add the coconut milk, white wine, and chicken stock, bring to a simmer and simmer for 15 minutes. Remove from the heat and set aside.

Peel and pit the avocados and cut into chunks. Put into a large bowl, add the slightly cooled cassava, and mash with a potato masher until smooth. Slowly add the hot coconut mixture, stirring to achieve a smooth puree, then stir in the salt, cilantro and lime juice. Serve hot.

Figure 22: Mashed Avocado and Cassava "Fufu"

Jollof Rice

I am almost reluctant to include this recipe, as it is certain to cause controversy. Jollof rice is a traditional celebratory dish from across west Africa, and each nation – and indeed each grandmother – is adamant about what makes a "proper" jollof rice. In any case, rice, tomatoes, onions, and chile peppers are non-negotiable ingredients. The following is my best take on the Nigerian version, but I strongly recommend you asking a Nigerian immigrant how they like their jollof rice. It will most certainly spark a conversation.

To reduce water consumption, local low-water aquaponic or aeroponic rice is recommended.

Adapted from "Jollof Rice-An Ultimate Guide" from Funke Koleosho's New Nigerian Cuisine Food Blog (Koleosho, 2013). Adaptations included the specification of local low-water rice and local greenhouse vegetables.

Scenario and Hotspot: Scenario 3 (Canada Increases Humanitarian Immigration), Nigeria

Trends: Waste Not Want Not, The Next Greenhouse

Serves 4

2 cups local low-water rice, soaked for 10 minutes and rinsed thoroughly

4 large plum tomatoes preferably local greenhouse sourced

1 large sweet red pepper, stalk and seeds removed, preferably local greenhouse sourced

1 scotch bonnet pepper, stalk and seeds removed, preferably local greenhouse sourced (optional)

1 medium size onion, preferably local greenhouse sourced

1 tbsp vegetable oil

5 sprigs of fresh thyme, preferably local greenhouse sourced

2 tsp freshly ground nutmeg

1 tsp of ground pimento (allspice)

1 tsp curry powder

1 tsp of smoked paprika

1 garlic clove, minced

2 cups of chicken or vegetable stock

1 cup hot water, plus extra for rice as needed

A small piece of ginger, minced

2 tbsp tomato paste

Salt to taste

3 tbsp butter

Freshly chopped chives

Puree the tomatoes, pepper, scotch bonnet (if using) and onion in a blender. Gently heat the oil in a large pot and add the thyme, nutmeg, pimento, curry powder and paprika. Allow the spices to infuse for about 2 minutes. Add garlic and saute for 30 seconds, then pour in the pureed ingredients. Add the stock along with one cup of hot water and bring to the boil. Add ginger and tomato paste and allow to boil for 3–5 minutes over high heat.

Turn heat down and slowly introduce the washed rice, stir in. Add just enough hot water to cook the rice (around ½ cup), cover pot first with a sheet of foil and then with the pot lid. Allow to steam for about 10 minutes.

Open pot and check if rice is cooked. Add more hot water if required to cook the rice until soft (to avoid over cooking the rice, add a little water at a time). When all water/moisture has evaporated, gently stir rice avoiding scraping the bottom of the pot. Salt to taste, add the butter and stir in. Cover pot and simmer for a further 5 minutes to allow the flavours develop. Top with chives and serve.

Jollof rice is typically served with fried chicken and fried plantain. You can vary this by serving with stewed fish or meat and steamed vegetables.

Figure 23: Jollof Rice

Korola Jal

Spicy Bitter Melon

I've long seen bitter melon in my local Asian grocery store, but have been afraid to try it. The knobbly texture and the unappetizing name made it intimidating to prepare. However, this traditional Bangladeshi dry curry made me wonder what took me so long. This dish is simple, quick (other than the salting process), and compellingly flavourful. To get the freshest taste possible, I recommend sourcing local aeroponic greenhouse farmed bitter melon. You just might be a convert!

Adapted from "Spicy Bitter Melon" from *Mangoes and curry leaves* by Jeffrey Alford and Naomi Duguid (Alford & Duguid, 2005). Adaptations included the specification of local greenhouse sourced bitter melon, and the use of a skillet rather than a karhai (the traditional Bangladeshi cooking pan).

Scenario and Hotspot: Scenario 3 (Canada Increases Humanitarian Immigration), Bangladesh

Trends: The Next Greenhouse

Makes 4 servings

3 medium (8 inches) or 6 small (4-5 inches) local greenhouse bitter melon

3 tbsp salt

2 tbsp vegetable oil

1 tbsp mustard oil

½ tsp cayenne

2 tsp finely minced garlic

2 green chiles, thinly sliced

1 cup thinly sliced onion

1 tsp sugar

½ tsp salt

About an hour before serving, salt the bitter melon. Cut the melons in half lengthwise, scoop out and discard the seeds, then slice very thinly crosswise. Place in a bowl, sprinkle with salt, toss, and let stand for 45 minutes.

Rinse bitter melon thoroughly, drain, squeeze out excess water and set aside.

Heat the oils in a wok or large heavy skillet over medium high heat. Add the cayenne and garlic and stir fry form 15 seconds. Add the chiles and onion and stir fry until very soft, about 10 minutes. Add the sliced bitter melon, reduce the heat to medium, and cook for about 15 minutes, stirring frequently, until tender. Add the sugar and ½ tsp salt and stir fry for another few minutes until very tender. Serve hot.

Figure 24: Korola Jal

Laphet Thoke

Fermented Tea Leaf Salad

This salad is what some consider Myanmar's national dish. Until recently, fermented tea leaves were near-impossible to find in Canada, making this dish a rare treat. Fortunately with the influx of immigrants it is much easier to obtain. Sour, crunchy, and savoury, it is a wonderful end to a meal. The fermented tea leaves are excellent for your gut microbiome. By obtaining a bespoke microbiome probiotic culture (through kits available online) the health benefits only multiply. In order to ensure your dried shrimp is from an ethical and sustainable source, I recommend Canadian land-farmed dried shrimp, which is readily available in many grocery stores.

Adapted from "Burmese Tea Leaf Salad" from *Burma: rivers of flavour* by Naomi Duguid (Duguid, 2012). Adaptations included the addition and process surrounding personalised microbiome probiotic culture and the specification of land farmed shrimp.

Scenario and Hotspot: Scenario 3 (Canada Increases Humanitarian Immigration), Myanmar

Trends: My Biome, Fishing on Land, Functional Foods

Serves 6 as a side

¾ cup packed fermented tea leaves

1 packet personalised microbiome probiotic culture (optional)

2 tbsp toasted sesame seeds

2-3 tbsp roasted peanuts, coarsely chopped

2-3 tbsp fried split roasted soybeans

½ cup thin tomato wedges

3 tbsp dried Canadian land farmed shrimp, soaked in water for 10 minutes and drained

1 cup finely shredded napa cabbage

1-2 tbsp garlic oil

1-2 tbsp fresh lime juice

1 tsp fish sauce (or soy sauce)

Pinch of salt

At least one day before serving, or six hours if not using personalised microbiome probiotic culture, place tea leaves in lukewarm water and mash a little with your hands. Drain and squeeze out. Repeat, then add cold water and let stand at least one hour (preferably six or overnight). Drain, squeeze thoroughly, remove tough bits and chop finely. If using culture, cover again with warm water, add culture, and let stand in warm place overnight. Drain and squeeze thoroughly.

Combine all the ingredients in a bowl, except the garlic oil, lime juice, fish sauce and salt, and mix with your hands. In a separate small bowl, mix the remaining ingredients then drizzle over salad. Mix thoroughly, adding salt to taste. Alternatively, each salad ingredient can be served in separate bowls, alongside the mixed dressing, and guests can mix their own salad.

Figure 25: Laphet Thoke

Main Dishes

Lahmacun

Turkish Pizza

My first encounter with Lahmacun was back in 2005. I was living in the Netherlands, and while visiting Rotterdam I stopped for a quick snack at a food stall. At the time the Netherlands had a high Turkish immigrant population, and their food was very popular. The lahmacun was so wonderfully savoury and spicy, I wondered why I had never seen it in Canada. Luckily, it's becoming much easier to find, and even easier to make at home. While it is also called "Turkish Pizza", it is rather different from its Italian namesake. It does not use cheese, has a very thin crust, uses different spices and is mainly meat-based. While my lahmacun in Rotterdam was served rolled up and filled with salad, it can also be served flat.

Salca is a Turkish tomato-pepper paste, but regular tomato paste may be used in a pinch. Lab-cultured ground beef, while not traditional, is a perfect and humane substitute that I recommend. Be sure to choose CFIA certified lab-cultured meat to ensure a quality, meat-free product.

Adapted from "Lahmacun" from the Traditional Turkish Cooking blog (2013). Adaptations included the specification of CFIA certified lab-cultured milk and meat.

Scenario and Hotspot: Scenario 3 (Canada Increases Humanitarian Immigration), Turkey

Trends: The Protein Lab, Food Fraud

Makes 8 individual pizzas

Crust:
4 ½ cups of all-purpose flour
1 ½ cups of lukewarm CFIA certified lab-cultured milk (or water, but milk helps with browning)
1/4 cup vegetable oil
1 tbsp salt
1 tsp sugar
1 package of instant yeast (8 grams)

Meat topping:
1 red pepper
1/2 green pepper
2 tomatoes
1 large onion
A handful of parsley
1 pound CFIA certified lab-cultured ground beef
2 tsp paprika
1 ½ tsp ground cumin
1 ½ tsp ground black pepper
2 tsp salt (1 tbsp if salca is unsalted)
1 tbsp pepper-tomato salca
3 tbsp olive oil
Parsley and lemon wedges for serving

Start the dough

Combine all the ingredients for the dough in a stand-mixer with a dough hook attachment. Knead dough for about 5 minutes. Cover with a towel, and let rise in a warm place for 2 hours.

Make the meat mixture

Put the peppers, tomatoes, parsley and onion in a food processor and process until mixture resembles a coarse paste. Transfer to a bowl and add meat, spices, salca and olive oil. Mix with your hands until well combined. Set aside.

Assemble the lahmacun

Preheat oven to 425° F. Once dough has risen, punch down and give a couple of quick kneads. Divide dough into eight balls and cover with a towel until ready to roll. Over a floured work surface, roll each ball until very thin – approximately 2 mm thick (in lahmacun, the meat – not the dough – is the star of the show). Spread meat mixture over the dough with the back of a tablespoon. Slide lahmacun on a lightly greased cookie sheet and bake for 8-10 minutes, or until the bottom is golden brown.

Squeeze with lemon, garnish with parsley, roll up and and serve. Optionally, the lahmacun can be served flat or sliced into wedges for a main or appetizer

Figure 26: Lahmacun

Biye Barir Chicken Roast with Panch Phoran Potatoes

Biye Barir chicken roast is a popular celebratory dish in Bangladesh served at weddings and Eid. In this recipe, traditional spice mix Panch Phoran (which contains fenugreek, nigella seeds, black mustard seeds, cumin and fennel seeds) is added to spice up potatoes and peas, adding a western nod to a Bangladeshi meal. These two dishes combined would make a lovely Bangladeshi take on a Sunday roast. Serve with a salad, or with korola jal (see page 104)

Adapted from "Bangladeshi Chicken Roast" by Lail Hossan's With a Spin blog (Hossan, 2016), and Frank Camorra's "Panch Phoran Potatoes" from the Good Food blog (Camorra, 2015). Adaptations included the blending of these two recipes, as well as significantly reducing the amount of ghee recommended for the chicken.

Scenario and Hotspot: Scenario 1 (Canada Increases Economic Immigration), Bangladesh

Trends: Creolization

Serves 6

Chicken:

6 pieces medium sized chicken leg quarters (about 3 lbs)

½ cup vinegar

1 tsp garlic paste

1 tsp ginger paste

½ tsp salt

1 cup ghee (or butter or oil)

1 cup beresta (crispy fried onions), divided

8-10 green cardamom pods

1 tbsp white poppy seeds (posto)

3 cinnamon sticks, about 1 inch each

2 tsp coriander

½ tsp mace

½ tsp nutmeg

1 cup yogurt

10-15 golden raisins

1 tbsp garlic paste

1 tbsp ginger paste

3-4 green chiles

1 tbsp sugar

1 tbsp lemon juice

2 tbsp kewra or rose water

Sliced almonds for garnish

Potatoes:

2 lbs waxy potatoes, peeled

½ cup vegetable oil

3 tbsp panch phoran

1 yellow onion, roughly diced

1 tbsp ginger, finely diced

2 cloves garlic, chopped

1 green chile, deseeded and chopped

8 fresh curry leaves

1 tsp ground turmeric

1 tsp sea salt

2 tomatoes, diced

4 oz (125 g) frozen peas

Prepare the chicken

Make a marinade with vinegar, 1 tsp garlic paste, 1 tsp ginger paste and salt. Marinate the chicken pieces in the refrigerator for 30 minutes to few hours.

Heat 1 cup of ghee or oil. Pat chicken pieces dry and fry over medium heat until golden brown on all sides, about 10 minutes. You may need to fry the chicken pieces in 2 batches. Remove chicken from pan, remove pan from heat and set aside.

Grind the cardamom, poppy seed, cinnamon stick, coriander, mace, and nutmeg to a powder. Add the powdered spices in the yogurt and mix well. Set aside.

Prepare the potatoes

Cut potatoes into 2-centimetre pieces. Heat the oil in a medium-sized pot over a medium heat. Toast the panch phoran in the oil for about a minute or until the spices release their aroma. Add the onion and cook until golden, then add the potatoes, ginger, garlic, chilli, curry leaves, turmeric, salt and tomatoes. Stir well to coat everything in the spices. Add a splash of water to moisten the pan. Add the peas, bring to a simmer then cover with a lid and cook for about 20 minutes or until tender. Add more water if the dish looks dry and check seasoning.

Finish the chicken

As the potatoes are cooking, pour off all but 2 tablespoons of ghee from the chicken pan and add ½ cup beresta. Add yogurt spice mix, golden raisins, 1 tbsp garlic paste and 1 tbsp ginger paste. Saute for 1–2 minutes. Add the chicken pieces back in the pan and cook covered until chicken is tender. Add the green chiles, sugar, lemon juice and kewra/rose water and gently stir the pieces for 2–3 minutes. Once the gravy starts separating from ghee, add the remaining ½ cup beresta. Cook covered for 10–15 minutes in very low heat.

Serve potatoes and chicken alongside each other, sprinkling with almonds.

Figure 27: Biye Barir Chicken Roast with Panch Phoran Potatoes

Figure 28: Canadian Harvest Gado Gado

Canadian Harvest Gado Gado

Gado gado means "potpourri" in Indonesian, which seems a rather appropriate name. Here, a classic Indonesian peanut sauce is tossed with a variety of vegetables, both raw and cooked. The result is a somewhat fresh, somewhat tender, and all-around delicious salad. This recipe uses a mix of Indonesian and Canadian harvest vegetables, but feel free to add whichever vegetables you desire. See what's growing at your local greenhouse. Just make sure to blanch the tougher vegetables first, and you will be on your way to developing your own gado gado recipe. In order to ensure your shrimp paste and chips are from an ethical and sustainable source, I recommend Canadian land-farmed shrimp products, which are readily available in many grocery stores.

Adapted from "Gado gado" and "Javanese Peanut Sauce" from *Cradle of flavor* by James Oseland (Oseland, 2006). Adaptations included the use of local Canadian vegetables (such as butternut squash and kale) and the specification of land-farmed shrimp.

Scenario and Hotspot: Scenario 1 (Canada Increases Economic Immigration), Indonesia

Trends: The Next Greenhouse, Creolization, Fishing on Land

Makes 2-3 main course servings, 4-5 if served with rice and other dishes

Peanut Sauce:

1 ½ cups unsalted skinned roasted peanuts

1 ½ tsp dried Canadian land-farmed shrimp paste

1 fresh red or green chile, or 1 tbsp Aleppo chile flakes

2 cloves garlic, coarsely chopped

3-4 tbsp dark brown sugar

¾ cup unsweetened coconut milk

1 tbsp palm, cider or rice vinegar

¾ tsp salt

¾ cup water

Prepare the peanut sauce

Heat a 12 inch skillet over medium heat and add the peanuts. Rotate the pan gently over the heat, turning the peanuts every 15 seconds until they've picked up golden spots, about 3-6 minutes. Remove the pan from the heat and transfer peanuts to a bowl to cool.

Place the cooled peanuts in a large food processor and process until the consistency of sand.

Place the shrimp paste the middle of a 5 inch square of aluminum foil. Fold over the edges of the foil to make a small parcel, and flatten into a ¼ inch thick disk. Heat a gas burner over medium low heat (or electric to medium high), and using tongs place the parcel directly over the heat source. Toast on each side for 1 ½ minutes, until a smoky, shrimpy smell is released. Let the parcel cool. Carefully unwrap the foil; the edges of the disk should be black-brown and toasty and the centre golden. Scrape the shrimp paste in a bowl.

Salad:

½ butternut squash, peeled and cut into 1 inch cubes

2 tbsp vegetable oil

4 medium sized Yukon Gold potatoes, peeled and cut about 1/3 inch thick

Peanut oil for frying

1 large carrot, peeled and cut on diagonal about ¼ inch thick

20 long beans, stemmed and cut into 2 inch lengths

½ bunch red kale, torn into fairly large bite sized pieces

1 Kirby cucumber, unpeeled, stemmed, cut into ½ inch chunks

Salt and cubeb pepper, to taste

10-15 fried Canadian land-farmed shrimp chips

Add the toasted shrimp paste, chile, garlic, and sugar to the peanuts in the food processor and pulse until you have a well ground mixture. Don't overmix – it shouldn't look like peanut butter.

Transfer the ground ingredients to the skillet, add the coconut milk and stir well to combine. The mixture will be quite thick. Bring to a gentle simmer over medium heat. Continue to cook at a gentle simmer, stirring constantly, until a few drops of coconut oil appear on the surface, about 5-7 minutes. Add vinegar and salt and stir well to combine. The sauce should be the consistency of pea soup.

Reserve 1 ½ cups of sauce for the dressing. Keep remaining sauce the refrigerator for about one week. This sauce can be used with chicken or beef satay, or even on french fries (see page 92 for Cassava fries).

Prepare the salad

Preheat oven to 400° F. Toss butternut squash with vegetable oil, season with salt and pepper, and place in a single layer on a roasting pan. Roast for 25-30 minutes until tender, set aside to cool.

Pour ½ inch of peanut oil into a heavy saucepan. Heat oil over medium high heat to 365° F. Fry 5-6 slices of potato into the oil, turning frequently for 4-7 minutes or until lightly golden on all sides and tender. Remove using a slotted spoon and set on paper towels to drain. Repeat until all potatoes are cooked, set aside to cool.

Bring a 3-quart saucepan of water to the boil. Add the carrot slices and blanch until fork-tender, about 2 ½ minutes. Remove to a colander with a slotted spoon, rinse, drain and set aside. Add the beans to the same boiled water and blanch for 1 ½ minutes. Drain, discarding the water, rinse, and set aside. Pat vegetables dry.

Place red kale in a large bowl and massage with little olive oil to soften, about 2 minutes. Add the cooled butternut squash, potatoes, the boiled vegetables and cucumber to the bowl. Toss gently with your hands, and place on serving plates. Pour peanut sauce over the vegetables, and garnish with shrimp chips. Season with salt and a few grinds of cubeb pepper. Serve immediately.

Drinks and Desserts

Kunnu Aya

Tiger Nut Milk

Tiger nuts are a traditional food of Nigeria, and their most beloved incarnation is tiger nut milk. Rich in fibre, protein, calcium, iron, magnesium, potassium and phosphorus, as well as vitamins C and E, this is a naturally sweet and rich beverage that has gained popularity in recent years, with a shocking price tag to match. Luckily, it is relatively easy to make at home. Cinnamon and cardamom are recommended here, but feel free to play with spices of your choice to create your own unique blend. Nutmeg and chile peppers, perhaps? Even better, since it's a tuber, not a nut, it's safe for nut allergy sufferers to eat!

Adapted from Jennifer McGruther's blog entry "Traditional Nigerian Tigernut Milk (Kunnu Aya)" from The Nourished Kitchen blog (McGruther, 2014). Adaptations included the recommendation of maple syrup as well as other spice recommendations.

Scenario and Hotspot: Scenario 2 (Canada Increases Humanitarian Immigration), Nigeria

Trends: Functional Foods, Alt-Proteins, Creolization

Makes 4 servings

8 oz/250 g raw, organic tiger nuts

4 cups filtered water

1 ceylon cinnamon stick

3 green cardamom pods

¼ - ½ cup jaggery, maple syrup or honey (to taste)

Pour the tiger nuts and cinnamon stick into a medium-sized mixing bowl, and cover them with warm water. Allow them to soak in the water at least 12 and up to 24 hours, or until softened.

Transfer the tiger nuts, soaking water, cinnamon stick, cardamom pods and jaggery to a high-powered blender, and until they form a smooth paste, adding water as necessary to allow even blending.

Allow the paste to sit in the fridge for an hour to rest, and then spoon it into a nut milk bag, press it through, and serve over ice.

Figure 29: Kunnu Aya

Ful Sudani

Sudanese Peanut Macaroons

This recipe uses a typical Sudanese crop – peanuts – and transforms it into a simple and delicious sweet treat. They are quick to make and perfect alongside a cup of coffee or tea. Unfortunately, due to the ongoing conflict in both Sudan and South Sudan, along with the increasing threat of desertification, the Sudanese peanut crop has faced an uncertain future. However, efforts have been made to revive this near-extinct strain of peanuts. To help these conservation efforts, and to achieve the most authentic flavour, I recommend purchasing only Agri-Revival certified Sudanese peanuts.

Adapted from Vera Abitbol's recipe from the blog 196 Flavors (Abitbol, 2013). Adaptations included the specification of Agri-Revival certified peanuts, as well as significant clarification of the method.

Scenario and Hotspot: Scenario 3 (Canada Increases Humanitarian Immigration), Sudan

Trends: Food Fraud, Disaster Proof Dining

Makes 24

2 cups Agri-Revival certified Sudanese peanuts, skinless and unsalted

1 vanilla bean

1 pinch salt

3 egg whites

1 cup icing sugar

Preheat oven to 350° F. Roast peanuts by heating them in a skillet over medium heat, tossing regularly to prevent scorching. Once peanuts are dotted with golden brown spots, remove from heat, still tossing for another minute, and allow to cool.

Place cooled peanuts in a food processor and pulse, grinding them until reaching a grainy texture (not a fine powder). Split the vanilla bean in half, and running a knife down its length remove the seeds. Add to peanuts, along with the salt, and pulse a few times to just combine.

Meanwhile, in a separate bowl, beat the egg whites on high speed until stiff peaks formed. Lower the speed and gradually add in the icing sugar, being careful not to deflate the egg whites. Fold in peanut mixture until just combined.

Drop batter in tablespoon sized mounds on a parchment lined baking sheet. Bake for 15 minutes, until lightly coloured.

Figure 30: Ful Sudani

For More Culinary Adventures

These recipes only touch on a small piece of each cuisine. Want to explore further? You can use an online cognitive cooking app to help you explore and invent with these cuisines. Simply enter a country, dish or ingredient, or be adventurous and enter a few!

What's a cognitive cooking app? It's a computing engine that creates dishes based on scanning recipes and flavour profiles of ingredients. Chef Watson from IBM pioneered the technology in the early 2010s, and remains the gold standard, but there are many variants to try.

Table 18: Inspiration for cuisine experimentation

Hotspot	Dish	Ingredient
Mexico	Cemitas	Chapulines
Venezuela	Empanadas	Carne frita
Brazil	Feijoada	Cassava
Nigeria	Pepper soup	Plantain
Sudan	Tamayya	Sorghum
Turkey	Kofta	Labneh
Syria	Jazmaz	Aleppo chiles
Bangladesh	Cham cham	Beresta
Myanmar	Mohinga	Dried shrimp
Indonesia	Beef rendang	Cubeb pepper

Figure 31, right: Men sharing a drink. Image by Igor Ovsyannykov from Unsplash under Creative Commons Zero license.

CHAPTER 8
Conclusion

Immigration and food in Canada are highly intertwined. The food of immigrant communities plays a large role in shaping the day-to-day diet of Canadians, and reciprocally food is essential tool for welcoming new immigrants into the local community. Curiously, while these two fields are the subject of numerous futures studies individually, to date few studies have attempted to bring the two together in a futures based approach. This research aimed to explore the possible future immigrant groups that might come to Canada, and how they in turn would impact the Canadian culinary landscape. Specifically, the research focused on understanding where Canada might receive immigrants from in five years considering current immigration policy and emerging migration hotspots, what are emerging trends in food in fifteen years, and how might these new communities' cuisines and future food trends intersect in fifteen years.

These highly complex subjects, affected by social, cultural, political, economic and environmental factors, made this research topic appear daunting on the surface. The branch analysis Foresight methodology brought clarity to these topics, guiding the development future immigration scenarios based on shifts

in Canadian policy and emerging global issues, and intersecting these scenarios with future food trends, to systematically reveal a range of potential future hotspots, unique cuisines, and recipes from the future.

Through researching the issues that drive Canadian immigration policy, Phase 1 revealed that the main factor shaping future "pull" for immigration is immigration class, and the target numbers that Canada sets for each class annually. These classes – economic, social, and humanitarian – formed the basis of the three scenarios of the first "branch". From here, research surrounding emerging global social, economic, environmental and political issues in Phase 2 highlighted ten potential future migration hotspots: Mexico, Venezuela, Brazil, Nigeria, Sudan, Turkey, Syria, Bangladesh, Myanmar and Indonesia. These hotspots might arrive as immigrant groups to Canada in five years, and formed the basis of the second "branch" of future scenarios.

It would be prudent for policymakers and governments of all levels to monitor the signposts indicated for each hotspot in order to keep abreast of the developments of each country, as well

as to prepare for the various policies and resources required to appropriately welcome these groups in five years.

Each of these hotspots had its own unique profile regarding its drivers for migration (e.g. which immigration class they fall under) as well as its cuisines. These findings were profiled in Phase 3, along with a scan of food trends that might be relevant in fifteen years – the ultimate timeframe of this research. What united these trends were the overarching drivers of searching for sustainable proteins, designing a resilient food system against climate change, leveraging high technology food production, and optimising and personalising nutrition for well being. These food trends were intersected with the cuisines of each hotspot to develop a selection of "recipes from the future". The final recipes that were developed were highly reliant on the type of immigrant that Canada may receive. For example, economic immigrants would bring dynamic, global interpretations of regional specialties blended with local Canadian ingredients. Meanwhile, humanitarian immigrants would bring traditional dishes, and social immigrants balancing out the extremes. In any case, the future of Canadian cuisine appears to be more globally

diverse, integrating a wide range of regions and cultures into its landscape.

The findings of this report offer a wealth of inspiration for those working in the food industry, who have ample time to prepare for these futures given the fifteen year timeframe. In particular, food vendors should consider sourcing ingredients from the migration hotspots such as:

- Chapulines from Mexican cuisine
- Cornmeal specific from Venezuelan arepas
- Cassava from Brazilian and Nigerian cuisine
- Tiger nuts from Nigerian cuisine
- Sorghum from Sudanese cuisine
- Aleppo chiles from Syrian cuisine
- Salca from Turkish cuisine
- Panch phoran from Bangladeshi cuisine
- Fermented tea leaves from Myanmar cuisine
- Sambal oelek and cubeb peppers from Indonesian cuisine

Moreover, to educate consumers on how to prepare these foods, they may want to consider distributing recipes such as the

ones in this report or holding classes on how to cook with these ingredients. To help enhance the community-building aspect, they may want to consider asking members of the immigrant community to help teach these classes.

In addition, producers and distributors should consider the potential of the following developing food categories, in particular their market viability and their applicability to a variety of established and new Canadian cuisines. Moreover, regulators should consider the policy implications of these categories. These emerging food categories, which emerged from the trend scan in Phase 3, played a strong influence on the adaptation of this report's recipes:

- Lab-cultured meat and dairy
- Alternative protein sources such as insects and algae in forms that are palatable to Canadians
- Preservation of at-risk food strains unique to conflict and climate change-stricken areas (such as peanuts from Sudan)
- Low-resource consuming produce, such as reduced water, waste and energy usage
- Local greenhouse-farmed products using aeroponic technology

- Land-farmed fish
- Customisable products tailored to individuals' microbiomes
- Unique "creolized" blends of the cuisines examined here, especially those from Scenario 1, and how they might blend with established cuisines in Canada

New immigrants from these hotspots should be mindful of how their foods may be adapted. Ingredients and cooking tools may be substituted due to availability and dishes may be altered to suit Canadian palettes. All of these adaptations may have pleasantly surprising results, and will contribute to shaping uniquely Canadian dishes.

Some of these results of this research were surprising. At the outset of the research, I was certain that cuisines of Iran, the Philippines, and Malaysia would be the focus. Instead countries such as Nigeria and Bangladesh were strong players. These surprises certainly demonstrate the importance of following the research process rather than prematurely jumping to conclusions. As a result, and wonderful and fresh new array of cuisines, dishes, and ingredients were revealed through this research, with unique interpretations for the future.

Perhaps even more surprising – and refreshing – was the amount of further research this exploration has prompted. This subject matter seems ripe with potential for new discoveries, and I welcome other researchers to explore these spaces or challenge the research conducted to date. Some potential areas of future research are as follows:

- Specifics surrounding how food can be used to integrate a new culture.
- Factors influencing the adoption of immigrant groups' foods within Canada.
- Regional differences in food adoption across Canada.
- Future Canadian attitudes towards immigration groups, which may affect adoption of certain cuisines.
- How these future cuisines might intersect with Indigenous foodways.
- The role that temporary residents play in influencing Canada's culinary landscape.
- The differing approaches to food and adaptation based on immigration class.
- Ongoing monitoring of status of these immigration hotspots, especially those with the potential for both economic and humanitarian

migrants (which while they may coexist, seem at odds), and the specifics of how these cuisines become adopted.

- Exploration into countries that did not make it to the "top ten" immigration hotspot list (such as Honduras or Yemen).

The areas indicate that this research field is just in its infancy, and much more exploration into possible futures is required to fully prepare for the outcomes. However, one does not have to be a researcher to play a role in these futures, nor does one have to wait idly to see how the future might unfold. I encourage all Canadians to explore the cuisines and cultures discussed in this research. Try one of the recipes, adapt them, or even reach out these new communities to learn about their cultures. To these hotspot groups, I encourage you to be proud of your food. Share it with others, and try something new in return. By embracing the foodways each other's communities wholeheartedly, we can take the first steps towards ensuring a welcoming, harmonious future in Canada.

Chapter 1 References

Angus Reid. (2016, October 3). What makes us Canadian? A study of values, beliefs, priorities and identity - Angus Reid Institute. Retrieved November 15, 2016, from http://angusreid.org/canada-values/

Chui, T., Flanders, J., & Anderson, T. (2013). Immigration and Ethnocultural Diversity in Canada: National Household Survey, 2011 (Rep.). Retrieved May 14, 2016, from Statistics Canada website: http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-010-x/99-010-x2011001-eng.pdf

Citizenship and Immigration Canada. (2016, June 21). Canada welcomes Syrian refugees. Retrieved August 17, 2016, from http://www.cic.gc.ca/english/refugees/welcome/

Duncan, H. (2012, December 17). How global demographic and economic trends might affect Canada's immigration program: A Report of a Metropolis Conversation held at Citizenship and Immigration Canada (Rep.). Retrieved May 23, 2016, from Citizenship and Immigration Canada website: http://www.cic.gc.ca/english/resources/research/global-trends.asp

Fisher, M. (1989). The gastronomical me. San Francisco: North Point Press.

Heltz, J. (2016, February 27). The Refugee Crisis and the EU's Future. Retrieved May 23, 2016, from http://intpolicydigest.org/2016/02/27/the-refugee-crisis-and-the-eu-s-future/

Knowles, V. (2016). Strangers at our gates: Canadian immigration and immigration policy, 1540-2015. Toronto: Dundurn

Koc, M., & Welsh, J. (2002). Food, Foodways and Immigrant Experience (Rep.). Retrieved March 2, 2016, from Multiculturalism Program, Department of Canadian Heritage at the Canadian Ethnic Studies Association Conference website: http://canada.metropolis.net/events/ethnocultural/publications/aliments_e.pdf

Maiani, F. (2016, February 3). Hotspots and Relocation Schemes: The right therapy for the Common European Asylum System? Retrieved June 21, 2016, from http://eumigrationlawblog.eu/hotspots-and-relocation-schemes-the-right-therapy-for-the-common-european-asylum-system/

Malenfant, E. C., Label, A., & Martel, L. (2010, March). Projections of the Diversity of the Canadian Population, 2006 to 2031 (Rep.). Retrieved September 12, 2016, from Statistics Canada website: http://www.statcan.gc.ca/pub/91-551-x/91-551-x2010001-eng.pdf

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of International Migration: A Review and Appraisal. Population and Development Review, 19(3), 431. doi:10.2307/2938462

Mintz, S. W., & Du Bois, C. M. (2002, October). The Anthropology of Food and Eating. Annual Review of Anthropology, 31, 99-119. doi:10.1146/annurev.anthro.32.032702.131011

OECD. (2016). Topics: Migration. Retrieved August 17, 2016, from http://www.oecd.org/migration/

Rhydderch, A. (2009, October). Scenario Planning. Retrieved October 19, 2016, from Foresight Horizon Scanning Centre, Government Office for Science UK website: http://webarchive.nationalarchives.gov.uk/20140108140803/http://www.bis.gov.uk/assets/foresight/docs/horizon-scanning-centre/foresight_scenario_planning.pdf

UNFPA, & International Organization for Migration. (2013). International Migration and Development: Contributions and Recommendations of the International System (Rep.). Retrieved August 17, 2016, from International Organization for Migration website: http://www.unfpa.org/publications/international-migration-and-development

Weller, D. L., & Turkon, D. (2014). Contextualizing the Immigrant Experience: The Role of Food and Foodways in Identity Maintenance and Formation for First- and Second-generation Latinos in Ithaca, New York. Ecology of Food and Nutrition, 54(1), 57-73. doi:10.1080/03670244.2014.922071

Yssaad, L. (2012, December). The Immigrant Labour Force Analysis Series: 2008-2011 (Rep.). Retrieved September 16, 2016, from Statistics Canada website: http://www.statcan.gc.ca/pub/71-606-x/71-606-x2012006-eng.pdf

Chapter 2 References

Bodirsky, M., & Johnson, J. (2008). Decolonizing Diet: Healing by Reclaiming Traditional Indigenous Foodways. Cuizine: The Journal of Canadian Food Cultures, 1(1). doi:10.7202/019373ar

Castles, S. (2010). Understanding Global Migration: A Social Transformation Perspective. Journal of Ethnic and Migration Studies,36(10), 1565-1586. doi:10.1080/1369183x.2010.489381

Chui, T., Flanders, J., & Anderson, T. (2013). Immigration and Ethnocultural Diversity in Canada: National Household Survey, 2011 (Rep.). Retrieved May 14, 2016, from Statistics Canada website: http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-010-x/99-010-x2011001-eng.pdf

Conference Board of Canada. (n.d.). Immigration is Critical to Canada's Prosperity. Retrieved August 9, 2016, from http://www.conferenceboard.ca/topics/immigration/default.aspx

Counihan, C., & Van Esterik, P. (2012). Food and Culture: A Reader (3rd ed.). Routledge.

Dawdy, J. (2016, March 2). Canada's 8 National Dishes and Where to Find Them. Retrieved August 12, 2016, from http://theculturetrip.com/north-america/canada/articles/canada-s-8-national-dishes-and-where-to-find-them/

Desmarais, A. A., & Wittman, H. (2014, January 17). Farmers, foodies and First Nations: Getting to food sovereignty in Canada. The Journal of Peasant Studies, 41(6), 1153-1173. doi:10.1080/03066150.2013.876623

Duncan, H. (2012, December 17). How global demographic and economic trends might affect Canada's immigration program Subscribe RSS (What is RSS?) A Report of a Metropolis Conversation held at Citizenship and Immigration Canada (Rep.). Retrieved May 23, 2016, from Citizenship and Immigration Canada website: http://www.cic.gc.ca/english/resources/research/global-trends.asp

D'rozario, D., & Choudhury, P. K. (2003). The Effect of Immigration on the Tastes and Preferences in Food of the Native-Born Consumer. Journal of International Food & Agribusiness Marketing,14(2), 49-75. doi:10.1300/j047v14n02_04

Farm Credit Canada, Media Relations. (2013, October 7). Immigration creating new opportunities for agriculture, FCC says [Press release]. Retrieved May 2, 2016, from https://www.fcc-fac.ca/en/about-fcc/media-newsroom/news-releases/2013/immigration-creating-new-opportunities-for-agriculture-FCC-says.html

Fox, R. (n.d.). Food and Eating: An Anthropological Perspective (Rep.). Retrieved March 2, 2016, from Social Issues Research Centre website: http://www.sirc.org/publik/food_and_eating_6.html

Green, D., Liu, H., Ostrovsky, Y., & Picot, G. (2016, March 21). Immigration, Business Ownership and Employment in Canada (Rep.). Retrieved August 4, 2016, from Statistics Canada website: http://www.statcan.gc.ca/pub/11f0019m/11f0019m2016375-eng.htm

Grigorescu, A. (2012, April 12). The top 8 food trends in Toronto for 2012. Retrieved May 14, 2016, from http://www.blogto.com/eat_drink/2012/04/the_top_8_food_trends_in_toronto_for_2012/

Jamal, A. (1996). Acculturation: The symbolism of ethnic eating among contemporary British consumers [Abstract]. British Food Journal,98(10), 12-26. doi:10.1108/00070709610153786

Kenneally, R. R. (2008). The Cuisine of the Tundra: Towards a Canadian Food Culture at Expo 67. Food, Culture and Society: An International Journal of Multidisciplinary Research,11(3), 287-313. doi:10.2752/175174408x347874

Koc, M., & Welsh, J. (2002 a). Food, Foodways and Immigrant Experience (Rep.). Retrieved March 2, 2016, from Multiculturalism Program, Department of Canadian Heritage at the Canadian Ethnic Studies Association Conference website: http://canada.metropolis.net/events/ethnocultural/publications/aliments_e.pdf

Koc, M., & Welsh, J. (2002 b). Food, Identity and the Immigrant Experience. Canadian Diversity, 1(1), 46-48. Retrieved April 29, 2016, from http://www.ryerson.ca/foodsecurity/publications/articles/FoodIdentity.pdf

Kuzmin, M., Motskin, A., & Gallinger, Z. (2015, April 28). Mapping Canada's Mosaic of Immigrant Communities - The 10 and 3. Retrieved May 14, 2016, from http://www.the10and3.com/mapping-canadas-mosaic-of-immigrant-communities/

Chapter 2 References (cont.)

La Rose, L. (2012, September 28). It's Official: Canadians Love Ethnic, Healthier Foods. Retrieved May 28, 2016, from http://www.huffingtonpost.ca/2012/09/28/canada-food-trends-_n_1922035.html

Maiani, F. (2016, February 3). Hotspots and Relocation Schemes: The right therapy for the Common European Asylum System? Retrieved June 21, 2016, from http://eumigrationlawblog.eu/hotspots-and-relocation-schemes-the-right-therapy-for-the-common-european-asylum-system/

Marcoux, J. (2016, July 05). Immigration numbers in Canada strong - but not compared to a century ago. Retrieved July 7, 2016, from http://www.cbc.ca/news/canada/manitoba/immigration-numbers-canada-1.3665172

Mintz, S. W., & Du Bois, C. M. (2002, October). The Anthropology of Food and Eating. Annual Review of Anthropology,31, 99-119. doi:10.1146/annurev.anthro.32.032702.131011

Morgan, E., Stukenberg, A., & Tolliver, A. (2011, August 4). The Immigration of Indian Food (Rep.). Retrieved August 4, 2016, from http://community.berea.edu/futuretense/Projects/Essays/Issue 1/tandooressay.pdf

NHS Profile, 2011. (2013, May 8). Retrieved May 14, 2016, from http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E

Piesse, M. (2014, October 24). Factors Influencing Migration and Population Movements – Part 1 (Publication). Retrieved May 23, 2016, from Future Directions International website: http://www.futuredirections.org.au/publication/factors-influencing-migration-and-population-movements/

Slater, N. (2015, May 24). Let's eat together: How immigration made British food great. Retrieved August 12, 2016, from https://www.theguardian.com/global/2015/may/24/lets-eat-together-cooking-immigration-britain-food

Smart, J. (2003, Fall). Ethnic Entrepreneurship, Transmigration, And Social Integration: An Ethnographic Study Of Chinese Restaurant Owners In Rural Western Canada. Urban Anthropology and Studies of Cultural Systems and World Economic Development,32(3/4), 311-342. Retrieved August 10, 2016.

The Economist "Data Team" (2016, May 27). The world's refugee crisis: Past and present. Retrieved May 27, 2016, from http://www.economist.com/blogs/graphicdetail/2016/05/daily-chart-21

Voinigescu, E. (2013, January 24). What is Canadian Cuisine, Anyway? Retrieved March 2, 2016, from http://www.torontostandard.com/culture/what-is-canadian-cuisine-anyways/

Weller, D. L., & Turkon, D. (2014). Contextualizing the Immigrant Experience: The Role of Food and Foodways in Identity Maintenance and Formation for First- and Second-generation Latinos in Ithaca, New York. Ecology of Food and Nutrition, 54(1), 57-73. doi:10.1080/03670244.2014.922071Bodirsky, M., & Johnson, J. (2008). Decolonizing Diet: Healing by Reclaiming Traditional Indigenous Foodways. Cuizine: The Journal of Canadian Food Cultures, 1(1). doi:10.7202/019373ar

Chapter 3 References

Candy, S. (2010, August). The futures of everyday life: Politics and the design of experiential scenarios (unpublished PhD Dissertation). Retrieved November 26, 2016, from https://www.scribd.com/doc/68901075/Candy-2010-The-Futures-of-Everyday-Life

Candy, S. (2014, April 26). A history of experiential futures [Web log post]. Retrieved November 26, 2016, from https://futuryst.blogspot.ca/2014/04/a-history-of-experiential-futures.html

Choo, C. W. (1999, February/March). The Art of Scanning the Environment. Bulletin of the American Society for Information Science and Technology, 25(3), 21–24. doi:10.1002/bult.117

Dator, J. (2009, November). Alternative Futures at the Manoa School. Journal of Futures Studies, 14(2), 1–18. Retrieved November 26, 2016, from http://www.jfs.tku.edu.tw/14-2/A01

Kahane, A. (1992). The Mont Fleur Scenarios: What will South Africa be like in the year 2002? (Vol. 7-1, Publication). Emeryville, CA: GBN Deeper News.

Kelliher, A., & Byrne, D. (2015). Design futures in action: Documenting experiential futures for participatory audiences. Futures, 70, 36–47. doi:10.1016/j.futures.2014.12.004

Rhydderch, A. (2009, October). Scenario Planning. Retrieved October 19, 2016, from Foresight Horizon Scanning Centre, Government Office for Science UK website: http://webarchive.nationalarchives.gov.uk/20140108140803/http://www.bis.gov.uk/assets/foresight/docs/horizon-scanning-centre/foresight_scenario_planning.pdf Asia Pacific Foundation of Canada. (2014, February). Climate Change and the Risk of Displacement in Asia (Rep.). Retrieved May 27, 2016, from Policy Horizons Canada website: http://www.horizons.gc.ca/eng/content/climate-change-and-risk-displacement-asia

Chapter 4 References

Boucher, A., & Cerna, L. (2014, May 15). Current Policy Trends in Skilled Immigration Policy. International Migration, 52(3), 21–25. doi:10.1111/imig.12152

CIC News. (2014, October 15). More Immigrants To Canada Expected To Look West For Job Opportunities. Retrieved May 23, 2016, from http://www.cicnews.com/2014/10/immigrants-canada-expected-west-job-opportunities-104012.html

Citizenship and Immigration Canada. (2014, June 30). Our mandate. Retrieved July 7, 2016, from http://www.cic.gc.ca/english/department/mission.asp

Citizenship and Immigration Canada. (2015, August 01). Facts and figures 2014 – Immigration overview: Permanent residents. Retrieved November 15, 2016, from http://www.cic.gc.ca/english/resources/statistics/facts2014/permanent/03.asp

Citizenship and Immigration Canada. (2016 a). Canada welcomes Syrian refugees. Retrieved August 17, 2016, from http://www.cic.gc.ca/english/refugees/welcome/

Citizenship and Immigration Canada. (2016 b). Facts and figures. Retrieved August 25, 2016, from http://www.cic.gc.ca/english/resources/statistics/menu-fact.asp

Conference Board of Canada. (n.d.). Immigration is Critical to Canada's Prosperity. Retrieved August 9, 2016, from http://www.conferenceboard.ca/topics/immigration/default.aspx

Curry, B. (2014, May 2). Everything you need to know about temporary foreign workers. The Globe and Mail. Retrieved August 24, 2016, from http://www.theglobeandmail.com/news/politics/temporary-foreign-workers-everything-you-need-to-know/article18363279/

Duncan, H. (2012, December 17). How global demographic and economic trends might affect Canada's immigration program: A Report of a Metropolis Conversation held at Citizenship and Immigration Canada (Rep.). Retrieved May 23, 2016, from Citizenship and Immigration Canada website: http://www.cic.gc.ca/english/resources/research/global-trends.asp

Ferrer, A. M., Picot, G., & Riddell, W. C. (2014). New Directions in Immigration Policy: Canada's Evolving Approach to the Selection of Economic Immigrants. Int Migr Rev International Migration Review,48(3), 846–867. doi:10.1111/imre.12121

Fleras, A. (2015). Immigration Canada: Evolving Realities and Emerging Challenges in a Postnational World. Vancouver: UBC Press.

Gross, D. M. (2014, April). Temporary Foreign Workers in Canada: Are They Really Filling Labour Shortages? (Rep. No. 407). Retrieved August 23, 2016, from CD Howe Institute website.

Chapter 4 References (cont.)

Heitz, J. (2016, February 27). The Refugee Crisis and the EU's Future. Retrieved May 23, 2016, from http://intpolicydigest.org/2016/02/27/the-refugee-crisis-and-the-eu-s-future/

Knowles, V. (2016). Strangers at our gates: Canadian immigration and immigration policy, 1540-2015. Toronto: Dundurn

Jandl, M. (1994). Is Migration Supply - or Demand - Determined? Some remarks on the ideological use of economic language. International Migration, 32(3), 467-476. doi:10.1111/j.1468-2435.1994.tb00165.x

Lenard, P. T. (2015, September 9). What future for Canada's immigration policy? Policy Options.

Li, W. (2009). Ethnoburb: The new ethnic community in urban America. Honolulu: University of Hawai'i Press.

Marcoux, J. (2016, July 05). Immigration numbers in Canada strong - but not compared to a century ago. Retrieved July 7, 2016, from http://www.cbc.ca/news/canada/manitoba/immigration-numbers-canada-1.3665172

Martin, S. (2010, July/August). Climate Change, Migration, and Governance. Global Governance,16(3), 397-414. Retrieved August 23, 2016, from http://www.jstor.org/stable/29764954

Mas, S. (2016, February 20). Temporary foreign worker program review to be launched by Liberals. Retrieved July 14, 2016, from http://www.cbc.ca/news/politics/temporary-foreign-worker-program-liberals-review-1.3453344

Mas, S. (2016, March 08). Liberals shift immigration focus to family reunification, refugee resettlement. Retrieved August 24, 2016, from http://www.cbc.ca/news/politics/liberals-immigration-levels-plan-2016-1.3479764

Meurrens, S. (2016, January 6). Supreme Court of Canada expands humanitarian and compassionate grounds. Retrieved May 23, 2016, from http://canadianimmigrant.ca/news-and-views/news/supreme-court-of-canada-expands-humanitarian-and-compassionate-grounds

Neborak, J. (2013, November). Family Reunification? A Critical Analysis of Citizenship and Immigration Canada's 2013 Reforms to the Family Class (Working paper No. No. 2013/8). Retrieved October 11, 2016, from http://www.ryerson.ca/content/dam/rcis/documents/RCIS_WP_Neborak_No_2013_8.pdf

Nekola, A. (2014, February 20). Remittance Flows Worldwide in 2012. Retrieved August 24, 2016, from http://www.pewsocialtrends.org/2014/02/20/remittance-map/

No Country for Old Men; Canada's Immigration Policy. (2015, January 10). The Economist (US).

Ortiz, A. (2015, September 08). Increasingly Mobile and Educated: The Future of Canadian Immigration. Retrieved May 23, 2016, from http://wenr.wes.org/2015/09/increasingly-mobile-educated-future-canadian-immigration

Qadeer, M., Agrawal, S. K., & Lovell, A. (2010, June 27). Evolution of Ethnic Enclaves in the Toronto Metropolitan Area, 2001–2006. Journal of International Migration and Integration / Revue De L'integration Et De La Migration Internationale, 11(3), 315-339. doi:10.1007/s12134-010-0142-8

Qadeer, M., & Kumar, S. (2006). Ethnic Enclaves and Social Cohesion. Canadian Journal of Urban Research, 15(2), 1-17. Retrieved November 16, 2016, from http://www.uwinnipeg.ca/faculty/ius/iusweb/cjur/pdfs/english/a-qadeer-eng.pdf

Suhasini, G. (2012, July 9). New policies could change the demographics of Canada. Retrieved May 23, 2016, from http://canadianimmigrant.ca/slider/new-policies-could-change-the-demographics-of-canada

The Canadian Press. (2015, November 24). Timeline: Canada and the Syrian refugee crisis. Retrieved August 29, 2016, from http://www.macleans.ca/politics/ottawa/timeline-canada-and-the-syrian-refugee-crisis/

Todd, D. (2014, July 31). Remittances: $24 billion a year sent home from Canada. Vancouver Sun. Retrieved August 24, 2016, from http://www.vancouversun.com/business/Remittances billion year sent home from Canada/10080290/story.html

Warner, K. (2010, August). Global environmental change and migration: Governance challenges [Abstract]. Global Environmental Change,20(3), 402-413. doi:10.1016/j.gloenvcha.2009.12.001

Webster, P. C. (2015, October 10). Canada criticised over refugee health-care restrictions. The Lancet, 386(10002), 1436. doi:10.1016/s0140-6736(15)00457-2

Westwood, R. (2013, February 19). Should Canada make it easier for immigrants to send money home? Maclean's.

Chapter 5 References

Associated Press. (2016, June 16). Venezuelan asylum claims in the US soar as economic crisis deepens. The Guardian. Retrieved September 13, 2016, from https://www.theguardian.com/world/2016/jun/16/venezuela-us-asylum-claims-increase-crisis-deepens

Benjamin Pace, C. (2016, September 8). Discussion with Cara Benjamin Pace, Newcomer Kitchen [Personal interview].

Boffey, D. (2016, January 30). Https://www.theguardian.com/technology/2016/jan/30/google-tory-battle-protect-30bn-tax-haven-bermuda. The Guardian. Retrieved September 13, 2016, from https://www.theguardian.com/technology/2016/jan/30/google-tory-battle-protect-30bn-tax-haven-bermuda

Brodzinsky, S. (2016, April 7). Colombia's road to peace: New militia threatens stability with bloodshed. The Guardian. Retrieved September 13, 2016, from https://www.theguardian.com/world/2016/apr/07/colombia-peace-talks-farc-eln-guerrilas-usuga-clan

Citizenship and Immigration Canada. (2016, August 22). Agricultural workers – Work temporarily in Canada. Retrieved September 13, 2016, from http://www.cic.gc.ca/english/work/permit-agriculture.asp

CNBC. (2014, August 12). 10 economies hit hard by climate change. Retrieved September 13, 2016, from http://www.cnbc.com/2014/08/12/10-countries-that-may-be-hit-hard-by-climate-change.html?slide=1

Duncan, H. (2012, December 17). How global demographic and economic trends might affect Canada's immigration program: A Report of a Metropolis Conversation held at Citizenship and Immigration Canada (Rep.). Retrieved May 23, 2016, from Citizenship and Immigration Canada website: http://www.cic.gc.ca/english/resources/research/global-trends.asp

Global Business Policy Council. (2015, August). "2020–Seven" Growth Economies (Rep.). Retrieved September 13, 2016, from AT Kearney website: https://www.atkearney.com/gbpc/detail/-/asset_publisher/0cePdOWatojD/content/2020-seven-growth-economies/10192

Harris, G. (2014, March 28). Borrowed Time on Disappearing Land. New York Times. Retrieved September 13, 2016, from http://www.nytimes.com/2014/03/29/world/asia/facing-rising-seas-bangladesh-confronts-the-consequences-of-climate-change.html?_r=0

Human Rights Watch. (2016). World Report 2016: Venezuela (Rep.). Retrieved September 14, 2016, from Human Rights Watch website: https://www.hrw.org/world-report/2016/country-chapters/venezuela

Knowledge @ Wharton. (2016, January 12). Have the BRICs Hit a Wall? The Next Emerging Markets [Web log post]. Retrieved September 13, 2016, from http://knowledge.wharton.upenn.edu/article/98411/

Knowmad. (2016). Migration and Remittances Factbook 2016 (Rep.). Retrieved August 24, 2016, from The World Bank Group website: http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1199807908806/4549025-1450455807487/Factbookpart1.pdf

Kramer, J. (2014, October 17). Yotam Ottolenghi on Why You Should Be Cooking with Dried Limes. Retrieved September 13, 2016, from http://www.bonappetit.com/people/chefs/article/yotam-ottolenghi-dried-limes

International Migration Institute. (2011, September). Global 'Megatrends' for Future International Migration (Issue brief). Retrieved September 13, 2016, from International Migration Institute website: https://www.imi.ox.ac.uk/publications/pb-09-11

Malenfant, E. C., Label, A., & Martel, L. (2010, March). Projections of the Diversity of the Canadian Population, 2006 to 2031 (Rep.). Retrieved September 12, 2016, from Statistics Canada website: http://www.statcan.gc.ca/pub/91-551-x/91-551-x2010001-eng.pdf

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of International Migration: A Review and Appraisal. Population and Development Review, 19(3), 431. doi:10.2307/2938462

Massey, Douglas S., 2009. "The Political Economy of Migration in the Era of Globalization" In International Migration and Human Rights: The Global Repercussions of US Policy". Ed Samuel Martinez (25-41). Berkeley: University of California Press

Nekola, A. (2014, February 20). Remittance Flows Worldwide in 2012. Retrieved August 24, 2016, from http://www.pewsocialtrends.org/2014/02/20/remittance-map/

No Country for Old Men; Canada's Immigration Policy. (2015, January 10). The Economist (US).

Chapter 5 References (cont.)

O'Neill, J. (2014, January 6). The Mint countries: Next economic giants? BBC Magazine. Retrieved September 13, 2016, from http://www.bbc.com/news/magazine-25548060

Otis, J. (2015, September 8). Inside Colombia and Venezuela's Border and Refugee Crisis. Retrieved September 13, 2016, from http://time.com/4025305/colombia-venezuela-borders/

Ricks, T. E. (2014, February 5). The Future of War?: Expect to see urban, connected, irregular 'zombie' conflicts. Retrieved September 13, 2016, from https://foreignpolicy.com/2014/02/05/the-future-of-war-expect-to-see-urban-connected-irregular-zombie-conflicts/

Scott, W. (1913). Immigration and Population. In A. Shortt & A. Doughty (Eds.), Canada and Its Provinces (Vol. 7, p. 589). Toronto: The ' Association of Canada.

Statistics Canada. 2013. National Household Survey (NHS) Profile. 2011 National Household Survey. Statistics Canada Catalogue no. 99-004-XWE. Ottawa. Released September 11, 2013. http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E (accessed September 12, 2016).

Statistics Canada. (2015, November 27). Postsecondary enrolments, by student status, country of citizenship and sex annual (number). Retrieved September 12, 2016, from http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=4770031

The World Bank. (2013, June 3). UN and World Bank Leaders: Resilience Is Vital to Africa's Promising Development Future [Press release]. News. Retrieved November 8, 2016, from http://www.worldbank.org/en/news/feature/2013/06/03/resilience-vital-africa-development-future

The World Bank. (2016, June). Global Economic Prospects (Rep.). Retrieved September 13, 2016, from The World Bank website: https://www.worldbank.org/en/publication/global-economic-prospects

The World Bank. (n.d.). What are emerging markets? Retrieved September 13, 2016, from https://datahelpdesk.worldbank.org/knowledgebase/articles/114958-what-are-emerging-markets

UNHCR. (2015). Global Trends 2015 (Rep.). Retrieved September 13, 2016, from UNHCR website: http://www.unhcr.org/global-trends-2015.html

World Economic Forum. (2016). The Global Risks Report 2016, 11th Edition (Rep.). Retrieved September 13, 2016, from World Economic Forum website: http://www3.weforum.org/docs/GRR/WEF_GRR16.pdf

Westwood, R. (2013, February 19). Should Canada make it easier for immigrants to send money home? Maclean's.

Chapter 6 Hotspot References

Adewunmi, B. (2015, June 24). 23 Nigerian Foods The Whole World Should Know And Love. Retrieved September 22, 2016, from https://www.buzzfeed.com/bimadewunmi/nigerian-foods-the-world-should-know-and-love

Akpodiogaga, P., & Odjugo, O. (2010). General Overview of Climate Change Impacts in Nigeria [Abstract]. Journal of Human Ecology,29(1), 47-55. Retrieved September 22, 2016, from https://www.researchgate.net/publication/229019531_General_overview_of_climate_change_impacts_in_Nigeria.

Arshad, A., & Fogarty, D. (2016, July 01). Palm oil companies ditch landmark Indonesian 'zero deforestation' pact. Retrieved September 23, 2016, from http://www.straitstimes.com/asia/se-asia/palm-oil-companies-ditch-landmark-indonesian-zero-deforestation-pact

Asia Pacific Foundation of Canada. (2014, February). Climate Change and the Risk of Displacement in Asia (Rep.). Retrieved May 27, 2016, from Policy Horizons Canada website: http://www.horizons.gc.ca/eng/content/climate-change-and-risk-displacement-asia

BBC Monitoring. (2016 a). Indonesia country profile. Retrieved September 23, 2016, from http://www.bbc.com/news/world-asia-pacific-14921239

BBC Monitoring. (2016 b). Turkey v Syria's Kurds v Islamic State. Retrieved September 23, 2016, from http://www.bbc.com/news/world-middle-east-33690060

BBC News. (2007, September 26). Should it be Burma or Myanmar? Retrieved October 11, 2016, from http://news.bbc.co.uk/2/hi/uk_news/magazine/7013943.stm

BBC News. (2016, February 11). Nigeria country profile. Retrieved September 22, 2016, from http://www.bbc.com/news/world-africa-13949550

Castanho, T., & Bianchi, L. (2014). Brazilian food. Firefly Books.

Duguid, N. (2012). Burma: Rivers of flavor. New York: Artisan.

Embassy of the Republic of Sudan. (n.d.). Sudanese Food. Retrieved September 22, 2016, from http://www.sudanembassy.org/index.php/sudanese-food

Gritzer, D. (2014, October 07). The Best Things I Ate in Mexico City and Puebla. Retrieved September 22, 2016, from http://www.seriouseats.com/2014/10/best-things-i-ate-in-mexico-city-puebla.html

Harris, G. (2014, March 28). Borrowed Time on Disappearing Land. New York Times. Retrieved September 13, 2016, from http://www.nytimes.com/2014/03/29/world/asia/facing-rising-seas-bangladesh-confronts-the-consequences-of-climate-change.html?_r=0

Hossain, L. (2015, April 27). Panch Phoron, A Must Spice Blend in Bengali Cooking. Retrieved September 23, 2016, from http://withaspin.com/2014/04/27/panch-phoron-a-must-spice-blend-in-bengali-cooking/

Hossain, L. (2016, February 10). Unique Flavorful Bangladeshi Chicken Roast. Retrieved September 23, 2016, from http://withaspin.com/2016/02/10/bangladeshi-style-chicken-roast-recipe/

Human Rights Watch. (2016). World Report 2016: Burma (Rep.). Retrieved September 23, 2016, from Human Rights Watch website: https://www.hrw.org/world-report/2016/country-chapters/burma

Human Rights Watch. (2016). World Report 2016: Venezuela (Rep.). Retrieved September 14, 2016, from Human Rights Watch website: https://www.hrw.org/world-report/2016/country-chapters/venezuela

Newcomer Kitchen. (2016, September 19). Newcomer Kitchen. Retrieved September 23, 2016, from http://thedepanneur.ca/about/newcomerkitchen/

OCHA - United Nations Office for the Coordination of Humanitarian Affairs. (2016, October). Syrian Arab Republic. Retrieved November 08, 2016, from http://www.unocha.org/syria

Oseland, J. (2006). Cradle of flavor: Home cooking from the spice islands of Indonesia, Malaysia, and Singapore. New York: Norton.

Presilla, M. E. (2012). Gran cocina latina: The food of Latin America. New York: Norton & Company.

Chapter 6 Hotspot References (cont.)

Roden, C. (2006). Arabesque: A taste of Morocco, Turkey, and Lebanon. New York: Knopf.

SBS Food. (n.d.). Sudanese Food. Retrieved September 22, 2016, from http://www.sbs.com.au/food/cuisine/sudanese

Sudanese Kitchen. (n.d.). Straight Outta Khartoum | Sudanese Kitchen. Retrieved September 23, 2016, from http://www.sudanesekitchen.com/

The Economist. (2016, June 04). Cleaning up: More visible scandals may mean that a country is becoming less corrupt. Retrieved September 22, 2016, from http://www.economist.com/news/leaders/21699917-more-visible-scandals-may-mean-country-becoming-less-corrupt-cleaning-up

Thurman, J. (2016, March 23). A Restaurant Guide to L.A.'s Little Bangladesh. Retrieved September 23, 2016, from http://www.laweekly.com/restaurants/a-restaurant-guide-to-las-little-bangladesh-6710950

United Nations. (2016). Member States. Retrieved November 7, 2016, from http://www.un.org/en/member-states/index.html#gotoM

United Nations High Commissioner for Refugees (UNHCR). (2016, September 18). UNHCR Syria Regional Refugee Response. Retrieved September 23, 2016, from http://data.unhcr.org/syrianrefugees/regional.php

Vidal, J. (2011, November 21). Sudan – battling the twin forces of civil war and climate change. Retrieved October 14, 2016, from https://www.theguardian.com/environment/2011/nov/21/sudan-civil-war-climate-change

Zoepf, K. (n.d.). Best Syrian Food Unveiled. Retrieved September 23, 2016, from http://www.foodandwine.com/articles/best-syrian-food-unveiled

Chapter 6 Emerging Food Trend References

Agriculture and Agri-Food Canada. (2015, July 30). Impact of Climate Change on Canadian Agriculture. Retrieved September 28, 2016, from http://www.agr.gc.ca/eng/science-and-innovation/agricultural-practices/climate/future-outlook/impact-of-climate-change-on-canadian-agriculture/?id=1329321987305

Baraniuk, C. (2016, August 2). These toxins in our food almost certainly shouldn't be there. Retrieved September 28, 2016, from http://www.bbc.com/future/story/20160726-toxins-uncovered-at-a-food-fraud-lab

Beans, C. (2016, August 18). Better Burgers, More Healthful Hot Dogs: Could A Pinch Of Seaweed Be The Answer? Retrieved September 28, 2016, from http://www.npr.org/sections/thesalt/2016/08/18/489662223/better-burgers-more-healthful-hot-dogs-could-a-pinch-of-seaweed-be-the-answer

Blum, D. (2012, March 12). 5. Food That Lasts Forever.Time. Retrieved from http://content.time.com/time/magazine/article/0,9171,2108051,00.html

Boyd, H. (2014, May 28). 3D Printer Will Print Futuristic Fruit On Demand. Retrieved from http://www.psfk.com/2014/05/3d-printed-fruit.html

Charles, D. (2016, June 16). How Canada Became A Greenhouse Superpower. Retrieved September 28, 2016, from http://www.npr.org/sections/thesalt/2016/06/16/473526920/how-canada-became-a-greenhouse-superpower

Chef Watson with Bon Appétit. (2015). Retrieved November 12, 2015, from https://www.ibmchefwatson.com

Cole, B. (2016, July 29). Biotech Wants to Make Fake, Sustainable Shrimp Out of Algae. Retrieved September 28, 2016, from https://www.wired.com/2016/07/google-may-start-serving-shrimp-made-red-algae/

Cousteau, J. (2014, March 17). The Future of Sustainable Fish Farming. Retrieved September 28, 2016, from http://www.oceanfutures.org/news/blog/future-sustainable-fish-farming

Culinary Institute of America. (2015, March 10). 3D Food Printing Comes to the CIA. Retrieved November 21, 2015, from http://www.ciachef.edu/fh-3dprinting/

Chapter 6 Emerging Food Trend References (cont.)

Dearden, L. (2016, May 22). France makes it illegal for supermarkets to destroy edible food in effort to cut waste. Retrieved September 28, 2016, from http://www.independent.co.uk/news/world/europe/france-makes-it-illegal-for-supermarkets-to-destroy-edible-food-in-effort-to-cut-waste-10268849.html

De Jong, J. (2015 a). What's on the Table? Dining in the Future Project 1: Scanning (pp. 15-16, Rep.).

De Jong, J. (2015 b). What's on the Table? Dining in the Future Project 1: Scanning (pp. 17-18-20, Rep.).

De Jong, J. (2015 c). What's on the Table? Dining in the Future Project 1: Scanning (pp. 19-20, Rep.).

Eisen, L. (Director). (2015, October 29). It Takes Guts [Television series episode]. In The Nature of Things. CBC. Retrieved September 28, 2016, from http://www.cbc.ca/natureofthings/episodes/it-takes-guts

Events With Google. (2016). The Restaurant. Retrieved September 28, 2016, from https://events.withgoogle.com/Small-World/the-restaurant/

Exo Inc. (2016). Exo | Made with Cricket Flour Protein. Retrieved September 28, 2016, from https://www.exoprotein.com/

Fabricant, F. (2016, March 29). The Chinese Club Is Reborn in Brooklyn. Retrieved September 28, 2016, from http://www.nytimes.com/2016/03/30/dining/chinese-club-williamsburg-restaurant.html

Farmopolis. (2016). Farmopolis. Retrieved September 28, 2016, from http://www.farmopolis.com/about/

Gross, L. (2016, August 9). Productive, Protein-Rich Breadfruit Could Help The World's Hungry Tropics. Retrieved September 28, 2016, from http://www.npr.org/sections/thesalt/2016/08/09/487094806/productive-protein-rich-breadfruit-could-help-the-worlds-hungry-tropics

Huen, E. (2015, July 31). 3D Food Printing: Is It Ready for Luxury Dining? Retrieved November 21, 2015, from http://www.forbes.com/sites/eustaciahuen/2015/07/31/3d-food-printing-is-it-ready-for-luxury-dining/

Hutchings, E. (2015, August 7). From Two Weeks to Two Years: Powdered Food Curbs Waste, Saves Lives.PSFK.Retrieved from http://www.psfk.com/2015/08/powdered-food-waste-disaster-relief.html

IKEA, IDEO, TU Eindhoven, & Lund University. (2015). Concept Kitchen 2025. Retrieved November 12, 2015, from http://www.conceptkitchen2025.com/

IntraFish. (2016, September 1). Supplier of land-based aquaculture systems sees sales jump 38%. Retrieved September 28, 2016, from http://www.intrafish.com/aquaculture/775679/supplier-of-land-based-aquaculture-systems-sees-sales-jump-38-percent

Kim, K., Schleuss, J., & Krishnakumar, P. (2015, April 7). 228 gallons of water were used to make this plate. Retrieved September 28, 2016, from http://graphics.latimes.com/food-water-footprint/

Klaiman, D (2015). What's on the Table? Dining in the Future Project 1: Scanning (Rep.).

Kogi BBQ Taco Truck Catering. (2016). About Kogi. Retrieved September 28, 2016, from http://kogibbq.com/about-kogi/

Laughlin, S., & Rees, T. (2014, July 14). MyBiome. Retrieved October 11, 2016, from https://www.lsnglobal.com/micro-trends/article/16127/mybiome

Leu, C. (2016, July 19). Know Your Meat-and Bugs. Introducing the Periodic Table of Protein. Retrieved September 28, 2016, from https://www.wired.com/2016/07/sustainable-proteins/

Levasseur, J., & Kubinec, V. (2014, January 09). Pesticide residue found on nearly half of organic produce. Retrieved September 28, 2016, from http://www.cbc.ca/news/canada/manitoba/pesticide-residue-found-on-nearly-half-of-organic-produce-1.2487712

Lin, B. B. (2011, March). Resilience in Agriculture through Crop Diversification: Adaptive Management for Environmental Change. BioScience, 61(3), 183-193. doi:10.1525/bio.2011.61.3.4

Chapter 6 Emerging Food Trend References (cont.)

LIVIN Farms. (n.d.). Start a food movement with our home mealworm farm. Retrieved September 28, 2016, from http://www.livinfarms.com/

Lucky Peach. (2016). Recipes - Lucky Peach. Retrieved September 28, 2016, from http://luckypeach.com/recipes/

Marks, P. (2014, January 18). Vertical farms sprouting all over the world | New Scientist. New Scientist. Retrieved from https://www.newscientist.com/article/mg22129524-100-vertical-farms-sprouting-all-over-the-world/

McCandless, L. (2016, March 17). $24M grant aims to combat global wheat crop threats. Retrieved September 28, 2016, from http://news.cornell.edu/stories/2016/03/24m-grant-aims-combat-global-wheat-crop-threats

Memphis Meats. (n.d.). Our Story. Retrieved September 28, 2016, from http://www.memphismeats.com/about-us/

Mishan, L. (2016, September 1). At Tsion Cafe in Harlem, Food From Ethiopia via Israel. Retrieved September 28, 2016, from http://www.nytimes.com/2016/09/07/dining/tsion-cafe-harlem.html

Munchies. (2014, July 28). Ants, Mayo, and Coffee from Chef Enrique Olvera. Retrieved September 28, 2016, from https://www.youtube.com/watch?v=IHP6lyLKfhQ

National Geographic Live. (2015). Revolutionizing the Way We Grow Food. Retrieved from http://video.nationalgeographic.com/video/ng-live/151027-harper-technology-food-lecture-nglive

Nicolussi, R. (2015 a). What's on the Table? Dining in the Future Project 1: Scanning (pp. 30-31, Rep.).

Nicolussi, R. (2015 b). What's on the Table? Dining in the Future Project 1: Scanning (pp. 24-25, Rep.).

Nowakowski, K. (2015, September 16). Why Getting Nepal the Right Seeds After the Earthquakes Matters. Retrieved September 28, 2016, from http://theplate.nationalgeographic.com/2015/09/16/why-getting-nepal-the-right-seeds-after-the-earthquakes-matters/

Nuttall-Smith, C. (2015, September 29). Meet the father-son farmer duo revolutionizing Ontario's shrimp business. Retrieved September 28, 2016, from http://www.theglobeandmail.com/life/food-and-wine/food-trends/big-shrimpin-the-success-of-shrimp-farming-in-ontario/article26584626/

Original Unverpackt. (n.d.). Über Original Unverpackt / Original Unverpackt. Retrieved September 28, 2016, from http://original-unverpackt.de/ueber-original-unverpackt/

Palomino, J. (2015, June 7). Is Salmon Raised on Land the Future of Seafood? Retrieved September 28, 2016, from http://news.nationalgeographic.com/2015/06/150607-salmon-aquaculture-canada-fish-farm-food-world/

Pasick, A. (2014, June 23). Nestle is developing a Soylent-like "nutrient Nespresso" . Retrieved September 28, 2016, from http://qz.com/224637/nestle-is-developing-a-soylent-like-nutrient-nespresso/

Perfect Day Foods. (2016). Perfect Day: All the dairy you love, with none of the dairy cows. Retrieved September 28, 2016, from http://www.perfectdayfoods.com/

Preston, E. (2015, September 17). How NASA Is Solving the Space Food Problem. Eater. Retrieved November 17, 2015, from http://www.eater.com/2015/9/17/9338665/space-food-nasa-astronauts-mars

Reuters. (2016, January 11). Nestle signs $120 million deal with Seres for 'healthy gut' drugs. Retrieved September 28, 2016, from http://www.reuters.com/article/us-nestle-seres-deals-idUSKCN0UP1VP20160111

Richardson Centre for Functional Foods and Nutraceuticals. (2016). About Us. Retrieved September 28, 2016, from http://umanitoba.ca/centres/rcffn/aboutus.html

Romero, E. D. (2016, August 31). With Water In Short Supply, One California Farmer Grows Feed Indoors. Retrieved September 28, 2016, from http://www.npr.org/sections/thesalt/2016/08/31/491927486/with-water-in-short-supply-california-ranchers-grow-their-feed-indoors

Rosa Labs. (2016). Don't skip breakfast. Drink Coffiest. Retrieved September 28, 2016, from https://www.soylent.com/product/coffiest/

Chapter 6 Emerging Food Trend References (cont.)

Rundle, M. (2015, October 15). Slaughter-free leather will make our world 'more cultured' Retrieved September 28, 2016, from http://www.wired.co.uk/article/andras-forgacs-modern-meadow-leather-wired-2015

Rupp, R. (2014, July 10). Killer Fungus Could Threaten World Food Supply. Retrieved September 28, 2016, from http://theplate.nationalgeographic.com/2014/07/10/killer-fungus-could-threaten-world-food-supply/

Schwartz, A. (2015, April 01). The $325,000 Lab-Grown Hamburger Now Costs Less Than $12. Retrieved September 28, 2016, from https://www.fastcoexist.com/3044572/the-325000-lab-grown-hamburger-now-costs-less-than-12

Scott, J. (2014, May 24). My No-Soap, No-Shampoo, Bacteria-Rich Hygiene Experiment. Retrieved September 28, 2016, from http://www.nytimes.com/2014/05/25/magazine/my-no-soap-no-shampoo-bacteria-rich-hygiene-experiment.html?_r=0

Siner, E. (Writer). (2016, August 25). Http://www.npr.org/sections/thesalt/2016/08/25/491357920/the-aztecs-once-revered-it-will-you-fall-for-amaranth-too [Radio series episode]. In All Things Considered. Nashville, Tennessee: Nashville Public Radio. Retrieved September 28, 2016, from http://www.npr.org/sections/thesalt/2016/08/25/491357920/the-aztecs-once-revered-it-will-you-fall-for-amaranth-too

The Algae Factory. (2014). The dark chocolate. Retrieved September 28, 2016, from http://thealgaefactory.com/the-chocolate/

ThisFish. (2013). What Is ThisFish. Retrieved September 28, 2016, from http://thisfish.info/about/what/

Toor, A. (2013, May 4). Color-changing gloves detect airborne toxins with shades of blue. The Verge. Retrieved November 15, 2015, from http://www.theverge.com/2013/5/4/4299528/fraunhofer-gloves-change-color-in-presence-of-toxins

Wagner, L. (2015, September 23). Syrian Civil War Prompts First Withdrawal From Doomsday Seed Vault In The Arctic. Retrieved September 28, 2016, from http://www.npr.org/sections/thetwo-way/2015/09/23/442858657/syrian-civil-war-prompts-first-withdrawal-from-doomsday-seed-vault-in-the-arctic

Warner, K., Mustain, P., Carolin, C., Disla, C., Golden Kroner, R., Lowell, B., & Hirshfield, M. (2015, October). Oceana Reveals Mislabeling of America's Favorite Fish: Salmon (Rep.). Retrieved September 28, 2016, from Oceana website: http://usa.oceana.org/sites/default/files/salmon_testing_report_finalupdated.pdf

Whelan, L. (2016, July 19). 11 Things Big Ag Crops Can Learn from Their Wild Relatives. Retrieved September 28, 2016, from https://www.wired.com/2016/07/best-heirloom-wild-vegetables/

Whyte, J. (2015). What's on the Table? Dining in the Future Project 1: Scanning (pp. 39-40, Rep.).

Zaraska, M. (2016, May 2). Lab-grown meat is in your future, and it may be healthier than the real stuff. Retrieved September 28, 2016, from https://www.washingtonpost.com/national/health-science/lab-grown-meat-is-in-your-future-and-it-may-be-healthier-than-the-real-stuff/2016/05/02/aa893f34-e630-11e5-a6f3-21ccdbc5f74e_story.html

Zax, D. (2010, December 15). For Eco-Friendly Santas: Algae Milk and Cookies. Retrieved September 28, 2016, from https://www.fastcompany.com/1709540/eco-friendly-santas-algae-milk-and-cookies

Zoran, A. and Coelho, M. (2010) "Cornucopia: The Concept of Digital Gastronomy." in Leonardo: Journal of the International Society for the Arts, Sciences and Technology. Volume 44, Number 5, October 2011, pp. 425-431.

Chapter 7 References

Abitbol, V. (2013, September 29). Ful Sudani - Traditional Sudanese Recipe | 196 flavors. Retrieved October 11, 2016, from http://www.196flavors.com/2013/09/29/sudan-ful-sudani-peanut-macaroons/

Alford, J., & Duguid, N. (2005). Mangoes & curry leaves: Culinary travels through the great subcontinent. New York: Artisan.

Camorra, F. (2015, October 11). Panch-phoran potatoes. Retrieved October 11, 2016, from http://www.goodfood.com.au/recipes/panchphoran-potatoes-20151011-44bqm

Castanho, T., & Bianchi, L. (2014). Brazilian food. Firefly Books.

Duguid, N. (2012). Burma: Rivers of flavor. New York: Artisan.

Hossain, L. (2016, February 10). Unique Flavorful Bangladeshi Chicken Roast. Retrieved October 11, 2016, from http://withaspin.com/2016/02/10/bangladeshi-style-chicken-roast-recipe/

IBM & Institute of Culinary Education. (2015). Cognitive cooking with Chef Watson: Recipes for innovation from IBM & the Institute of Culinary Education.

Kadé-Badra, D., & Badra, E. (2013). Flavours of Aleppo: Celebrating Syrian cuisine.

Koleosho, F. (2013, August 13). Jollof Rice-An Ultimate Guide. Retrieved October 11, 2016, from http://funke-koleosho.blogspot.ca/2013/08/jollof-rice-ultimate-guide-b.html

McGruther, J. (2014). Traditional Nigerian Tigernut Milk (Kunnu Aya). Retrieved October 11, 2016, from http://nourishedkitchen.com/tigernut-milk-kunnu-aya/

Oseland, J. (2006). Cradle of flavor: Home cooking from the spice islands of Indonesia, Malaysia, and Singapore. New York: Norton.

Presilla, M. E. (2012). Gran cocina latina: The food of Latin America. New York: Norton & Company.

Regan, I. (2016, August 24). Elote Pierogis - Lucky Peach. Retrieved October 11, 2016, from http://luckypeach.com/recipes/elote-pierogis/

Samuelsson, M. (2006). The soul of a new cuisine: A discovery of the foods and flavors of Africa. Hoboken, NJ: John Wiley & Sons.

Turkish Food & Recipes. (2013, May 5). Lahmacun. Retrieved October 11, 2016, from http://www.traditionalturkishcooking.com/2013/05/lahmacun-lahmacun-also-known-as-turkish.html

Figure 32: Celebrating with a delicious meal. Image by Lily Lvnatikk from Unsplash under Creative Commons Zero license

Figure 33, right: A food truck in Kitchener, Ontario specialising in blending flavours from around the world.

Emerging Food Trends

Creolization

(Social; mature, high intensity)

This new global cuisine is based on blending elements from around the world. Unlike the "fusion" cuisines of the past, this food is not watered down, rather it is globally aware, bold and fearless.

Signals:

- Google's Small World Pop-Up restaurant featured chefs from a variety of cuisines, such as Afro-Asian-American chef JJ Johnson (Events With Google, 2016).
- The Chinese Club is a Indian-style Chinese restaurant in Brooklyn, much like the Hakka-Chinese food popular in Toronto (Fabricant, 2016).
- Food Magazine Lucky Peach has numerous creolized recipes for the globally-savvy and progressive diner (Lucky Peach, 2016).
- Tsion Cafe in Harlem sells Ethiopian food with Jewish and South American influences (Mishan, 2016).
- The Kogi food truck in Los Angeles pioneered Korean-Mexican cuisine, which has since become popular across the US and Canada (Kogi BBQ Taco Truck Catering, 2016).

Implications:

- Canadians, and indeed citizens worldwide, will continue to mix and match ingredients from around the world to make a innovative dishes and exciting flavour combinations.
- Some of these dishes may eventually become distinctly "Canadian" dishes as time passes.

Alt-Proteins: 'ick'-less crickets

(Social, Environmental; emerging, low intensity)

(based on work by Roxanne Nicolussi, 2015 a)

Seaweed, algae and insects are being reinvented to provide a sustainable - and more palatable - protein source.

Signals:

- Chef Enrique Olvera of Mexico City's Pujol has become famous for a dish with corn and chicatana ants, a traditional Oaxaca ingredient (Munchies, 2014).
- A periodic table of protein shows there are many options for the consumer beyond beef and tofu (Leu, 2016).
- New Wave Foods is trying to make shrimp made out of red algae (Cole, 2016).
- Food scientists are experimenting with adding seaweed to processed meats like hot dogs to boost nutrition (Beans, 2016).
- LIVIN Farms is the first "desktop hive for edible insects" (LIVIN Farms, n.d.)
- The Algae Factory's chocolate has spirulina, a type of algae (The Algae Factory, 2014).
- Exo Protein's bars are made with cricket flour (Exo Inc., 2016).
- An article in Fast Company features various companies experimenting with algae, making products such as infant formula and milk and cookies (Zax, 2010).

Implications:

- As traditional proteins become more expensive, these protein alternatives could be worked seamlessly into various meals. More "approachable" formats, such as algae milk and cricket flour, may first be adopted by Canadians, with whole bugs and meal worms potentially gaining traction in the more distant future.

Forever Fresh

(Technological; emerging, low intensity) (de Jong, 2015 a)

From High Pressure Processing to food powders, innovative methods for long-term food preservation are increasing food security, minimizing waste, and boosting food safety.

Signals:

- In an effort to develop food that lasts for long journeys, NASA recently developed a bread pudding that stays fresh for a year (Preston, 2015).
- Lund University students recently created "FoPo", a freeze-dried food powder made of near-expired foods like bananas and raspberries (Hutchings, 2015).
- German researchers recently developed a colour changing material that detects toxins. One potential use case was identifying spoiled food through its packaging (Toor, 2013).
- Developments in High Pressure Processing may soon "allow the military to offer sandwiches stuffed with ingredients like tuna salad and mayonnaise" (Blum, 2012).
- Oregon State food scientist Yanyun Zhao has developed an antibacterial food coating made of chitosan and lysozyme for delicate fruits and vegetables (Freedman, 2011).

Implications:

- As Canadians rekindle their interest in food preservation, methods that are used in other countries may become more commonplace in the Canadian diet.
- Highly perishable foods that were difficult to ship abroad may soon be more accessible to Canadian consumers.

My Biome

(Technological; emerging, medium intensity) (name inspired by Laughlin and Rees, 2014)

A growing understanding of how our unique gut bacteria affects health is leading us to rethink our approach to food and customise diets to our unique microbiome.

Signals:

- Nestle signed $120 million deal with Seres to develop 'healthy gut' drugs (Reuters, 2016).
- The Nature of Things' documentary "It Takes Guts" explores the role that our gut bacteria play in influencing our health, including our weight (Eisen, 2015).
- Several companies, including L'Oreal, are exploring how bacteria can be used in beauty products (Scott, 2014).
- The Personalized Nutrition Project uses numerous metrics - including one's microbiome - to design a personalised diet (Yong, 2015).

Implications:

- Personalised probiotic cultures may be developed as a common food additive.
- Fermented foods will become a celebrated part of the diet, due to their benefits to one's microbiome.

Disaster Proof Dining

(Technological; emerging, medium intensity)

Securing our food system against natural and human-driven disasters, such as enhancing crop resilience and preserving unique strains.

Signals:

- Wheat stem rust Ug99 is threatening 90% of the world's wheat supply, and GMOs may be the only option to save the grain (Rupp, 2014).
- The Bill and Melinda Gates Foundation gave $24M to Cornell University to combat global wheat crop threats (McCandless, 2016).
- In 2015 the first withdrawal from the Svalbard Seed Vault – which preserves seed samples from around the world – was made in reaction to the civil war in Syria (Wagner, 2015).
- Agriculture and Agri-Food Canada has outlined the risks of climate change, including reduced crop yields through more frequent droughts and increased pests and weeds (Agriculture and Agri-Food Canada, 2015).
- Plant geneticists are now working to restore genes from heirloom plants into modern monocultural strains to increase plant resistance (Whelan, 2016).
- Amaranth may be the next big grain due to its nutritional content and drought resistance, according to an article by NPR (Siner, 2016).
- After the recent earthquake in Nepal, several crowdsourced initiatives are attempting to regenerate the local seed stock (Nowakowski, 2016).
- A paper by Brenda B. Lin of the Environmental Protection Agency profiles the various agricultural alternatives to monoculture – from polyculture to agroforestry – as methods to increase crop resilience against pests, diseases, and climate shifts (Lin, 2011).

Implications:

- In a world of growing refugee populations, there may be increasing demand to preserve and revive foods from home in their new country.
- New strains of produce, some with elements of heirloom genetics, will add new diversity to the produce aisle in an effort to make a more resilient food system.

Digital Gastronomy

(Technological; emerging, medium intensity) (de Jong, 2015 c)

From digital assistants to 3D printing to cognitive cooking, computers are having a greater influence over what and how we eat.

Signals:

- A collaboration between IBM and Bon Appetit, Chef Watson's cognitive cooking engine scans recipe archives and analyses molecular compounds to develop unique and unconventional recipes (Chef Watson with Bon Appétit, 2015).
- A Table for Living uses motion sensors, projectors and cameras to create an immersive chef assistant. It identifies ingredients and suggests recipe options, walks users through food preparation, and provides ingredient information (IKEA et al., 2015).
- MIT Media Lab students created the Cornucopia 3D food printer, an early signal in the rise in 3D printed food (Zoran and Coelho, 2010).
- The Culinary Institute of America (CIA) is currently exploring "the future of three-dimensional (3D) printed food and artisan culinary methods" (Culinary Institute of America, 2015).
- In May 2015, Chef Mateo Blanch served the first five course 3D printed meal at a pop-up restaurant in London (Huen, 2015).
- Dovetailed's 3D printer makes "fruit" made from fruit juice and alginic acid on demand (Boyd, 2014).

Implications:

- Digital Gastronomy tools such as cognitive cooking engines and immersive cooking assistants could be as normal as the mixer and blender in the kitchen, encouraging chefs to experiment with traditional or creolized foods
- With cognitive cooking engines finding new flavour combinations, and 3D printing requiring soft and pliable media, new ingredient combinations and textures could enter our culinary lexicon.
- 3D printed food could create new and novel experiences with respect to plating and ingredients, and may perhaps bring new rituals around special meals. For example, children could 3D print special cookies for Santa as part of the Christmas Eve ritual.
- However, in order to become a regular fixture in the home, there are numerous barriers to overcome. Printers and printable food "material" will need to be widely available and affordable, and 3D printed food will have to move beyond the novel into the practical. For example, printing will have to be faster and capable of printing a broader range of foods.

The Protein Lab

(Environmental, Technological; emerging, high intensity) (based on work by Donna Klaiman, 2015)

The continuing promise of cultured meat and dairy as a sustainable vegan food source.

Signals:

- Memphis Meats is one of the companies pioneering lab-grown (or cultured) meat, and fried up its first meatball in 2016 (Memphis Meats, n.d.)
- Perfect Day milk is a cultured milk product which hopes to soon hit store shelves (Perfect Day Foods, 2016).
- The infamous $325 000 lab grown burger from 2013 would have cost $12 to make in 2015 (Schwartz, 2015).
- An article from the Washington Post boldly states "Lab Grown Meat is in Your Future" (Zaraska, 2016).
- Lab-grown leather maker Modern Meadow is also experimenting with lab-grown jerky (Rundle, 2015).

Implications:

- While it is not likely that cultured meat will have the look and texture of a t-bone steak in the near future, processed meats such as ground beef may be an affordable and ethical food alternative that will be commonplace on the Canadian table.
- As these foods become more commonplace, vegetarianism and veganism may be more commonplace, as those who were previously unwilling to give up meat and dairy now have a more realistic substitute.

Fishing on Land

(Environmental, Technological; emerging, high intensity) (based on work by Roxanne Nicolussi, 2015 b)

The worrisome overfishing of the seas has prompted the birth of sustainable aquaculture in land-based systems.

Signals:

- First Nations owned and Vancouver Island based Kuterra is one of the few land-based sustainable aquaculture farms (Palomino, 2015).
- First Ontario Shrimp is the first Pacific White Shrimp farm in Ontario, and is land-based (Nuttall-Smith, 2015).
- "Norwegian land-based aquaculture equipment supplier Artec Aqua AS reported solid growth last year with a 38 percent in sales in 2015" (Intrafish, 2016).
- A letter from the President of the Ocean Futures Society highlights work by University of Maryland's Department of Marine Biotechnology "to develop next-generation sustainable aquaculture that counters the sustainability issues of the current systems in place" (Cousteau, 2014).

Implications:

- If land-based aquaculture develops as promised, it may be easier for Canadians to purchase locally farmed fish guilt-free, even ones that aren't normally available locally.
- Unique species of fish used for ethnic food may be easier to acquire locally.
- However, large fish will still be difficult to farm. Wild caught fish will become a luxury item, and consumers will be more likely to eat "every part" of the fish.

The Next Greenhouse

(Environmental, Technological; emerging, high intensity) (de Jong, 2015 b)

Developments in aero and aquaponics are helping to create a local, low-impact food resource.

Signals:

- MIT's Caleb Harper has championed aeroponic farming, a low-water way of indoor farming powered by smart technology, in the Open Agricultural Initiative (National Geographic Live, 2015).

- Dairy farmer Romeo Dacarrett is farming his grain crops indoors in reaction to the California drought (Romero, 2016).

- An article from NPR explored how Canada became "a greenhouse superpower", including the widespread success of greenhouses in Leamington, ON (Charles, 2016).

- An article in New Scientist profiles the large number of vertical farms popping up worldwide (Marks, 2014).

- Farmopolis in London is a new type of urban farm –"a micro-city of experiential production" – with plans for "a makers-space and food incubator, large-scale event and festival spaces, hydroponic farming and sustainable innovations, green spaces and orchards, farm-to-table restaurants and major art commissions, community engagement and event programming year-round across the harvest seasons." (Farmopolis, 2016).

Implications:

- These developments in vertical and aeroponic farming may make it possible for Canadians to grow local food year round.

- With a small footprint and little resource demand, perhaps more obscure, smaller scale crops could be farmed to accommodate demands from local communities (such as immigrants).

Waste Not Want Not

(Environmental, Economic, Values; mature, medium intensity) (based on work by Jenny Whyte, 2015)

The movement to reduce the unsettling degree of water and food waste with creative solutions.

Signals:

- The Los Angeles Times published a tool that visualises the water usage of various popular foods, raising awareness of excessive water use by California farmers (Kim et al., 2015).

- In reaction to the California drought, Wired magazine gives five rules for drought-free eating, including eating more leafy greens and choosing pistachios over other water-hungry nuts (Pearlstein, 2016).

- Amaranth may be the next big grain due to its nutritional content and drought resistance, according to an article by NPR (Siner, 2016).

- A journalist for online food magazine Food52 chronicled her week of cooking "waste free" (Weiner, 2016).

- Original Unverpakt is a Berlin-based supermarket that has removed all packaging (Original Unverpakt, n.d.)

- In 2015 France banned the disposal of edible foods in an effort to reduce food waste (Dearden, 2016).

Implications:

- Water and waste metrics may be required by on food packaging, and consumers will make choices based on the amount of waste that a food produces.

- Alternatively, the government may impose a surtax proportional to the resources used for producing certain food.

- Much like the way consumers today demand "organic" and "local", "low water" and "less waste" foods may be a purchase criteria by consumers.

- Consumers may also be interested in recipes that maximise use of food waste, especially in a world of higher food prices.

Food Fraud

(Political; emerging, high intensity)

Increasing awareness of false labelling is leading to a push for clarity, transparency and stricter food regulations.

Signals:

- In the wake of the 2013 horse meat scandal in Europe, the BBC covered a food lab in Belfast that checks products for proper labelling. In the interview one sample of oregano found 40% "non-oregano" plant matter (Baraniuk, 2016).
- A news clip from CBC in 2014 stated that "pesticide residue was found on half of all organic produce" (Levasseur and Kubinec, 2014).
- This Fish is a startup that traces the origins of fish to ensure accurate labelling (ThisFish, 2013).
- A study by US group Oceana found as much as 43% of salmon collected in samples were mislabeled, whether "wild" when it was farmed, or "Pacific" when it was Atlantic (Warner et al., 2015).

Implications:

- Clear traceability of food, including where it came from, how it was processed, and its nutritional content, may be required.
- This requirement may in turn increase the price of "pure" foods, making them inaccessible by the masses.
- The rising numbers of certification programs may become confusing to consumers and businesses.

Functional Foods

(Values; mature, high intensity)

Our continuing obsession with nutritional content and health benefits is leading us to prioritise nutrition, sometimes over flavour or experience.

Signals:

- Coffiest is the latest innovation from Soylent (by Rosa Labs), providing complete nutrition and caffeine in a bottle (Rosa Labs, 2016).
- While hailed as a food to feed the hungry tropics, breadfruit may be a future superfood due to its high protein and vitamin content (Gross, 2016).
- Nespresso has developed a personalised nutrient-rich coffee pod (Pasick, 2014).
- Opened in 2006, University of Manitoba's Richardson Centre for Functional Foods and Nutraceuticals researches " improvement of health and nutrition and to support the development of an economically viable functional foods industry" (Richardson Centre for Functional Foods and Nutraceuticals, 2016).

Implications:

- New food products with "boosted" nutritional content might enter the market, especially "superfoods".

Bon Appetit.