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Reassessing Food Safety, Risk and Globalization in China and Japan

AN OVERVIEW OF EMERGING RESEARCH TRENDS

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Abstract
In recent years, the number of food safety incidents in East Asia has led to increased concerns about threats to food safety in the region. Indeed, following the 2008 melamine scandal in China and the 2011 Fukushima Daiichi nuclear plant accident in Japan, these concerns are now at unprecedented levels. This article presents an overview of research in social and cultural anthropology, sociology and area studies on food safety and food sovereignty in China (excluding Taiwan) and Japan. One research area captures emerging research on consumer education initiatives and environmental networks that provide guidelines to food preparation skills and food choices. A second research area addresses providence and efforts of culinary heritage preservation that are linked to national identity building and revitalization, in particular in economically disadvantaged areas. As anthropologist Sidney Cheung has argued, recent trends in research on food have shifted from an analysis of food as a marker of social status towards environmental and health issues that are not linked to social status and have an impact on all consumers.
Keywords: food safety, food self-sufficiency, consumer education, culinary heritage, risk theory

Food Safety Incidents and Food Self-sufficiency

Since the 1990s, food safety in China has come under increasing scrutiny, with the 2008 melamine scandal gaining perhaps the widest exposure. Cultural anthropologist Yunxiang Yan identifies three kinds of food safety problems in contemporary China, namely, food hygiene, unsafe foods and poisonous foods (Yan 2012: 707). Food hygiene, a conventional and well-known risk, has existed since

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the pre-industrial era but has now shifted "from family kitchens or public canteens to food factories and various eateries" (Yan 2012: 713). Problems of food hygiene affect small-scale family enterprises in food processing that make up more than 70 percent of the market share (Yan 2012: 713). Contamination, poor packaging, mislabeling and counterfeiting are common food hygiene problems. As opposed to food hygiene problems, unsafe foods are associated with post-industrial risks and are predominantly the result of using pesticides and chemical fertilizers. In the last category, Yan defines poisonous foods as the disturbing and "deliberate contamination of foods" (Yan 2012: 716), including the purposeful use of harmful food additives and distribution of toxic foods. The distribution of poisonous foods is purely profit-driven and conducted with full knowledge of the harmful impact on the consumer's health, the melamine scandal being a particularly disturbing example.

Historical anthropologist Françoise Sabban (2010), who has outlined the history of milk in Ancient China through examining culinary and agricultural treatises from the sixth to the nineteenth century, has partially shifted her research to the consumption of milk in contemporary China after the melamine crisis and focused her exploration on the new habit of consuming milk during the Chinese Reform of the 1980s. Sabban relates the consumption of milk to the first phase of modernization in China, which occurred in major cities after the mid-nineteenth century. Sabban further reveals that although knowledge of milk has progressively disappeared in China, milk as a food item has remained a precious product of the pharmacopoeia—at least until now.[1]

In contrast to China, concerns about food safety have had a longer history in Japan, and food safety scandals have been widely publicized. For example, in 1955, dried milk at the Morinaga Milk company was contaminated with arsenic, leading to 12,000 cases of food poisoning; many of the victims were babies and children. As a further example, the country also suffered outbreaks of Minamata disease in Kumamoto (1953) and Niigata (1964) after industrial pollution contaminated local seafood. These and other incidents are explored in the overview of food safety incidents in Japan by Jussaume *et al.* (2000).

More recent food safety incidents in Japan include the import of Chinese dumplings that were tainted with pesticides and affected ten consumers with food poisoning in 2008. In particular, this incident put severe strains on the relationship between China and Japan. Although the cause of the food poisoning could never be fully clarified, the incident of tainted dumplings led Japanese consumers to distrust imported food products and strengthened the perception that domestic food products were safer than imported products. A survey conducted by Kyodo News after the dumpling incident revealed Japanese consumers expressing mistrust of imported Chinese products (Japan Times Online 2008). Among Japanese consumers, the scandal also evoked the rhetoric of *anshin* (peace of mind) and *anzen* (safety), which together depict locally produced food as safe as the origins of production are well known and consumers can associate the face of the producer with the foodstuff. According to the *anshin/anzen* rhetoric, locality minimizes food-related risks.

Anthropologist Nicolas Sternsdorff is taking a particular interest in the *anshin/anzen* rhetoric in post-Fukushima Japan. Sternsdorff (2012) notes that the Ministry of Health, Labor and Welfare (MHLW) altered food safety standards for general foods such as vegetables, grains, meat, eggs and fish and raised the standard limits for radioactive cesium in these foods to 500 Becquerel per kilo after the disaster, but lowered the limits again to 100 Becquerel per kilo as of April 1, 2012. Similarly, standard limits of radioactive cesium contained in milk and dairy products were lowered from 200 Becquerel per kilo to 50 Becquerel per kilo whereas standard limits for drinking water stand at 10 Becquerel per kilo and at 50 Becquerel per kilo for infant foods (MHLW 2011). Sternsdorff further observes that Japanese food (*washoku*), in particular fermented food such as tofu, was proclaimed as "safe food" after the disaster. This proclamation of *washoku* as "safe food" corresponds with the Japanese government's recent application to UNESCO to add Japanese food in its entirety to its List of the Intangible Cultural Heritage of Humanity, thus according internationally recognized status to another Japanese cultural entity after the recognition of Hiraizumi as a UNESCO World Heritage Site in 2011. The appreciation of Japanese food as key to food safety and as a unique cultural entity is also an attempt to uplift and revitalize the Tohoku region in northern Japan, which has been severely affected by the devastating earthquake, tsunami and nuclear disaster.

Japan has also suffered some home-grown food safety problems. In June 2007, the president of the Hokkaido-based meat-processing company Meat Hope admitted that croquettes made of minced beef, pork and chicken had been labeled as 100 percent ground beef (Japan Times Online 2007a). In the same year, the confectioner Fujiya had to halt production after admitting the repeated use of expired ingredients and the mislabeling of consume-by dates (Japan Times Online 2007b), and an investigation by the prefectural government Mie discovered that the confectioner Akafuku had falsified production dates of its popular bean-jam sweets (Japan Times Online 2007c).

The above examples underline the significance of food and risk. New directions in research on food in East Asia are revisiting prominent Western risk theories advanced by Ulrich Beck (1992), Anthony Giddens (1991) and Douglas and Wildavsky (1982). Arguing that risks are hidden, involuntary and irreversible, Douglas and Wildavsky argue that risks are socially selected based upon cultural criteria: "Each culture is biased towards highlighting certain risks and downplaying others" (Douglas and Wildavsky 1982: 14). Beck (1992) and Giddens (1991) have argued that the advancement of technology and science in industrial societies has made the assessment of risks more predictable and calculable than was the case in pre-industrial societies where the exposure to risks such as natural disasters was perceived as a given factor in life. However, the very same technologies that have made risks more calculable and less threatening have produced new risks such as industrial pollution, nuclear threats and climate change.

New food-related risks that consumers need to deal with on a daily basis are the choice of ready-made meals and processed foods, food products that contain genetically modified (GM) organisms and food additives. Based on interviews with

Japanese consumers and observations in supermarkets, cultural anthropologist Neal Akatsuka (2010) has analyzed the threat of GM food as an "absent presence" and traces fears of GM foods among consumers who associate potential dangers with GM foods despite the ubiquitous presence of imported GM foods such as soybeans, corn used mainly for animal feed, and certain oils.[2] These new risks produced by manmade technologies are a characteristic of post-industrial societies and affect every person no matter their social status in society. According to Beck (1992) and Giddens (1991), "reflexive modernization" in post-industrial societies requires people to assess, manage and avoid risks on their own terms and on their own responsibility.

Yan (2012) and Veeck *et al.* (2010) reinvestigate Ulrich Beck's and Anthony Gidden's theories of risk and examine how consumers navigate risk in a rapidly changing market such as China. Unlike Japan, which is a mature and affluent consumer society, China has made a rapid transition in the past two decades "from a state-regulated food system that was bounded by season, location, and traditional taste to a much expanded food supply that offers larger quantity and variety year round and is increasingly exposed to global market forces" (Veeck *et al.* 2010: 222). Veeck *et al.* investigate four different cities in China, namely Nanjing, Beijing, Changchun and Shijiazhuang. Based on observation of shopping tours, in-depth interviews and focus groups with consumers (Veeck *et al.* 2010: 225), their qualitative study aims to provide tendencies as to how Chinese consumers navigate new food choices made available to them and how they assess and avoid food-related risks in a newly industrialized and in parts even post-industrial society. Their results are twofold. First, their observations show that Chinese consumers prefer a combination of traditional shopping venues such as local markets where food can be touched and investigated prior to purchasing and prices can be negotiated, and modern shopping venues such as supermarkets that offer a variety of reliable brands. Second, their reinvestigation of Western risk theories has revealed that a "global risk consciousness" among Chinese consumers is absent. Rather, consumers assess and navigate food-related risks in an emerging industrial market economy on a "personal level" and "adopt individual strategies to minimize personal risks such as contamination, adulteration, deception and victimization" (Veeck *et al.*2010: 234). In other words, while enjoying a new abundance of food choices, consumers are developing pragmatic strategies to minimize personal risk and do not scrutinize the emergence of food-safety risks as such. In this assessment, Veeck *et al.* stress Gidden's concept of "active trust," specifically that consumers actively look for retailers and brands that they can trust. Responding to Veeck *et al.*, Yan (2012) argues against the dismissal of Western risk theory, stating that although the role of science, technology and modernity with regards to food-safety problems in China is not (yet) being thoroughly discussed in public, risk theory plays a significant role in contemporary Chinese society but lacks the "centrality of modernity" and conveys a "stronger influence of its control-logic" (Yan 2012: 721). As Yan argues, "the food safety problems and the associated risks have indeed demonstrated the arrival of a risk society in China, but they have arrived with a number of Chinese characteristics" (Yan 2012: 726).

The emergence of global food chains and the import and export of food products have led to a mutual interdependency of countries in East Asia. Several countries in East Asia struggle with low food self-sufficiency rates. According to Lee Wu-chung (2011), Taiwan reports a food self-sufficiency rate of 32 percent, while Singapore and Hong Kong rely entirely on food imports. Japan has been struggling with a food self-sufficiency rate of approximately 40 percent. Roughly 60 percent of the calories consumed in Japan derive from imported food items. Regional self-sufficiency rates greatly vary in Japan—for example, while Tokyo has a self-sufficiency rate of just 1 percent, and Osaka has a self-sufficiency rate of 2 percent, the northern island Hokkaido has a self-sufficiency rate of 173 percent and can sustain itself (MAFF 2010). However, Japan remains highly dependent on the import of agricultural products and food items. The food self-sufficiency rate in Japan has declined drastically over the past fifty years: in 1965, it was 73 percent, falling to 50 percent in 1987, reaching a record low of 37 percent by 1993 (MAFF 2011). Japan now has the lowest food self-sufficiency rate of the major industrial countries. By comparison, the self-sufficiency rate of the United States was 130 percent in 2009, while that of Australia was 187 percent (MAFF 2009). Major food suppliers to Japan include the United States, China, Australia, Thailand and Canada. According to the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF), in 2006 Japan was chiefly dependent on the United States for imports of agricultural products and food supplies (30 percent), followed by China (13 percent) and Australia (10 percent) (MAFF 2007). Food self-sufficiency also varies significantly according to foodstuff. Rice, which is Japan's major staple food, has the highest self-sufficiency rate—96 percent of all available rice is harvested in Japan. In addition, the food self-sufficiency rate for vegetables is high—79 percent of all available vegetables are produced in Japan. In contrast, only 9 percent of beans and only 38 percent of fruits are produced domestically (MAFF 2012a).

Highly dependent on food imports, a large percentage of the food consumed in these countries is not produced domestically but derives from sources that are often unknown. Apart from the changes of eating habits and food safety problems, the loss of food self-sufficiency or food sovereignty, which occurs alongside the integration into global food chains, is a particular feature of post-industrial societies.

Consumer Education Initiatives

In response to various food scandals, consumer education initiatives aim to prevent the consumption of too many ready-made meals and processed foods, food products that contain GM organisms and food additives. While Yan (2012) and Veeck *et al.* concentrate on the application and re-evaluation of Western risk theory in the Chinese context and the navigation of daily food-related risks on a highly personal basis, two further research areas in the anthropology and sociology of food (1) identify consumer education initiatives that provide guidelines to food preparation skills and promote the consumption of organic foods, and (2) focus on the rediscovery of providence and culinary heritage as a counter movement to globalization.

Consumer education initiatives are often channeled through non-governmental initiatives. Based on fieldwork in urban China, anthropologist Jakob Klein (2009) is concerned with attempts of environmentalists to create "ethical food consumers." Focusing on three major players in Kunming in Yunnan Province in southwest China—the Pesticide Eco-Alternatives Center (PEAC), Haobaoqing, the first certified organic farm and Sino-Agriculture, a Taiwanese-led company that has established an organic vegetarian centre in Kunming—Klein (2009: 74) differentiates between the promotion and availability of organic foods, green foods and "no public harm" foods. "No public harm" vegetables may have been produced using chemical fertilizers and pesticides but have been carefully checked for residues. In particular PEAC has actively engaged in the education of food consumers about the use of pesticides and the promotion of organic foods at supermarkets and hypermarkets in Kunming. Klein's analysis shows a shift from personal responsibility of the consumer who navigates risks in a post-industrial society towards the emergence of new institutions that provide guidance to making the "right" food choices. However, Klein's study reveals limitations of this approach and the emergence of new inequalities as, for example, organic foods are expensive and remain unavailable to many consumers.

In Japan, non-governmental consumer organizations such as the Seikatsu Club Seikyo banned GM commodities in 1997, and the Japan Consumers' Federation strongly oppose GM commodities as discussed by Jussaume *et al.* (2000). Consumer movements are not a new phenomenon in Japan. For instance, Patricia Maclachlan has investigated the consumer movement against the deregulation of food additives in the early 1980s and the resistance against the use of GM foods. Maclachlan describes the tensions between the desire of Japanese consumers for a "zero risk policy" concerning food additives and the attempt of the Ministry of Health, Labor and Welfare to negotiate consumers' demands and foreign pressures to liberalize agricultural markets and deregulate the use of food additives. In response to consumer activism, in 1972 the Japanese government strengthened the 1948 Food Sanitation Law (*Shokuhin eisei-hō*), which regulates the number of approved food additives (Maclachlan 2002: 184).[3] *Gaiatsu* (foreign pressure) has played a significant role in the liberalization of food additives and continues to this day in other arenas as Japan is currently considering to join the Transpacific Partnership Agreement (TPP) under American leadership which has been met with resistance by Japanese farmers who fear the deregulation of food prices, in particular of subsidized staples such as rice.

In addition to non-governmental food education initiatives, food education (*shokuiku*) in Japan is part of a nationwide educational scheme jointly initiated by the MHLW and MAFF in 2005 through the enactment of the Basic Law of Food Education (*shokuiku-kihon-hō*). The term *shokuiku* is a combination of the Chinese characters *shoku* (to eat, food or diet) and *iku* (to nurture, education or guidance). The current *shokuiku* campaign is not a new phenomenon in Japan. The link between locality, heritage and health has previously been made in state-led campaigns but has resumed a renewed official stance through the enactment of the *shokuiku kihon-hō* in 2005. The current state-led *shokuiku* campaign is a response to the increase of lifestyle-related illnesses in Japan such as obesity but also extreme skinniness, coronary heart problems, diabetes and high blood pressure.[4] The most prominent feature of the *shokuiku* campaign is the "Food Guide Spinning Top" (*Shokuji baransu gaido*), which features an upside down pyramid with nutritional components and suggestions for daily meals containing grain and wheat dishes, vegetables and fruits, meat and fish as well as dairy products and sweets.

The state-led educational campaign has been critically discussed by Aiko Kojima (2011) and Cornelia Reiher (2009). Sociologist Aiko Kojima has argued that the state-led concept of *shokuiku* does not just serve as a mere dietary guideline, but as a holistic remedy for all food-related issues that prioritizes consumers' responsibilities over consumers' rights. Moreover, Kojima argues that the concept of *shokuiku* reinforces conservative gender perceptions by reassigning women to their traditional role as homemakers and main food providers, and strengthens ethnocentrism by emphasizing Japanese staple foods as part of a proper dietary scheme, which neglects the nutritional needs of ethnic minorities in Japan. In a similar vein, Japanologist Katja Schmidtpott (2011) has argued that women are likely to bear the main burden of the *shokuiku* campaign. In her study on the dissolution of family meals in Japan from the Meiji period until present, Schmidtpott reveals that family meals in Japanese households are becoming less frequent. Family members often dine separately and alone and consume individually purchased ready-made meals available in convenience stores and supermarkets as opposed to a family dish prepared by a homemaker.[5] To increase familial conviviality at the dinner table is also one objective of the *shokuiku* campaign. However, given the fact that 40 percent of women are in employment, the ideal of familial conviviality may be difficult to implement. The rising employment of women, higher demands of flexible and individualized work schedules, and the decline of culinary responsibility within the family has resulted in a shift from the responsibility of the individual consumer for his/her dietary needs towards the need for the implementation of "culinary competence" in public places such as schools and universities. This requires a long-term and revised approach to adequate food consumption outside the home. Dining outside and the consumption of ready-made meals and convenience foods have increased in both countries, accompanied by a critical loss of familial conviviality.

Providence and Culinary Heritage Preservation

Consumer education is one response to food-related challenges. Anthropologist Sidney Cheung (2013) has pointed out that since the 1980s, social and cultural anthropologists have broadened the study of foodways to food choices as indicators of social status and as a means to create symbols of national and cultural identity (Cheung 2013: 2). Recently, however, this emphasis has shifted towards ethnographically informed accounts of providence and heritage preservation that correspond with concerns about food safety, low food self-sufficiency rates and the pertinent issue of revitalization of peripheral areas. Cheung examines heritage preservation in Hong Kong from three different angles of culinary resources, namely retail networks and family recipe traditions. He argues that culinary traditions are often lost as the preservation of domestic recipes is handed over to commercial sectors in Hong Kong where eating out prevails over family dinners at home. However, intangible heritage preservation also takes place through preserving particular wholesale and retail networks. (Cheung 2013: 9). Through examining a snake retail shop in Hong Kong, Cheung shows how dishes made of snake are a specialty of Cantonese cuisine, which is preserved through passing down a network of business relations with wholesale traders, restaurant businesses and individual customers from generation to generation along with particularized apprenticeship (Cheung 2013: 9).

The study of foodways as markers of national identity is only a step away from a concern about food and nationalism. Klein *et al.* (2012) critically examine responses of food initiatives such as Fair Trade, Slow Food and heritage food movements to the liberalization of trade and food safety challenges. They argue that the celebration of locality and heritage foods may neglect tendencies of xenophobia and ethnocentrism, which may result in downplaying culinary traditions of minorities—a concern they share with sociologist Aiko Kojima (2011) who argues that the emphasis on domestic foodstuffs as healthy foodstuffs may neglect the nutritional needs of ethnic minorities. The notion of "culinary nationalism" is also addressed by Maclachlan (2006) who cites the example of Takeuchi Naokazu, a former official of MAFF and the founder of the Japan Consumers Union (*Nihon Shōhisha Renmei*)—an advocate of maintaining culinary traditions and eating domestically produced foods, in particular rice. Maclachlan states that "[t]he culinary nationalism inherent in Takeuchi's recommendations symbolizes not so much the centrality of indigenous foods in Japanese culture as a marked distrust of free trade principles and economic globalization led by the United States" (Maclachlan 2006: 250). Maclachlan's example demonstrates that the current *shokuiku* campaign is by no means a new phenomenon but that the link between locality, heritage and health has been made in previous state-led campaigns but has resumed a renewed official stance through the enactment of the *Shokuiku kihon-hō* in 2005.

Government initiatives such as Food Action Nippon in Japan and the transnational food activist network Slow Food that have been studied by Stephanie Assmann (2010) view culinary heritage preservation as a way to increase food self-sufficiency, to prevent the further loss of distinct food cultures and to emphasize the conviviality of food sharing. Food Action Nippon, a government initiative which was founded by the MAFF in 2008, pursues the ambitious goal to raise Japan's food self-sufficiency from the present 39 percent to 45 percent by 2015. Through conducting food fairs and educational events, in particular, the significance of rice as Japan's major staple food is reinforced (Assmann 2010). This emphasis on rice is not a new phenomenon and has been previously addressed by Maclachlan (2006), who cites that MAFF officials have advocated eating domestically produced foods, in particular rice for breakfast since the 1960s (Maclachlan 2006: 250).

However, efforts to preserve Japanese food as a cultural heritage are not limited to domestic campaigns but extend to the promotion of Japanese food abroad. In 2008, the MAFF founded the Organization to Promote Japanese Restaurants Abroad

(JRO) (*Nihonshoku resutoran kaigai fukyū suishin kikō*) in order to promote the positive image of Japanese haute cuisine abroad, and reconfirm the globally positive image of sushi and tempura. As of June 2011, JRO has established twenty branches worldwide. Based on the popularity of Japanese food in a given country, JRO conducts research on the use of Japanese food products and the state of Japanese restaurants; and it launches promotion events to promote the positive image of Japanese cuisine. In contrast to initiatives like Food Action Nippon that focus on daily and simple dishes, JRO aims to convey an image of an elaborate Japanese cuisine which is part of Japan's national identity.

The creation of culinary heritage is seen as key to rural revitalization. Agriculture is currently facing a number of severe difficulties such as the aging of farmers and the decline of people who choose farming as a profession. According to MAFF data from 2012, 2.51 million people in Japan were working in the farming sector; of these, only 1.78 million were pursuing farming as their main occupation, highlighting the growing tendency for farmers to pursue farming as a part-time occupation (MAFF 2012b). The number of farmers in Japan has declined significantly since 1960 when there were 14.54 million farmers, of which 11.75 million were working part-time (MAFF 2012b). A further problem is the aging of farmers. According to data compiled by MAFF, the average age of farmers in Japan is 65.9 years. In 2011, 550,000 people decided to take up farming as a profession; however, only 130,000 new farmers were younger than 39 years (MAFF 2012b).

The decline in agriculture is particularly felt in rural areas in Japan where local communities are making efforts to counter the declining attractiveness of peripheral areas. Bridget Love (2010) documents efforts of women who have formed a heritage food initiative in Nishiwaga, a small town in Iwate Prefecture in the Tohoku area in northern Japan to revive the local economy and community through the marketing of food, specifically *sansai*—mountain herbs and vegetables that are used for making pickles and sauces. In doing so, Love also reveals that the women had to research the preparation of these heritage foods by consulting the older people in the town.

Conclusion

The melamine scandal in China and the nuclear disaster at Fukushima in Japan, have demonstrated the impact of food safety crises at the global level. In connection to globalization, cultural anthropologists and sociologists have revisited Western theories of risk advanced by Ulrich Beck, Anthony Giddens and Mary Douglas and Aaron Wildavsky.

The significance of risk theory in current research is threefold. First, the scale of food safety incidents such as the Fukushima disaster and the melamine crisis put established brands and future-oriented technologies under intense scrutiny. In other words, the collapse of trust has made it necessary to reinvestigate the impact of risk in post-industrial societies. Moreover, the arrival of new food-related risks such as the increased use of GM organisms and food additives underlines the importance of risk assessment, in particular as consumers need to familiarize themselves with new and possibly harmful food technologies. Second, in its application to the case of China, Western risk theory has taken a new turn as risk is not being linked to modernity (Yan 2012), and consumers navigate food-related risks on a highly personal basis instead of scrutinizing the emergence of food-related risks in a newly industrialized society as a phenomenon as such (Veeck *et al*. 2010). Third, in Japan, risk assessment demanded by Japanese consumers after the Fukushima disaster opposes a state-led rhetoric of *anshin* and *anzen* which aims to pacify the fears of Japanese consumers and reposition the cultural and national entity of Japanese food.

The notion of locality is linked to the desire to minimize risk. Knowing the origin of food increases the feelings of *anshin* and *anzen* among consumers. In addition to the need for safety enforced by locality, providence and food heritage preservation is linked to revitalization efforts in peripheral areas and sustainable agriculture. However, efforts of revitalization and ethnic integration coincide with concerns about the emergence of culinary nationalism, as voiced by Kojima (2011) and Klein *et al.* (2012).

The notion of heritage also plays a significant role in food education efforts in Japan. Poor eating habits are another form of a food-related but self-imposed risk. Food education delegates the responsibility for culinary competence to the individual and embraces national staple foods and local food specialties as well as vegetarian foods. However, efforts to provide adequate information about nutrition often coincide with a return to conservative gender perceptions and family values. New forms of culinary education are necessary that take the demands of working parents, individualized work schedules and dining outside the home into consideration.

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Notes

1 Sabban discovered how milk was used in Chinese foodways during this long period. According to the *Qimin yaoshu*, the first Chinese agricultural treaty, dated in the sixth century, the generally accepted patterns of East Asian agricultures at that time were essentially based on the cultivation of grains, but also included husbandry, including the production of milk. The farmers of northern China were at that time developing specialized

techniques to transform milk into a variety of products.

2 At present, GM crops are not grown for human consumption in Japan. Nevertheless, the country relies heavily on imported GM foods such as soybeans and corn, which are mainly imported from the United States. Most of these imports are used for animal feed—only 30 percent of imported corn is used for human consumption (Akatsuka 2010). Under the Food Sanitation Act and the Act for Standardization and Proper Labeling of Agricultural and Forestry Products (JAS Law) as of April 2001, Japan applies a labeling policy for GM foods. GM foods include agricultural products such as soybeans, potatoes and corn but also processed food that contain genetically modified DNA such as bean curd, natto and soybean products (Consumer Affairs Agency 2011). Food products have to labeled as GM foods "if over five percent of the total weight of the food item consists of a GM ingredient" (Akatsuka 2010).

3 Following the revision of this law, the Japanese government authorized only seven additives between 1972 and 1983. However, due to foreign pressure, the Nakasone government authorized another eleven additives in 1983, among them the sweetener aspartame, fungicides used in baked foods, colorants, and an additive used for beer fermentation (Maclachlan 2002: 189). The approval of these partially contested food additives was seen as a failure of the consumer activist movement and the beginning of what Maclachlan has referred to as "*fuyu no jidai*," (winter period), a term which has been used to describe the gradual decline of influence of consumer movements during the 1980s and the failure to prevent the introduction of the contested consumption tax.

4 According to data from MHLW (2009), in 2008, roughly 36 percent of men in their forties and 30 percent of men in their twenties were struggling with overweight, while more than 22 percent of women in their twenties and 17 percent of women in their thirties showed the opposite tendency towards underweight. These lifestyle-related health problems threaten to put additional burden on the medical system, which is being challenged by the increase of age-related health problems due to the aging of the population.

5 Schmidtpott draws upon the results of the annual survey of 120 households in the Tokyo area conducted by the Asats DK advertising agency since 1998. In this survey, homemakers of predominantly middle class families are asked to keep a diary for one week and document the meals they have prepared for their families and also take photographs of these meals.

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