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RUSSIA'S FOOD REVOLUTION

THE TRANSFORMATION OF THE FOOD SYSTEM

Stephen K. Wegren

with

Alexander Nikulin and Irina Trotsuk



Russia's Food Revolution

This book analyzes the food revolution that has occurred in Russia since the late 1980s, documenting the transformation in systems of production, supply, distribution, and consumption. It examines the dominant actors in the food system; explores how the state regulates food; considers changes in patterns of food trade interactions with other states; and discusses how all this and changing habits of consumption have impacted consumers. It contrasts the grim food situation of the 1980s and 1990s with the much better food situation that prevails at present and sets the food revolution in the context of the wider consumer revolution, which has affected fashion, consumer electronics, and other sectors of the economy.

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Preface

This book pursues two broad themes. First, the tremendous changes in Russia's food system since the Soviet period are not merely reform or a transition: commonly used terms that imply some degree of continuity with the previous system. Instead, there has been a complete transformation of the food system. During the past 40 years Russia has experienced a food revolution. In the 1980s Russian consumers were preoccupied with where to obtain food. In the 1990s Russian consumers were preoccupied with how to afford food. Today, those questions have been replaced with which restaurant to eat in and which cuisine to try. Russian consumers today are more food secure and have more options about how and where to obtain food than at any time in the past 100 years. This book explores, explains, and analyzes Russia's revolutions in food supply, food distribution, and food consumption. The second broad theme is that while it is well-known that the state was the central actor in the Soviet food system, what is interesting about the Russian case is that despite the transformation of the food system in terms of actors, institutions, policies, and consumer choices, the state retains residual influence. It no longer dominates the food system and it no longer directly controls food actors, but its presence is embedded in the operation of the food system.

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1 Thinking about food revolutions

Imagine if it were possible to travel back in time to Moscow in 1990. You would find a grim food situation. In 1990, gross food production was not the primary problem, but the food distribution system had broken down and criminal elements were withholding food from cities. Even in the capital, consumers experienced chronic shortages of low-quality food. While no one was starving in the USSR, consumers could not expect to find beef, chicken, pork, or sausage on a regular basis. To ensure at least minimum consumption levels, food rationing was introduced in the winter of 1990 for the first time since World War II. Food coupons that were supposed to ensure access to a minimum supply of food were more times than not worthless because shelves were empty. Advisors to Soviet President Mikhail Gorbachev told him that the country needed to import food and consumer goods to save *perestroika*, which had become unpopular with the Soviet people. Soviet Russia had not quite yet fully opened its trade borders, so Western foodstuffs were not widely available, although by 1990 the trickle had begun, at least in Moscow. Mostly, by 1990 the consumer experience was difficult and frustrating, entailing a daily grind to search for food. Distribution networks had deteriorated to the point that Gorbachev put the KGB in charge of food distribution in an attempt to ensure that food reached shelves in state stores. In terms of consumption, Soviet consumers were already tightening their belts and buying less food, due to emerging food inflation. While the government debated the extent to which food prices should remain regulated by the state, supply and demand decided the actual food prices that consumers paid. Households did more and more of their food shopping at urban markets, where selection and quality were better, but prices were five to ten times higher than in state stores. A small percentage of the population was able to take advantage of the nascent cooperative movement; most cooperative owners had migrated into the restaurant and café business. The prices at these cooprestaurants were prohibitively high and out of reach for the common consumer. The cooperative movement fed popular distaste for private entrepreneurs. In 1990 the first Western fast food appeared—McDonald's and Pizza Hut—but the outlets were so few that their impact on the average consumer was negligible. The one and only McDonald's in the Soviet Union opened in January 1990 in Moscow to enormously long lines, a reflection of demand for tasty food with reliable supply. A single meal would take up one-half or more of an average monthly salary.

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The first decade of post-communism was hardly better. During the 1990s consumers' real income contracted and food inflation raged. The country experienced mass poverty. A cruel cycle emerged: as household budgets became strained, consumers bought less food and ate less. Food demand fell. As demand declined, farms, which were already feeling the effects of reductions in state subsidies (despite a system of soft credits) and price scissors, curtailed food production. Lower domestic production helped retailers to keep food prices high and generated demand for imports, which, while usually of better quality, were also more expensive as the value of the ruble deteriorated. As the decade progressed, the "green shoots" of a capitalist consumer economy emerged, but the benefits were beyond the reach of most Russians. If during the 1980s consumers were concerned about where to find food, in the 1990s they were concerned with how to afford food.

Now imagine you could return to Moscow (or any large city) in 2019–2020. The food situation bears no resemblance to 1990. The present-day Russian consumer does not have to worry about food shortages, long lines, or empty shelves. Today, middle-class consumers' wonder about which restaurant and which cuisine to try. During June 2019, I ate Russian fast food and Russian food at a traditional sit-down restaurant. I also ate Georgian, Uzbek, pizza, American fast food, hamburgers Russian style, sushi, Chinese, Nepalese, and Japanese. I visited a food mall and food courts in shopping centers in Moscow. I went to several beer gardens, including a craft-beer enterprise in Kostroma. I visited craft-cheese operations outside of Moscow and in the city of Kostroma. I visited food stores of different sizes operated by national and regional companies. In 2019, almost 13,000 restaurants and places to eat outside the home operated in Moscow alone, offering every type of cuisine imaginable, Russian and foreign, at every price level. Fast food restaurants of both Russian and foreign origin are found in every neighborhood and district. McDonald's, the lone pioneer in 1990, operates more than 600 of its restaurants throughout Russia, extending into the Ural region and Siberia. McDonald's now competes with numerous Russian fast food chains as well as other Western companies; together, the number of fast food restaurants in Russia is several thousand. Today, a typical Russian family may spend a Sunday at a mall and eat at food court that offers a variety of Russian, Asian, and Western cuisines.

Retail food shopping has been transformed. A consumer may choose from neighborhood food stores or supermarket chains. Shopping malls have food courts that offer a variety of Russian, Asian, and Western cuisines. Gigantic hypermarkets sell food as well as a wide selection of other household goods. Specialized food stores offer high-end imported food that caters to the wealthy. Outdoor food markets continue to operate but are no longer the primary source of food shopping for most families. Retail food chains operate their own supply chains from farm to storage to transportation to retail stores.

What has occurred since the fall of communism in Russia is not merely a transition, a term that implies some degree of continuity from the previous system. Instead, Russia has experienced a food *revolution*. A conceptualization of Russia's food revolution model is presented in Table 1.1.

Table 1.1 Scheme of food revolution model

	1990s outcome	2000s outcome
Supply revolution		
Level of production	Decrease	Increase
Imports	Increase	Increase then decrease
Main food contributor	Households	Agroholdings
Distribution revolution		
Where consumers shop	Farmers' market	Supermarket
What consumers buy	Imports	Domestic
Importance of restaurants	Minimal	Substantial
Consumption revolution		
Level of consumption	Decrease	Increase
Access	Decrease	Improvement
Availability	Improvement	Improvement
Food and culture	Minimal change	Substantial change

Note

Why did Russia experience a food revolution? There have been several important drivers. First, systemic economic change brought to the forefront new actors, new institutions, new policies, and new opportunities that were central to the food revolution. Second, changes in the economic and political environment facilitated new consumer expectations and demands. Russian consumers expected alternatives to Soviet-era long food lines, limited selection, and lowquality food products. Moreover, new consumer expectations and demands were derived from foreign travel, and access to foreign media and movies. Russian consumers learned of alternatives to food lines, limited selection, and low-quality products. They wanted better. They demanded better. In short, Russia's food revolution is part and parcel of a broader consumption revolution in Russia. The consumption revolution is evidenced by higher spending on consumer durables and electronics for the home; the purchase of new apartments; the "dacha boom" outside of large cities; increased foreign travel; and the development of a car culture as witnessed by a significant increase in gasoline consumption and personal car ownership. Reflecting the rise of a car culture, suburban McDonald's restaurants have drive-through pickup, similar to what happened in America in the 1950s with the rise of its car culture. The consumption revolution in Russia means that the average consumer today has more choice and better access to products of all types, not just food, than at any time in post-Soviet history.

A third driver was political change that liberalized the system, allowing access to foreign information and making foreign travel accessible to the masses. Russian travelers could see first-hand how people in Europe, America, and Asian nations

a Level of consumption is measured by average per capita food consumption and daily caloric intake.

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shopped for food and ate. To be denied basic rights to food that other nations enjoyed may have been politically explosive. Political change also brought about a change in philosophy regarding the purpose and quality of life. No longer was the purpose of life to serve the Communist party and fight for communist causes, but rather to enjoy the pleasures of life, including different food experiences.

A fourth driver was an improvement in personal income and the investment environment; there cannot be a food revolution unless people have money to spend on food and unless entrepreneurs are willing and able to invest. Real per capita incomes increased by more than 11 percent per annum during 2001–2008, which in turn spurred increase demand for food. Increased demand opened up opportunities for investors to make money, and thus supermarkets began to populate the retail landscape and eating outside the home became more popular. Concomitant with a rise in per capita income, domestic agricultural production rebounded *and* the volume of imported food rose to 2013, both of which reflected increased demand and purchasing power. Furthermore, the investment climate improved. According to the *Doing Business* series published by the World Bank since 2004, Russia has improved significantly, ranking 28th out of 190 countries in 2019. The number of days taken to start a business declined from 36 days in 2004 to ten days in 2018; and the number of days to register a property decreased from 52 days in 2005 to 13 days in 2018.

This book focuses on the transformation of Russia's food system, but similar analysis could be applied to transformation in other spheres of consumer life as well. Several arguments are developed throughout this book. The first, and most important, is that a food revolution is part of the landscape that defines contemporary Russia. This food revolution distinguishes the contemporary food system from that in the 1980s and 1990s. The origins of this revolution may be traced to 2000–2001 and the rise of state capitalism in Russia under President Vladimir Putin. A food revolution is operationalized to encompasses *food supply, food distribution*, and *food consumption*. These variables were chosen because of their centrality to food systems and to food security.

A second argument is that although the food revolution is most pronounced in Moscow and other large cities, it is not restricted to large cities. In Chapters 4 and 5, I discuss some of my observations in medium-sized cities that reflect the food revolution there. Here, suffice it to note that enhanced consumers' food choices, availability, and access define the daily reality for all but the very poorest in contemporary Russia. There are, of courses, differences of scale and opportunity in Moscow and cities such as Kurgan or Kostroma. But it would be inaccurate to say that consumers in medium-sized cities are deprived of food choice or availability.

A third argument is that the transformation of the food supply system is characterized by domination of big capital. There is a high concentration of economic power in food production and food retailing. I develop the idea that Russia's food system is following patterns that previously occurred in the West, which suggests that capitalism behaves similarly across countries and regimes.

A fourth argument is that there has been a fundamental change in the way consumers obtain food. Today there is significant variance from the bimodal

retail food distribution system of the Soviet period. Consumers may food shop at supermarkets, discount stores, mini-marts, urban markets, and even online. Eating outside the home has taken on new importance. During the Soviet period eating out was not common due to poor quality and poor service. In the 1990s, eating out was beyond the reach of most consumers. Since 2000, however, eating out has become much more popular. Consumers choose from fast food; fast casual; food malls; regular sit-down restaurants with different cuisines and price ranges; and food trucks. Contemporary consumers are able to select cuisines from around the world.

Fifth, the consumption revolution has not only improved food security but also is impacting culture and society. Consumption levels are up from the 1990s. Perhaps more important, the transformation of the food system and expanded consumer choice is changing the way people think about food. The consumption of food is increasingly viewed as a form of recreation rather than merely a means of survival. Packaged and prepared foods liberate women from the kitchen and allow them to participate in the labor force or do other things with their time. Fast food and fast casual options lessen the communal experience of food consumption and sense of community; instead, food is a solitary experience.

I am not the first to refer to a food revolution in Russia. More than 40 years ago Deutsch applied the term "food revolution" to the communist world—but this book represents both an original framework and a different approach from Deutsch's book.³ This book considers the totality of the food system (production, distribution, consumption), whereas Deutsch was interested mainly in consumption. Deutsch argued two main points: (1) the food revolution in communist states during the 1960s to 1970s occurred as part of the modernization process in those societies; and (2) satisfying consumer demand for food was integral to political stability and preservation of power. In short, the food revolution was part of the Soviet-era "social contract" that Western scholars debated for many years.⁴ Deutsch's two basic lines of argumentation remain generally true today. Russia's food revolution may be understood as part of the social contract with the population in post-Soviet Russia. The post-Soviet social contract continues to be discussed as scholars examine the bases for the legitimacy of the Putin regime.⁵

Even though many food revolutions have occurred throughout history, the term "food revolution" is not terribly common in the literature on food policy. Food historians are more apt to use the term "food revolution" than political analysts of food systems. My usage of "revolution" is meant to reflect the *transformation* of the food system and the way that it operates. The measurement of transformation compares the present with the food system of the 1980s and 1990s, but I hasten to add that Russia's food revolution continues to evolve. Borrowing a concept from Francis Fukuyama, Russia's current food system is *not* the final iteration, any more than the end of communism and the triumph of democracy in the early 1990s represented "the final form of human government." The rise of illiberal nationalism within a democratic framework testifies to this truth. An illustration of the transformation of Russia's food system is presented in Table 1.2.

Table 1.2 Transformation of Russia's food system

Variable	1989–1991	1992–1999	2000s onward
Domestic production Food imports Food distribution Food consumption Main producer (by value)	Decrease Increasing Irregular Falling State and collective farms	Large decrease Large increase Disrupted Falling Households	Substantial increase Rise then decline Regular, stable Rising Agroholdings
Primary shopping outlet	Urban markets	Urban markets	Supermarkets

The remainder of this chapter provides context for subsequent chapters on Russia's contemporary food revolution by exploring the term "food revolution." The chapter is organized around several questions:

- (1) Why is food important?
- (2) What is a food revolution?
- (3) How can a food revolution be utilized as a concept and a variable?
- (4) What is the role of the state in a food revolution?
- (5) What are the impacts of food revolutions?

The discussion begins with the importance of food in general, before proceeding to food revolutions.

Why food is important

Before analyzing food revolutions, it is worthwhile to say a few words about why food matters. The first and most obvious reason why food is important is that all living persons need it to survive: a fact that has led to food being used as a weapon by one state against another. A human being can last about four weeks without food before the body begins to show severe signs of starvation. After 30 days a person experiences dizziness, an inability to concentrate, loss of balance, lack of energy, and physical weakness. Without food, death can occur within 45–60 days. Short of starving to death, the condition of inadequate food is called food insecurity, which occurs in gradations, from having adequate caloric intake but access is worrisome, to inadequate intake, to chronic hunger, to acute hunger, to starvation.⁷

Food is also important because it has been a driver of physiological evolution and historical development. One of the earliest and most important food revolutions in history occurred when humans began to cook food, arguably one of most important events in human history. It is commonly believed that humankind began to cook food approximately 400,000 years ago.⁸ An anthropologist from Harvard, Richard Wrangham, however, argues that cooking food may have started during the emergence of *Homo erectus* about 1.8 million years ago.⁹ The ability to cook

food was revolutionary because it changed what humans ate, how we ate it, and led to physiological changes such as smaller teeth, smaller jaws, larger brains, smaller stomachs, and other anatomical changes related to diet. ¹⁰ Pollan argues that the cooking of food is also important because it "sets us apart, helps to mark us and patrol the borders between ourselves and nature's other creatures—none of which can cook." Cooking, in short, defines us as humans. Pollan further argues that: "cooking transforms nature and, by doing so, elevates us above that state, making us human ... the human enterprise involves transforming the raw of nature into the cooked of culture." ¹¹ The cooking of food had importance beyond physiological changes and taste preferences. Cooking food meant that less time was spent chewing, and more time for other creative pursuits. Apes, for example, may spend half of their time simply chewing and digesting raw food, but cooking frees up time to do other things, allows us to digest more of what we eat, and yields more energy than raw food, so that early *Homo sapiens* would have more energy for other activities. ¹²

The cooking of food also became associated with culture, as different ingredients and techniques defined ethnic groups, regions, and nationalities. It also gave rise to community, as people gathered to share cooked food, socialize, and share experiences. Later, in modern society cooked meat became a means for breaking down racial differences, if only temporarily. For example, sharing a barbequed pig in the south of the United States brought together blacks and whites whose relations otherwise were based on suspicion and even animosity.¹³ The cooking of meat also became tied to status and prestige, both in terms of the types of meat that were cooked and the frequency with which certain meats were consumed. Thus, cooking evolved from an early method of preparing food to cross-cutting issues central to the fabric of modern societies.

Another crucial food revolution was the domestication of food. Humans began to grow food and cultivate land about 12,000 years ago. The development of agriculture meant that hunting and gathering, a nomadic lifestyle with little food security, was no longer necessary. Instead of a daily search for food, humans needed to stay in place in order to watch over their crops. Staying put resulted in communities. Communities gave rise to other forms of formal organization: government, classes, religions, and culture. Indeed, virtually everything we attribute to modern society can be traced to the domestication of food. Human culture arose from food.¹⁴

Further, food is important because it conveys power. A consistent theme that resonates throughout food history is the association between food and power. He who controls food supply has power; he who does not control his food supply does not have power and is vulnerable. It is telling, for example, that a common strategy of warfare in ancient times that extended into the Middle Ages was to lay siege to a town or city in order to deprive it of food and force surrender. That tactic resonates into the modern era. Among the most famous episodes in the modern era occurred during World War II, when the Germans surrounded the city of Leningrad, the second largest city in the Soviet Union, in an effort to starve it into submission. Hitler's attempt was ultimately unsuccessful, although

the siege lasted from early September 1941 through January 1944. ¹⁵ Soviet wartime records are incomplete but the estimated number of people who died ranges from the official tally of 600,000 (which is considered too low), to 1.2 million, with a general consensus of about one million persons perishing, or 40 percent of the city's pre-war population. Most of the deaths were from starvation.

Another consistent theme in food history is the linkage between food and state power. The history of food prior to 3400 BC, that is, prior to the advent of writing, has to be discerned through drawings. Once Sumerians started writing for the first time in human history, a clearer picture emerges that testifies to the importance of food to regime and society. From ancient drawings and writing it is clear that food was of central importance to the exercise of state power. Food was used as currency, as a form of payment for taxation, and was the basis for trade. Wine, sugar-cane and sugar, grain, and spices were some of the earliest commodities common to food trade. Trade was especially important because it necessitated not only a merchant fleet but naval forces to protect trade routes. Naval forces required manpower and thus the state got into the business of employing and deploying military manpower. The authority of the ruler and loyalty to him was influenced by his ability to ensure adequate food supplies. The role of the state touched people's daily lives when the state issued rations to state workers and employees, as well as to other segments of the population. We now know, for example, that the Egyptian pyramids were not built with slave labor but rather by state employees who were paid in beer and bread. 16

Food was important in other ways, for example it was integral to the appearance of the first primitive class structure in ancient societies. Once humankind evolved from hunting and gathering to domesticated crops, distinctions were made between workers who engaged in crop production and state bureaucrats (people who did not work with their hands), who tabulated taxes paid in kind with grain. Tax collectors became important agents of state power and received higher rations than ordinary workers.

Not only were food and drink central to state power in ancient times, they also played significant roles in ceremonies and celebrations. Food was a means for a ruler to display his wealth and power. Around 870 BC, King Ashurnasirpal II of Assyria celebrated the inauguration of his new capital, Nimrud, by hosting an enormous celebration. The feasting went on for ten days, attended by nearly 70,000 people. The guests, who included 5,000 dignitaries from other nations, gorged on 1,000 cattle, 1,000 calves, 10,000 sheep, 16,000 lambs, 1,000 ducks, 1,000 geese, 20,000 doves, 12,000 other birds, 10,000 fish, and 10,000 eggs. Even assuming some exaggeration or inaccuracy, this volume of food testified to the enormous wealth and power of Ashurnasirpal II. On an everyday basis, beer served with food was the basis for social interactions, and many present-day customs can be traced to ancient practices, for example clinking glasses and toasting "your health." Ancient Mesopotamians and Egyptians used beer medicinally, and, in Egypt, beer and bread were supplied to prepare the deceased for the journey into the afterlife. "

Further, the search for new foods and spices was a primary motivation that spread influence and created or maintained empires. Food trade facilitated the expansion of empires in that it required storage, roads, ships, and an ability to ensure safe sea lanes, as evidenced by several historical examples. In the first century AD, Rome was able to break the monopoly that Arab states had in spice trade since 1450 BC by building ships that were able to travel from the Red Sea to India, a long and dangerous trip.²⁰ Food trade was also a factor that contributed to the decline of the Roman empire. As demand for wine in Roman society grew, subsistence farmers were replaced by large estates engaged in viticulture and operated by slaves. While wine production expanded, grain production decreased, and thus Rome became dependent on grain imports from African colonies, especially Egypt.²¹ As tensions between Rome and colonies increased, grain was used as weapon against Roman masters. Grain shortages led to food shortages and, over time, Rome experienced difficulty ensuring an adequate food supply to its troops in remote locations such as England. There, local Roman military officers turned to harsh measures against the indigenous population to obtain food, thereby alienating the population and facilitating resistance to Roman rule.

The Christian Crusades that started in 1095 were motivated as much by population pressures and the need for food, as by religious zeal.²² In the late fifteenth century the Spanish King Ferdinand sent Christopher Columbus westward to search for spices in the East Indies. Thinking that he had reached India, in fact Columbus discovered the West Indies.²³ His original voyage and return trip in 1493 opened up subsequent Spanish exploration and conquest of regions that would later become America and Mexico. During the sixteenth and seventeenth centuries, England established a network of colonies in the West Indies and tied them to England through exports of textiles to the colonies, while importing sugar, tobacco, and tropical fruits.²⁴

Competition over trade pitted empires against each other. In 1600, the English Queen Elizabeth I set up the East India Company, which effectively put India under English rule, thereby providing exclusive access to India's wealth of spices such as cloves, cinnamon, black pepper, nutmeg, and mace.²⁵ In 1601, the Dutch sent 65 ships to the Far East in search of spices. After landing in Indonesia, in 1602 the Dutch government unified trading companies, thereby creating the United East India Trading Company and gave it monopoly rights to export spices to Denmark. (The name was later changed to the Dutch East India Trading Company to distinguish it from the British one.) Competition over access to spices led to conflict with England, Portugal, and other imperial countries that also wanted a stake in the Far East. The profits at stake were huge. One pouch of a rare spice had a value equal to a herd of cattle. The Dutch East India Trading Company represented the first global company by linking West and East through trade, bringing exotic (and expensive) spices to Europe. The Dutch prevailed against their competitors, and became one of the most important trading empires of the seventeenth century by dominating trade with the Far East. The Dutch East India Trading Company powered the Dutch economy for nearly 200 years.²⁶ Finally,

after a series of wars with England, the Dutch were defeated in 1784 and the Dutch East India Trading Company was dissolved in 1795.

Food and the contemporary era

In the contemporary era, food policy and food trade continue as important political factors. I will refer to three examples. First, food trade has been used as a political weapon dating back to ancient civilizations, as noted above. This behavior continues in the contemporary period as states withhold food to display irritation or disagreement with the behavior of another country. During President Ronald Reagan's first term (1980–1984), US–Soviet relations were very tense, and in 1980 the US banned wheat exports to the USSR in retaliation for the Soviet invasion of Afghanistan in December 1979. The wheat export ban continued until 1981 and became one of the pillars of Reagan's vehement anti-Soviet policy when he referred to the Soviet Union as the "axis of evil" and the "evil empire." In this way, the US used food trade to punish the USSR for its foreign policy behavior.

A second example is the use of food aid for political purposes. Historically, food has been used to "show the flag" and spread soft power. As the largest donor of food for international food assistance, the United States lagged European nations in agreeing to "untie" food assistance. Starting in the 1950s and continuing for several decades, "tied" food assistance meant that donated food would come from the donor country, a policy that helped the United States because it stored large amounts of surplus food for international donation—something that was expensive to do. Tied assistance—food in-kind—not only helped American producers but also benefited US foreign policy as aid packages were clearly marked in bold letters with "USA." Over time, tied assistance became controversial, because it helped donor nations get rid of surplus food but hurt recipient countries because their own domestic producers and markets were undercut. In the 1990s, the European Union (EU) began to untie its assistance, transitioning to monetized assistance, which allowed recipient nations to buy food from domestic producers, a practice that gave them an incentive to produce a surplus. Australia and Canada followed the EU a decade later, but the United States resisted and continued to tie its assistance.²⁷ Eventually, the US moved away from tied assistance to monetization during the second administration of George W. Bush. Even so, emergency food aid continues to advertise the country of

A third example of the political importance of food comes from authoritarian states where food continues to be inherently linked to regime support. Maxwell argues that a *causal* relationship exists between food insecurity and political unrest.²⁸ Sufficient food consumption (i.e., food security) is a central goal of every regime, whether for reasons of political support or simply to create a good society. History shows that events which upset the food consumption equilibrium can exacerbate political unrest.²⁹ The Food and Agriculture Organization (FAO) argues that "food insecurity itself can become a trigger for violence and

instability, particularly in contexts marked by pervasive inequalities and fragile institutions."³⁰ During the 2007–2008 rise in global food prices, food riots broke out in more than 25 countries, and in nearly 40 countries during 2007–2014.³¹ The World Bank finds that the proclivity to riot varies by location, with large city residents more likely to riot, while dwellers in small towns are less likely to protest.³²

Other analysts do not go as far as the FAO and nuance their argument by noting that food prices or deterioration in availability do not in themselves cause political instability but rather act in concert with other factors.³³ As evidenced during the 2010–2011 Arab Spring, frustration over the rising price of food, combined with political grievances against corruption, motivated mass protests against regimes in several states, leading to regime change in Egypt, Tunisia, and Libya, and ongoing civil war in Syria.³⁴ In the case of Egypt, for example, a rapid spike in food prices in late 2010 and early 2011 (exacerbated by Russia's ban on wheat exports after its disastrous 2010 harvest), combined with grievances over widespread government corruption, a stagnant economy, fraudulent elections, and an aged, out-of-touch president, set off protests that brought down the Mubarak regime.³⁵

Authoritarian regimes and one-party states, in particular those that struggle to provide adequate food supply and/or affordable food, are prone to instability. In developing countries, where a high percentage of the workforce is employed in the state sector, the regime is especially motivated to keep food prices low. Thomson argues explicitly that, "authoritarian regimes, in particular, make agricultural policy by responding to political threats, implementing urban-based policies to appease powerful urban interests and taking a rural-based stance when the rural sector is threatening."³⁶ Evidence of regime concern over food prices was observed in Africa in the 1970s, when marketing boards discriminated against food producers to keep prices low for urban consumers.³⁷ Today, the Chinese regime closely monitors food prices, due to concerns over food protests. During the 2007–2008 spike in global food prices, for example, the Chinese government introduced price controls. In 2019, food prices rose more than 9 percent in the first half of the year, including a 27 percent increase in pork prices due to the widespread outbreak of African swine fever. The government introduced price controls on some basic food necessities in order to slow food inflation.³⁸ In addition, the regime is trying to encourage more production (increase supply) to put downward pressure on prices; in this regard China is leasing farmland in the Russian Far East for food production to be exported back into China. The regime also has the option of importing more food. For example, China has begun to import Russian beef for the first time since 2000, chicken for the first time since 2005, and pork for the first time since 2008, although current import volumes are low. The point is that the regime sees food as an important political factor and is wary of protests over prices and availability.

The political salience of food applies to contemporary developing states. In Sudan, for example, food protests over high bread prices broke out in the eastern city of Atbara in December 2018. Food protests quickly spread throughout the

country, and the original grievance over the price of bread transformed into a movement against the dictatorship of Omar al-Bashir who had run the country since 1989.³⁹ An estimated 400 protests had occurred by early January 2019, with at least 40 people killed.⁴⁰ Al-Bashir was finally overthrown in April 2019.

Political importance of food in Russia

Food has been important in Russian history dating back to the earliest days of Kyivan Rus. Although the written record is spotty, the *Primary Chronicle* is a valuable source of information that makes clear that food was central to the state's military power dating from 997, and to the legitimacy of the Grand Prince of Kyiv, Vladimir Monomakh.⁴¹ In the twentieth century, several incidents illustrated the political importance of food in Russia.

In February 1917, the breakdown of the food distribution system due to unusually cold weather in the capital city, Petrograd, was exacerbated by rumors of bread rationing and panic buying, leading to empty store shelves. Fuel shortages closed factories and led to layoffs. Unemployed workers with nothing to do roamed the streets of Petrograd. Frustration over Russian losses at the front during the war, anger over food shortages and layoffs, and generalized disaffection toward the government brought hundreds of thousands to the streets in protest. Tsar Nicholas II, who was not in Petrograd and did not realize the gravity of the situation, ordered his troops to disperse the crowds by force. The army complied, but was uneasy with the order to fire on unarmed protesters, because the peasant soldiers shared anti-regime grievances with the protesters. Short-lived calm was soon upset by the mutiny of Petrograd garrison, which turned 160,000 uniformed men into rioters and revolutionaries.⁴² The defection of the army set in motion a series of events that culminated in the formation of a Duma cabinet, which led in turn to the creation of a provisional government, resignation of the Tsar and the end of the Romanov dynasty, and thus the empowerment of the Petrograd Soviet that was controlled by the Bolsheviks. The Petrograd Soviet would go on to play a central role in the October 1917 revolution that brought the Bolsheviks to power. With regard to the February 1917 revolution, however, Bolshevik leader Leon Trotsky was clear in his understanding of the root causes:

the fact is that the February revolution was begun from below, overcoming the resistance of its own revolutionary organizations, the initiative being taken on their own accord by the most oppressed and downtrodden part of the proletariat—the women textile workers, among them no doubt many soldiers' wives. The overgrown bread-lines had provided the last stimulus.⁴³

In October 1917, upon coming to power, the Bolsheviks underestimated the severity of the food crisis and seemed not to comprehend the near-total breakdown of the distribution system. Even in the central industrial region and around Moscow, only a fraction of the food that was needed to meet meager rations was

actually delivered.⁴⁴ Food rationing in cities became the norm. After experiencing enormous difficulties obtaining food for cities during the early months of the Bolshevik regime—largely because state-defined purchase prices were unattractive—by spring 1918 party functionaries were leaning toward food requisitioning. When War Communism was formerly adopted in 1918, it represented the first attempt for a planned economy. One of the core features was food requisitioning. The consequences of War Communism are well-known: peasants reduced cultivated acreage and withheld food from the market; cities began to depopulate as urban residents relocated to the countryside to grow their own food; and a wave of violence was unleashed to combat peasant grain hoarding, the effect of which was to alienate the peasantry from the regime. Thus, the Soviet regime's food policies during 1918–1921 were instrumental in creating opposition to its rule.

By 1921, the Soviet economy had basically collapsed and the country suffered from a famine that required rapprochement with the West in order to obtain food aid. Lenin changed course by ending War Communism and introducing the New Economic Policy (NEP) that replaced food requisitioning with a food tax and allowed private trade, including food. The politics of food during this period directly affected the Bolsheviks' legitimacy, and ultimately compelled the party to change direction by offering concessions in the form of NEP. The centerpiece of the NEP was the replacement of food requisitioning with a food tax which gave incentives to peasants to grow surplus grain, with the assurance that they could keep it after paying their tax.

Another example that illustrates the political importance of food occurred when Nikita Khrushchev was First Secretary in June 1962 in the city of Novocherkassk. The incident in Novocherkassk is perhaps the classic case of the potency of food prices during the Soviet period. In short, Novocherkassk is testimony to the potential for instability generated by food protests.

On June 1, 1962, a 35 percent increase in retail prices took effect for meat and poultry and 25 percent for milk and butter, the first increase in the Soviet Union since 1947. The fact that retail food prices had not been raised for 25 years reflects their political sensitivity, at least as perceived by regime leaders. The price increases were said to be temporary and were accompanied by an increase in factory output quotas that in effect presented workers with a wage decrease. Like the situation in other cities in the Soviet Union, food availability was inconsistent and the quality of food was often poor, which added to consumers' frustrations. With the price increases, consumers would be paying more with no guarantee of improvement in supply or quality. The price increases led to protests and strikes in several cities, including Moscow, Kyiv, Leningrad, Donetsk, and Chelyabinsk—behavior that was illegal in Soviet society. The most severe rioting occurred in the city of Novocherkassk in southern Russia.

On the first day (June 1), protesters blocked a railroad line heading south from Novocherkassk and violent clashes occurred with the police. On the second day, protesters marched to party headquarters to confront party officials, carrying banners that read "Bread, meat, and butter." KGB forces and the army

were dispatched. Some KGB agents infiltrated the crowds to get the names of instigators. To reach the city center, protesters had to cross the Tuzlov river, and the army blocked the bridge with tanks. Some protesters waded through the shallow river while others went around the tanks. A crowd of about 10,000 people reached Lenin Square in the morning, united over demands for meat, butter, and pay raises. 46 Interior troops and the army guarded party headquarters although the leaders had fled.⁴⁷ According to eyewitness Anatoly Zhmurin, during the protest in Lenin Square "everyone was totally calm. They were waiting for the bosses to come speak. Nobody was throwing rocks. Nobody was doing anything. They could have dispersed everyone with a firehose."48 Other eyewitnesses confirm that protesters were quietly talking in groups among themselves in the square in a non-threatening manner. That peace was shattered as soldiers began to fire on the crowd. It remains unclear who gave the order to shoot, but the troops killed at least two dozen and wounded another 69 people. There were reports that the soldiers used dumdum bullets that expand on contact to cause maximum injury.⁴⁹ This episode shows the frustration of Soviet consumers with chronically inadequate food availability in state stores, and their sensitivity to price increases due to pre-existing low wages.

In the aftermath, Soviet leader Nikita Khrushchev stuck with his price increases but improved food supplies to the city as a concession. Protesters who had been shot and killed were buried in unmarked graves outside the city. More than 100 demonstrators were arrested and sentenced to 10–15 years in hardlabor camps; ringleaders were subject to a show trial and sentenced to death. The Novocherkassk episode remained hidden from the general public. It was not until Soviet leader Mikhail Gorbachev's *perestroika* that the first published article devoted to Novocherkassk appeared in June 1988. After the Soviet Union collapsed, declassification of documents and the opening of party archives led to films, articles, and books about the incident. Other protests occurred and protesters were killed in that same summer, for example in Vladimir oblast, but the son of Soviet leader Nikita Khrushchev, Sergei, argued that the bloodshed at Novocherkassk "tormented Father to the end of his days." State of the city of

A third example comes from the late Soviet period when food shortages played directly into the destabilization of the Soviet regime. In 1989–1990, Soviet leader Gorbachev refused to free food prices from state control because he feared a "social explosion" from the population.⁵² As a result, the government's economic reform program (the Ryzhkov plan of May 1990) retained state control over retail food prices. The consequences that followed included the need for an administrative increase in food prices in April 1991 as the government attempted to motivate farms to supply state food stores; an erosion in Gorbachev's legitimacy due to the combination of empty food shelves and rising retail prices due to speculation; and an opening for political opponent Boris Yeltsin to differentiate himself from Gorbachev by advocating price liberalization to deal with food supply problems. It is not certain what course events would have taken had the food situation been dealt with differently, but it is clear in retrospect that the daily struggle to obtain food, starting in late 1990s,

affected the morale of society and undermined whatever support remained for Gorbachev's *perestroika*.

The positive food revolution in Putin's Russia aligns with regime goals for stability and the development of a good society. The Putin era "social contract" with the population rests on regime performance and distributive policies that satisfy consumer preferences. Expectations that the Russian population will become restive if economic performance is poor are based on an assumption that Russia's modern-day social contract flows from results-generated legitimacy. In this regard, Western sanctions against Russia may be understood not only to have concrete policy goals—withdrawal from Crimea and an end to interference in eastern Ukraine—but at some level were also designed with the hope that economic hardship may lead to regime change. While sources of instability under Putin have been a popular topic for academics and policy analysts, Russia's food revolution lessens the chance that food-based instability will ensue. Contemporary Russia shows that states with high corruption and weak group influence by agricultural interests can still experience a food revolution. 54

What is a food revolution?

Having discussed the ways in which food is important, I will now turn to a discussion of a food revolution. There are many different types of revolutions. A political revolution ushers in a new party or governing elite that exercises authority and defines the direction of the nation. A cultural revolution changes dominant norms, values, and mores in society. An economic revolution changes economic policy, institutions, and relations. A technological revolution spurs productivity and development. Notable technological revolutions that had significant economic impact include the invention of the first steam engine in the nineteenth century and later gas-powered engines in the early twentieth century. In the midtwentieth century the widespread electrification of towns and cities revolutionized how people lived and worked. In the late twentieth century, the internet became a part of everyday life, increasing efficiencies and lowering transaction costs. In the early twenty-first century, smartphones changed the way we interact with each other, obtain information, and entertain ourselves. Current big technological revolutions encompass the "internet of things" and increasing use of artificial intelligence in our daily lives.

A food revolution is both different and similar to other revolutions. It is different in that what changes concerns food. It is similar in that the change is revolutionary. I define a food revolution as *a significant, discernible, measurable change in one or more of behavior, actors, or processes.* The analysis operationalizes a food revolution to encompasses food supply, food distribution, and food consumption, which were chosen because of their centrality to food systems and to food security. Each of these three variables is further analyzed in subsequent chapters. For now, suffice it to note that a food supply revolution includes the level of food production, the source of food production, and the structure of contribution by different produces. A food distribution revolution

refers to changes in consumer preferences, regarding where they food shop, what they buy, and the importance of eating outside the home as a means to consume food. A food consumption revolution includes the level of consumption, consumer preferences as to origin of food, and the cultural and societal impacts of food.

One of mankind's first food revolutions pertains to the process of domesticating animals and food crops in the Neolithic age.⁵⁶ A relatively short list of events and processes that have been drivers of food revolutions, past and present, includes:

- The discovery of fire and learning to cook food;
- The domestication of crops and animals;
- The use of animals to replace manual labor in food production;
- The development of irrigation;
- The introduction of enclosed land parcels and exclusive cultivation/grazing rights:
- The advent of crop rotation;
- Fermentation to make beer and wine as alternatives to unsafe water;
- The preservation of food with salt and other techniques of drying;
- Canning, refrigeration, and freezing;
- The creation of gas-powered engines and the rise of mechanized production;
- The rise of plant and animal selection;
- The rise of mass-production techniques in food production;
- The expansion of the trucking industry as a food delivery system;
- The rise of supermarkets and supermarket chains;
- The development of the food processing and manufacturing industries;
- The development of the synthetic fertilizer, pesticide, and herbicide industries;
- The popularity of frozen food and the growth of the frozen-food industry;
- The emergence of vertically integrated food conglomerates;
- The rise of the fast food industry;
- The development of genetically modified food;
- The use of digital technology in food distribution and trade;
- The introduction of artificial intelligence in food production and processing;
 and
- The development of genetically modified crops and animals.

Food revolutions are regime neutral, which means that they occur in democratic and authoritarian (or other non-democratic states), although the role of the state is more forceful in a non-democratic polity. An illustration of the democratic/authoritarian dichotomy comes from the late 1920s when Soviet leader Joseph Stalin introduced a food revolution—collectivization—that had negative effects on food supply, distribution, and consumption. This food revolution represented the forcible transformation of the Soviet Union's agrarian and food systems. Stalin feared that peasants would withhold grain from the market that he needed to feed cities as a result of the growing rural—urban migration during the 1920s.