


Anna Jastrzębiec-Witowska 
Jagiellonian University, Kraków, Poland
witowska@yahoo.com

Food Is Different During the Pandemic

COVID-19 Effects on Food Security in the Developed World as Exemplified by United States and Canada

The COVID-19 pandemic has left no area of human life unaffected and the food system in its global, regional, or micro manifestations is not an exception. The images of empty store shelves caused by lockdowns stirred a lot of anxiety among consumers in the so-called First World. At the same time, thousands of miles away, in the developing and underdeveloped countries, where having a meal is never taken for granted, people suffered the harshest consequences of any pandemic-related instability in the food system. Both these realities deserve intellectual reflection, with the former being far more intricate than its media portrayals and therefore will be explored further in this work.

This paper aims to study the COVID-19 impact on food systems in developed countries such as the United States and Canada, as well as the challenges to the food security they face during the pandemic. It offers a top-down approach, starting with the definition of food security, and highlighting some crucial aspects of food access and food availability, which has been compromised by the spread of coronavirus in the two countries. Detailed analysis of responses to the pandemic-related food security problems in both countries will be offered as well.

The right to food is presented here as a human right, and the links between that right and the concept of food security are brought out. The pandemic wreaked havoc on food security in many parts of the world, including the affluent, but at the same time revealed its fragility and the need for continuous monitoring, re-assessment, and improvement through more effective food programs. The emerging sliver of hope for a more just post-pandemic food system should not be ignored.

Key words: food system, food supply chain, food security, food insecurity, hunger, malnutrition, COVID19, SARS Cov-2 pandemic, food assistance, food stamps, food banks, charities

Introductory Remarks and Definitions

The first part of this work's title alludes to Peter M. Rosset 2006's book, *Food Is Different: Why We Must Get the WTO out of Agriculture*, in which he argues for locally-based agriculture and warns of the effects of continued trade liberalization and neo-liberal economics of scale on small agricultural producers around the world. He states that 'food is not just any merchandise or commodity. Food means farming, and farming means rural livelihoods, traditions and cultures, and it means preserving, or destroying, rural landscapes. Farming means rural society, agrarian histories; in many cases, rural areas are the repositories of the cultural legacies of nations and peoples. Food can give us pleasure, it can taste good or bad, it can be good for us or it can be bad for us' (Rosset 9).

This paper concentrates on food as the foundation of human life and will dissect various problems with food access and food availability during the COVID-19 pandemic in two developed countries, the United States and Canada. The general issues of persistent food shortages in many places around the world, unjust agricultural trade agreements, and corporate dominance over the global food system should not be ignored, but the brevity of this paper does not allow for a comprehensive analysis of these global matters. While critical analyses of the sociological and economic aspects of food problems in any country, aggravated by the novel coronavirus, cannot escape the international context, a more individual approach to food systems in United States and Canada will be applied here. Although, these two countries were never exempt from having certain portions of their populations relying on food assistance, the COVID-19 pandemic, which turned global in early 2020, ratcheted the extant food insecurity problem up to a new level, alarming public health officials and NGOs. As food in/security fluctuates and varies with the food supply chain, its pandemic-related malfunctions in these two countries will be addressed in detail.

The definitions of food security, insecurity, and hunger are essential for this paper. The right to food was first recognized in Article 25 of the United Nation's Universal Declaration of Human Rights (76) in 1948, but the concept of food security has evolved over time. In the early 1980s, the UN's Food and Agricultural Organization (FAO) viewed food security from the point of view of a balance between the demand and supply sides. Food security was about 'ensuring that all people at all times have both physical and economic access to the basic food that they need' (UN FAO *Food Security*). In 1986, an influential World Bank Report on Poverty and Hunger focused on certain dynamics of food insecurity, including its individual and household aspects in addition to its regional and international contexts. It also assumed a more analytical perspective on the causes of these problems, whether they could be viewed as temporary or chronic (1-5).

A broader and more widely accepted definition of food security came with the World Food Summit of 1996. It declared that food security 'exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life' (UN FAO *Food Security*). This definition went beyond the link between starvation and crop failure, which dominated the approach to world development issues until the mid-1990s and presented food insecurity as a social and political construct.

Taking into consideration these shifts in viewing food security on both a global and a more individual level, the United States Department of Agriculture (USDA) introduced a gradation system for assessing food insecurity in 2006, as requested by the Committee on National Statistics (CNSTAT) of the National Academies. These ranges of food security/insecurity remain relevant to this day. Food security may be evaluated as high, with no reported indications of food-access problems, or marginal, with one or two reported indications, typically meaning anxiety over food sufficiency or a shortage of food in the home. Anything beyond such minor changes in access to food can be categorized as food insecurity. Low food security comes with reports of reduced quality, variety, or desirability of diet with little or no indication of reduced food intake. Very low food security implies multiple indications of disrupted eating patterns and reduced food intake (USDA Economic Research Service *Definitions...*).

Since 2006, the USDA has been making a clear and explicit distinction between food insecurity and hunger. It describes food insecurity as 'a household-level economic and social condition of limited or uncertain access to adequate food' that can be assessed in food security surveys and presented in reports. Hunger is defined quite differently, and more intuitively, as 'an individual-level physiological condition that may result from food insecurity' (USDA Economic Research Service *Definitions...*).

The Canadian approach to food security and surveying techniques to monitor food security/insecurity largely follows that of the United States. The primary difference is that the United States reports perceive food security as operating along a continuum, where food insecurity is synonymous with flawed and/or insufficient food security, whereas Canadian analysts see food insecurity as a more distinct concept. When describing food insecurity, they distinguish three ranges: marginal, moderate, and severe. The United States and Canada somewhat differently determine each household's food security status and 'use different language to describe the ranges of severity of food insecurity' (Nord and Hopwood 8).

Rosset's concept of the exceptional meaning of food and putting it at the center of human life, on both an individual and communal basis, was quite pragmatic. In doing so, he called for a food and agriculture system that could provide 'every one of us with adequate, affordable, healthy, tasty, and culturally appropriate food' as well as dignity for rural peoples and 'inclusive economic development at the local, regional, and national level' (68). These are very ambitious goals and even in crisis-free times can prove to be challenging. For the most part, they remain unfulfilled in many parts of the 21st century world, especially in the countries of the Global South. The COVID-19 pandemic makes matters much worse with more parts of the world and more people around the globe facing food shortages and becoming food insecure, due to a lack of consistent access to edible food. The pandemic is exacerbating all the problems of the contemporary food system in countries or pockets of society (like in the United States and Canada) that have to rely on food assistance. United Nations' World Food Programs and numerous humanitarian organizations around the world including Oxfam International, Action Against Hunger, and Polska Akcja Humanitarna (Polish Humanitarian Action) have intensified their relief efforts and pleas for donations for hunger stricken Niger, Yemen, Southern Sudan, Haiti, and many other countries. In the United States, the Associated Press analyzed data from food banks and reported a sharp year-on-year increase in the amount of food

distributed. Canada's reliance on food banks in providing food assistance to the needy has increased significantly during the pandemic and has been characterized as insufficient by relevant experts (Wakefield, Men and Tarasuk).

Food Insecurity in Highly Developed Countries Before the Pandemic

In 2021, as billionaires, bored by pandemic travel restrictions, were preparing their personal conquests of outer space, food insecurity remained a significant global problem. Although its most drastic form can be seen and experienced in the Global South, it is accurate to say that no part of the world is free from it. Public health officials, sociologists, economists, and other academics of many disciplines in developed countries see it as a serious problem affecting economies and deepening social inequalities. Not long before the pandemic in 2019, Christina M. Pollard and Sue Booth, Australian authors who analyzed household food insecurity in developed countries, claimed it to be relatively high in most developed countries, ranging from 8 to 20% of the population (1). As Australia, Canada, Europe, New Zealand, the United Kingdom, and the United States of America pledge to make improving household food and nutrition security a public health priority, an estimated 60 million people, or 7.2% of the population of high income countries, used food banks in 2013 (1). They also stressed that food insecurity might be hidden in the developed world and as a result continued to go unreported. This might be partially due to the stigma on poverty and food shortages related to it and partially due to the lack of reliable relevant research, as well as a lack of official government statistics on food insecurity as a distinctive category, since the problem is usually lumped together with other aspects of poverty (4).

Quite valuable data on food insecurity come from the United States and Canada, which started monitoring food insecurity in 1995 and in 2004, respectively. Both countries calculate food security using the same tool – a set of questions about conditions and behaviors that are known to public health and agricultural experts to characterize households that have difficulties meeting their food needs. In the United States, it is the US Department of Agriculture that compiles and interprets the data of the Household Food Security Survey Module (HFSSM), while Health Canada, a government department responsible for national health policy, does the same in Canada within the scope of the Canadian Community Health Survey (Nord and Hopwood, Loopstra).

Similar surveys are also conducted in Portugal, Australia, England, Wales, and Northern Ireland, but not in most member countries of the European Union or the Union itself as a separate entity. Rachel Loopstra, a Canadian academic who focuses her research on household food insecurity in high-income countries, has observed that in the context of Europe and its countries, 'single-item indicators of food hardship are often included as part of larger scales used to measure material deprivation' (271). Such an approach might not be able to 'capture psychological or quantitative dimensions of going without food or of food running out,' and does not specify the duration or frequency of such experiences (Loopstra 271). In this regard, surveys conducted in the United States and in Canada are more insightful. 'Each

question asks whether the condition or behavior occurred at any time during the previous 12 months and specifies a lack of money or other resources to obtain food as the reason, thereby excluding voluntary fasting or dieting. The series includes 10 questions about food conditions of the household as a whole and of adults in the household, and, if there are children, an additional 8 questions about their food conditions' (Nord and Hopwood 1).

Pre-Pandemic Food Insecurity in the United States and Canada

In 2008, when the global economic and food crisis dominated the attention of the international community, the USDA research duo of sociologist Mark Norwood and nutritionist Heather Hopwood compared household food security in the United States and in Canada. They used the most contemporary data that were available in both countries, which meant 2007 data for the United States and 2004 data for Canada. They revealed that Canadians were less likely to live in food insecure households—estimated at 7% of all households—than US residents, 12.6% of whom lived in food insecure households. The percentage of the population living in households with very low food security (characterized by self-assessed inadequacy of food intake and disrupted eating patterns) was also lower in Canada (2.4%) than in the US (3.6%)' (Nord and Hopwood III). While describing food insecurity in both countries, the authors pointed to the same demographic and economic characteristics. Those most affected by food insecurity were young adults, single parents with children at home, unemployed adults and those looking for a job, adults out of the labor force due to disability, and people living in households with no adults having completed a 2- or 4- year college education. Not surprisingly, income level was strongly associated with food security in both countries.

According to Nord and Hopwood (III), the differences in population composition and income accounted for about 15 to 20% of the overall Canada-US difference in food insecurity among adults, and 20 to 30% of the difference among children. At the time, Canada had, proportionally, more college graduates and fewer children living in single parent households. 'For very low food security, as for food insecurity, the difference in educational attainment was the main factor favoring Canada, partially offset by less favorable income and employment characteristics' (Nord and Hopwood 30). The same authors also pointed out that single men and single women were more likely to be food insecure in Canada than in the United States, suggesting that family ties played a significant role in securing food needs within Canadian households. They also addressed the possibility that the tax and food assistance systems in Canada might be having better effects on food security than they do in the United States. Nevertheless, the research concluded that a 'generally lower rate of food insecurity in Canada' cannot be determined from information collected in the household food security surveys (Nord and Hopwood 31-32).

While comparative studies between food security in the United States and Canada are not being routinely conducted, it is still possible to compare the data from them at certain points in time. Publicly accessible data on food security in 2011/2012 in the United States and Canada show that food insecurity increased in both countries. The data describing food security prior to the pandemic are also available and will be analyzed later in this paper.

In 2011, food insecurity affected 14.9% of US households and then dropped slightly to 14.5% (17.6 million households) in 2012. These percentages included 5.7% of households (around 7 million), in 2011 and 2012, with 'very low food security – meaning that the food intake of one or more household members was reduced and their eating patterns were disrupted at times during the year because the household lacked money and other resources for food' (Coleman-Jensen et al. "Household..." 2012 I). The USDA research team that in 2012 included sociologists such as Alisha Coleman-Jensen and Mark Nord, as well as Anita Singh, a chief evaluator of the USDA's popular food assistance program known as SNAP (Supplemental Nutrition Assistance Program), also noted that 10% of all US households with kids were food insecure in 2011 and 2012.

At the same time, 12.6% (or 1.7 million) of Canadian households, representing 2.8 million adults and 1.15 million children under the age of 18, experienced some level of food insecurity during the previous 12 months. The food insecure households in Canada combined 2.6% of households with severe food insecurity, 6% of those with moderate food insecurity, and slightly over 4% of households with marginal food insecurity (Tarasuk et al. 8).

The increase in the percentage of food insecurity self-reported in surveys was larger in Canada than in the United States. This could be due to improved self-awareness on this matter, and/or an increased ability to overcome shame and stigma related to not having enough to eat, but the possibility of inadequate measures taken by both countries to combat food insecurity and poverty in general should not be ignored. The analyses conducted in both countries in 2012 and prior to 2008 left no room for doubt that food insecurity was strongly associated with income. In 2012, 40.9% of US households with incomes below the level of 185% of the official poverty line, which in 2012 meant the annual income of \$43,074 USD (with the federal poverty line in 2012 being \$23,283 USD) for a family consisting of two adults and two children, were food insecure. The same year in Canada food insecurity affected 69.5% of households reliant on social assistance such as welfare and disability support programs (Tarasuk et al. 11). Still, the percentage of households reporting very low food security in the United States (5.9%) was higher than the percentage of households reporting severe food insecurity in Canada (2.6%) in 2012.

Immediately before the pandemic, food security looked better in the United States than at any time in over a decade, with 10.5% (13.7 million) of households reporting being food insecure at least some time during 2019. This meant a continuous decline from a high of 14.9% in 2011 and was significantly below the 2007 pre-recession level of 11.1%. The 0.6% drop from 2018 (11.1%) was also statistically significant. Likewise in 2019, 4.1% (5.3 million) of US households reported having very low food security, which was not significantly different from 4.3% in 2018 (Coleman-Jensen et al. "Household..." 2020 V). Nevertheless, it meant a quite significant drop in comparison to the 2011 and 2012 data, when low food security, or more explicitly, significant impairment in meeting daily food needs, affected 5.7% (around 7 million) of US households.

As indicated by Coleman-Jensen ("Household..." 2020 16) and her team of researchers, rates of food insecurity in 2019 were statistically and significantly higher than the national average (10.5%) for households with children. This included all households with children (13.6%), households with children under age 6 (14.5%),

households with children headed by a single woman (28.7%) or a single man (15.4%), and other households with children (17%). Singles living alone also reported higher than average food insecurity – 13% for women and 12.8% for men.

Black (non-Hispanic) households experienced 19.1% food insecurity and Hispanic households 15.6%. Family income was among the most significant factors affecting food security, as in 2019, 27.6% of households with incomes below 185 percent of the poverty threshold reported problems with food security. With the federal poverty line in 2019 being \$25,926 USD for a family of two adults and two children, an income of less than \$48,000 USD for a household of 4 would implicate a nearly 30% chance of food insecurity. A similar chance of food insecurity could be inferred for households headed by women who lived with their children. The overlap between these two factors could also be very likely and quite significant. For households living below the poverty line, the percentage indicating food insecurity was even higher – 34.5%. Suburban areas were generally more secure than large cities and rural areas. (USDA, *Food Security*).

Canadian pre-pandemic data on food security, although showing insecurity not as high in absolute numbers as in the United States, looked far more grim in percentages, especially in terms of the growing percentage experiencing insecurity since 2004. The research data closest in time to the current pandemic, the Canadian Community Health Survey addressing food insecurity, was collected in 2017/2018. It revealed that 12.7% of Canadian households had experienced some level of food insecurity in the previous 12 months. In other words, 4.4 million people, including more than 1.2 million children under the age of 18, were experiencing food security at home. Tarasuk and Mitchell, who analyzed this data, did not hesitate to call it “higher than any prior national estimate” (3). The first Canadian reports on food insecurity conducted in the early 21st century acknowledged that this problem affected 7% of households but a little over a decade later an increase in this problem of close to 6% was reported.

Canadian food insecurity percentage breakdown into the descriptive ranges is also worth further exploration. Before the pandemic, severe food insecurity, otherwise defined as an extreme level of deprivation, was experienced by 3% of Canadian households, and this represented a 0.4% increase from 2011/2012. It also indicated that out of all food insecure households, every fourth household was severely impacted by food shortages. Moderate food insecurity was reported by 5.7% of households and this indicated a small drop since 2011/2012, when it was 6%. Marginal food security was the same in 2017/2018 as it was in 2011/2012 – 4% (Tarasuk and Mitchell 8).

A significant change in food security could be seen in just over a decade, from 2004 to 2017/2018. While the first targeted statistical studies conducted in Canada on this social and health problem initially revealed a higher likelihood of single men and women to be food insecure due to the lack of a family support system, the most recent pre-pandemic data on food insecurity in Canada showed that it was more prevalent among households with children than those without children. “In 2017-18, 16.2% of households with at least one child under 18 years of age were food insecure, compared to 11.4% of households without a child under 18 years of age” (Tarasuk and Mitchell 10).

The socio-demographic and economic profiles of food insecure households in Canada and the United States are generally pretty similar. The most important

markers of disadvantage are: low incomes, limited financial assets, and, most importantly, being a parent, especially a single parent. What could explain the pre-pandemic data indicating slow improvement in food security in the United States over the last decade and growing percentages of food insecure households in Canada? There are no clear answers. The US food programs might be more efficient and more directly targeted towards the needs of vulnerable populations than they were 10 years ago. Or perhaps some marginal food insecurity goes unreported in the United States as analyses there do not have the same high sensitivity as in Canada. The two countries most likely vary in how this problem is perceived. It is quite possible that the troubling data from Canada might be a combination of increased social awareness of the problem, de-stigmatization of household food shortages, improved surveying methodology, as well as insufficiency of Canadian public policy measures to tackle this serious public policy concern. Some analysts have wondered if Canada should introduce food assistance programs like the ones established in the United States (Gundersen et al.), namely the Supplemental Nutrition Assistance Program (SNAP), formerly known as the food stamps program, the National School Lunch Program (NSLP) and Special Supplemental Nutrition Program for Women, Infants and Children (WIC).

These programs have a long history in the United States dating back to 1939 when food stamps were first introduced by Franklin D. Roosevelt as a temporary remedy to the poverty caused by the Great Depression. Terminated in 1943, they were revived by President John F. Kennedy in 1961 in one of his first executive orders. His successor, Lyndon B. Johnson, expanded the program, signing the Food Stamp Act of 1964. "Participants were still required to purchase stamps equivalent to their normal expenditures for food. Then they received extra stamps to allow them to obtain a low-cost nutritionally adequate diet. Food stamps could be used only for items intended for human consumption with the exception of alcoholic beverages and imported foods" (Landers 1946-1947). Over the next five decades, food stamps have been revamped and the program reassessed and restructured under the already mentioned acronym SNAP.

Although SNAP and other food assistance programs have not eradicated food insecurity in the United States, some studies have indicated that adequate help through SNAP most likely played a role in reducing it. In 2009, the Obama administration introduced the American Recovery and Reinvestment Act (ARRA), which was an economic stimulus project undertaken by the government in response to the Great Recession of 2007 and included a temporary increase in SNAP benefits. Researchers (Nord and Prell III) found that low-income households eligible for SNAP improved their food security from 2008 to 2009, and a substantial share of that improvement may have been due to the increase in SNAP benefits. From late 2008 to late 2009, food expenditures in a typical (indicated by median) low-income household increased by 5.4%, with an estimated 2.2% may have resulted from the more generous SNAP benefits. Furthermore, in low-income households, the prevalence of food insecurity fell by 2.2 percentage points, and the prevalence of very low food security fell by 2.0 points. Households with income that were low, yet above the SNAP eligibility level, did not see any decline in food insecurity. These findings were also acknowledged by public health researchers (Keith-Jennings et al.) as a natural experiment, in which the effect of raising SNAP benefits was isolated to measure the

effect on food insecurity. Good effects from SNAP were also noted in 2017, with acknowledgment of food insecurity being reduced by up to 30%, and even more for some populations (Keith-Jennings et al.).

The United States Department of Agriculture estimated that in fiscal year 2018 SNAP “served an average of 40.3 million people per month and issued \$60.9 billion in benefits to be spent in food stores authorized to accept SNAP benefit” (Canning and Morrison). However, analysts such as Canning and Morrison pointed out SNAP’s “multiplier” effect throughout the economy, particularly the local economy, in generating incomes for those who produce food, work in food transportation, processing or marketing. When low income families spend more, other parts of the food supply chain and people connected with them, benefit as well. The USDA Economic Research Service estimates put that multiplier between 0.8-1.5 USD, under normal economic conditions. This means that every dollar spent on SNAP increases the Gross Domestic Product (GDP) by 0.8-1.5 USD. “Research also suggests that the size of the multiplier depends on economic conditions and the types of spending that take place. Spending multipliers tend to be higher during recessions, when there are underemployed resources in the economy” (Canning and Morrison). It would be inaccurate to see the benefits of food assistance as limited only to low income families as its value in dollars retained by the local community is also significant.

As noted earlier, Canada does not have any specific food assistance programs involving government subsidized food, and all types of social assistance are financial. Families that receive such help can spend it according to their needs, of which food is one of many. It could be argued that such help is more dignified and gives families more autonomy than SNAP benefits, which can only be spent on food (Ralph, Power et al.), protecting family resources for food that might otherwise be spent on other items. Opponents of the introduction of a SNAP-like program in Canada often refer to the stigma surrounding the program (Power et al.) and its high costs. They dismiss the evidence that the general character of Canadian social assistance does not keep up with the increasing costs of living (Ralph), of which the cost of food comprises a large part. While the United States has seen a moderate success from SNAP over the last ten years, and its usefulness during the pandemic has been undeniable (see the next chapter), one might wonder if Canadian opponents of such a program truly worry about the unintentional shaming of its potential recipients or worry more about the stigma for Canada on the international stage as a ‘country of food stamps’.

The Pandemic and Food Systems of the Developed World. Eye on the United States and Canada

Panic Buying and Food Anxiety

In early 2020, the novel Coronavirus pandemic made people anxious about food around the globe. While the underdeveloped countries once again had to face the grim reality of dependence on foreign food assistance that became less predictable and reliable, the highly developed and industrialized countries saw a lot of shopping activities indicating consumer concerns about having enough to eat in the

upcoming days and weeks. Supermarkets in the United States, Germany, and Great Britain reported panic buying (Askew, "Coronavirus..."), even though the governments of these countries did not even come close to food rationing (although certain stores in Britain did opt to ration certain food items per customer per visit) (Alstedter and Hong). With time, as various governments in developed countries introduced lockdowns, they also started sending mixed messages to their populations, advising against buying beyond the weekly household needs yet, at the same time, urging people to take fewer trips to supermarkets and convenience stores. Stores in many countries were forced to limit the number of consumers who could be inside simultaneously. The queues in fronts of supermarkets and grocery stores became part of the everyday reality even in affluent countries. For many families, this led to challenging mental gymnastics about what food products to buy and how much. Customers in the United Kingdom did not follow the guidance to buy infrequently, contributing to supermarket chains taking special measures such as banning couples shopping together and enforcing a "one person per household" rule (Askew, "Shoppers..."). Confusion and various manifestations of erratic behavior around food could be understood as indicative of the changing perceptions of food security, particularly the availability of needed food products and their sufficient quantities during the pandemic.

Analyses of consumer behavior regarding food products during the pandemic indicated that indiscriminate stockpiling of food in many countries due to lockdowns was rather short lived. Not the same could be said about the volatility of food prices, which in many developed countries has remained high more than a year into the pandemic. Some customers switched to online food shopping to ensure safety, while others felt safer in small, local stores rather than in large supermarkets. In the long run, many customers in developed countries found themselves dealing with the economic consequences of the pandemic and adjusting the contents of their shopping carts and baskets accordingly. Many families have experienced severe cuts in household incomes during the pandemic, which in turn has affected their food budgets and shopping choices. This could lead to limited access to adequate food resources as the ability to acquire them has decreased. Additionally, pandemic-related stress has affected food preferences and buying patterns.

Certain trends in food consumptions have been identified. Some of them, such as the rediscovery of home cooking, which increased the demand for staple foodstuffs (Borsellino et al. 1-2), could be seen as beneficial to health and family relations. On the flip side, psychologists and psychiatrists have reported an increase in the frequency and severity of eating disorders symptomatology, as well as problems with access to treatment for individuals experiencing such health issues (Vuillier et al.). Links between food insecurity and binge eating disorder and bulimia during the pandemic have also been described in the literature on eating disorders. With depleted funds to purchase a sufficient amount of adequate quality food, episodes of involuntary food restriction might be on the increase. These could be followed by episodes of binge eating when the food once again becomes more available stemming from a combination of food cravings and the biological effects of restriction or starvation. The pandemic might add the additional stresses of economic and psychological uncertainty which, combined with home confinement, might lead to disordered eating. As Iranian psychiatrist Mohsen Khosravi points out in the 2020

Journal of Eating Disorders, “the inescapable media coverage on grocery shopping, food safety, food shortage threats, and ‘how to control emotional eating’; or the focus of some online content regarding the pandemic on “how to appear perfect on a webcam”, as well as at-home workout challenges, can involuntarily strengthen the eating-disorder behaviors and cognitions” (1-2).

Pitfalls of the Modern Food Chains Exposed in Northern America

The coronavirus pandemic not only affected consumers’ behavior and emotions around food but also uncovered existing problems within food systems in the developed world, particularly problems with distribution, packaging, and sales. Each of the problematic areas represents an important part of modern food supply chains, which entail the path the food has to go through, starting in the field or the barn in order to end up on the dining table. In modern food supply chains, efficiency is more important than diversity, flexibility, or resilience to crisis. Each particular part of the modern food chain is codependent on the previous and subsequent ones with routinized exchange between them. This leaves very little room for adapting to unexpected situations. While discussing these matters, Canadian science writer and journalist Bob Holmes (“How Has the Pandemic Strengthened the Global Food Supply Chain?”) considers the pandemic to be “a stress test for the world’s food supply chain – and a preview of looming threats.”

Such a test was to some extent failed by the meatpacking industry, as high rates of Coronavirus (COVID-19) outbreaks among workers in the spring of 2020 caused some meatpacking plants to temporarily shut down. Others did not shut down and downplayed the Coronavirus risks, thus gambling with the health and lives of their staff. Eric Schlosser, the acclaimed author of *Fast Food Nation*, noted the following in a 2020 article in *The Atlantic*: “The industry practice of making hundreds of workers stand close together at a production line – with sharp knives and a fast line speed – endangers not only their safety, but also food safety and public health. If mistakes are made, workers can get hurt, and meat can get contaminated. The huge processing facilities run by America’s meatpacking companies are excellent vectors for spreading lethal strains of *E-coli*, antibiotic-resistant *Salmonella*, antibiotic-resistant *Staphylococcus aureus*, and now COVID-19” (Schlosser).

Schlosser’s article notes that three USDA food safety inspectors who oversaw meatpacking plants died from COVID-19 in the spring of 2020, and nearly 200 became ill. The Midwest Center for Investigative Reporting tracked “at least 50,000 reported positive cases tied to meat and poultry processing facilities from at least 499 outbreaks in 38 states, and at least 259 reported worker deaths in at least 67 plants in 29 states” (Chadde). These data were compiled from April 2020 to early July 2021.

Similarly to Schlosser, the reporters of the Midwest Center identified the meat industry’s vulnerability to the Coronavirus as closely connected with “the same features that allow a steady churn of cheap meat [to] also provide the perfect breeding ground for airborne diseases: a cramped workplace, a culture of underreporting illnesses, and a cadre of rural, immigrant, and undocumented workers who often live and work together because few other jobs are available” (Mc Van et al.). The situation of workers improved with vaccinations but the accountability of the industry is still very much lacking.

As of mid-2021, the Biden administration started to implement tougher standards in food processing than those that existed under President Trump, but this appears to be a long process. Such problems are not necessarily unique to the United States. Major outbreaks affected workers in meat processing plants in Germany, France, Spain, and the United Kingdom (Reuben).

Disruption of work in meat processing plants is not just a matter between workers and their employers. The closure of such facilities in the spring of 2020 affected animal farming sectors that are located directly prior to meat processing in the industrial food supply chain. Thousands of pigs, chickens, turkeys, and cows were euthanized (or sometimes in the case of piglets, chemically aborted) as widespread plant closures led to a backlog of livestock ready for slaughter. Farmers, not able to deliver their animals to slaughterhouses at meat processing facilities, were not prepared to keep them on their farms past the usual maturity point in their lives. This was particularly the case in pork farming. Reuters writers Tom Polansek and P.J. Huffstutter, covering finances in agriculture, explained the situation as such: “Unlike cattle, which can be housed outside on pasture, US hogs are fattened up for slaughter inside temperature-controlled buildings. If they are housed too long, they can get too big and injure themselves. The barns need to be emptied out by sending adult hogs to slaughter before the arrival of new piglets from sows that were impregnated just before the pandemic.”

Vulnerability of the food supply chain at the level of animal production and meat processing was acknowledged by US Agriculture Secretary Tom Vilsack when he announced that farm animal producers can receive financial assistance of 80% of the market value of the swine, turkeys, and chickens euthanized between March 1 and December 26 of 2020. Farmers were required to have “legal ownership of the animals at the time they were killed” (McCrimmon). Vilsack’s position was that many farmers decided to depopulate their livestock as they had no other financially feasible option. Although not opposing compensation for animal farmers, the earlier quoted Eric Schlosser had long been known to consider such a lack of other viable options for farmers as a primary problem of the industrial meat sector. The pandemic might be convenient to blame, but hogs raised on much smaller, non-industrial farms live much longer than those in factory farms. It is the prioritizing of profits over sustainability that requires farmers to slaughter farm animals at a certain young age. In the words of Schlosser: “The fact that hundreds of thousands may have to be culled and discarded is one more sign that our centralized, industrialized food system isn’t sustainable, lacks resilience, defies logic, and must be transformed.”

In the United States, a slow return to normal life in 2021 meant that the country’s food system would, for the time being, continue to stumble on pandemic-related production roadblocks that lead to rising food prices. In an NBC News story on growing food prices, the author Martha C. White (“The Price of Food...”) addresses the reliance of food production in the United States ‘on a mobile army of laborers, whose low pay and crowded working conditions make them uniquely vulnerable to Covid-19—a combination of circumstances that have crimped production and raised costs for producers... The combination of production bottlenecks and demand spikes have culminated in higher prices, especially for meat.’ White argues that while large supermarket chains are still able to maneuver prices in order to mitigate the worst of market chain disruptions caused by the pandemic, small grocers

and corner stores do not have the resources to do so. They are being forced to increase their retail prices due to the higher costs they are incurring. As a result, customers have to pay higher prices, which increases the anxiety of low-income families surrounding their ability to afford food in sufficient quantities. Consequently, this becomes a matter of food security, mostly in terms of food access, that the pandemic is taking away from an unprecedented number of people in such highly developed countries as the United States and Canada.

COVID-19 Challenges of Food Access and Food Availability in the United States and Canada

In more developed countries during ordinary times, food access usually presents a bigger challenge to food security than food availability. The latter is generally abundant, with the exception of areas lacking proximity to well-stocked food stores (increasingly referred to as 'food deserts'). Undoubtedly, the COVID-19 pandemic has increased the role of food availability in food security problems with temporary disruptions in the supply of some food products, particularly in the meat sector, but this has not thus far translated to 'long-term food shortages or a fundamental breakdown in the supply chain' (Johannson). These shortages, however, contributed to an increase in the retail prices of meat, eggs, and baked goods in the spring of 2020, which greatly affected food access for the more vulnerable pockets of society. Things deteriorated further in October 2021, especially in the United States with restaurants facing disruptions in supplies of meats and vegetables and grocery stores struggling to keep their shelves stocked as non-perishable food products such as canned or frozen vegetables and pasta continue to be in high demand (Rinelli). Still, according to information posted on the USDA website that was current and relevant in early November 2021, there were 'no nationwide shortages of food although in some cases the inventory of certain foods at your grocery store might be temporarily low before stores can restock' (USDA 'Food Supply Chain'). In real life terms, this could mean a limited variety of products or temporary issues with obtaining particular products but no serious infringement on availability in the food system. Therefore, food access as determined by financial means still remains more critical to food security than availability. But there is no denying their interdependence as interruptions and reductions in the supply of certain food products drive their prices up and this has been a constant concern since the beginning of the COVID-19 pandemic.

In the United States, the Bureau of Labor Statistics (BLS) revealed that in 2020 'the food price index increased 1.5% in April, following a 0.3% increase in March. The index for meats, poultry, and fish rose sharply by 4.3% and the cereal and bakery index increased 2.9%, its largest monthly increase ever recorded by BLS' (Johannson). In Canada, an increase in food prices related to food supply disruptions were revealed in the 11th edition of *Canada's Food Price Report* published in 2021 by Dalhousie University and the University of Guelph. In 2020, overall food prices increased by 2.7%, with the price of meat increasing by 6.1%, dairy products by 3.1%, and vegetables by 2.4% (*Canada's Food Price Report 2021* 7). The report predicted a further 3-5% in spikes of general food prices in 2021, with the prices of various meats going up by 4.5-6.5%. Similar increases were expected for vegetables, while bakery products were expected to cost 3.5-5.5% more than in 2020. For dairy products, these

increases were estimated to be between 1 and 3%. In 2021, a hypothetical Canadian family of four, consisting of two opposite sex adults aged 31-50, a girl (age 9-13) and a boy (age 14-18), was expected to spend \$695(CAD) more on food than in 2020. The food inflation rate was anticipated to outpace the general inflation rate (*Canada's Food Price Report 2021* 4-5).

The significant increases in food prices in both countries during this pandemic have had a tremendous impact on food access, as they are often combined with individual and family income losses due to lay-offs, reduced hours, business closures, sick leaves, or even COVID-19 hospitalizations and/or deaths of family members. Despite the fact that problems with the availability of certain food products did not last long, they still brought long-lasting effects on food access through growing prices. The limited availability of certain food products complicates food access but ultimately, people are able to adjust their dietary habits if they have financial means to obtain a sufficient quantity of food. Losing food access in an economic sense means an inability to feed oneself or one's family and, in developed countries, is the most prevalent cause of food insecurity. During the COVID-19 pandemic, this unwelcome social problem has reached a level unseen in the United States and Canada since the 1930s.

Food Insecurity Dynamics in the United States and Canada During the Pandemic

In the United States, where household food insecurity is regularly monitored (Pollard & Booth 4), pandemic-related food shortages experienced by Americans are reflected in statistics and in everyday life. The novel coronavirus has destroyed a sense of safety in many households, with job losses and increasing concerns over paying bills, making ends meet, and fulfilling food needs. The images of lines of cars in front of food banks have become quite common across the United States. According to Siobhan O'Grady from *The Washington Post*, the pandemic that 'unleashed the cascade of suffering' around the world also made some people in the United States resort to 'shoplifting basic necessities, including baby formula.'

In April 2020, the US Census Bureau came up with an experimental statistical tool to collect data on how people's lives have been impacted by the coronavirus pandemic from a social and economic perspective. It is called the Household Pulse Survey and takes the form of a 20-minute online survey addressing issues such as childcare, education, employment, food security, health, housing, social security benefits, household spending, consumer spending associated with stimulus payments, etc. Phase 1 of the survey ran from April 23 through July 21, 2020; Phase 2 went from August 19 through October 26 of 2020; and Phase 3 from October 28, 2020 through March 29, 2021. Almost a year later, Phase 3.1 of the Household Pulse Survey began on April 14, 2021 and ended on July 5, 2021 (US Census). In the very first survey, covering April 23 through May 5 of 2020, over 24 million adults reported not having enough to eat in the 7 days prior to taking the survey. Among them were almost 4.7 million adults who claimed that they often did not have enough to eat in the 7 days prior to taking the survey (US Census Food Table 2b, Week 1). When the same people were asked to describe their food security prior to March 13, 2020, slightly over 20 million identified as not having enough to eat prior to the pandemic.

This number included 4.2 adults who often felt that they did not have much to eat (US Census Food Table 2a, Week 1). It can be inferred that in the course of less than two months, over 4 million adults experienced a food insufficiency which they had not known before, and half a million among them felt it was happening rather often.

More dramatic food insecurity data were noted in Phase 3 of the Household Pulse Survey, towards the end of the year. Right before Christmas 2020, as many as 29.7 million adults reported not having enough to eat, with 7.3 million (US Census Food Table 2b Week 21) reporting that it was happening quite often. The same sample of people revealed that pre-pandemic food insufficiency was affecting 23.2 million adults, of which 6 million experienced it quite often (US Census Food Table 2a, Week 21).

Comparing the above data with the 2019 Household Food Security Report from the United States Department of Agriculture is very difficult, as the US Census Bureau is based on individual reporting of food security over the course of a year and the USDA conducts surveys among households, not individuals. As already mentioned in this paper, the USDA identified 13.7 million food insecure households in 2019 but the 2020 data pertaining to households had not yet been released by the USDA at the time of this paper's submission. While the ability to quantify the effect of the pandemic on food security in the United States and Canada would hold great value, there are qualitative indicators showing that the pandemic is taking its toll on food security in North America.

Food banks have become an important part of dealing with the pandemic in the United States and Canada alike. Both countries have seen a dramatic increase in food bank recipients, especially first-timers. Long lines in front of food banks became a rather permanent feature and in many cases food had to be distributed outside due to safety reasons (Charles, "Food Banks...", O'Grady, Wong). In April 2020, the Government of Canada announced a \$100 million contribution through the Emergency Food Security Fund to aid food banks and other charity organizations that tackled food insecurity during the pandemic. An additional \$100 million in funding was allotted to them in the fall of 2020 (Wong). Some of these charity organizations, such as the Salvation Army, which received a significant amount of government help ('Government of Canada'), are not just food assistance charities and have a much broader scope of operation.

In the United States, Feeding America, the most well-known network of food banks fighting domestic hunger, handed out 4.2 billion meals in just 7 months from March through October. It had never worked with such a quantity of meals and so many people over the course of such a short time. 'The organization has seen a 60 percent average increase in food bank users during the pandemic: about 4 in 10 are first-timers' (Cohen).

For Feeding America, which is comprised of 200 *food banks*, the data on food security from 2019 and 2020 reflected an undesirable change. 'Before the COVID-19 crisis began, more than 35 million people, including nearly 11 million children, lived in a food-insecure household' (Feeding America, "Impact..." 2020: 1). Pre-pandemic data reflected the lowest food insecurity rates in more than 20 years, but the current crisis has reversed improvements made over the past decade. In March 2021, after a year of the pandemic, Feeding America revised its estimates on food insecurity, which was expected to be experienced by 42 million (1 in 8) people in the United

States, including 13 million children by the end of 2021. For Black populations, the situation was even worse, with its projected 21% (1 in 5) of individuals possibly experiencing food insecurity in 2021 'compared to 11% of white individuals (1 in 9)' (Feeding America, "The Impact..." 2021: 1). 'In 2019, food insecurity among Black and white individuals was 19.3% and 9.6%, respectively' (Feeding America, "The Impact..." 2021: 5).

Interestingly, but perhaps not surprisingly, the staff and volunteers of food banks in the United States and Canada earned the status of heroes during the pandemic. This is much deserved, especially that they distributed about 50% more food in 2020 compared to 2019 (Parlapiano and Bui, Wolfson and Leung), while dealing with supply chain interruptions. Food banks usually operate in non-government sectors and are run by charities, and can in some instances be viewed as a form of public-private partnership. Despite their successes in providing for food-deficient households during the pandemic, they are not in a position to erase problems with food insecurity – neither in times of stability nor in crisis. 'The pandemic made clear that food banks work best as a complement to, not a replacement for, government assistance' (Parlapiano and Bui).

The closing of schools during the COVID-19 pandemic posed another problem with fighting food insecurity through the federally assisted National School Lunch Program. Many local school districts all over the United States mobilized and still provided meals to children (Wolfson and Leung). Some schools adapted to the pandemic realities by introducing a grab-and-go option, while others organized weekly deliveries. Pick-ups of three-day meal bags proved to be working for some schools in Chicago and the parents involved (Patton and Querolo). It is quite accurate to state that the pandemic brought a new appreciation for school lunches and even hope for a program of universal school lunches served to all children, regardless of family incomes. In the summer of 2020, the United States Department of Agriculture made a considerable effort to ensure that schools provided free meals to children under 18, even during the summer vacation period. Income restrictions were lifted, as well as the requirement that children eat in a group setting. Parents were permitted to pick up meals for the children (Richardson), essentially making these meals family meals. Such an opportunity was not given to schoolchildren in Canada and their families.

All the waivers easing the regulations around school lunches in the United States have been extended through September 2021, 'maintaining what has become a de facto universal school meals program' (Fu). This move has been praised by anti-hunger advocates and nutrition experts who are now asking policymakers to keep school breakfast and lunch free even after the COVID-19 public health emergency ends. 'The bulk of their argument is that doing so would increase access to nutritious food, reduce stigma, and cut down paperwork for schools – advantages that are all the more welcome during a crisis that has led to increased unemployment and food insecurity' (Fu). There are also food policy and community health analyses indicating that universal school lunches in schools might cost less overall than targeting students from low income families exclusively (Long et al.). In the post-pandemic world, the possibility of students from various social circles and economic backgrounds bonding over food is also a valuable goal, very much worth pursuing.

In fighting food insecurity in the United States during the pandemic, SNAP proved yet again that it plays a critical role for underprivileged families. The American Rescue Plan Act included a 15% increase in SNAP benefits, which was authorized in December 2020 and then extended through September 2021 in March 2021. This means an additional \$28 USD per month per individual eligible for SNAP and for a family of four this adds up to another \$112 USD per month. 'With this increase, an individual could receive a maximum allotment (the allowance SNAP provides) of \$234 per month, while a household of four could be eligible for up to \$782 per month' (Rowan). As these dollars can only be spent on food, they could make a substantial difference in families' food expenditures, self-assessments of food security, as well as the quantity and quality of food that is served at the dinner table.

The flexibility of government-run food programs is quite important in a time of crisis. With provisions and extensions, food can reach more families. Safety concerns also play a role in adjustments of food programs to the harsh reality of a novel virus running rampant. One positive consequence of the pandemic was the roll-out of online redemption (i.e., usage) of SNAP food coupons; in the vast majority of the US before the pandemic, SNAP benefits generally required in-person transactions. With changing shopping patterns during the coronavirus crisis and many customers turning to online food shopping to minimize the risk of a potentially deadly viral infection, the use of SNAP for online purchases was tested (Tobin). It might be further integrated into the program during ordinary, more stable times, as well.

Not all government programs in the United States that were intended to fight food shortages during the pandemic were successful. One example is the Farmers to Family Food Box program created at the early stage of the pandemic, in May 2020, when the work of food processing facilities faced disruption by lockdowns and thousands of employees were fighting infections. Its idea was to purchase food from farmers who were having trouble marketing their produce, dairy products and other perishable items" (Glauber) and then channel it to the needy families through food banks and other charitable organizations. In that sense it was a two-step program overseen by the Agricultural Marketing Service of the USDA, the one that generally helps farmers sell their products, "rather than the USDA's Food and Nutrition Service, which administers food aid programs" (Charles, "How Trump's..."). Trying to achieve the multiple goals of helping farmers, preventing food waste, and alleviating household insecurities, this was an ambitious, possibly noble, but quite inefficient endeavour. The contents of food boxes varied from week to week, their prices were inconsistent, sometimes much higher than expected, which made the program quite costly. "As of March 2021, the food box program has delivered almost 150 million boxes of food to 11,000 nonprofit organizations. Between \$4.5 and \$6 billion has been spent on the program since it went into effect last May" (Glauber). This initiative, however, was particularly cherished by Ivanka Trump (Walljasper) and well-suited for President Donald Trump, who added an extra bonus in the third round of the program in the fall of 2020: his signed letter (Lundford). Non-profit food charities were quite concerned, as such a letter could be interpreted as a campaign stunt.

Distribution of food boxes was not free of food safety concerns as there were refrigerator shortages at food banks (Charles, "How Trump's...") and other charities. Sometimes perishable food would stay without proper refrigeration (Walljasper) "for extended periods of time at distribution sites" (Glauber). So called combo

boxes, which included fruit, vegetables, and dairy products often needed unpacking, sorting, and re-packing by the food pantries' staff. Those and many other costs "were often absorbed by food pantries, food banks, and other nonprofits that were already struggling to meet the increased demand for food caused by the pandemic" (Glauber). Sometimes food would get to charities in poor conditions, with liquids such as yogurt spilled or products spoiled in transit (Walljasper).

All these problems could have been overlooked if the program delivered what it promised. It did not. National distribution was quite uneven and the costs greatly outweighed the benefits of the program. The United States Department of Agriculture (USDA) hired hundreds of private companies to make a smooth passage from farmers to families in distress but many of them overcharged the government and were late with deliveries. It seemed that the program helped farmers and middlemen more than it did eligible families in need of food. In the spring of 2021, the Biden Administration reviewed the program and decided to discontinue it. Under current Secretary of Agriculture Tom Vilsack, the USDA is to focus on different initiatives to fight hunger and malnutrition in the United States (Walljasper) and the SNAP food stamps program, as well as other food distribution programs with a more successful implementation history are meant to be continued and improved upon.

In Canada, food insecurity was perhaps experienced more privately than in the United States, nevertheless, the number of Canadians having problems with meeting their daily food needs grew noticeably during the pandemic. In early May of 2020, Statistics Canada conducted a web panel survey, which was a contribution to the larger Canadian Perspectives Survey Series. The May 4-10 panel discussed here included some questions 'aimed at assessing the levels of food insecurity being experienced by Canadians. Almost one in seven (14.6%) Canadians indicated that they lived in a household where there was food insecurity in the past 30 days' (Statistics Canada 2). Such an assessment was based on a scale of six food experiences, ranging from food not lasting before there was money to buy more, to going hungry because there was not enough money for food. Overall, the surveyed Canadians reported only one negative experience, but 2% reported the most severe food insecurity, with five or all six experiences. Higher levels of pandemic-related food insecurity were reported among Canadians living in a household with children (19.2%) compared to those living with no children (12.2%). 'In particular, when compared to households with no children, Canadians living in households with children were more likely to be worried about food running out before there was money to buy more and having difficulty affording to eat balanced meals' (Statistics Canada 2). There was also a quite strong effect on food security related to work absence due to closure, layoffs, or a personal health situation related to COVID-19 infection experienced by the survey participants in the week prior to the web panel. Canadians who stayed out of work in that period of time were more than twice as likely to be food insecure (28.4%) than those who were working (10.7%) (Statistics Canada 4).

The Canadian government's measures to fight the pandemic and potential deterioration of the citizens' and residents' quality of life included taking care of health insurance for those who lost their jobs, ensuring wage replacement, and loan repayment deferrals (Robson S2-S3, S-6). 'In addition, Canadian Emergency Response Benefit (CERB) was introduced in early April 2020, providing \$500 per week for up to 16 weeks to Canadians aged 15 years or older who received at least \$5,000 in work

income in 2019 or in the 12 months before their CERB application' (Men and Tarasuk 203). With all of these programs being very helpful, no specific government food program was introduced during the pandemic.

Observing moderate, but still insufficient, successes with fighting food shortages in low-income families through government programs that proliferated in the United States during the COVID-19 pandemic, numerous food policy experts in Canada were becoming frustrated by the lack of distinct government-run food help programs and the continued placement of food security in the hands of non-government organizations. COVID-19 proved this to be particularly cumbersome as the 'vast majority of food-insecure households did not report receiving any charitable food assistance' (Men and Tarasuk 202). In the past, a lack of government control over social programs delegated to charities and churches proved to be problematic with the most horrific example being the residential schools for indigenous children. As food aid remains a domain of non-government organizations today, the scenario for similar abuses is very unlikely, it might well be an example of the Canadian government's avoidance of dealing with problems head on. Such an argument could be supported by a food policy study conducted in 2019 indicating that 'food charity is not an effective means to manage, let alone reduce, household food insecurity... Persistent unmet food needs and significant levels of food deprivation are commonly reported among food bank users despite the receipt of assistance' (Men and Tarasuk 204).

Some essential human needs like food are too important to remain outside of the government's domain. A lack of free school lunches for kids from food-insecure households goes against the popular belief that Canada is a country where basic human rights are highly valued. Researchers such as Fei Men and Valerie Tarasuk, quoted several times in this work, have called for more 'adequate and secure financial support for low-income households' to reduce food insecurity and other repercussions of the pandemic on food access by vulnerable families (2018). Their evaluation of government measures to address increased poverty during the pandemic deemed these efforts as positive but quite insufficient, especially that increased funding for charities had an inconsistent effect on the fulfillment of food needs for specific populations.

Conclusions

Food is, indeed, different during a pandemic. With so many ways to look at food — as a nutrient, as a human need, and as a social justice issue — the current pandemic has been a stark reminder that food can never be taken for granted. The coronavirus crisis has put some severe strains on the world's food system, but it did not turn it upside down. Globally, the food insecure nations have become even more insecure, and some of the First World problems with acquiring food during the pandemic might not be understood by, and appear rather trivial to, the developing world.

Yet, human experience with food in a pandemic is more complicated than the dichotomy of haves and have-nots in a global sense. In highly industrialized countries food insecurity is a real public health problem. So is the prevalence of eating disorders, their onsets, relapses, and intensification during a pandemic. The spectrum of

these problems include increased anxieties about having enough to eat, not being able to predict when the next meal will be available, as well as about having too much to eat in times of decreased physical activities.

Access to food, its availability on the market (regional and more local) in the United States and Canada, has generally been reflecting social inequalities to a greater extent than it has social diversity. Decisions on what to eat, although influenced by ethnicity, cultural belonging, health concerns, and chosen lifestyles, have always been directly linked to one's purchasing power. This power has been greatly weakened by the COVID-19 pandemic in many households in the United States and Canada alike, and governments found it necessary to step in.

In the United States, existing food programs were expanded and new ones were introduced. Some of them turned out to be not so cost-effective and successful as expected, such as the USDA Farmers to Families Food Box Program, and were therefore discontinued. Others, that had been running for years, were improved and gained new, more favorable recognition. In Canada, the government increased general anti-poverty funds available to low-income families and made some employment-related programs more flexible. Food security problems were handled, as usual, through charitable organizations, especially the food banks. This proved insufficient, and re-invigorated calls for specific, government-run food programs.

Among the consequence of the pandemic that could be seen as having side-effect benefits was the roll-out of online access/redemption usage for recipients of food coupons under the nationwide Supplemental Nutrition Assistance Program (SNAP) in the vast majority of the US, as well as a better appreciation of this program. The same could be said about the USDA-funded school lunches, which food justice advocates would like to see as universal in schools and available to children of all economic backgrounds.

The COVID-19 pandemic has been a very unkind specter to the contemporary global food system. While augmenting the existing problems with food security in a global and local sense, it has also presented a new array of problems that global as well as local supply chains might be prone to. Finally, it showed that the food system needs changes to ensure sufficiency and access to food around the globe, as well as the affirmation and practical implementation of the right to food that needs to be formally recognized as a basic human right.

References

- Altstedter, Ari and Jinshan. "Why People Are Panic Buying as Coronavirus Spreads". *Time*, March 10, 2021, <https://time.com/5800126/panic-buying-coronavirus>.
- Askew, Katy. "Coronavirus: Europe Calls for Calm as Food Shortages Fears Spark Panic Buying". *Food Navigator*, March 16, 2020, <https://www.foodnavigator.com/Article/2020/03/16/Coronavirus-Europe-calls-for-calm-as-food-shortage-fears-spark-panic-buying>.
- Askew, Katy. "Shoppers Ignore Government COVID-19 Advice to Shop Infrequently: Data". *Food Navigator*, April 3, 2020, <https://www.foodnavigator.com/Article/2020/04/03/Shoppers-ignore-government-COVID-19-advice-to-shop-infrequently-Data>.
- Borsellino, Valeria, et al. "Covid-19 Drives Consumer Behaviour and Agro-Food Markets Towards Healthier and More Sustainable Patterns". *Sustainability*, vol. 12, no. 20, 2020, <https://doi.org/10.3390/su12208366>.

- Canada's Food Price Report 2021*, edition 11. Dalhousie University, University of Guelph, [https://cdn.dal.ca/content/dam/dalhousie/pdf/sites/agri-food/Food%20Price%20Report%202021%20-%20EN%20\(December%208\).pdf](https://cdn.dal.ca/content/dam/dalhousie/pdf/sites/agri-food/Food%20Price%20Report%202021%20-%20EN%20(December%208).pdf).
- Canning, Patrick and Rosanna Mentzer Morrison. "Quantifying the Impact of SNAP Benefits on the US Economy and Jobs". *Amber Waves: The Economics of Food, Farming, Natural Resources, and Rural America*. United States Department of Agriculture, Economic Research Service, no. 6, July 2019, <https://www.ers.usda.gov/amber-waves/2019/july/quantifying-the-impact-of-snap-benefits-on-the-us-economy-and-jobs>.
- Chadde, Sky. "Tracking COVID-19 Impact on Meatpacking Workers and Industry". Midwest Center for Investigative Reporting, investigatemitwest.org, April 16, 2020, Updated July 6, 2021, <https://investigatemitwest.org/2020/04/16/tracking-covid-19s-impact-on-meatpacking-workers-and-industry/>.
- Charles, Dan. "Food Banks Get the Love, But SNAP Does More to Fight Hunger". *The Salt, National Public Radio*, May 22, 2020, <https://www.npr.org/sections/the-salt/2020/05/22/859853877/food-banks-get-the-love-but-snap-does-more-to-fight-hunger?t=1627927898870>.
- Charles, Dan. "How Trump's Food Box Initiative Overpaid and Underdelivered". *National Public Radio*, September 3, 2020, <https://www.npr.org/sections/health-shots/2020/09/03/907128481/how-the-usdas-food-box-initiative-overpaid-and-under-delivered>.
- Cohen, Sharon. "Millions of Hungry Americans Turn to Food Banks for the First Time". *Associated Press. Public Broadcasting Corporation*, December 7, 2020, <https://www.pbs.org/newshour/economy/millions-of-hungry-americans-turn-to-food-banks-for-first-time>.
- Coleman-Jensen, Alisha, et al. "Household Food Security in the United States in 2012". Economic Research Report no. 155, United States Department of Agriculture, 2013, https://www.ers.usda.gov/webdocs/publications/45129/39937_err-155.pdf?v=0.
- Coleman-Jensen, Alisha, et al. "Household Food Security in the United States in 2019". Economic Research Report no. 275, United States Department of Agriculture, 2020, <https://www.ers.usda.gov/webdocs/publications/99282/err-275.pdf?v=9229.6>.
- Feeding America. "The Impact of the Coronavirus on Food Insecurity in 2020". October 2020, https://www.feedingamerica.org/sites/default/files/2020-10/Brief_Local%20Impact_10.2020_0.pdf.
- Feeding America. "The Impact of the Coronavirus on Food Insecurity in 2020 & 2021". March 2021, https://www.feedingamerica.org/sites/default/files/2021-03/National%20Projections%20Brief_3.9.2021_0.pdf.
- Fu, Jessica. "The Pandemic Has Made Universal School Meals the Norm: This Model Could Help Cafeterias Save a Lot of Money over Time". *The Counter*, March 11, 2021, <https://thecounter.org/universal-school-meals-usda-lunch-covid-29-biden/>.
- Glauber, Joseph. "Ending the Food Box Program Was the Right Move". *The Hill*, April 19, 2021, <https://thehill.com/opinion/finance/549059-ending-the-food-box-program-was-the-right-move>.
- "Government of Canada Rolling out \$100 M in Added Support to Food Security Organizations During COVID-19 Pandemic". *Agriculture and Agri-Food Canada*, December 18, 2020, <https://www.canada.ca/en/agriculture-agri-food/news/2020/12/government-of-canada-rolling-out-100m-in-added-support-to-food-security-organizations-during-covid-19-pandemic.html>.
- Gundersen, Craig, et al. "Food Assistance and Food Insecurity: Implications for Canada in Light of the Mixing Problem". *Empirical Economics*, vol. 52, no. 3, 2017, pp. 1065-1087, <https://doi.org/10.1007/s00181-016-1191-4>.
- Hazzard, Vivienne, et al. "Food Insecurity and Eating Disorders: A Review of Emerging Evidence". *Current Psychiatry Reports*, vol. 22, no. 12, 2020, <https://doi.org/10.1007/s11920-020-01200-0>.

- Holmes, Ben. "Growing a More Resilient Food System". *Knowable Magazine*, March 19, 2021, <https://doi.org/10.1146/knowable-031921-1>.
- Johansson, Robert. "Another Look at Availability and Prices of Food Amid the COVID-19 Pandemic". *United States Department of Agriculture Official Blog*, July 29, 2021, <https://www.usda.gov/media/blog/2020/05/28/another-look-availability-and-prices-food-amid-covid-19-pandemic>.
- Keith-Jennings, Brynne, et al. "Links of the Supplemental Nutrition Assistance Program with Food Insecurity, Poverty, and Health: Evidence and Potential". *American Journal of Public Health*, vol. 109, no. 12, 2019, pp. 1636-1640, <https://doi.org/10.2105/AJPH.2019.305325>.
- Kohsravi, Mohsen. "The Challenges Ahead for Patients with Feeding and Eating Disorders During the Covid-19 Pandemic". *Journal of Eating Disorders*, vol. 8, no. 43, 2020, <https://doi.org/10.1186/s40337-020-00322-3>.
- Landers, Patti. "The Food Stamps Program: History, Nutrition, Education and Impact". *Journal of the American Dietetic Association*, vol. 107, no. 11, 2007, <https://doi.org/10.1016/j.jada.2007.08.009>.
- Long, Michael, et al. "Universal Free Meals with Lower Meal Costs While Maintaining Nutritional Quality". *Nutrients*, vol. 13, no. 2, 2021, <https://doi.org/10.3390/nu13020670>.
- Loopstra, Rachel. "Interventions To Address Household Food Insecurity in High-Income Countries". *Proceedings of the Nutrition Society*, vol. 77, no. 3, 2018, pp. 270-281, <https://doi.org/10.1017/S002966511800006X>.
- Lunsford, Mackensy. "A Signed Letter from Donald Trump Is Being Included in Food-Aid Boxes: Nonprofits Feel Conflicted". *USA Today News*, October 22, 2020, <https://eu.usatoday.com/story/news/politics/2020/10/22/trump-letter-usda-farmers-families-food-box-muddles-nonprofits/3728211001/>.
- McCrimmon, Ryan. "USDA to Pay Farmers Who Euthanized Animals Amid Meat Plant Shutdowns". *Politico*, July 29, 2021, <https://www.politico.com/news/2021/07/28/usda-to-pay-farmers-who-euthanized-animals-amid-meat-plant-shutdowns-501271>.
- McVan, Madison, et al. "Thousands of Meatpacking Workers Have Been Vaccinated, but the Industry's Crisis Continues". *USA Today News*, April 8, 2021, <https://eu.usatoday.com/in-depth/news/investigations/2021/04/08/meatpacking-workers-still-face-risks-one-year-after-coronavirus/4842584001/>.
- Men, Fei, and Valerie Tarasuk. "Food Insecurity Amid the COVID-19 Pandemic: Food Charity, Government Assistance, and Employment". *Canadian Public Policy*, vol. 47, no. 2, 2021, pp. 202-230, <https://doi.org/10.3138/cpp.2021-001>.
- Nord, Mark, and Heather Hopwood. "A Comparison of Household Food Security in Canada and in the United States". *Economic Research Service Report* no. 67. United States Department of Agriculture, 2008, https://www.ers.usda.gov/webdocs/publications/46100/11267_err67.pdf?v=0.
- Nord, Mark, and Mark Prell. "Food Security Improved Following the 2009 ARRA Increase in SNAP Benefits". 2011, https://www.ers.usda.gov/webdocs/publications/44837/7469_err116.pdf?v=8376.5.
- O'Grady, Siobhan. "The Coronavirus Intensified a Hunger Crisis Last Year, but 2021 Could Be Worse". *Washington Post*, January 6, 2021, <https://www.washingtonpost.com/world/2021/01/06/coronavirus-starvation-poverty-inequality-hunger-un/>.
- Parlapiano, Alicia, and Quoc Trung Bui. "How Food Banks Succeeded and What They Need Now". *New York Times*, March 31, 2021, <https://www.nytimes.com/2021/03/31/upshot/how-food-banks-succeeded-and-what-they-need-now.html>.
- Patton, Leslie, and Nick Querolo. "The Pandemic Tears a Hole in a Vital Child Nutrition Safety Net". *Bloomberg Businessweek*, October 21, 2020, <https://www.bloomberg.com/news/articles/2020-10-21/covid-pandemic-online-teaching-means-fewer-students-get-free-school-meals>.

- Polansek, Tom, and P.J. Huffstutter. "Piglets Aborted, Chicken Gassed as Pandemic Slams Meat Sector". *Reuters, Yahoo Finance*, April 27, 2020, <https://ca.finance.yahoo.com/news/piglets-aborted-chickens-gassed-pandemic-214016299.html>.
- Pollard, Christina M., and Sue Booth. "Food Insecurity and Hunger in Rich Countries – It Is Time for Action Against Inequality". *International Journal of Environmental Research and Public Health*, vol. 16, no. 10, 2019, <https://doi.org/10.3390/ijerph16101804>.
- Power, Elaine M., et al. "Should Canadian Health Promoters Support a Food Stamp-Style Program to Address Food Insecurity". *Health Promotion International*, vol. 30, no. 1, 2015, pp. 184-193, <https://doi.org/10.1093/heapro/dau080>.
- Ralph, Talia. "Hey, Canada, Why Don't You Have Food Stamps". *Vice*, June 13, 2021, <https://www.vice.com/en/article/4xbj4p/hey-canada-why-dont-you-have-food-stamps>.
- Reuben, Anthony. "Coronavirus: Why Have There Been So Many Outbreaks in Meat Processing Plants". *BBC Reality Check*, June 23, 2020, <https://www.bbc.com/news/53137613>.
- Richardson, Randi. "USDA Extends Free Meals for Kids Through Summer". *NBC News*, March 10, 2021, <https://www.nbcnews.com/politics/politics-news/usda-extends-free-meals-kids-through-summer-n1260460>.
- Rinelli, Alyssa. "Running Out: Can Fast Food Favorites Beat Supply Shortages?". *Forbes*, October 16, 2021, <https://www.forbes.com/sites/zengernews/2021/10/16/running-out-can-fast-food-favorites-beat-supply-shortages/?sh=2b704f3f1df6>.
- Robson, Jennifer. "Radical Incrementalism and Trust in the Citizen: Income Security in Canada in the Time of COVID-19". *Canadian Public Policy*, vol. 46, no. S1, 2020, pp. S1-S18, <https://doi.org/10.3138/cpp.2020-080>.
- Rosset, Peter M. *Food is Different: Why We Must Get the WTO out of Agriculture*. Halifax, Nova Scotia: Fernwood Publishing, Bangalore: Books for Change, Kuala Lumpur: SIRD, Cape Town: David Philip, and London & New York: Zed Books, 2006.
- Rowan, Lisa. "SNAP Expansion Extended Through End of September". *Forbes*, March 25, 2021, <https://www.forbes.com/advisor/personal-finance/snap-benefits-american-rescue-plan>.
- Schlosser, Eric. "America's Slaughterhouses Aren't Just Killing Animals". *The Atlantic*, May 12, 2020, <https://www.theatlantic.com/ideas/archive/2020/05/essentials-meatpacking-coronavirus/611437/>.
- Statistics Canada. "Food Insecurity During the COVID-19 Pandemic, May 2020", June 24, 2020, <https://www150.statcan.gc.ca/n1/en/pub/45-28-0001/2020001/article/00039-eng.pdf?st=4REPfdTv>.
- Tarasuk, Valerie, et al. "Household Food Insecurity in Canada, 2012". *PROOF Food Insecurity Policy Research*, 2014, https://proof.utoronto.ca/wp-content/uploads/2014/05/Household_Food_Insecurity_in_Canada-2012_ENG.pdf.
- Tarasuk, Valerie and Andy Mitchell. "Household Food Insecurity in Canada: 2017-2018". *PROOF Food Insecurity Policy Research*, 2020, <https://proof.utoronto.ca/wp-content/uploads/2020/03/Household-Food-Insecurity-in-Canada-2017-2018-Full-Report.pdf>.
- Tobin, Tommy. "Fighting Food Insecurity Amid COVID-19, Groups Advocate for 15% Food Stamp Boost". *Forbes*, July 8, 2020, <https://www.forbes.com/sites/tommytobin/2020/07/08/fighting-food-insecurity-amid-covid-19/?sh=1e6695006862>.
- UN, Food and Agriculture Organization (FAO). "Food Security". *Policy Brief*, no. 2, June 2006, http://www.fao.org/fileadmin/templates/faoitally/documents/pdf/pdf_Food_Security_Cocept_Note.pdf.
- UN. *Universal Declaration of Human Rights*, 1948, [https://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/217\(III\)](https://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/217(III)).
- US Census Bureau. "Household Pulse Survey: Measuring Social and Economic Impacts During the Coronavirus Pandemic". *Household Pulse Survey (COVID-19)*, <https://www.census.gov/programs-surveys/household-pulse-survey.html>.

- US Census Bureau. "Table 2a. Food Sufficiency for Households, Prior to Covid-19 Pandemic by Select Characteristics, Week 1", https://www2.census.gov/programs-surveys/demo/tables/hhp/2020/wk1/food2a_week1.xlsx.
- US Census Bureau. "Table 2a. Food Sufficiency for Households, Prior to Covid-19 Pandemic by Select Characteristics, Week 21", https://www2.census.gov/programs-surveys/demo/tables/hhp/2020/wk21/food2a_week21.xlsx.
- US Census Bureau. "Table 2b. Food Sufficiency for Households in the Last 7 Days, by Select Characteristics. Week 1", https://www2.census.gov/programs-surveys/demo/tables/hhp/2020/wk1/food2a_week1.xlsx.
- US Census Bureau. "Table 2b. Food Sufficiency for Households in the Last 7 Days, by Select Characteristics. Week 21", https://www2.census.gov/programs-surveys/demo/tables/hhp/2020/wk21/food2b_week21.xlsx.
- USDA, Economic Research Service. "Definitions of Food Security", September 2020, <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx>.
- USDA, Economic Research Service. "Food Security and Nutrition Assistance", December 19, 2020, <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-security-and-nutrition-assistance>.
- USDA, "Food Supply Chain", <https://www.usda.gov/coronavirus/food-supply-chain>.
- Vuillier, Laura, et al. "The Impact of the COVID-19 Pandemic on Individuals with Eating Disorders: The Role of Emotion Regulation and Exploration of Online Treatment Experiences", *Journal of Eating Disorders*, vol. 9, no. 10, 2021, <https://doi.org/10.1186/s40337-020-00362-9>.
- Wakefield, Sarah. "Eating in the Age of COVID-19: Food Security in Canada During and After the Pandemic". University of Toronto, University College Web, 2021, <https://www.utoronto.ca/eating-age-covid-19-food-security-canada-during-and-after-pandemic>.
- Walljasper, Christopher. "Biden to Cancel Trump's Pandemic Food Aid after High Costs, Delivery Problems", *Reuters*, April 14, 2021, <https://www.agweek.com/news/government-and-politics/6985205-Biden-to-cancel-Trumps-pandemic-food-aid-after-high-costs-delivery-problems>.
- White, Martha C. "The Price of Food and Gas is Creeping Higher – and Will Stay That Way for a While", *NBC News*, March 1, 2021, <https://www.nbcnews.com/business/business-news/price-food-gas-creeping-higher-will-stay-way-while-n1259206>.
- Wolfson, Julia A., and Cindy W. Leung. "Food Insecurity During COVID-19: An Acute Crisis with Long-Term Health Implications". *American Journal of Public Health*, December 2020, <https://doi.org/10.2105/AJPH.2020.305953>.
- Wong, Madison. "Food Banks Aren't Meant to Be Long-Term Solutions in a Pandemic: Experts". *Global News*, January 24, 2021, <https://globalnews.ca/news/7593808/food-insecurity-foodbanks-last-resort/>.
- World Bank, *Poverty and Hunger: Issues and Options for Food Security in Developing Countries*, Washington, D.C., February 1986, <https://documents1.worldbank.org/curated/en/166331467990005748/pdf/multi-page.pdf>.