1 Introduction

The *Oxford Dictionary of Food and Nutrition* (Bender 2014) defines ‘nutrition’ as ‘the branch of science that studies the process by which living organisms take in and use food for the maintenance of life, growth, reproduction, the functioning of organs and tissues, and the production of energy’. Nutrition science differs from food anthropology, which typically focuses on food as an anthropological object or on the broader concept of foodscape. Foodscape are ‘the global flows of food and cuisines as they are produced, distributed and exchanged, and as imagined and experienced within everyone’s daily lives’ (Ferrero 2002 cited in Crowther 2018: xxvi). Nutrition can intersect with ‘global flows of food’; for instance, as nutritional guidelines change over time, so too do the needs and behaviours of consumers. As a result, some foods might be more popular than others or they may be promoted differently in public health nutritional guidelines. For example, a century ago, Hass avocados were not part of the typical North American diet. In Mexico and Central America there is evidence that humans did cultivate *āhuacatl* around 500 BCE, but no such evidence exists for North America. Today, thanks to discourses that have extolled the nutritional value of avocados, the popularity (and, arguably, notoriety) of the fruit has soared worldwide (Handwerk 2017). This example illustrates how discourses on the nutritional value of specific foods/ingredients can influence dietary and consumer behaviour in specific foodscape. The study of nutrition, as it intersects with food anthropology and sociology, allows us to understand foodscape more holistically.

This chapter focuses more specifically on human nutrition and translation, meaning that the perspective is inevitably more anthropocentric (i.e. what *humans* eat). Since this handbook addresses human health, primarily, it makes sense to focus on human nutrition, though this is not to discount the valuable insights that come from studying the nutrition of other living organisms or the links that can be made with non-anthropocentric perspectives (an area that is gaining ground, for instance, in fields such as Critical Animal Studies).

Public and individual health are intrinsically linked to nutrition: illnesses in the population can be related to poor nutrition or poor diet. Food contamination or food-borne
diseases are also a matter of public health as these relate to what we eat, where and how (e.g. the rise in food allergies and sensitivities; changes in auto-immune diseases; the growing emphasis on proper handling of food in public spaces). Although nutrition science differs epistemologically from how we understand and study food behaviours, as in food anthropology, the two disciplines can overlap: because humans generally want to perform optimally and feel well (maintaining optimal health), they will turn to nutrition science or dietary advice to inform their eating behaviours (which include food choices, diet, number and frequency of meals). Specific food behaviours are typically associated with cultural and social norms, and are usually forged within a food community or other community (e.g. eating locally as part of the Slow Food movement; eating plant-based foods as part of the vegan movement). As Crowther (2018: xx) states: ‘what we eat is culturally and socially patterned’.

Nutritional guidance typically falls within the purview of public health. Public health issues or problems tend to be multifaceted, which means that different expertise and disciplinary lenses can examine different aspects of the same issue (cf. Tolley 2016). If we consider that language is a foundation of effective public health communication, it follows that we can examine nutrition using the lens of translation studies.

2 Current research on translation and nutrition

In translation studies (TS), it is well-established that translation contributes to the circulation of knowledge, and this would naturally include knowledge related to food and nutrition. Yet, little research exists in TS, food studies (using humanistic epistemology), food science (using epistemologies from chemistry, biology, nutrition, microbiology and engineering) and public health examining these various points of convergence. To complicate matters, when the term ‘translation’ is used in public health or nutrition science contexts, it often refers to ‘knowledge translation’ (KT) or ‘knowledge management’ (KM). Although these terms are not always used interchangeably, they are understood as generally synonymous in this chapter. According to Risku (2013: 92), ‘[k]nowledge management (KM) is an interdisciplinary area of management research and practice that deals with the systematic, planned coordination and development of knowledge in organisations and individuals’. The Canadian Institutes of Health Research (2010) states that, ‘knowledge translation is a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of [citizens], provide more effective health services and products and strengthen the health care system’. Thus, when public health, nutrition or dietetics researchers refer to or use the concept of translation, this may not always mean interlingual translation; rather, translation in these areas would mean the development, transfer, uptake, and dissemination of discipline-specific knowledge (health, nutrition, dietetics, public health). Yet, as Risku notes, KM/KT and interlingual translation relate to one another:

In KM, the different ideas, experiences, and perspectives of people with different cultural backgrounds are considered valuable intellectual capital […] Translation and cross-cultural communication are thus increasingly seen as a form of KM – preserving and supporting the diversity that is essential for sustainable development.

2013: 93
Despite the relation between these terms, literature on interlingual translation in public health and nutrition research remains rather scant and difficult to find in English due to this conceptual overlap.

For instance, in the second edition of the *Oxford Handbook of Nutrition and Dietetics* (Webster-Gandy, Madden and Holdsworth 2012) the subject of global nutrition is addressed in a stand-alone chapter. This chapter addresses a list of causes that lead to global undernutrition, and while ‘low national expenditure on health and education’ is listed as a risk factor, the lack of nutritional information provided in one’s language (i.e. a lack of ‘knowledge translation’) is not mentioned, though one could hypothesise a connection. Further, the *Handbook* does not explicitly mention the role of interlingual translation in disseminating nutritional literacy (KM/KT). Nutritional literacy and food education, as part of a holistic public health strategy, cannot be adequately imparted if this knowledge is not available in the languages of a given community (see Dragan 2009, n.p.). Similarly, in the *Multicultural Handbook of Food, Nutrition and Dietetics* (Thaker and Barton 2012), one might expect to see the index include the terms ‘translation’ (interlingual and KM/KT) or ‘language’, yet neither are indexed. Translation/multilingual communication plays a role in how food knowledge circulates, but none of the chapters, which are divided by region (South Asian Sub-continent, West Indies, East Asia, Israel, Eastern Mediterranean Region, West Africa, East and South-East Europe), explicitly addresses this role, nor do the last two chapters on public health discourse on maternal and child nutrition and on nutritional management of disease (Thaker and Barton 2012). These two examples serve to illustrate the relative absence of translation in nutrition and dietetics literature, despite the fact that translation is recognised as an important part of effective public health communication. However, in recent years, some public health campaigns have been more sensitive to the needs of multicultural and multilingual societies, as we shall see further on. Moreover, as food systems have increasingly become interconnected on a global scale, the need for multilingual approaches to production, labelling, packaging, and distribution has also become more pressing. As Chiaro and Rossato state:

…due to the globalisation of food production and distribution, the circulation of food items originating from the most remote parts of the planet has also increased enormously, boosting the need for documents and labels that accompany foods and the need to translate them.

*2015: 237*

The subject of (interlingual) translation may be taking some time to gain visible traction within nutrition research, but it is worth noting that interest in food and translation is on the increase in TS. For instance, in 2015, *The Translator* published a special thematic issue titled ‘Food and Translation, Translation and Food’ (Chiaro and Rossato, 2015), which generated notable engagement within the field and beyond: the issue’s introduction received over 16,100 online views since 2015, while the combined views for individual contributions amount to nearly 5,000. The co-editors of the special issue remark that part of this growing interest also reflects a broader interest in food as a cultural phenomenon: ‘generally speaking it would appear that a sort of food mania has pervaded the post-modern world’ (Chiaro and Rossato 2015: 239). It is worth noting that the publication of the special issue occurred between two editions of the FaCT (Food and Culture in Translation) conference, in 2014 (Bertinoro, Italy) and 2016 (Catania, Italy).
respective. Another conference titled *Traduire le culinaire/Culinary Translation* was originally scheduled for spring 2020 (but later rescheduled due to the COVID-19 pandemic) with subjects ranging from cookbook translation to food in translated films, culinary terminology and food ecology.

In reviewing extant literature in TS and in related fields (such as media studies, semiotics, etc.), research linking food and translation can generally be divided into the following categories:

- Food in translated literature (e.g. Wiedenmayer 2016)
- Food, tourism and translation (e.g. De Marco 2015)
- Food terminology and phraseology (comparative analyses) (e.g. Gaspari 2015)
- Translation of food-related texts (non-institutional; e.g. cookery books; menus; recipes) (e.g. Chiaro 2008; Desjardins 2011; Ghafarian, Kafipour and Soori 2016; Fuentes-Luque 2017)
- Translation of food-related texts (institutional) (e.g. public health guidelines; nutritional guides; food labels; food packaging) (e.g. Chiaro 2004; Desjardins, Cooke and Charron 2015)
- Food and ‘translation’ of the Other/Otherness (e.g. Chiaro 2004; Elliott 2008; Stano 2016)
- Audiovisual translation (subtitling; dubbing; closed-captioning) and food (e.g. González-Vera 2015; Baños 2019)
- Non-anthropocentric/decolonised understandings of food ecology (e.g. Cronin 2016)

For the most past, research in all these categories tends to fall under the umbrella of the social sciences and humanities: the food/translation nexus has been examined from a more humanistic perspective than a nutritional science perspective or public health perspective. In this chapter, I draw from these arenas, but also seek to shift the focus to nutrition, public health and app development, and to the question of how these fields have mobilised translation to disseminate nutritional and dietetic knowledge.

There is a need for a closer examination of the roles translation plays in discourses on nutrition where it is curiously absent. Likewise, there is a need for examining how nutritional knowledge is translated or presented multilingually in institutional contexts, such as national public health campaigns or national food regulation policies. Countries with more than one official language or multilingual policies (e.g. Canada, South Africa, Singapore, Switzerland) must ensure the availability of public health information in each of their official languages, so examining translation in these national settings may provide data to determine best practice related to equitable public health communication and nutritional guidelines. Closer study of translation’s role in nutritional discourses is also relevant in spaces where geography does not determine polyglossia (the coexistence of multiple languages), but where it is undeniably present, for instance in online spaces, such as social media platforms and websites, which are transnational by definition. Finally, this chapter seeks to fill a gap noted within TS: comprehensive handbooks such as *The Routledge Encyclopedia of Translation Studies* (Baker and Saldanha 2020) and *The Handbook of Translation Studies* (van Doorslaer and Gambier 2010) do not have entries under ‘food’ (at the time of writing this chapter), despite the evident interest in the topic. In this chapter, the three main topics that will be considered are the translation of nutritional guidelines with a focus on Canada’s *Food Guide*; health apps, translation and
localisation; and the growing importance and relevance of translation in the agro-food and food-processing industry.

3 Translation of public health discourses and nutritional guidelines: the case of Canada’s Food Guide

Dietary recommendations are part of the foundation of many public health guidelines. In North America, proper nutrition and a healthy diet are deemed integral to preventative healthcare models. Public health authorities and agencies are usually involved in developing policy and action plans on food safety, food packaging and in promoting nutritious and balanced food habits for the general population. According to the Food and Agriculture Organisation of the United Nations (FAO):

Food-based dietary guidelines (also known as dietary guidelines) are intended to establish a basis for public food and nutrition, health and agricultural policies and nutrition education programmes to foster healthy eating habits and lifestyles. They provide advice on foods, food groups and dietary patterns to provide the required nutrients to the general public to promote overall health and prevent chronic diseases. 2020

For instance, the United States’ Office of Disease Prevention and Health Promotion, which is the body that communicates national food and nutrition guidelines in the United States, includes dietary guidelines and nutritional intake references. Similarly, Health Canada, the federal government agency that communicates health and food policy and guidelines, has produced the well-known (and recently revamped) Canada’s Food Guide. Santé Publique France [Public Health France] established the Programme national nutrition santé [Health and nutrition national programme] in 2001, as part of an overarching plan to promote holistic health and healthy dietary habits. FAO states that more than 100 countries worldwide ‘have developed or are currently developing food-based dietary guidelines’ (2020). The FAO’s website is available in Arabic, English, Chinese, Russian, French, and Spanish, and their data is classified regionally; as of 2018, seven countries in Africa reported having food-based dietary guidelines; 15 countries in the Asia Pacific region; 30 countries in Europe; 25 countries in Latin America and the Caribbean; four countries in the Near East; and two countries in North America (FAO 2020). It is worth noting that international public health and dietary experts have heralded Brazil’s dietary guidelines as a gold standard. They are praised for overcoming some of the ‘common limitations of [other] conventional dietary guidelines’ by shifting from a sort of abstract nutritional prescriptivism to guidance that was relative to an individual’s context and circumstance (Monteiro at al. 2015). The Brazilian guidelines are available in Portuguese, English and Spanish, and they are premised upon five overarching principles that include a broadening of food choice autonomy and a diversification of dietary advice (Monteiro et al. 2015). Perhaps the most significant component of these guidelines was the incorporation of the concept of sustainability in all dietary recommendations: a healthy diet should be simultaneously sustainable on a physical, emotional and environmental level. As we shall see, the Brazilian guidelines led to the revision of other guidelines thereafter, including Canada’s Food Guide.

Narrative theory has been a useful framework in translation studies to understand how knowledge is constructed and circulated. Mona Baker examined the narrative theory/translation studies nexus in her book Translation and Conflict (2006); since then, narrative
theory has been applied to other case studies examining narratives and translation. With regard to nutrition, many narratives co-exist to inform food behaviour. For instance, public health discourses function as public narratives (Somers and Gibson 1994; Baker 2006), as do nutritional guidelines. Both ‘narrate’ normative food behaviour, consumption, as well as beliefs on and about food/nutrition at national level. Because food also relates to family, community and the self, we can also examine how ontological narratives (Somers and Gibson, 1994; Baker 2006) and public narratives related to nutrition/food intersect or diverge. The concept of knowledge translation is relevant here because it is this process that ‘translates’ public narratives on nutrition to individuals in order to inform behaviour. Experts who codify and transcribe scientific knowledge (e.g. medical or nutritional knowledge), participate in what Latour and Woolgar (1986: 245) have described as a ‘[…] material operation of creating order’, which also relates to how food-related narratives are shaped. Food guidelines, public health recommendations, and prescribed diets are examples of this codified ‘text-making’ that interrelates with ontological narratives and public narratives:

text-making goes beyond materializing or expressing something that already exists in the mind and goes hand in hand with sense-making. By communicating verbally and non-verbally, we constantly shape and reshape […] the scientific concepts that we need for our purposes as well as the arguments in which they are embedded and the social interactions that we pursue.

Montalt-Resurreció and Shuttleworth 2012: 12

Part of successful nutritional knowledge translation, and by extension successful public health strategy, depends on all individuals of a given country to be able to access, understand, and implement this knowledge. Interlingual translation is one of the strategies public health authorities mobilise to successfully impart this knowledge. However, because public health communication also depends on symbols (signs) to represent and mediate knowledge, intersemiotic translation (cf. Jakobson 1959) is also relevant.

The translation, or rather the non-translation, of nutritional guidelines, has been part of the debate surrounding the need to update national guidelines to reflect increasingly multicultural and multilingual nations. Canada’s Food Guide is an example of where and how translation has been mobilised to mediate nutritional guidelines. The original Food Guide was published in 1942 under the title Canada’s Official Food Rules and it was supposed to help Canadians make judicious food choices. The title of the document changed a number of times: Canada’s Official Food Rules (1942); Canada’s Food Rules (1944, 1949); Canada’s Food Guide (1961, 1977, 1982); Canada’s Food Guide to Healthy Eating (1992); Eating Well with Canada’s Food Guide (2007); Canada’s Food Guide (2019). These successive editions of the Food Guide were published over the years to address an evolving food system (agrarian to more industrialised), shifting cultural norms (such as the role of women in households), and an increasingly diverse population (due to migration, but also due to the increasing interest in ‘foreign’ food cultures and traditions). In its early iterations, the Food Guide was only available in the country’s official languages: English and French. This made it harder for those who did not speak these languages or who did not have the proficiency to understand some of the terminology in a second language. More importantly, it meant that lack of access to public health and nutritional guidance in one’s own language created a barrier to managing one’s health and wellbeing, which could have negative effects on health outcomes. But the lack of interlingual translation
was not the only translation problem at hand: earlier editions of the *Food Guide* only had one iconographic rendering, meaning that regardless of language or culture, the foods represented visually illustrated only one dietary or nutritional narrative. For example, in the 1992 edition of the *Food Guide*, one can note certain packaged products. For most Canadians, these packages would be generally recognisable (e.g. a box of rice, a bag of frozen vegetables, a carton of milk). However, these items were not (and still are not) necessarily packaged in the same form in other countries. As a result, recent immigrants to Canada might have found this visual narrative confusing or misleading, not to mention that the Guide’s pictorial elements largely omitted food items or behaviours from other cultures. For instance, packaged cereals with milk for breakfast might represent a typical early morning meal in North American societies, but may strike some individuals from other locales as an odd meal choice if boxed cereals are not an accessible or a customary food item or if an intolerance to dairy milk is present. These earlier versions, therefore, did not necessarily reflect the food traditions or cultural preferences of all Canadians, nor did they reflect the shifting and evolving food behaviours of a country impacted by immigration and migration (given that travel also impacts food behaviours and trends).

In 2007, a new edition of the *Guide* was published, which sought to remedy some of the earlier shortcomings, including issues related to the lack of cultural diversity in terms of ingredients or food items. Moreover, the new iteration was translated into 10 languages, in addition to the French and English versions. The 2007 edition also included a version of the *Guide* adapted for Indigenous peoples in Canada, titled *Food Guide for First Nations, Inuit and Métis*. This latter version was translated into Cree, Ojibwe, Inuktitut as well as into French and English. Although the 2007 iterations of the *Guide* are now archived, it is worth noting that their original online presentation suggested a sort of subordination of the Indigenous guide to the English and French guide (cf. Desjardins, Cooke and Charron 2015). Curiously, the former iteration of the 2007 *Guide* or the ‘standard’ guide, was not translated into any of Canada’s Indigenous languages. Though the idea was that the Indigenous guide catered specifically to Indigenous communities and food cultures, the non-translation of the ‘standard’ English/French guide into Indigenous languages nonetheless posed an issue: if all nutritional guidance should be available to all Canadians, then all versions of the Guide – be it the Indigenous or ‘standard’ version – should be available in an equal number of languages. In this food narrative, it was as though there were two different guides for two different groups, one secondary to the other – an issue that has been somewhat redressed in the guide’s most recent edition (2019). Cultural communities have specific food norms and food behaviours; however, these communities do not exist in a vacuum and can be influenced by or overlap with others. The overt delineation between the two guides and implicit subordination of the Indigenous version did not reflect permeable and sometimes inter-dependent food communities.

In 2015, Health Canada published its *Evidence Review for Dietary Guidance: Summary of Results and Implications for Canada’s Food Guide* (Health Canada 2016), which served to usher in the 2019 (and the most recent) version of the guidelines. The *Canada’s Food Guide Snapshot* (Canada’s Food Guide 2019) is now available in 17 multicultural languages (Arabic, Farsi, German, Hindi, Italian, Korean, Polish, Portuguese, Punjabi, Russian, Simplified Chinese (Mandarin), Spanish, Tagalog, Tamil, Traditional Chinese, Urdu and Vietnamese) and nine Indigenous languages (Dene, Inninnaqtun, Inuktut (Baffin), Inuktitut (Nunatsiavut), Inuktutit (Nunavik), Michif, Ojibwe, Oji-Cree and Plains Cree), in addition to French and English (28 languages in total). The *Snapshot*’s visual content is the same across all language versions, addressing previous criticism about delineating food.
iconography ‘neatly’ according to different groups/language versions in other iterations.

Ginette Petitpas Taylor, Canada’s Minister of Health at the time of the 2019 release, notes how language and accessibility intersect in the new version:

Canada’s new Food Guide was developed to be relevant to and accessible by all Canadians. Today, I am pleased to announce the translation of Canada’s Food Guide Snapshot into 17 multicultural languages – making it more accessible and easier to understand by Canadians whose first language is not English or French. Now, more Canadians will benefit from our healthy eating guidance.

Health Canada 2019

In a similar vein, Jennifer Buccino, Regional Executive Director (Ontario) from the Dietitians of Canada alludes to the concept of linguistic justice in her assessment of the new Snapshot:

When we can provide resources in the languages our patients and clients speak, we create a more positive and comfortable space to talk about food and nutrition. The translation of Canada’s new Food Guide Snapshot into additional languages will help dietitians and health care professionals start more conversations about healthy eating with the patients, clients, and communities they serve.

Health Canada 2019

The evolution of Canada’s Food Guide shows the importance of creating nutritional guidance that is accessible. It also shows the power that institutional narratives can have in shaping food policy, food behaviour, and nutritional guidance. These narratives can create and perpetuate detrimental stereotypes or function as a gatekeeping mechanism, creating a barrier to health equity when they are not equally accessible to all. The newest version of the Guide is not without reproach, however. Some argue that the Guide still lacks representational diversity and does not sufficiently address the issue of food insecurity. For instance, Sarah Duignan, PhD candidate at McMaster University (Canada) and host of the podcast Anthrodish laments the fact that the 2019 guidelines do not sufficiently incorporate Indigenous visuals or recipes:

The guide does consider culture’s role in maintaining a healthy diet, but falls short of incorporating this effectively into its visuals or recipes. The discussion on culture values eating in ways that help ‘learn about cultural food traditions’ or that ‘keep your cultural roots and food traditions alive’. Yet this section frames culture as a part of ‘enjoying your food’ rather than as a critical part of overall well-being. Incorporating traditional Indigenous foods (for example game meat, corn soup or wild blueberries) or foods that would be recognizable to newcomers to Canada (such as plantains or cassava for Central American families) would have helped more communities recognize their own diverse histories and cultures.

Duignan 2019

Another debate emerged around the addition of more plant-based recipes. The inclusion of plant-based recipes and food items was meant to encourage Canadians to implement more environmentally sustainable food habits and to represent vegetarian and vegan diets in the guidelines. It is worth noting that prior to the official release of the 2019 Guide,
some voices in the agricultural industry, such as the Dairy Farmers of Canada, expressed concerns regarding this shift. They felt it indicated to Canadians that some meat and dairy products were less nutritious and that this would have deleterious effects for the farming sector (Kirkup 2019). Although the scope of this entry does not allow for an in-depth analysis of these specific food narratives, what must be acknowledged are the many interrelated narratives that operate within national nutritional guidance and food policy. These narratives – whether verbal or visual – function to translate food-related and nutrition-related knowledge.

The Canada’s Food Guide case study falls within product-oriented descriptive translation studies (DTS) (Saldanha and O’Brien 2013). For readers interested in studying institutional or public narratives on nutrition, a similar framework might be advisable. In addition, translation flow analysis (Brisset 2008) can illustrate the directional flow of information in the dissemination of food-related knowledge.

4 Nutrition, well-being, social media, apps and translation

Roland Barthes (1961), a French semiotician, argued that food functions as a system of communication. As such, ‘people use food to differentiate themselves from others, to establish rules of behaviour […] and as a form of classification’ (Elliott 2016: 5). In transnational online spaces, like social media platforms (e.g. Instagram, Pinterest, YouTube, Reddit) food-related content has proliferated over the years. Users turn to food to create their online identities, to communicate social status, cultural heritage, culinary knowledge, as well as food ideologies (e.g. veganism). Food, then, is not just a matter of nutrition or sustenance; it is a ‘language’ that communicates our online and offline identities. We can also examine how the language of food and wellness (fitness; self-care) intersect online and offline. Indeed, consumers are increasingly going online to find information on proper nutrition, fitness, and wellbeing (Schumer, Amadi and Ashish 2018). While seeking good health and eating well are not inherently new pursuits, the self-care and ‘fitspo’ (fitness inspiration) revolutions of the 2010s have motivated many to take their nutritional health into their own hands (sometimes literally, with mobile devices and wearable technology like smart watches) in unprecedented ways. Eating and other food-related behaviours now intersect with the aspirational goal of finding holistic wellness. The pursuit of wellness through the language of food is performative (Cavanaugh 2015): on platforms like Instagram and Pinterest, users who post carefully curated feeds ‘perform’ (or, in Barthes terminology, communicate or translate through captions and iconographic content) ideals of wellness related to diet and nutrition. This performative content has an effect on other users who may either replicate similar posts, ignore the content, or refute/subvert it, all of which serve to define and maintain specific online identities. Social media ostensibly provides a space in which the Self is ‘translated’ (Desjardins, 2019). For instance, if a user creates an Instagram post featuring a photo of fresh, colourful vegetables, this image could be ‘translated’ any number of ways by the caption (see Desjardins 2017): it could be a statement on nutrition, as much as it could be about decrying socio-economic barriers around healthy eating. This would depend on how the user wishes to create and perform their online ontological narrative (see Somers and Gibson 1994; Baker 2006).

Food-related user-generated content also connects to larger narratives about wellness and self-care both offline and online. In this sense, food can also communicate some users’ health behaviours. To illustrate, the New York Times (Carraway 2019) reports that in 2019 approximately 18 million Instagram posts were tagged using the hashtag #selfcare,
compared to 2 million for #selfhelp. Though #selfcare does not necessarily mean the content is food-specific, much of the online discourse surrounding #selfcare has to do with food-related behaviour: weight loss, healthy eating, espousing a plant-based diet, counting macro-nutrients (also known as ‘counting macros’), snacking, etc. Mobile app developers have capitalised on this growing interest. From registered nutritionists looking to help clients manage disease, allergy, or food sensitivity through online counselling, to more insidious developers looking to capitalise on body insecurity and aspirational weight goals, many people have devised apps for the navigation and tracking of nutritional information (e.g. ingredients, recipes, food databases, macro calculators, ‘diet diaries’). These apps can also track other health or wellness metrics (e.g. sleep, physical activity, prescription medications and their interactions). These apps are known as mobile health or ‘mHealth’ applications (Xu and Liu 2015; Schumer, Amadi and Ashish 2018). According to 2014 data (Research2Guidance 2014; Xu and Liu 2015), there were more than 100,000 apps classified under the categories of health, fitness, and medicine.

Schumer, Amadi and Ashish (2018) examined the features of 86 diet and nutrition apps available in the Google Play Store (a digital distribution service operated by and developed by Google that targets applications available for Android operating systems). Interestingly, the study does not mention the apps’ linguistic or localised features at all. Elsewhere, in an earlier review of extant research on smartphone applications promoting healthy diets and nutrition, Coughlin et al. (2015) indicate that ‘there are currently no culturally, research-tested smartphone apps suitable for non-English speakers or for persons with low health literacy’, though it is worth noting their study focuses on research written in English only. However, mobile app development moves at a significantly faster pace than academic research and there has been some change in this situation since the publication of this research.

As of 2020, diet and nutrition apps do exist in languages other than English, although there is scant research on the languages involved, translation/localisation, uptake and effectiveness. Yuka, for instance, is an app that can operate on both iOS and Android devices and uses barcode (Scandit) technology to let users know about a ‘product’s impact on their health’. The app currently supports English, French and Spanish. One could posit that localised apps or apps with multilingual features would probably reach a broader audience – a hypothesis that could supplement analyses focusing on app effectiveness and uptake. However, language support and translation features are often contingent on programming and user experience (UX) priorities. For instance, it took seven years for Instagram, one of the most dominant social platforms in the world in terms of global uptake and number of users, to enable right-to-left (RTL) languages, such as Farsi, Hebrew and Arabic (Tepper 2017). If it takes dominant players, such as Facebook Inc. (who owns Instagram), several years to offer this type of language support, it makes sense that smaller-scale nutrition apps would face similar issues or have similar development models. Then again, one might question whether this is a matter of priorities: since English is the most readily spoken second language on a worldwide scale, the English-as-default in software and application development is relatively unsurprising. One could ask why spend resources on multilingual development if most users can use the app in English anyway.

This recalls the idea of equitable knowledge translation discussed in the previous section. Technology meant to help users adopt healthier lifestyles and diets should be accessible, in the same way that nutritional guidelines developed by public health institutions are or should be. Encouraging the development of multilingual nutrition apps
would also stand to address some of the issues related to what is commonly referred to as the ‘digital divide’: the uneven distribution of technology and/or the barriers to its access and use (Wikipedia 2020). Unequal technological access and distribution can lead to the uneven distribution of knowledge, further exacerbating the ‘knowledge divide’. In a knowledge economy, lack of access can be a social determinant of health (CPHA 2020) and studies focusing on the development of mHealth apps should examine how localisation, translation, dubbing and subtitling (in the case of video counselling for dietitians and nutritionists) may serve to make these technologies more inclusive and accessible.

As for food-related content in transnational online spaces like social media, future research avenues could include examining the content indexed under hashtags in different languages referring to similar food practices or behaviours (e.g. #vegan / #végétalien / #vegano), the use of self-translation by food and wellness influencers (cf. Desjardins 2019), and how machine translation is leveraged in the mHealth arena.

5 Food production, translation and social determinants of health

The World Health Organisation is considered a leading health agency that has put multilingualism at the core of its mission statement. The WHO conducts its advocacy for and promotion of health in six official languages: Arabic, Chinese, English, French, Russian, and Spanish. Its website was initially translated into all six languages in 2005 and much of its online content has since been translated into more languages. The WHO considers multilingualism a way to ‘effectively guide public health practice, reach out to international audiences, and achieve better health outcomes worldwide. In this way, multilingual communication is an essential tool for improving global health’ (WHO 2020a).

This section addresses translation, interpreting and multilingualism, as they inextricably connect to social determinants of health, but with a specific focus on the contexts of food production and processing. WHO defines the social determinants of health (SDH) as follows:

The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities – the unfair and avoidable difference in health status seen within and between countries.

The main SDH include: income and social status, employment and working conditions, education and literacy, childhood experiences, physical environments, social supports and coping skills, healthy behaviours, access to health services, biology and genetic endowment, gender, culture, race/racism (cf. WHO 2020b; Government of Canada 2019). National public health agencies also generally recognise that specific marginalised groups (e.g. LGBTQIA communities; and Black, Indigenous, and Peoples of Colour) are affected by additional SDH based on systemic discrimination, racism, and historical trauma.

Translation, in all its forms, can intersect with all of the SDH listed above. For instance, one cannot advocate for their own health in a clinical setting if they cannot adequately communicate with their attending physician, a subject that has been extensively studied by researchers in translation and interpreting studies (Angelelli 2004; Antonini et al. 2017; Meyer et al. 2010; Montalt-Resurrecció and Shuttleworth 2012). Similarly, in situations
of crisis, as with the recent COVID-19 pandemic, people rely on public health service announcements to stay informed, healthy and safe. This kind of messaging can take many forms: from online social media posts to pamphlets, websites, infographics and even workplace bulletin boards. Yet translation and multilingual access were in some cases neglected in COVID-19 public health communication. As Canadian linguist Gretchen McCulloch states in *Wired*, public health communication can be Anglocentric:

> It’s easy to overlook how important language is for health if you’re on the English-speaking internet, where “is this headache actually something to worry about”? is only a quick Wikipedia article or WebMD search away. For over half of the world’s population, people can’t expect to Google their symptoms, nor even necessarily get a pamphlet from their doctor explaining their diagnosis, because it’s not available in a language they can understand.

McCulloch 2020

The connection between language equity and healthcare, as in a healthcare consultation, is probably quite straightforward – at the very least, the connection between limited English proficiency (LEP) and healthcare provision has been addressed in a number of case studies examining the barriers that persons with LEP face in the English-speaking world (Kim et al. 2011). However, the links between translation/interpreting/multilingualism, SDH, food supply chains and production do not seem to have been readily examined in an interdisciplinary manner.

While companies have increasingly implemented equality, diversity, and inclusion plans (EDI), they have sometimes skirted the issue of translation and multilingualism – the assumption being that the workforce should have sufficient English proficiency in English-speaking countries. In administrative and managerial ranks, this assumption might be justified, but in the case of migrant and marginalised workers who may have LEP, translation becomes essential in navigating the workplace. Much like in healthcare settings, non-professional interpreters (Antonini et al. 2017) end up ensuring that information is shared in the languages spoken ‘on the floor’. However, when a situation is rapidly evolving and where conflicting information is circulating, leaving non-professional interpreters responsible for mitigating and mediating a public health crisis places additional burden on this workforce.

Food supply chains and food processing rely heavily on a migrant and/or marginalised workforce (Lever and Milbourne 2017; Xu and Jordan 2016). Xu and Jordan state ‘[…] due to population aging and the absence of willing domestic workers, rich countries are increasingly looking outside their borders for low-skilled workers in agriculture, food processing, construction, manufacturing, and low-wage services such as domestic work and home health care’ (Xu and Jordan 2016: 3–4, see also Münz 2008: 2). In the case of the COVID-19 pandemic, these workers were negatively and disproportionately impacted relative to the population that could safely work from home: in North America, for instance, governments declared food production and supply ‘essential’, meaning that food supply and food production/processing workers were obligated to continue work in the early stages of the pandemic. In late April 2020, it was reported that Canada’s largest outbreak (at the time of writing) had occurred at a Cargill meat-processing plant in High River, Alberta. The plant employs 2,000 unionised workers, most of whom are immigrants, refugees or temporary foreign workers (Frangou 2020). By 5 May 2020, 945 workers had been infected, with another 600 cases elsewhere in the province associated
to the same Cargill outbreak. Investigative reporting revealed a lack of translation was a contributing factor (Baum, Tait and Grant 2020).

The Cargill plant in High River employs temporary foreign workers, most of whom are Filipino and yet, reports indicated that ‘bulletin-board postings and letters to employees were provided only in English, causing confusion about compensation, isolation protocols and eligibility for paid time off’ (Baum, Tait and Grant 2020). To abate the lack of translation, workers would consult a Facebook group, where employees would help one another make sense of Cargill’s English-only communications (ibid.), clearly illustrating the relevance of and recourse to bilingual co-workers in such situations.

The issue also went beyond linguistic translation; there was also a problem of cultural translation. Family configurations among migrant worker communities tend to take on many forms: to counter fragmentation, loss of identity, and to adapt to new surroundings as well as to share resources, the family structure may mean the blending of two or more families or a multigenerational configuration. Community members will carpool or leverage public transit (when available) to commute to work. In normal circumstances, these practices do not pose a specific health issue, but in the case of the COVID-19 pandemic, contagion was linked to close contact. Cargill said some of these practices (carpooling; living in close proximity) were likely responsible for the rise in cases (Baum, Tait and Grant 2020; Frangou 2020), but employees from these communities felt unduly vilified. Slaughterhouses and meat-processing plants are recognised as being ‘dirty’ and ‘dangerous’ where employees work long hours in cramped spaces with poor air circulation (Lever and Milbourne 2017). To suggest the rise in contagion was attributable only to family structures and/or commuting practices is to sidestep the issues posed by the work environment altogether. If carpooling or isolation from family members was a key concern, Cargill could have prioritised translated material on the subject. Instead of vilifying or scapegoating cultural practices that are part of survival and that overlap with SDH, Cargill could have invested in a form of cultural translation demonstrating more sensitivity and understanding, rather than forcing this responsibility onto migrant workers already facing compounding health risks.

Although difficult working conditions and labour issues are well-documented in research literature on agro-food migrant workers (though still inadequately addressed in policy), the COVID-19 pandemic added another layer of complexity. Not only did this context demand an examination of how language representation and translation are or could be incorporated in EDI plans, the pandemic also revealed the additional crises these groups can face when translation and interpreting services are not readily available. At a time when automatic machine translation could have proven to be an arguably cost-effective short-term solution, Cargill seems to have maintained an Anglocentric position as opposed to finding creative and viable ways to leverage technology. Further research could examine how machine translation could be used in the agro-food industry to help facilitate communication with and within migrant communities. Some may argue that migrant workers should simply ‘upskill’ and learn English. However, Lever and Milbourne (2017) indicate that plant workforces often comprise migrant workers from different cultural and linguistic communities within the same plant. Typically, these workers will group together according to the languages they speak or according to co-nationality. As a result, workers may not be inclined or feel the need to pivot to a dominant language, like English, since their immediate co-workers will speak their language. This, then, also constrains language skill improvement – not to suggest learning English inherently means ‘improvement’, but it does mean, to some degree, more language versatility and access. For those interested in
further examination of machine translation in the agro-food arena it is important to consider additional parameters related to how machine translation functions. As McCulloch (2020) states:

Machine translation disproportionately works for languages with lots of resources, with things like news sites and dictionaries that can be used as training data. Sometimes, like with French and Spanish, the well-resourced languages of former colonial powers also work as lingua francas for translation purposes. [...] Google Translate supports 109 languages, Bing Translate has 71, and even Wikipedia exists in only 309 languages—figures that pale in comparison to the 500-plus languages on the list from the Endangered Languages Project.

In sum, technology can be useful, but it is worth recalling that wealthier languages are usually better supported to begin with, as in the example of Instagram and RTL languages cited above. It is also important to understand the relationships migrant workers maintain in such contexts and to avoid simplistic solutions like learning English on the floor.

Since food supply and food production/processing is an inherently multilingual and multicultural space, it is incumbent upon researchers in translation and interpreting studies interested in power dynamics and translation ethics to add to the discussion. This work could then assist in more comprehensive EDI development in the agro-food industry.

6 Conclusion

While the intersection of food and translation is a relatively new area of interest, it is gaining momentum. Previous studies have examined food and translation in the context of literary studies, semiotics, tourism, menu and cookbook translation and examples of these have been given in the introductory section of this chapter. However, the subject of nutrition and translation remains relatively underdeveloped. Here, attention has been given to three areas that indicate a need for translation and for additional scholarly interest, be it in TS or FS or both. First, translation is an important part of public health communication, and, thus, nutritional guidance. As more nations and jurisdictions acknowledge this fact, it is likely that nutritional guidelines and guides will be increasingly translated into multiple languages as standard practice. However, the question of how warrants further scrutiny: is machine translation sufficient and ethical? What can be done with iconographic or contentious recommendations? Machine translation surely cannot resolve these questions without human intervention and reflection. Moreover, how do public health authorities develop nutritional guidelines that are at once adaptable to individual circumstance, but also applicable to national demographics that are increasingly heterogeneous? This chapter also explored people’s increased desire to become more autonomous with their health and eating. Nutrition and food apps on mobile devices are one of the ways people are tracking and analysing their nutritional intake. For marketability and for better user experience, one can easily argue in favour of translation’s value here again. Insights from TS can also serve to better develop multilingual strategy and advise developers in the programming of better UX, indicating a connection between web/app development and language-related research. Finally, in examining the links between social determinants of health and food production/processing, specifically with regard to meat-processing plants in Canada, we see that translation can be a question of health or sickness, and, in dire cases, life and death. Translation, then, seems all the more relevant
at a time of rising concerns around pandemics, global migration, agro-food industrial practices, and zoonotic diseases.

Notes
1. When some food items are extolled for their health benefits, they often gain popularity quickly. Unfortunately, this has a downside: some of these food items – like avocado, but also quinoa and açaí – require complex processes of exporting and importing, which can have detrimental environmental effects. So called ‘superfoods’, like the avocado, are also lucrative produce, which has attracted the attention of cartels looking to capitalise on ‘green gold’ (Linthicum 2019). Consumer marketing does not always address this ‘darker side’ of health food crazes.
2. It is worth noting that food studies, like translation studies, is considered a relative recent field. Charlene Elliott states that ‘whereas food was once marginalised as a scholarly focus’ (2016: 4) there has been a rapid and wide-ranging expansion of food studies scholarship.
3. The use of ‘ontological’ refers here to narratives that relate to the Self. Baker (2006) applies this category to occasionally signal disciplinary narratives about translation or TS (a sort of disciplinary self-reflexivity); I follow Somers and Gibson’s definition (1994: 61): ‘These are the stories that social actors use to make sense of – indeed, in order to act in – their lives. Ontological narratives are used to define who we are; this in turn is a precondition for knowing what to do’.
4. The distinction between multicultural languages and Indigenous languages is important: it signals recognition of the fact that Indigenous peoples and Indigenous languages were present prior to settler colonisation and not a product of latter waves of immigration.
7. As of February 2020, this number was 24 million and counting.
9. www.who.int/about/who-we-are/multilingualism.

Further reading
This special issue is the first dedicated entirely to examining the intersections between food and translation. The contributions tackle different aspects of this nexus, from the relationships between translation studies and food studies, food ecology, translation and food tourism, and food-related phraseology.

In the second chapter of his book, titled ‘Eating our words’, Cronin examines the ‘translation consequences’ of food movement across languages, cultures, spaces and places. One of the more probing questions lies with the increasing industrialisation of both professional translation and food production. Cronin invites us to think about applying principles from the Slow Food movement into our translation practice. He asks ‘[h]as there been a movement that has called into question the potential consequences for language ecology of the mass production of translated languages?’ (2016: 59).

Related topics
Translating Global Epidemics, Quality, Accessibility and Readability in Medical Translation, Inter- and Intralingual Translation of Medical Information
References


