Critical Food Studies

SUSTAINABLE FOOD CONSUMPTION IN CHINA

CHANGING FOODSCAPES, VALUES AND PRACTICES

Alex Hughes, Shuru Zhong, Mike Crang,
Guojun Zeng, Fernando Fastoso,
Héctor Gonzalez Jimenez and Bob Doherty

Sustainable Food Consumption in China

This book investigates the current and potential roles of food consumption to address sustainability challenges in China.

Focusing on the megacity of Guangzhou, it looks at sustainability and food from the perspectives of government, commercial and third sector actors and through the lived experiences of consumers. It charts the rapidly transforming landscapes of retail across urban China and the ways they are shaping and are shaped by everyday food consumption practices. Using a multi-method research approach of quantitative and ethnographic data, it provides readers with a rich and comprehensive understanding of the relationships and tensions between contemporary practices of food consumption and pressing sustainability challenges. It unpacks the complex foodscape in contemporary Chinese cities, from traditional wet markets to online deliveries, from supermarkets to farmers markets and alternative food providers, to understand the values and practices promoting and hindering sustainability in food consumption.

The book is intended for academics from advanced undergraduate level through to masters, postgraduates and scholars across key social science disciplines including Geography, Sociology, Anthropology and Business and internationally given the global interest in the focus on China.

Alex Hughes is Chair of Economic Geography at Newcastle University, UK. Her research addresses social justice and environmental sustainability challenges in global supply chains, including issues of corporate responsibility and sustainable production and consumption in Kenya, South Africa, Malawi, Pakistan, Malaysia, Brazil, China, the United Kingdom and the United States. Studies have addressed challenges associated with labour standards, including forced labour and modern slavery, antimicrobial resistance, product safety and environmental sustainability in sectors including food, horticulture, textiles and personal protective equipment. Many of the projects have involved interdisciplinary and international collaboration and partnership with state, commercial and third sector organizations.

Shuru Zhong is Associate Professor at the School of Tourism Management, Sun Yat-sen University, China. She is a cultural anthropologist in the field of food studies and consumer culture and has conducted research and published widely on sustainable food systems and consumption in China.

Mike Crang is Professor of Geography at the University of Durham, UK, with expertise in the field of cultural geography. His work has focused on public and oral history, photography and museums, and he has worked at the borders of economic and cultural geography, looking at the travels and transformations of various goods, including waste. He is also interested in more abstract issues regarding time-space, action and temporality.

Guojun Zeng is Professor at the School of Tourism Management, Sun Yat-sen University, China. He teaches and researches in the area of food and beverage tourism, hospitality and management strategy. His work focuses on food and cultural geographies, especially the food geographies of tourism and mobility.

Fernando Fastoso is Chair of Brand Management for Luxury and High-Value Brands at Pforzheim University, Germany. His expertise lies in the areas of cross-cultural and luxury brand marketing. His research focuses on how consumers interact with brands when those brands cross national borders (consumer psychology) and how companies can best adapt their strategies in response to consumer needs (brand marketing strategy). He is also a speaker and consultant.

Héctor Gonzalez Jimenez is Professor of Marketing at ESCP Business School, Madrid, Spain. His professional portfolio has grown in various roles in marketing, education and corporate strategy. During this time, Hector has worked on projects for small- to medium-sized businesses as well as large international companies. He is interested in interdisciplinary research that addresses phenomena on the self and consumption. Currently, his work spans areas such as cross-cultural consumer behaviour, body image and consumption and, in particular, human-robot/AI interactions.

Bob Doherty is Professor and Dean at the School for Business and Society, University of York, UK. He specializes in research on hybrid organizations, namely, the marketing and management aspects of fair trade organizations and social enterprises, and has published in *Nature*, *Journal of Business Ethics* and *the International Journal of Management Reviews*. Recently his research interests have developed to look at the role these hybrid organizations play in food systems resilience. Bob has also provided both oral and written evidence for a range of House of Commons select committees, House of Lords Food and Farming enquiries and for the National Food Strategy, where he has played the role of rapporteur at public dialogues.


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Critical Food Studies

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1 Introduction

Introduction

We set out in this book to investigate the current and potential roles of food consumption in addressing sustainability challenges in China, focusing on the case of the megacity of Guangzhou. The growth in middle- and high-income households in China suggests that food consumption, the values it expresses, changing cultures and consequent environmental pressures are becoming ever more germane and in need of critical engagement. The growth of the "middle-classes" and their consumption patterns in China and across other rising and emerging economies have been celebrated as a demonstration of improving living conditions and as a potential impetus for global economic growth (Kharas and Gertz, 2010; Wang, 2014). However, there are concerns that expanding consumption is generating ever greater environmental pressures in a world in which consumers, particularly those in western economies, have long been living unsustainable lifestyles (Lange and Meier, 2009; OECD Observer, 2007/2008). While there has been a focus on food security in low- and middle-income countries and in settings that have been known as emerging and rising power economies, there is also increasing "over-consumption" amidst the rising global middle classes. Nowhere is this more striking than in China where, for instance, pork consumption has doubled in 30 years and is now nearly six times that of the United States, and nearly half of the global total (OECD, 2022). However, a turning point may have come when China's State Council announced in 2019, "In the new era, the Chinese people are more concerned with their nutrition and health, from having enough food to eat to eating well and safely",[1] or in colloquial terms from *chidebao* to *chidehao*, from eating enough to eating well. And yet, what "eating well" means and how it might link to issues of sustainable consumption is complex. Previous work makes clear that " 'goodness' in food is as much about morality as it is about nutritional value. Foods are laden with meaning about what is natural, proper and virtuous" (Mylan et al., 2016: 5), and such meanings are shaped by socio-cultural and political histories as well as contemporary influences.

The book will advance understanding of what sustainable food consumption means and might mean in the future, in Guangzhou and across urban settings in China more broadly, from perspectives of government, commercial and third sector actors and through the values and lived experiences of consumers.

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Food consumption is a "major issue in the politics of sustainable consumption because of its impact on the environment, individual and public health, social cohesion, and the economy" (Reisch et al., 2013: 7). The United Nations (UN) Sustainable Development Goal (SDG) 12 ("Ensure Sustainable Consumption and Production Patterns") recognizes the need to move towards more sustainable patterns of consumption by promoting sustainable public and corporate procurement practices and ensuring that consumers have the relevant information and awareness for sustainable lifestyles (United Nations, n.d.). Sustainability is understood in terms of social, economic and environmental implications and outcomes. The critical importance of sustainable food consumption spaces and practices in the Global South, including in economies of high and rapid growth, such as China, as well as in low-income economies, is being acknowledged in policy circles (Benton and Bailey, 2019). However, they remain relatively under-researched and poorly understood in comparison with those in European and North American contexts. In response, this book evaluates the values, mobilization and practices of sustainable food consumption in China, where there is robust evidence of large and growing middle classes. We examine interconnected levers for change in sustainable food consumption, including (i) trends and values of sustainable food operating through diverse food systems, retail landscapes, and consumption discourses; and (ii) everyday habitual consumption and the ordinary ethics of food purchase and use.

In terms of the book's focus on middle-class consumers in high- and middle-income demographic groups, while the notion of the global middle classes is dogged by definitional controversies and data inconsistencies, the research underpinning the book focuses mainly on Guangzhou where there is robust evidence of a substantial and rapidly growing middle-income cohort (Pew Centre, 2015).[2] We recognize middle class as an identity performatively produced as well as abstractly definable against levels of income. Defining the middle classes as performatively produced sees identity as recursively produced in part through consumption habits and practices (Kravets and Sandiki, 2014), including sustainable consumption; these habits and practices may vary across cultural contexts, but are recursively recognized as signalling middle-class identity. Nonetheless, we also explain the broad income groups covered in our primary research in Chapter 4. We focus particularly on this socio-economic group because of its spending power and associated capacity to make food consumption choices with implications for environmental and social sustainability.

The book draws on multi-method research to understand sustainable consumption beyond western, neo-liberal models and narratives of "responsibilized" consumers (Shamir, 2008), whereby sustainable change is seen to result from the mobilization of consumers by the state, commerce and civil society to consume less and/or in more environmentally and socially sensitive ways (Evans et al., 2017). It will make a fresh contribution to the literature not only through Chinese perspectives but also through a focus on the interface between the diverse "urban foodscape" (Morgan and Sonnino, 2010: 209) and everyday practices of household food purchasing, use, and waste. We thus argue for the importance of considering sustainable consumption beyond a limited focus on environmental and social initiatives, labels and standards,

and behaviour change through conscious consumption, to embrace additionally the environmental and social effects of ordinary food consumption embedded in the foodscape and shaped by complex cultural values.

We introduce understandings of food system challenges and sustainable consumption briefly here, as well as some of the architectures of Chinese food systems, before outlining the structure of the book, its contents and arguments.

Food system challenges

Food systems are seen as complex socio-ecological systems (Colding and Barthel, 2019) operating across multiple spatial, temporal and jurisdictional scales (Folke, 2006). We acknowledge that food systems are meant to deliver a number of important outcomes, ranging from food and nutritional security to dietary health coupled with positive environmental, economic and social impacts. Ben Fine (1994) pointed out more than 30 years ago that food stands out from other systems of provision because of its organic nature, which governs and constrains how quality and value are generated across the supply chain. For instance, while it is now commonplace to speak of food production as "industrialized", these processes are still tempered by issues of risk, perishability, seasonality and sustainability, all of which stem from food's organic qualities (Goodman and Watts, 1994; Kirwan et al., 2017). In recent decades, urban consumers throughout the world have experienced fundamental changes to their food systems with the liberalization and globalization of markets. During the past two decades, many food systems have expanded greatly to offer a wide variety of products year-round. Supermarkets and other forms of modern retailing have established a presence in cities of emerging and rising power economies, joining or supplanting traditional enclosed and outdoor food markets (Goldman et al., 1999; Layton, 2007). In this context, the food we consume and the way it is produced are resulting in significant damage to both human and planetary health (Zurek et al., 2022). It is the single largest contributor to biodiversity loss, deforestation, freshwater pollution and the collapse of aquatic wildlife. The food system is also the second biggest contributor to climate change after the energy industry. A third of the global anthropogenic Greenhouse Gas (GHG) emissions were estimated to be attributed to our current food system, the negative environmental impacts of which will in turn adversely affect agricultural production and food supply systems (Crippa et al., 2021). Collectively, actions need to be taken from all respects to transform current food systems and contribute to the United Nations (UN) Sustainable Development Goals (SDGs). Moreover, the recent COVID-19 pandemic exposed the current vulnerability of food systems (Power et al., 2020).

Food system outcomes do not spontaneously change. Rather, they do so as a result of the actors (farmers, consumers, businesses and policy makers) changing their activities. Similarly, actors do not spontaneously change their activities but in response to a change in a driver(s) to either capitalize on an opportunity or mitigate the impact of a threat. So, to change a food system outcome, the actors need to *adapt* their activities, which means changing either the external system drivers or

the internal system drivers (i.e. the relationships between actors). A change in any food system activity, for example, adapting diets toward sustainable consumption, could have positive impacts across the whole system.

By 2050, the global population will reach 9.7 billion, 68% of whom will live in cities (United Nations, 2018). The rapid population growth and urbanization process, together with increasing external challenges such as climate change and public health emergencies, have stressed the risks associated with urban food systems in securing high-quality food supply (Grewal and Grewal, 2012). Action is needed to change the current food system to contribute to UN SDGs. We thus turn our attention in this book to the role of sustainable consumption as a leverage point in (potentially) changing the food system.

Sustainable consumption

The role of consumer decisions and practices in sustainability issues is well established (Jackson, 2005; Dermody et al., 2015), but most research has focused on western contexts. Consumer concern around the food system has increased, reflected in consumer demand for attributes suiting their social and ethical priorities as well as growing pro-environment consumerism (Sepúlveda et al., 2016; Dermody et al., 2018).

Sustainability includes several dimensions categorized into social, ethical, economic and environmental factors (Hanss and Böhm, 2012). According to Dermody et al. (2018), sustainable consumption integrates the needs of future generations into choice making; reduces the impact of over consumption to minimize ecological destruction; and combines the citizen orientation of fairness, equality, and stewardship. "Organic" remains the biggest sub-market in sustainable food globally (Janßen and Langen, 2017), with a wealth of existing research on organic and "Fair Trade" labelling (Huybrechts et al., 2023; Thorgersen and Zhou, 2012). Environmental sustainability specifically comprises a diversity of factors such as local food production, sustainable farming, low carbon footprints and food miles, anti-deforestation, and reduced waste, among others (Lazzarini et al., 2018), and a systematic review found environmental attributes were most preferred by consumers, with social attributes close behind (Tobi et al., 2019). However, messages with an environmental focus are difficult to tease apart from social and ethical attributes. For example, French consumers who typically buy local food were not driven by environmental motives such as reducing carbon via less distance travelled but rather by a lack of trust in the food supply chain and to support their local economy (Sirieix et al., 2008). There is relatively less research on sustainable consumption behaviour and practice in eastern settings, including China (Dermody et al., 2018), though see the work of Jehlička et al. (2024), Liu et al. (2015) and Liu et al. (2019) among other studies, some referred to below, and with which we engage through the book.

There is evidence that sustainability messages have benefits relating to (although perhaps not driven by) consumer perceptions of environmental sustainability. One review found that "local food" was believed to be tastier and of higher quality and,

unlike food certified as "organic", was not perceived to be as expensive (Feldmann and Hamm, 2015). Other studies report consumers' greater willingness to pay a premium for locally grown foods than for organic (Costanigro et al., 2011). The latter finding is important when trying to overcome premiums associated with sustainable foods, particularly in less affluent groups who identify cost as a barrier to sustainable choices (Duckworth et al., 2022).

Jiang et al. (2019) studied households in China using the Theory of Planned Behaviour and found that cultural values of collectivism and pro-environmental self-identity were having a positive effect on helping to reduce carbon emissions at household level by purchasing environmentally friendly and energy-saving products, using green energy, investing in low-carbon housing, saving electricity and green travel. In contrast, Wang et al. (2019) found that status seeking lifestyle had a negative impact on energy saving behaviours. However, the story is more complex, as a perceived seriousness of environmental problems and perceived environmental responsibility weaken the mediating effects between face consciousness and energy-saving behaviour. "Face consciousness" refers to the desire to manage oneself and express oneself favourably to others in social encounters (Lee and Workman, 2020: 1). It is interesting that under the condition of which both the seriousness of environmental problems and environmental responsibility are perceived to be high, a status-seeking lifestyle has a positive impact on energy-saving behaviours. Dermody et al. (2015, 2018) showed that consumers in China had more concern than consumers in Poland for the environmental aspects of sustainable consumption with pro-environmental self-identity on display. This may reflect the growing concern associated with environmental issues in Chinese cities. This could signal to others in China a positive identity especially when sustainable products are more expensive and publicly consumed. In contrast to materialism in western cultures, Dermody et al. (2015) found a positive relationship between materialism and sustainable consumption in China. This perhaps reflects a consumer population focused on the acquisition of possessions and their social status, who are also environmentally concerned. This positive effect may indicate different meanings of materialism in China (Hurst et al., 2013) and suggests this positive relationship represents identity status signals to others and self, especially when sustainable products are more costly and publicly consumed. Dermody et al. (2018) describe this as the green side of materialism, that is, a socially symbolic status signal to others. Pro-environmental self-identity refers to individuals possessing a sense of self that embraces pro-environmental action, for example, I am a recycler rather than I recycle (Dermody et al., 2015).

Veeck et al. (2010) have highlighted growing concerns of urban consumers in Chinese cities regarding the overuse of chemicals such as pesticides and fertilizers in food production and the potential for contamination, the deficiency in trust in food vendors, and the safety of their food due to the profit motive and concerns over genetically modified foods, concerns that we flesh out in Chapter 3. That research also shows how some consumers seek out certified organic produce in supermarkets due to trust in the claims of environmentally sensitive food production. However,

more research has been needed, and our book aims to develop understanding of some of these explicit forms of sustainable consumption as well as more nuanced aspects of sustainability embedded in the ordinary practice of everyday life.

Structure of the book

Conceptualizing sustainable food consumption and the urban foodscape

The book's overall approach is to apprehend sustainable food consumption in terms of values and practices embedded in the lived experiences of China's diverse foodscapes and households shaped by past-, present- and future-oriented cultural norms. Chapter 2 presents a detailed outline of the theoretical literatures we draw upon, explaining key concepts and framing our approach. Our conceptualization seeks to broaden understanding of sustainable consumption beyond western, neo-liberal models of "responsibilized" consumers encouraged by policymakers, business and campaigners to engage in more sustainable forms of food purchase and use, by consciously changing their behaviour and consumption choices. In global policymaking on sustainable consumption, a discourse of individual-level behaviour change to effect more sustainable consumption continues to prevail. For example, UN Sustainable Development Goal 12 states the need to move towards more sustainable patterns of consumption by promoting sustainable public and corporate procurement practices and ensuring that consumers have the relevant information and awareness for sustainable lifestyles (United Nations, n.d.).

Reflecting a policy focus on behaviour change through the market, critical academic engagement with ethical and sustainable consumption has tended to prioritize western subjects engaged with ethical consumption as a form of intentionally practising politics through consumer choice in advanced liberal settings (Barnett et al., 2005, 2008, 2011; Bryant and Goodman, 2004; Clarke et al., 2007; Goodman, 2004). Chapter 2 acknowledges the marketing-based conceptualization of consumers as agents of social and environmental change, and the Foucauldian critique of it (Barnett et al., 2011). However, we shift the geographical focus to a non-western setting where it is not necessarily always the consumer who is mobilized as a key lever for change to drive sustainability. And while, importantly, we recognize some forms of mobilization and discourses of behaviour change as present and thus researchable in China, we also broaden our understanding of sustainable consumption to the realm of practices. Chapter 2 thus explains our application of social practice theory (Shove et al., 2012), widely used in studies of sustainable food consumption (Evans, 2019; Liu, 2021; Meah and Jackson, 2017; Warde, 2005, 2014), and the reasons for developing it and expanding its geographical reach through our book. We explain that social practice theory importantly enables a focus on lived experiences and grounded practices but acknowledges their embeddedness in broader political-economic and social structures and networks of materials that shape and constrain agency. We highlight in the chapter that this is particularly helpful for a study of everyday food consumption in a context where consumers do not always tend to be driven by conscious, environmentally driven consumption choices.[3]

We explain in Chapter 2 how the book advances a practice-based approach in two key ways. First, we develop the approach through a deep engagement with the interface between consumption practice and the "urban foodscape" (Morgan and Sonnino, 2010: 209). Engagement with the foodscape and the diverse spaces through which food is purchased in Guangzhou – traditional wet markets, alternative farmers' markets, supermarkets, community stores, restaurants and takeaway outlets – affords attention to the different commercial influences on values and practices of sustainability, as well as tracing their influence through spaces of the home. It also connects questions of sustainable consumption to issues of food availability, access and affordability (Clary et al., 2017). Social practice theory applied to the foodscape captures routine purchasing practices through these spaces and their implications for food system sustainability. Second, we develop a practice-based approach by responding to Evans's (2019) call for reconnecting it to the wider sociologies of consumption literature to place greater emphasis on the *cultural dimensions* of consumer agency associated with meanings, values and identities, whether they are injected with materialistic aspirations or moral concerns, and to grasp their environmental and social effects. This conceptualization developed through Chapter 2 takes us beyond the binary of recognizing sub-conscious habitual practice on the one hand and responsibilized, intentional purchasing decisions on the other. Moreover, we argue that it allows an appreciation of sustainable consumption practices shaped by the cultural values, histories and norms of Guangzhou citizens and the commercial and governmental influences on them.

Foodscapes, consumption and sustainability in China and Guangzhou

Chapter 3 sets the scene for our analysis by presenting an overview of the institutional, commercial and cultural settings for sustainable food consumption in China more broadly, and in Guangzhou specifically. It paints a picture of foodscapes in China. China has become one of the largest food markets in the world, and it continues to grow rapidly (EU SME Centre, 2013). In terms of institutional context, we explain that the state has historically been the major actor in modes of food provisioning. Concerns with the effects of pollution on food and damage to the environment have been reflected in the 13th five-year plan (2016–2020) and the 14th five-year plan (2021–2025).[4] Market-led reforms, we explain, have created a complex institutional foodscape from large "dragonhead" state-related providers and contracts with small farms, to a consumer market mixing transnational/national retailers and traditional wet markets. Amidst this, the chapter explores some countervailing trends, where China is a major exporter and the fourth largest consumer in the world of organic food, with a market valued at USD 14.57 billion (Willer and Lernoud, 2016).[5] In terms of consumer ethics and practices, traditional foods and modes of cultivation, previously derided as anti-modern (Hung, 2013) or associated with poverty and backwardness, are now being revalorized as authentic and pure (Park, 2014; Wu, 2014).

The chapter specifically outlines the diversifying "foodscape" (understood as a landscape of food retail outlets, markets and food service) of Guangzhou.

The transformation and upgrading of the traditional market, the rise of new neighbourhood market brands and the emergence of fresh retail brands in the high-end market along with the increased use of online food services are described and analysed with recent market data. Guangzhou is a metropolis of more than 14 million people on the Pearl River Delta, which has grown from a city of 3.5 million 30 years ago. Its story reflects that of a China that has in the same period become a majority urban country, witnessing radical change in both food provisioning systems and consumption practices against a backdrop of 5,000-year culinary traditions. The chapter reflects on concerns over "good food" ranging from seeking good nutrition to avoiding actual harm, from maintaining traditions to embracing new foods.

Researching sustainable food consumption across urban China and Guangzhou

Chapter 4 outlines the methodology used in the Economic and Social Research Council (ESRC)-funded research underpinning the book. It argues for the importance of multiple methods, including survey-based data capturing trends, values and behaviours associated with sustainable food consumption, as well as "talk data" deriving from interviews (Barnett et al., 2011) and ethnographies embracing consumer practices embedded in the wider foodscape. In so doing, the chapter offers correctives to both solely practice-focused studies of households and the values-knowledge-action gaps approaches individualizing action and locating it in the cognitive realm. We explain the use of our multiple methods to expand the usual view of what is understood as sustainable consumption, where and when it occurs and through what practices. We also identify our samples of households used for the survey, interviews and household ethnographies, locating them geographically and demographically in terms of income brackets.

Trends in sustainable food consumption: values and drivers across China

Before focusing on the specific "urban foodscape" (Morgan and Sonnino, 2010: 209) and conventional and alternative food systems of Guangzhou (Chapter 6) and everyday consumption practice (Chapter 7), Chapter 5 identifies key patterns and trends in terms of values of sustainable food consumption that resonate (or not) with consumers across urban China and some of their key drivers. It reports and evaluates the results of the quantitative, survey-based phase of the research. Overall, the chapter demonstrates that sustainable food consumption trends are present in China, but that the drivers are rarely associated with altruism and care for distant human and non-human others. This, we suggest, stands in contrast to some significant western drivers of ethical and sustainable consumption associated with responsibilization. The findings we present in this chapter show that current sustainable food practices in China are driven mainly by forms of self-expression and health benefits and concerns along with concerns about food freshness, price and nostalgia.

Locating values of sustainability through conventional and alternative foodscapes

Chapter 6 identifies how different notions and values of food sustainability circulate through conventional and alternative foodscapes in Guangzhou, focusing on the practices through which food is acquired and the diverse commercial influences on values of sustainability. To do this, it engages with Conventional Food Networks (CFNs) whose production side consists mainly of industrialized, large-scale farms and millions of small farmers who use pesticides and fertilizers and whose landscapes of consumption consist of supermarkets, wet markets, community stores and online stores. It also identifies the emergence of niche Alternative Food Networks (AFNs), which comprise small-scale, family-based farms adopting organic farming and their sales and consumption networks. The chapter discusses how these different sectors of the food supply chain and associated foodscapes understand and practice sustainability. In China, the official food certification system includes three levels: organic food, green food and non-hazardous food. Research with both institutional and commercial actors and consumers underpins this chapter. The chapter delves into the diverse scales of the Chinese food system and the national discourses on sustainability, framed largely by concerns with food security and safety, showing how they are implemented and interpreted in various local contexts, particularly in Guangzhou.

The chapter confronts the assumption that CFNs are inherently unsustainable by exploring the role of wet markets, which, despite being part of CFNs, can in part contribute positively to sustainability. The discussion extends to the Government's role in promoting food security and safety over environmental concerns and the significant implications of state policies like the Vegetable Basket Program (VBP), traceability systems and food safety regulations.

Despite the divergence in sustainability values, this chapter sees the relationship between CFNs and AFNs in China as potentially complementary rather than conflicting. The perceptions of sustainability in CFNs are consistent with government discourses and with consumers at large and are a concentration of the most pressing food system issues in Chinese society, illustrating dominant state influences. AFNs are necessary civil society food initiatives that are also essentially committed to solving China's food crisis but take a bottom-up, body- and community-scale approach. The differences between the two sectors suggest that when talking about sustainability at the global scale, we need to consider local differences. It is argued that the pursuit of sustainability in China does not fit a uniform approach. While AFNs offer a path to sustainability, their currently very limited role in China suggests the need for different solutions. The chapter advocates for a multi-faceted strategy that re-evaluates national sustainability goals, enhances the role of wet markets and supports the growth of AFNs. This strategy aims for a balanced perspective on sustainability, reflecting China's distinct socio-economic and cultural context as well as its heterogeneous foodscape.

Practising sustainable food consumption through the lived experiences of Guangzhou's foodscape

Chapter 7 draws deeply on the interview-based research and household-focused, ethnographic field research from our project to investigate how issues of food sustainability are both intentionally but also, crucially, often unintentionally woven through ordinary practices of food acquisition, appropriation, appreciation, re-use and disposal in Guangzhou (to use Warde's, 2005 and Evans', 2019, "moments" of consumption). While a minority of consumers can engage in deliberate forms of sustainable food consumption driven by care for the environment and producer communities, many food consumption practices are also marked by a diverse set of cultural values and forms of care. Themes of food freshness, heritage, bodily health, alternativeness, digital influence and urban farming involving sensorial practices, frugality, aspirations and memory are all explored in this chapter in terms of their influence on food purchase, use and disposal, as well as their often unintentional social and environmental implications and effects (following Gregson and Ferdous, 2015). With participant consent, the chapter incorporates diary extracts, interview material and authors' and participants' photographs to illustrate our findings.

Examples in the chapter include digital influences on consumption choices and practices, given that digital technologies are integrated into the lives of many participants, including widespread and regular use of WeChat (the dominant form of social media in China, which roughly compares to a fusion of Instagram with WhatsApp, but allows commercial applets to work through it). We show how food consumption and notions of sustainability are heavily mediated (Goodman et al., 2017). The influence of health and safety considerations is emphasized in a context where the concept of sustainability is most strongly associated with the sustainable development of people and society. A hierarchy of "body-food-place" was narrated and practised by many respondents, with some younger participants purchasing "free-from" and plant-based foods through modern channels and outlets in the foodscape, while for older respondents, there was more reliance on seeking fresh, healthy foods through a more sensorial understanding of food, including the purchase of fresh food in wet markets.

The strong influence of regional cooking and purchase of seasonal foods in Guangzhou is also explored for its social and environmental implications, shaped most strongly by notions of "traditional" foods, food memories and imagined and real connections to rural producers. We discuss how research participants relate to powerful food memories and influences from childhood diets. Although not usually framed in the language of sustainability, for first- or second-generation urban residents, food memories were often reported to include a sense of the pleasure in so-called simple things and of frugality as an important part of that. For some, this prompted feelings of dissonance between their appreciation of the convenience and choice of city-based food worlds, and an awareness of something lost. We show how food practices built on these "traditional" knowledges and memories, often combining the old and new, can sometimes result in more sustainable or ethical practices and outcomes.

Conclusion

Chapter 8 reflects on the variegated urban foodscapes with sustainable, as well as unsustainable and dimensions, and asks how the culinary heritage of China and the habits of routine create a dynamic set of "ordinary ethics". Examining various values and understandings of "good food", consumption of food in practice is shown to be always laden with sustainable dimensions of all sorts, enabling us to think of the possibilities for more sustainable outcomes. In so doing, the conclusion offers approaches that go beyond the notion of individualized consumers embedded in various neo-liberal, market-led approaches, but also encoded in much of the literature that sets out to address a "values-action" gap in terms of "willingness to pay" a premium for sustainably sourced food. Instead, we show how evolution in food consumption in China is embedded in wider cultures, as an evolving "habitus" (Bourdieu, 1977) shaping practices. We thus unpack the varied values ahead of or behind the times of possibly fragmenting fields of practice as evidenced in the field materials.

Notes

1 https://www.gov.cn/zhengce/2019–05/20/content_5393212.htm (accessed 29/07/2024).
2 https://www.china-briefing.com/news/china-middle-class-growth-policy-and-consumption/ (accessed 29/7/2024).
3 In making this point, we do not mean to suggest that such a context is unique to China.
4 Outline of the 14th Five-Year Plan for National Economic and Social Development and the Long-Range Objectives through the Year 2035 for People's Republic of China_Rolling News_Chinese Government Network (www.gov.cn) (accessed 28/8/2024).
5 https://www.renub.com/china-organic-food-market-p.php (accessed 29/7/2024).

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2 Conceptualizing sustainable food consumption and the urban foodscape

Introduction

This chapter develops our conceptualization of sustainable food consumption across urban China and in Guangzhou. It does so in three parts, beginning first by acknowledging a large social science and humanities literature on consumption, which has developed significantly from the 1980s as the global economy has become increasingly consumption led. We use the literature to define consumption for our analysis, appreciating its political-economic, socio-cultural and spatial dimensions, and identifying how this scholarship has understood the consumption of food. This sets up the second part of the chapter conceptualizing sustainable food consumption more specifically, engaging in turn with the framing of sustainability in the food system, prevailing perspectives on sustainable consumer behaviour and choice, and theories of practice emphasizing the habitual dimensions of everyday life in which consumption and its environmental and social implications are embedded. The third part of the chapter then develops theorization of sustainable food consumption in cities. We engage with geographical perspectives on landscapes of consumption, and specifically the notion of the "urban foodscape" (Morgan, 2010; Morgan and Sonnino, 2010: 209), in order to connect the values and practices of sustainable food consumption with diverse spaces of food retail across the city and private spaces of the home. This enables us to develop a geographical perspective on sustainable food consumption that grasps how its practice, both routinized and sentient, is shaped by urban spaces of retail and domestic life.

The chapter conceptualizes sustainable food consumption in Guangzhou, and urban China more broadly, by broadening out from a western framing of responsibilized consumers compelled to act more sustainably through conscious purchasing choices on the one hand, and on the other the notion that sustainable consumption happens largely through subconscious routines embedded in urban infrastructure. Following Evans (2019), we present a perspective on sustainable food consumption that foregrounds routine practices of everyday life but that also appreciates cultural influence, distributed agency across the food system and urban spaces of food acquisition, appropriation, and appreciation and divestment, devaluation, and disposal.

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Conceptualizing consumption: contributions from across the social sciences and humanities

Defining and developing critical perspectives on consumption to be applied to our setting of Guangzhou in China, and for conceptualizing practices of sustainable food consumption and levers for progressive change, we build on a large consumption studies literature. There is a long history of scholarship on consumption created in and across the disciplines of Sociology, Media and Cultural Studies, Anthropology, Business and Management, Geography and History (Mansvelt, 2005, 2014; Miller, 1995; Warde, 2014). Consumption can generically be understood as "taking ownership, using up, wasting and destroying" (Evans, 2019: 513), but it has been theorized in a variety of ways through different disciplinary lenses. In the several decades since the 1980s, inquiry has gathered pace as the global economy has become increasingly consumer-influenced (Hudson, 2005). With the breakdown of Fordist mass production and consumption and the deregulation of global production and trade through processes of neo-liberalization, the materiality and cultural energies of markets have become ever more influential. As a part of this, systems of production and distribution, including those for food, have become more "buyer-driven" (Gereffi, 2018), influenced by consumers' desires, aspirations, and tastes as well as their needs and ethical concerns.

The growing influence of consumption carries implications for pathways of economic development, societal change, cultural identity and now, most pressingly, planetary health. While research on consumption in this context has been seen as a necessary corrective to previously "productionist" accounts of the economy (Miller et al., 1998), perspectives have been diverse. We engage with this diversity here as we build an approach appropriate to understanding actual and potential forms of sustainable food consumption in Guangzhou. We focus in the first section of this chapter on literature engaging with the following interrelated fields of inquiry: (i) the relationship of consumption to wider circuits of capital, including retail and supply chains; (ii) "dimensions" or "moments" of consumption (Evans, 2019: 506); (iii) consumption and its connections with cultural identity; and (iv) the agency of consumers. From our focused reviews of this literature, identifying how each set of perspectives relates to the food sector, we develop understandings of consumption to take forward into our own research in Guangzhou, before honing our perspectives in the second and third sections of the chapter, respectively, on sustainable consumption and its embeddedness in the foodscape.

Consumption's relationship to circuits of capital, retail, and supply chains

Political-economic scholarship, some of it rooted in Marxist perspectives, grasps consumption's structural role in circuits of capital. As Marx explains in *The Grundrisse*, "Consumption creates the motive for production; it also creates the object which is active in production as its determinant aim. . . . Without production no consumption; without consumption no production". Marxist perspectives see

commodity exchange mediating between production and consumption, with merchant capital including commercial capital (incorporating retail) being the fraction of capital enabling commodity circulation (Ducatel and Blomey, 1990).

Commodity chain, network and systems literatures apprehending the geographies of food production and distribution are extensive as meso-scale modes of theorizing production-consumption relations. Literature from these perspectives focusing on food has illuminated some key shifts and global trajectories incorporating consumption from the 1980s through to the early decades of the twenty-first century. These include global economic liberalization, export-oriented food production, increasing corporate influence including the rising power of agribusiness and corporate food retailers (Burch and Lawrence, 2007) and a broad turn towards the "private global regulation" of the food system (Friedmann, 1993: 52; Guthman, 2008). Related trends also include increased industrialization of agriculture and food processing and the increase in the global production of, and international trade in, high value agricultural goods such as high-quality fruits, vegetables, meats, and fish, with large volumes produced in regions of the global South for consumption in the global North and typically drawing on low wage labour (Watts, 1996; Watts and Goodman, 1997). Increasing South-South international trading networks for these goods have been observed through the early decades of the twenty-first century (see, e.g., Barrientos et al., 2016), reflecting a wider pattern of growing supranational regional supply chains. Globalization (and regionalization) of these sectors has relied on industrialized production and improved cold chain technologies addressing challenges of fresh food perishability and has played a role in increasing the availability of produce for consumers hitherto constrained by domestic seasonality.

A body of work also appreciating consumption's relationship to wider circuits and landscapes of capital concerns the retailer-consumer interface. Scholarship in Economic Anthropology and Sociology recognizes this relationship as a dimension of consumption involving product/service acquisition through commodity exchange – the "act of purchase" prior to "end use" (Carrier, 1990). Fine and Leopold's (1993) "systems of provision" approach has been flagged by Watts (1996) as pertinent to the food sector, given its emphasis on how the organic and biological dimensions of food's materiality shape the organization and governance of the production-consumption chain. Jackson et al. (1998), Lowe and Wrigley (2002) and Hudson (2005) take geographical perspectives by acknowledging the engagement of consumers with *landscapes* of retail at different spatial scales, including the theme park, the mall, the street, the market, the store, the home, and the body. Research into these spaces helps to embrace what Mansvelt (2005: 1) terms "the situatedness of consumption processes". On a global scale and with reference to the food sector, Humphrey (2007), Coe and Wrigley (2007), Reardon and Timmer (2014) and; Reardon et al. (2019) have all recognized the increasing influence of supermarkets internationally including in China (Han et al., 2022) and across Asia as part of "an integrated system" developed from the "five interlinked transformations" of urbanization, changing diets, agrifood system transitions, rural

market shifts and intensifying and more technologically driven food production (Reardon and Timmer, 2014: 108). Typically, supermarkets driving what Reardon et al. (2019) term "modern" supply chains involving commercial capital and agribusiness co-exist with food markets linked to more traditional supply chains and smaller-scale agricultural production. These observations inform our understandings of the urban foodscape in China, and specifically in Guangzhou elaborated later in this chapter and explored empirically in Chapter 6.

In her comprehensive texts on consumption, Mansvelt (2005, 2014) recognizes the importance of research appreciating the various ways in which consumption is positioned in these wider circuits of capital, supply chains and retailing formats. In cultural terms, a significant literature, including in Geography, has considered the changing knowledges consumers develop about the origins, production and distribution of the goods they consume in these changing contexts. Marxian perspectives have focused on the lack of knowledge consumers have about the social relations and locations of production resulting from the fetishization of the commodity (Hartwick, 1998; Marx, 1976), while post-structural perspectives have demonstrated the complex and surplus knowledges consumers can (re)create through their relations with materiality and aesthetics of production, distribution, marketing and retail (Crang, 1996; Cook and Crang, 1996). In terms of food consumption, this includes consumer knowledges of product origins, biographies and the everyday and aspirational settings in which foods are consumed (Cook and Crang, 1996). The cultural politics of these knowledges, including the influence of colonial legacies, have received critical attention in the social sciences and humanities literature on food consumption (see Slocum, 2011, for a review of this).

Beyond the act of purchase: dimensions and "moments" of consumption

Studies working specifically at the retailer-consumer interface engage mainly with the act of purchase and commodity acquisition at the point of sale. However, also important for our book is the broadening out of understandings of consumption to incorporate a wider set of dimensions of consumption practice (see Crewe, 2001). Evans (2019: 506) follows the work of Alan Warde in defining the key "moments" of consumption practice as acquisition, appropriation and appreciation, adding devaluation, divestment and disposal to capture waste, re-use and recycling. While acquisition is about the point of sale through which commodities are accessed, appropriation involves the processes through which consumers make goods meaningful to themselves and others, and appreciation is about how consumers culturally value commodities (Evans, 2019; Warde, 2005). To Warde's (2005) three As, Evans (2019: 307) adds the three Ds as additional (and opposite) aspects of consumption – devaluation, divestment (where "attachments [to goods can] be undone") and disposal.

To apprehend the multi-dimensional nature of food consumption, we concur with Evans (2019) that all six of these dimensions are important. Moreover, they take our understanding of consumption beyond the point of purchase and consumer choice exercised when shopping and into the broader sphere of everyday life.

For Warde (2005), this means recognizing consumption as embedded in a wide range of social practices, which in turn are shaped by infrastructures including but not limited to retail, production, and distribution systems (see also Barnett et al., 2011). As Mansvelt (2014: 379) succinctly puts it, "Consumption can be defined as a set of social relations, practices and discourses which centre on the sale, purchase and use and disposal of commodities". We pick up the embeddedness of consumption in social practice when we elaborate theories of practice and their application to sustainable food consumption below. And we work with these "moments" of consumption as part of our analytical structuring device for understanding sustainable food consumption in Guangzhou, refining towards the end of this chapter our understanding of how they are performed through the urban foodscape.

Consumption and cultural identity

On the embeddedness of consumption in everyday life and its relationship to cultural identity, there is a historical literature considering the increasing commodification and commercialization of social and cultural life. The work of the Frankfurt School led by Adorno and Horkheimer (1993/1948) famously captured the negative impacts of this, including through the culture industries. In the decades since, a rich and variegated literature has developed to grasp all kinds of ways in which the consumption of goods and services shape, and are shaped by, cultural values, norms and identities (Mansvelt, 2005). This literature burgeoned through what was seen as a "cultural turn" in the social sciences more broadly and consumption studies more specifically, particularly through the 1980s to the early 2000s. In research on consumption, attention to its cultural dynamics has incorporated accounts of conspicuous consumption through spectacular sites of retail such as theme parks and shopping malls (Lane and Mansvelt, 2020), and increasingly sophisticated advertising campaigns (Jackson and Taylor, 1996; McFall, 2004; Po, 2006; Williams, 1993). It also developed anthropological and sociological accounts of the relationships between people and goods, inspired by the works of anthropologists Appadurai (1986) and Kopytoff (1986) and Miller's (1998a, 1998b) programmes of work on material cultural. Moreover, it embraced the agency of consumers with emphasis on both their creative capacities and the moral conundrums they face regarding care for both distant and proximate others when they purchase goods and services and incorporate them into their everyday lives (Miller, 2001).

Bell and Valentine (1997) delineated two main ways in which consumption connects to identity: "consuming according to who we are" and "consuming to become". The first concerns ways in which existing positionalities of consumers in terms of class, gender, race, sexuality and age (and the intersections between them) shape consumption choices, patterns and practices. Driven by social theories of practice elaborated below, the pivotal work of Bourdieu (1984), for example, demonstrates how social class and cultural capital shape consumption tastes. Miller (1991), Mort (1996) and McRobbie (2011) spearheaded scholarship on gendered identities and consumption. And Slocum (2011) captures a wide range of work embracing how race is connected to food, appreciating the social construction of

race and racialized identities both shaping and shaped by food consumption and production. Daya (2023) presents a particular example of this work, showing how racial identities inform and are (re)produced through the consumption of meat in urban South Africa, incorporating food memories and people's biographies and everyday lives. The second of Bell and Valentine's (1997) dimensions – consuming to become – concerns the more aspirational energies of consumption emblematic of lifestyle consumption, where purchases and the incorporation of goods and services into everyday life reflect desires and alignment with values, materiality and aesthetics of who consumers seek to be. Literature over the past decade observes the increase in aspirational consumption on the part of growing middle classes across the globe and increased spending power, including in emerging economies (see, e.g., Southall, 2016, in the context of South Africa), and the influence of social media in this respect is increasingly significant.

Focusing on the cultural identities and practices of consumers in the context of an increasingly service-led economy and society, literature recognizes the ways in which the breakdown of mass production and consumption, coupled with globalization, has led to greater consumer choice and more individualized rather than collective forms of consumption (Lash and Urry, 1994; Mansvelt, 2005). Regarding consumption's connections to cultural identity formation in a globalizing world, against the backdrop of perspectives suggesting an increasingly homogenized global landscape of consumption, geographical and anthropological scholarship has embraced the complex ways in which foods and their cultural associations morph between different places. Notions of displacement (Crang, 1996), hybridity (Howes, 1996), commodity journeys (Jackson, 1999) and "connective aesthetics" (Cook, 2000: 341; Cook et al., 2004, 2017) have been mobilized to grasp these "cross-cultural" identities and connections (Howes, 1996). Recent examples are afforded by Choo et al.'s (2023) study of global influences, including specifically Korean cultural identities, on consumption in Vietnam, foregrounding a non-western setting and south-south relations and engaging with aspirational dimensions of consumption choice and practice.

Regarding aspirational forms of consumption and the creation of cultural identity, as Hudson (2005) points out, only a minority of the world's population has the wealth to engage in such "stylized" consumption. And commentators, including Sayer (1997), from the beginning of the cultural turn argued that work embracing shifts towards more individualized forms of consumption can risk shifting attention away from more structural and collective societal and political concerns. We return to that concern later in the chapter, as it pertains to recent debates about fostering more sustainable forms of consumption, not least in the context of the crisis of climate change. Indeed, recent work in the context of crisis returns to consideration of consumption in ways that directly engage with social structures and collectives (see, e.g., Trubner et al., 2022).

To move towards an understanding of actual and potential change regarding consumption against this backdrop of changing political-economic and cultural landscapes of consumption, we now consider how theoretical works have understood the agency of consumers, including the cultural perspectives we have introduced here, but also notions of individual choice and behaviour change and theories of practice.

The agency of consumers: from notions of individualized behaviour to theories of practice

Debates about the agency of consumers animate much of consumption research, with Marxian accounts tending to view consumers as "dupes" choreographed by the logics of capital and commercial imperatives and rendered ignorant about the social relations of production through commodity fetishism, while branches of economics take a competing view of consumer sovereignty driving the economy. Much of the work in the social sciences and humanities, however, explores more nuanced forms of structure-agency relationships at play when it comes to consumption, with early scholarship influenced by Bourdieu's (1984) perspective on class-based dispositions shaping consumer practice and Giddens's (1991) notion of increasing reflexivity on the part of consuming subjects shaping the individualization of consumption choices in post-Fordist economies. Anthropological and geographical work in the 1990s, some of it influenced by these social theorists, championed understandings of consumers as knowledgeable subjects rather than as passive dupes of marketing and advertising (Jackson and Holbrook, 1995; Miller, 1998b; Miller et al., 1998). These understandings have continued to inform scholarship (Mansvelt, 2014).

Alongside the literature across Cultural Studies, Anthropology, Sociology and Human Geography engaging in research discussed earlier on the relationships between consumption and cultural identity, an increasingly dominant set of perspectives on consumer agency has developed from the business management literature, particularly focused on marketing. Business marketing and psychological notions of consumer behaviour and its relationship to values, intentions and actions hold sway in much contemporary research on consumption, including on sustainable consumption (see Vermeir and Verbeke, 2006), with behavioural economics' insights into "nudge" touted as a mechanism for achieving positive environmental change as well as influencing aspirations designed to sell goods and maximise profit (Lehner et al., 2016). This prevailing perspective can be seen as part and parcel of, particularly western, assumptions about how society operates through individualized behaviour and behaviour change in neo-liberal, market-dominated and weakly regulated settings (Guthman, 2008; Hinchliffe, 2022). With the resurgence of state regulation and more structural accounts of crisis and response gaining traction, this view is being challenged in some critical and political quarters but still holds sway in the vast contemporary literature on consumption and in policy spheres. The survey-based part of our research methodology captures consumer values articulated using the language of behaviour and intention, as Chapter 4 explains. We argue that this framing is still significant in parts of the Chinese food system and consumption space. But it is supplemented by other qualitative methods capturing consumer values and practices in more diverse and socially embedded ways so as to avoid an overly narrow frame of reference and economically driven notion of action.

Consumption research inspired by the "cultural turn" in the social sciences and hegemonic accounts of consumer agency resting on notions of individual behaviour change and choice are arguably both underpinned by a neo-liberalizing and

increasingly consumer-influenced economy, the former body of work embracing cultural aspects of consumption with a critical edge and the latter tending to travel with, and sometimes reinforce, the neo-liberal energies of consumption. Against this backdrop, an alternative conceptualization of consumer agency has developed through the application of theories of practice. The sociologist, Alan Warde, not only has produced a rich body of empirical research on food consumption, which has largely taken a practice-based approach, but also has presented overviews of theories of practice and their specific application to consumption studies. Warde (2005, 2014) acknowledges the diversity of theories of practice applied to the study of consumption, but before illuminating that diversity and explaining what it offers our work on food consumption, we first define practices more generically and consumption practice specifically.

Warde (2005: 134) suggests that practices involve "both doings and sayings" and he turns to Reckwitz (2002: 249) in specifying what is meant by a practice:

> A "practice" (Practik) is a routinized type of behaviour which consists of several elements, interconnected to one another, forms of bodily activities, forms of mental activities, "things" and their use, background knowledge in the form of understanding, know-how, states of motivation and motivational knowledge.

Warde (2005) explains that practices are understood as being inherently social and are collective in nature. They are thus performed in a way that can be recognized at a communal level beyond individuals and individualized behaviour. Theories of practice have evolved over recent decades, and we explain their specific application to studies of sustainable consumption in the next section of this chapter. In terms of their antecedents, it is important to acknowledge their roots in structuration theories such as those developed by Giddens (1981) and Bourdieu (1977, 1984), among others. That work, addressing structure-agency relations, recognized the duality of structure in terms of its ability both to develop agency and to act as a medium for this development. For Giddens (1981), the mediating influence is a combination of systems and institutions, with systems being rules, and institutions being the building blocks of those rules. Bourdieu (1977) saw habitus as the mediating field, which comprises systems of what he termed "dispositions" that in turn produce tendencies and inclinations. Bourdieu's (1984) pivotal work on *Distinction*, referred to earlier, focused on class-based dispositions forming discernible forms of cultural taste in consumption, including those involving food, and this work has been influential despite being subject to sustained critique (Warde, 2014).

Offering a correction to notions of consumer sovereignty and individualism emblematic of marketing-focused perspectives, theories of practice emerging since these earlier works thus emphasize the influence of context through structures and mediating forces shaping collective norms. As Warde (2014: 286) highlights:

> Against the model of the sovereign consumer, practice theories emphasize routine over actions, flow and sequence over discrete acts, dispositions over

> decisions, and practical consciousness over deliberation. In reaction to the cultural turn, emphasis is placed upon doing over thinking, the material over the symbolic, and embodied practical competence over expressive virtuosity.

Theories of practice therefore pay much more attention than both notions of consumer sovereignty and meanings-based cultural analysis to the embodiment of consumption and to the role of materials and infrastructure. They emphasize practical consciousness and the habitual. In terms of explicating what theories of practice lend to the theorization of consumption and consumer agency, Warde (2005: 137) explains that "consumption is not itself a practice, but is, rather, a moment in almost every practice". Consumption is thus seen as being embedded in practices of everyday life, much of which are collective and routine, including travel, cleaning, and washing, as well as shopping. This counters overly celebratory accounts of consumption and what he and other practice theorists see as an overemphasis on the symbolic character and cultural meaning of consumption through perspectives shaped by the cultural turn. Warde (2014: 282) argues that through the cultural turn, "consumption came to be seen as a means by which individuals and groups expressed their identities through symbolic representation in taste and lifestyle".

Theories of practice over some 15 years have been applied to the consumption of food and practices of food purchase, cooking and eating, as well as discard and disposal. As Warde (2014: 288) suggests:

> Eating is a propitious area for investigation [through practice-based approaches] because it can incontrovertibly be characterized in terms of the material, the corporeal and the mundane, and by repetition, routine and convention.

Work in this vein includes research by Southerton (2013) on the relationship between consumption and reproduction of everyday practices. Ethnographic work by Meah and Jackson (2013, 2017) in the United Kingdom and by Chen and Liu (2022), Liu (2021) and Liu et al. (2015, 2019) in China are other examples of work advancing a practice-based perspective, specifically looking at food consumption to interrogate the ways in which consumer choice is exercised through multiple, sometimes contradictory, considerations of convenience, quality, provenance, care, aspirations and cost embedded in much wider practices of everyday life. Research embracing the embodied and visceral nature of consumption, emphasizing its corporeality (Valentine, 1999), is thus complementary to practice-based notions of consumption. For example, work by Longhurst et al. (2009: 333) with migrant communities in New Zealand and their connections made with "home" via food preparation and eating practices foregrounds the "visceral experiences of food – the tastes, textures, and aromas" of food (Longhurst et al., 2009: 333; see also Hayes-Conroy and Hayes-Conroy, 2010), performed through the materiality of domestic spaces.

Despite their considerable critical traction, however, there have been critiques of theories of practice and their application to research on consumption (see, e.g.,

Evans, 2019). Concern is expressed about the pendulum swinging too far towards emphasizing routinized practice at the expense of agency and intention oriented towards flux and rupture. Also, critique has suggested that while practice-based perspectives on consumption have acknowledged its embeddedness in infrastructure, they have become more distanced from supply chain dynamics shaping the provision of goods and services to consumers. Warde (2014) has thus suggested the importance of more explicitly reconnecting theories of the field of consumption with political-economic theories of production and distribution. He points to Fine and Leopold's (1993) "systems of provision" approach, introduced earlier, as a means for reconnecting understandings of production and consumption, not least because that perspective pays more attention to consumption than its counterparts. As Leslie and Reimer (1999: 11) argued, the systems of provision approach offers a "more balanced treatment of the relationship between production and consumption" and "recognises the importance of the cultural meanings attached to commodities and appreciates that the producer-consumer dynamics can be different for contrasting industries" (Hughes, 2000: 177). Warde (2014: 297), concurring with the views of Smart (2011), therefore, advocates for "some recovery of political economy and re-articulation of the link between consumption and economic production". This is a view we take forward when we consider the influence of wider urban foodscapes and the systems provisioning them on practices of sustainable food consumption.

In work applying theories of practice to food consumption, there has been significant attention paid to the roles of infrastructure, equipment and bodies. That includes the spaces and equipment of kitchens in the home, and their roles in constructing cooking and eating routines as well as memories shaped by food and its material preparation (Meah and Jackson, 2016). This resonates with work in human geography considering spaces of food consumption, including the home (Bell and Valentine, 1997). Some of this work captures the more fragmented ways in which household food consumption changed, particularly in western settings through the 1980s but also more globally (Liu et al., 2015), including challenges to the organization of family mealtimes, the rise of the food service sector and convenience foods and increasing consumption of food "on the go" (Bell and Valentine, 1997).

We explain later in the chapter how theories of practice have been applied to the sustainable consumption of food, more specifically, led by the work of Elizabeth Shove (see, e.g., Shove et al., 2012). We find this work compelling in terms of what it offers to our understanding of how food consumption, including sustainable practices, is embedded in spaces shaped by modes of regulation, commerce, retailing and routines of everyday life. We appreciate the focus of practice-based perspectives on performance, materiality and collective sets of behaviours. Influenced by the work of Giddens (1984), Warde (2014) discusses how commerce and government shape the systems, rules and institutions that influence daily life and consumption as moments within it. That is a notion we take forward into our approach embracing the role of the urban foodscape and the supply chains feeding into it.

Conceptualizing sustainable food consumption: systems, values and practices

We move on now to consider perspectives on *sustainable* consumption more specifically, covering the following three themes in turn: notions of sustainable supply chains focusing on the food systems into which sustainable consumption fits; discourses of sustainable consumption focused on the attitudes and behaviours of consumers and their mobilization; and practice-based understandings of sustainable consumption. From these three different conceptual threads, we then flag what some authors, particularly Evans (2019: 501), have identified as "blind spots" in the literature and seek to address those by building our conceptualization of sustainable consumption in urban foodscapes of China.

Sustainable food systems

Sustainability is a comprehensive concept encompassing various complex elements. According to discourse promoted by international organizations including the United Nations (UN), sustainability is composed of three balanced pillars: economic efficiency, social equity and environmental justice (Béné et al., 2019). In terms of food systems, economically, it aims to protect the livelihoods of producers and promote rural economic development. Socially, it concentrates on labour and consumer rights, the preservation of local food cultures and ensuring access to adequate and nutritious food for all segments of society. Environmentally, it requires that food production, distribution and consumption activities do not pollute the environment, deplete natural resources, harm ecological diversity or compromise animal welfare. These three pillars have been advocated by international organizations, led by the UN, as a guiding framework for the sustainable development of the global food system (Béné et al., 2019).

UN Sustainable Development Goal 12 has brought the sphere of consumption explicitly into the global policy realm of sustainability, focused on "ensuring sustainable consumption and production patterns, which is key to sustain the livelihoods of current and future generations".[1] While these Sustainable Development Goals were created in 2012 at the UN Conference on Sustainable Development in Rio de Janeiro, Evans (2019) explains that it was the 1992 Rio Earth Summit that marked the time when *sustainable consumption* as a specific policy field was significantly flagged. Regarding work on sustainable food consumption in particular, state and third sector organizations are seen to guide consumers towards considerations of organic food, animal welfare, environmental protection and other issues in their daily lives, with a view to achieving symbiotic and sustainable relationships between people and the environment. Relevant social actions include the food sovereignty movement, which criticises the power of food companies, the local food movement, which aims to reconnect consumers with producers, and the food justice movement, which focuses on the rights of producers and communities (Agyeman and McEntee, 2014; Hammelman et al., 2020; Hopma and Woods, 2014).

Mobilizing sustainable food consumption: shaping values, behaviours and choices

A part of the literature and policy-orientated work on sustainable food consumption looks at how it is driven, encouraged and shaped by state, commercial and third sector organizations and subsequently enacted through changing consumer attitudes, behaviours and choices (Shove, 2010). As some of the authors of this book have explained in previous work on ethical consumption, this involves

> a wide range of movements, initiatives and practices through which values, morals, principles and ideals concerning social and environmental responsibility shape consumers' decisions about the purchase of goods and services, as well as their use and recycling.
>
> (Crang and Hughes, 2015: 131)

Work in this vein rests on the assumption that it is by identifying values of sustainable consumption and encouraging consumers to change their behaviour through choices aligning with these values that more socially, economically and environmentally sustainable consumption patterns can be achieved. Here we highlight two key versions of this scholarship: first, the broad marketing literature looking at sustainable consumer behaviour and its drivers, and second, a critical geographical take on mobilizing the ethical consumer that takes a Foucauldian perspective on consumer problematization embedded in practices of everyday life. That second approach begins to bleed into the next of our perspectives: theories of sustainable consumption practice.

We have already introduced the prevailing perspectives of consumer behaviour characteristic of business and marketing approaches to consumption more broadly. These travel into policy work and scholarship on the specifics of *sustainable* consumption, including in the food sector. An area of focus for a lot of this work has been identifying the gap between consumer attitudes, which often indicate support for sustainable consumption, and behaviour that does not always align with that support. As Vermeir and Verbeke (2006: 169) have explained, "Although public interest in sustainability increases and consumer attitudes are mainly positive, behavioural patterns are not univocally consistent with attitudes". We explain the response of practice-based approaches to this issue in the following sub-section. First, we briefly illustrate some work embracing and seeking to understand the attitudes held by consumers according to marketing-based framings. The values-beliefs-norms (VBN) theory of environmental concern and behaviour is one example, emphasizing the link between values that consumers hold and decisions they make about the environment (Stern et al., 1999). VBN theory, which we take forward into our survey and its findings discussed in Chapter 5, proposes three fundamental determinants of environmental concern in people: biospheric altruism, humanistic altruism and self-interest (Dietz et al., 2005). Studies of nature values among Chinese adolescents in this vein for instance pick out tensions between the range of environmentally and self-oriented values, from feelings of oneness with nature, affective care for nature through to more self-actualizing values around it offering positive experiences and

then cognitive scientific environmentalism in that order of prominence (Hua et al., 2025). The work of Panzone et al. (2016) reveals the significance of education to consumers' attitudes to environmentally responsible consumption. And with significance for our research focus, Geng et al. (2017) find the same when researching young people's consumption behaviours in China's eastern cities. Regarding socially responsible consumption, a complementary field of literature looks at values concerning care for the livelihoods of people producing and distributing goods. Our consumer survey, as Chapter 4 explains, explores how these values resonate (or not) with consumers across Beijing, Shanghai and Guangzhou.

We now turn to critical approaches, including Foucauldian perspectives spearheaded by geographers Barnett et al. (2011) and more broadly developed across the social sciences, on consumers' ethical problematization of their purchasing decisions embedded in everyday life. In advanced capitalist economies of the West, a shift has been observed whereby significant responsibility for the social and environmental implications of production and trade has been passed to consumers. Shamir (2008: 1) explains that neo-liberalization involves "an economization of the political", where the market increasingly shapes social concerns. In this context, Shamir (2008: 7) argues, "Governance – as a modality of power – relies on predisposing social actors to assume responsibility for their actions", with responsibility covering fields previously and still to some extent regulated by the state. "Responsibilized" actors include private companies, as well as consumers, with growth in the fields of Corporate Social Responsibility (CSR) and Corporate Sustainability reflecting that. This suggests that increasing consumer choice in a globalized and weakly regulated economy incorporates not only aspirational desires and everyday imperatives but also ethical considerations about social and environmental dimensions of production and distribution. These considerations include producer livelihoods, working conditions and animal welfare, as well as environmental impacts such as carbon footprints, pollution and land degradation. As Shamir (2008: 10) explains, "Politics mediated through market-based mechanisms . . . are based on the mobilization of consumers".

A large body of work has explored case studies of ethical consumption concerning both social and environmental issues (Littler, 2008; Micheletti, 2003). Regarding food consumption, research has investigated the consumption of particular kinds of ethically labelled goods, including Fairtrade (a globally recognized certification system focused on cutting out exploitative intermediaries in supply, empowering producer communities and improving their livelihoods) (Clarke et al., 2007b; Lyon et al., 2014; Raynolds, 2000, 2002), organics (Clarke et al., 2008; Lockie et al., 2002; Raynolds, 2000, 2004), animal welfare (Miele and Evans, 2010) and other product sustainability schemes (Brach et al., 2018). For much of the literature on Fairtrade and ethical consumption focusing on consumer choice exercised at the point of sale, the consumer tends to be viewed as a responsibilized individual whose purchase choices of ethically labelled products can be influenced by marketing and advocacy campaigns. The emphasis here is on consumers as individualized agents of change, who can practise politics in neo-liberalizing settings through their purchasing choices (Bryant and Goodman, 2004; Carrigan et al., 2023; Clarke et al., 2007b; Goodman, 2004; Newholm et al., 2015).

Barnett et al.'s (2011: 85) ground-breaking and careful conceptualization of ethical consumption succeeds in embracing the processes through which consumers are "mobilized" to consume more responsibly, while crucially also recognizing that their purchases and uses of goods and services are deeply embedded in the ordinary practices of everyday life and are thus framed by a much wider set of social and cultural considerations. In food consumption research, this aligns with Meah and Jackson's (2013, 2017) attention to the multiple questions of care, quality, convenience, provenance and cost that shape food shopping, cooking and mealtimes.

Barnett et al. (2011) pay particular attention to the work of mobilizing people to consume ethically that is performed by mediating actors in supply chains, including retailers and brands operating in the ethical markets mentioned earlier, incorporating certified Fairtrade and organics products, and advocacy organizations. They highlight a "double resonance" of ethical mobilization (Barnett et al., 2011: 85) whereby these mediating organizations not only encourage ethical forms of consumption (in terms of the purchase of goods with social and environmental credentials) but also render such ethical consumption patterns, practices and subjects visible to commercial and state organizations in a bid to develop and grow ethical markets and lobby for higher labour and environmental standards in mainstream trade and production. These intermediaries can include civil society organizations including non-governmental organizations and other advocacy groups, traditional media organizations (e.g. journalists and magazines such as the *Ethical Consumer* magazine in the United Kingdom), and celebrities (Clarke et al., 2007a; Goodman, 2010; Goodman et al., 2017) and have been joined increasingly since Barnett et al.'s (2011) work by social media in an era of big data and digitization (Sharma et al., 2023; Simeone and Scarpato, 2020).

An important intervention in debates about the mobilization of the ethical consumer, and fundamental to our research on sustainable consumption in China, is the observation that framings of consumer mobilization have been mainly applicable to the Global North and spaces of advanced capitalism and deregulation. These framings mainly see ethical consumption involving the purchase and use of ethically certified goods marked by environmental and social standards, associated with models of ethical consumption constructed in the Global North (Aritzia et al., 2016), rather than "ordinary consumption with ethical effects" (Gregson and Ferdous, 2015: 244). While ethical consumption associated with product certification schemes such as Fairtrade and organics has been increasingly "mobilized" in so-called emerging and rising power economies and spaces of the Global South in the context of the growing middle classes and their increased spending power (Doherty et al., 2015; Dombos, 2008; Guarin and Knorringa, 2014; Hughes et al., 2015), various authors have critiqued research that looks *only* for this northern form of ethical consumption (Afonso et al., 2024). Rather, along with Gregson and Ferdous (2015), critical scholarship also identifies forms of routine consumption that embrace dimensions of morality and responsibility in ways that are not necessarily labelled and marketed as "ethical" or "sustainable" but that can have ethical and sustainable dimensions and outcomes (McEwan et al., 2015). Smith et al. (2015: 227) in their work on Polish and Czech cases of household food self-provisioning

have termed this "quiet sustainability", and it has also been observed in some northern settings particularly driven by austerity (Evans, 2012; Hall, 2011, 2015).

Barnett et al.'s (2011) view of ethical mobilization, no matter which spatial settings it is applied to, departs from marketing-based notions of behaviour change focused on the point of purchase and the ability of consumers to make rational choices in the light of marketed knowledge. Rather, they see ethical mobilization working through what they term a "problematization" process on the part of consumers and citizens and a wider realm of social practices involving domestic life, kinship and social networks, work-life rhythms and more. As consumption is seen as "a dispersed activity distributed across so many integrated practices" (Barnett et al., 2011: 69), then any attempts to engender ethical consumption must be worked through these integrated practices that stretch way beyond the point of purchase and into the complexity of everyday life. In this vein, then, Barnett et al. (2011: 72) argue that "analytical attention should shift from a focus on 'moments of acquisition to routines of use', and away from 'consumers' to 'practitioners'". Thus, mediating actors seeking to create public discourses of ethical and sustainable consumption to be acted on by responsibilized individuals, as observed in western economies, must find "ways of making various political *issues* – trade justice, human rights, climate change – both relevant to people's *ordinary* concerns and actionable in their *everyday* routines" (Barnett et al., 2011: 73, emphasis added).

Barnett et al.'s (2011) critical embrace of consumers' moral agency but through the domain of social practice and everyday life brings us to pick up again on what theories of practice, explicated earlier, offer inquiry into consumption, more particularly thinking now about what they lend to the field of *sustainable* food consumption.

Perspectives of sustainable consumption practice

Theories of practice have had a huge influence on both policy endeavours and social science scholarship concerning sustainable consumption. The work of Alan Warde, introduced earlier, has been at the leading edge of sociological work in this area regarding food, along with the academic innovation and policy influence of Elizabeth Shove. Shove (2010) famously critiqued what she termed the "ABC" approach to sustainable consumption focused on Attitudes, Behaviours, and Choices, emblematic of the business and management framings outlined earlier, proposing an alternative vision of sustainable consumption concerning resource use embedded in technologies, infrastructures and ordinary practices of everyday life. A slew of policy-focused social research ensued, termed by Evans (2019: 499) as "applied environmental social sciences", and this has incorporated a wealth of projects on resource, including energy and water, use (see, e.g., Bulkeley et al., 2016; Judson et al., 2015; Powells et al., 2014; Scott and Powells, 2020a, 2020b; Shove and Walker, 2014). Some of the conceptual writings driving that work explicitly pitched it against cultural scholarship on consumption, which, it was argued, failed to consider the environmental impacts of consumption's energies (Shove and Warde, 2002). It also moved attention away from spaces of more

spectacular and conspicuous consumption to engage with ordinariness and routine (Gronow and Warde, 2001; see also work in Geography by Hall (2011)).

Despite the considerable achievements of environmental social science research on sustainable consumption, Evans (2019) points to its shortcomings especially an overfocus on resources like water and energy. Considering a wider array of goods beyond such resources, Evans (2019: 507–508) argues that:

> commodities are every bit as environmentally significant as resources – not least because of the impacts embedded in their production and distribution . . . [T]heoretical approaches to commodification and the social life of things (cf. Appadurai, 1986) shed new light on questions of sustainability and consumption.

Evans (2019: 510) thus proposes a re-engagement with insights from sociologies of consumption focused on cultural identity, "the cultural logic of capital accumulation", moral judgments and consumption's role in producing social inequalities. These sociologies, he argues, can offer important insights into sustainable consumption. He argues that the wide literature on sociologies of consumption referred to in the first section of this chapter

> draws attention to the distribution of responsibilities for enacting change . . . Where the extant sociological literature on sustainable consumption carries a strong critique of political tendencies to responsibilize "the consumer" and govern through behaviour change (cf. Evans et al., 2017), [sociologies of consumption] suggest that critique should be focused more squarely and systematically on the role of commercial actors and cultural intermediaries.
>
> (Evans, 2019: 514)

This resonates with both Warde's (2014) plea to reconnect practice-based approaches to systems of provision and supply chains and Barnett et al.'s (2011) important insights into the roles of intermediaries in shaping ethical (and sustainable) consumption. We respond to these imperatives in the next section of the chapter, explicitly advancing these versions of practice-based understandings of sustainable consumption and cultural influences by considering how they work through the urban foodscape.

Spaces of sustainable food consumption: understanding urban foodscapes in China

In the final section of this chapter, we continue foregrounding a practice-based conceptualization of sustainable food consumption but focus more sharply on how practices are performed through urban locations to develop an explicitly spatialized understanding. In an urban context, we work with the notion that agency regarding sustainable consumption is distributed in practice (Agyeman and McEntee, 2014; Barnett et al., 2011) and involves institutions as well as infrastructure, materiality and

cultural preferences and histories. This helps us to understand the actual and potential levers for progressive change when it comes to developing more sustainable forms of consumption, in our case specifically across urban China and in Guangzhou. We are inspired by Sahakian and Wilhite's (2014: 25) practice-based "view of agency distributed across people, things and social context". And in the case of our research, the aspects of context we explore pertain to the urban foodscape.

The urban foodscape for us includes not only landscapes of retail but also spaces of domestic consumption, including private spaces of the home and, of course, the spaces between them. It also takes in the supply chains provisioning landscapes of retail. So, turning attention specifically to the urban foodscape, in this final section, we first cover definitions of the urban foodscape and contributions of the social science literature in this area. We also revisit understandings of particular moments and dimensions of consumption (Evans, 2019; Warde, 2005) and how they play out through the urban foodscape, before moving on more specifically to consider how *sustainable* food consumption both shapes, and is shaped by, the urban foodscape.

The urban foodscape

There have been various definitions of "foodscape" in the literature and an acknowledgement of the concept's origins in the discipline of Human Geography. The value of the foodscape lens comes from its focus on the spatiality of retail and consumption, which has been foregrounded in geographical writing (Goodman et al., 2010; Hudson, 2005; Lane and Mansvelt, 2020; Mansvelt, 2014). In the case of our research, that spatiality takes its form in, through and beyond the city. Furthermore, Kneafsey et al. (2021) explain how the foodscape concept can incorporate not only spatial aspects of food retail landscapes but also the relational geographies bound up in connections between food production, retail and consumption. We thus consider in our analysis the supply chains provisioning the food environments we study, including product offerings in particular retail outlets and their origins and credentials. This responds to Warde's (2014) plea to reconnect understandings of consumption practice with systems of provision, not least when assessing the environmental and social impacts of consumption.

Regarding landscapes of retail and consumption in the food sector, Winson (2004: 301) uses the term "foodscape" to refer to "the multiplicity of sites where food is displayed for purchase, and where it may also be consumed". These sites, he explains, include supermarket chains, restaurants, markets including farmers' markets, cafes, street vendors and more. This connects to work in the "new retail geography" associated with the work of Lowe and Wrigley (2002) considering different *sites* of retail and consumption from the theme park to the mall, the street, the shopping centre and the department store, as well as the food-specific retail formats identified by Winson (2004). MacKendrick (2014: 16) uses the term "urban food environments" to capture the landscape of this array of formats, and he explains how the notion of foodscape mobilized in urban studies and cognate fields takes in aspects of retail and consumption pertaining to food acquisition, availability and access presenting through these environments (see also Clary et al., 2017).

Vonthron et al.'s (2020) scoping literature review on foodscapes is helpful in identifying key themes. The first of these is the spatial diversity of foodscapes, reflecting what MacKendrick (2014: 17) recognizes as "the heterogeneity of foodscapes" and which can be linked to Reardon et al.'s (2019) observation that modern, transitional and traditional retailing formats co-exist in most places. The second refers to the relationship of foodscapes to the shaping of diets of urban communities, illustrated by Winson's (2004) work interrogating how problems of obesity are in part shaped by landscapes of retail affecting availability of certain foods and product offerings to communities (see also Clary et al., 2017). It also incorporates research on the health effects of "food deserts" referring to spaces of low and restricted availability of healthy foods (see, e.g., Wrigley, 2002). In low-income countries and regions, this can cause or aggravate food insecurity and the "double burden of malnutrition" (Popkin, 2014). Jackson (2023) also has recently considered questions of health connected to foodscapes and the food system. A third theme concerns the relationship of the foodscape to issues of food justice, incorporating debates such as those spearheaded by Agyeman and McEntee (2014: 219) about the shaping of foodscapes by processes of capital accumulation involving the rise in power of agribusiness and corporate retail capital, which require "radical critiques" to grasp and radical political action to redress. This dovetails with Fuchs et al.'s (2016) plea to consider the power asymmetries creating forms of sustainable consumption. There is a connection here to a fourth theme emerging from Vonthron et al.'s (2020) literature review on the relationship of the foodscape to inequalities in food access that can be experienced by urban communities in different locations and marked by contrasting socio-economic backgrounds. A fifth theme identified by Vonthron et al. (2020) and associated with this concerns the influence of aspects of socio-cultural identity, including class, race and gender on retail landscapes and food access. As MacKendrick (2014: 17) reflects, "Foodscapes are . . . classed and racialized environments", and recent commentary engages with decolonial approaches to understanding the colonial construction of landscapes of consumption and the frames of reference used to understand them (Jackson and Watson, 2023).

Complementing most of the literature prioritizing commercial aspects of foodscapes, Vonthron et al. (2020) also identify work on the public sector's contribution, showing the role of schools, hospitals and universities, for example, in spaces of food service and provisioning. Other themes concern the "alternative" dimensions of foodscapes to mainstream supermarkets, stores and traditional markets, which are made up of retail spaces such as farmers' markets that in part set themselves up in opposition to more conventional commercial retailing, and this is a particular area we investigate in Guangzhou with respect to sustainable forms of food consumption (see Chapter 6). Then, an area also resonating with our research is a body of literature considering spaces of the home as a crucial part of foodscapes incorporating both cultural dynamics and histories of households and their materiality (see Meah and Jackson's, 2013, 2016, research referenced earlier). Another theme the authors pull out in their scoping review concerns the association sometimes present between foodscapes and place-based marketing, particularly incorporating and sometimes recreating images and narratives of place-based food heritage.

And finally, another more political-economic subject addressed in the literature reviewed by Vonthron et al. (2020) concerns questions of how policy, including urban policy, shapes foodscapes (see, e.g., Morley and Morgan, 2021).

In addition to these themes, Vonthron et al. (2020) also identify sections of literature marked by different framings of how consumers interact with the foodscape, with one body of work theorizing these interactions in terms of consumer behaviour and another conceptualizing them as performed practices, reflecting the wider literature we have already highlighted on consumption and agency. We recognize this distinction in our work too but work with both framings in what we aim to be complementary ways. The first captures values of sustainability recognized by institutions and consumers, and the second interrogates more deeply the "doings" (Warde, 2005: 134) of people consuming as part of their daily routines.

Part of the work on the urban foodscape involves a mapping of food environments and the locations of food retail outlets affecting food access and availability for communities. Beyond, or complementary to, that mapping is then an approach we take, which is understanding how consumption is practised through the foodscape. To refine our spatialized conceptualization of consumption practice, we now revisit the "moments" of consumption identified by Warde (2005) and Evans (2019: 506) – the three As of acquisition, appropriation, and appreciation, and the three Ds of devaluation, divestment, and disposal. What we develop through our research presented in Chapters 6 and 7 is how these moments take shape and are shaped by the urban foodscape. Considering acquisition, first, we are concerned with how practices of food choice and purchase are performed through landscapes of retail (and their connections with wider food systems) in Guangzhou. This incorporates consumers' browsing and purchasing through some of the growing supermarket chains in the city, with their increasingly modernized and sophisticated digitized systems and various corporate and western influences on food product ranges and labelling, as well as the continued patronage, particularly by older demographic groups, of the traditional wet markets that remain prominent spaces of the city. Embracing some of the more conscious aspects of consumption, we acknowledge how moments of acquisition are embodied and involve the senses, as consumers make judgments and choices about food based on notions of freshness and quality as well as price (Zhong et al., 2020). We embrace how everyday decision-making on the part of consumers about which foods to purchase works very much through the spaces (modernized, traditional, virtual) through which food is sold. The appropriation of foods, which, as Carrier (1990) puts it, involves the work of converting food commodities into personalized and meaningful goods, begins with the performance of shopping trips and routines and continues through food preparation and cooking in embodied ways as well as involving cultural questions of taste and care for household members through considerations of ingredients, meals, nutrition and well-being (Meah and Jackson, 2017; Miller, 2001).

As these different moments interconnect, moments of acquisition and appropriation bleed into the moment of consumption concerned with appreciation – the enjoyment of food that is at once also cognitive, emotional and embodied, shaped by tastes and desires. And here again we concur with Evans (2019) regarding the

value of insights provided by sociologies of consumption, as identities including those shaped by national background, class, race, age and gender (and the intersections between them) influence those tastes and choices, as discussed earlier, shaped by contemporary and historical intermediaries from the state, commercial and third sectors working through the various retail and consumption environments (physical and virtual) comprising the foodscape. These extend from spaces of retail and food service, including restaurants, to spaces of the home where food can be appreciated and, at least sometimes, enjoyed through acts of preparation, cooking and eating, though all of these practices can importantly also involve elements of work and stress.

Considering the three Ds of devaluation, divestment and disposal of food, aspects of disposal are most obviously important in our research. Regarding the foodscape the ways in which disposal of food waste is practised operate through spaces of the home and their connection with urban policies and infrastructures dealing with food waste and recycling (see Evans, 2012). We return to this when we consider more specifically the urban foodscape and sustainable food consumption. But we can also appreciate ways in which foodstuffs can be devalued and declassé, for example, where particular kinds of foods and brands can become less popular, less desirable, and the ways that the foodscape through the presence of particular food retail formats, as well as marketing and media, can influence this through changing trends. The modernization of parts of the foodscape across urban China (the rise of supermarkets, restaurants, and food delivery services, for example) and its impacts on the consumption of "traditional" and regional foods is an example of this. And this links to divestment and dissociation, where people's attachments to particular foods can be effectively challenged and unravelled.

We thus conceptualize food consumption values and practices in a spatialized way, focusing specifically on the urban foodscape in all its diversity, and the way in which the foodscape stretches relationally to incorporate supply chains provisioning retail and private spaces of the home, as well as the interconnections between them. Responding to Evans's (2019) plea to link practice-based understandings of consumption with cultural insights, we aim to attend not only to the infrastructures of the urban foodscape and the ways those infrastructures shape routinized practices of shopping, cooking, eating and dealing with waste but also to their cultural energies. And we now therefore finally turn to conceptualization of how those energies charging the foodscape involve not only emotional, meaningful and sometimes aspirational dimensions of food choice, purchase and use but also moral considerations and material practices that can either compromise or improve planetary health.

Sustainable food consumption embedded in the urban foodscape

Contemporary global climate change challenges and problems of planetary health, exacerbated by industrialized and globalized forms of commodity production, trade and consumption, including in the food sector, demand action and more urgently now than ever before. This is alongside continually pressing labour issues

and other social justice challenges. There is a role, as highlighted in UN Sustainable Development Goal 12 flagged in our earlier discussion, for action around consumption as part of a global response (Trubner et al., 2022). In terms of conceptualizing sustainable food consumption as a part of that response, this final part of our chapter brings together the previously discussed themes and crystallizes our practice-focused approach by embedding it in the context of the urban foodscape.

We make room for identifying forms of sustainable food consumption in China, and specifically in Guangzhou, which are associated with strategies and schemes explicitly named and labelled as being environmentally and socially focused. To do this, we use grey literature, a large-scale survey and interviews with governmental and supply chain stakeholders to identify some of the policies, product ranges, initiatives and strategies for food that have various sustainability credentials. We also do not sideline insights into sustainable consumer behaviour and values, so we include questions in interviews with Guangzhou residents that seek to identify how some of these schemes and initiatives resonate with people and gain traction with them through their purchasing decisions. This is alongside using interviews to ascertain participants' social and environmental values. Chapter 4 sets out our methodological approach incorporating these elements. This part of the research embraces how sustainable food consumption is effectively "mobilized" by influential actors and intermediaries and acted upon (or not) intentionally by consumers through processes of problematization and purchasing (Barnett et al., 2011; Evans et al., 2017). However, where Barnett et al. (2011) pay less attention to the power and influence of retailers in their analysis of ethical consumption (Goodman, 2013), we explicitly bring their influence through both supply chains and the urban landscape more squarely into the equation. We take seriously not only the national and local environmental and food policies shaping the provision, trade and accessibility of food but also how sustainability criteria are (or are not) present in different conventional and alternative food networks and retail formats across the city. This appreciates how values, attitudes and behaviours associated with sustainability and sustainable consumption can be recognized as present and (re)produced through influential political-economic and cultural intermediaries. Far from being placeless, these values, attitudes and behaviours operate through an array of digitized and place-based media, production sites, supermarkets and traditional market formats.

We will chart these more conspicuous forms of sustainable food consumption, for example, organic labels in supermarkets, pop-up farmers' markets, locally sourced products, and new vegan dishes served in city-centre restaurants. However, we also seek to embrace some of the "quieter" (Smith et al., 2015), unlabelled, and in some cases regionally constructed, forms of sustainable food consumption that are not necessarily badged as being environmentally responsible but can be observed as having actual and potential beneficial environmental and social effects. This requires engagement with everyday practice, but again in a way that sees that practice as embedded in urban infrastructures and public, commercial and domestic spaces. Responding to Evans's (2019) call to reconnect practice-based approaches to sustainable consumption through cultural insights, we seek to explore the cultural

energies of diverse retail spaces of the city – supermarkets, wet markets, wholesale markets, farmers' markets – through which ordinary shopping quite literally takes place. Through this lens, we can witness some of the quieter forms of sustainable consumption practice working through these spaces and the ways in which they are inflected by cultural values, senses, forms of care and emotion, as well as being driven by habit.

This perspective is aligned with that of Liu et al. (2019: 130), who argue that:

> "Sustainable consumption" draws attention to the achievement of economic, social and environmental sustainability through consumer practices which are intertwined with wider consumer culture, infrastructure, contexts and social changes.
>
> (Liu et al., 2019: 1309)

Liu et al. (2019) present a critique of contemporary sustainable food consumption in urban China that recognizes some of the ways in which cultural values of *mianzi* (around dignity or keeping "face") and *guanxi* (around networking) encouraging hospitality and lavishness, as well as concerns about food safety and imports, can compromise environmental policies attempting to foster healthier and less environmentally harmful lifestyles. This supports Evans's (2019) approach appreciating relationships between cultural identity and sustainable consumption in practice. What we seek to amplify in our study is how those values (environmental, economic, cultural) energise shopping, cooking and eating practices performed through Guangzhou. This also builds upon Liu et al.'s (2015) study of ethical consumption in restaurants, and Chen and Liu's (2022) account of young people's considerations of responsibility in takeaway food consumption, in the same city by exploring sustainable consumption practice through a heterogeneous foodscape in Guangzhou. It is this heterogeneous foodscape and its relationship to sustainability in China, and specifically in Guangzhou, to which we now turn in Chapter 3.

Note

1 https://www.un.org/sustainabledevelopment/sustainable-consumption-production (accessed 16/12/2023).

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3 Foodscapes, consumption and sustainability in China and Guangzhou

Introduction

In this chapter, we outline the rapid change in the Chinese food system over the last 40 years and outline its current configuration for Guangzhou in terms of supply systems and provisioning – a period that has moved from food ration coupons to digital delivery services. We do so in three main sections that cover first the changing food production and supply system focusing on the sustainability issues that have arisen. We start with this because since the horrors of the famine of the Great Leap Forward in the officially termed "Three Years of Natural Disaster 1959–1961", the arithmetic of feeding the world's largest population on a constrained cultivable area has shaped state policy of ensuring sufficient calories for the people. This imperative of feeding its population is marked by the fact that China's "No.1 Central Document" (that is the first policy document released by China's state council each year) always addresses food systems and rural production. The last decades have seen huge rises both in output and in the use of chemical fertilizers and pesticides, alongside waves of reform of production and supply systems with increasing marketization and latterly imports of foodstuffs. Second, we outline the shift from concerns shifting from "chidebao" (eating enough) to "chidehao" (eating well) that is the transition we also see associated with the rise of middle-class urban consumption. The context of changing consumption is then rising incomes and demands for changing foodstuffs that have been linked with the emergence of middle-class groups in China, and especially in the large cities. In so doing we focus on the "broad middle" rather than the "chi huo" or "meishijia" foodie sub-cultures. Our focus is on, then, the "good food grammars" (Goodman and Jaworska, 2020) of everyday middle-class life among the urban middle classes in southern China. This sense of good food is set in a context where trust in food quality is low and consumers are aware of rampant, financially motivated food fraud, where Zhang and Qi (2019) counted at least 15 food scandals at province-wide or greater scales. We thirdly set this in the context of the Chinese urban foodscape in general, and Guangzhou in particular, around the ways that provisioning or food acquisition is possible in the city. In doing this, we highlight how consumption practices work across multiple retail channels in a foodscape that is now marked by everything from hypermarkets, to supermarkets, to "mom and pop" convenience

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stores, be they independent or increasingly franchised, to formal "wet markets" and informal roadside stalls, to farmers' markets, to self-grown and foraged foods and then buying groups, of conventional and specialist foodstuffs, increasingly using digital media, and not overlooking the ready cooked food eaten away from home in restaurants, work canteens and street hawker stalls, and the ever-growing habit of ordering food from restaurants to be delivered to home or work.

The promise of plenty

Any discussion of sustainable food in China needs to begin with the context of rapid socio-demographic changes and the relationship with demand for food and then the reorganization of food production and supply over the last 50 or so years. The fundamental concern has been that arable land available per person in China is well below the global average, with 7–9% of the world's arable land supporting some 20% of the world's population (Liu et al., 2016: 17). Since the revolution, a variety of policies had worked to extract surplus from the countryside and ensure preferential food supplies for urban areas. We do not need to rehearse the details of various phases in policies, but the scars of unrealistic targets and collectivization that led to the Great Famine remain. The post-Mao period saw the introduction of a household responsibility system whereby peasant farmers contract land from the village in return for fulfilling a production quota that remains the bedrock of agricultural organization to this day.

Between 1978 and 2022, total agricultural output grew at the rate of 4.5% per year – more than four times the rate of population growth. In 2022, China's total grain output reached a historical high of 686.53 million tonnes, which is roughly double the pre-reform era output (Sheng and Jia, 2023; Zhang, 2018). According to FAO figures, fertilizer use also doubled from the introduction of market reforms in 1979 by 1990, and then more than doubling again to a peak in 2014–2015 of more than 55 million tonnes, since when use has decreased to a little over 41 million tonnes (FAOSTAT, 2024).

The food supply system in China is both massive and highly fragmented. Around 200 million small-scale farmers form the base of food production, and the food processing sector consists of more than 448,000 firms, of which three quarters had fewer than ten employees (Scott et al., 2014: 158). The average size of farms in China has remained relatively stable rising from 0.58 to 0.67 hectares, though with greater numbers of both very small and larger farms appearing (Gao et al., 2021: 915). However, these "farms" are typically made up of more than five smaller parcels that were allocated to share out different soil types, elevations and aspects from across each village (Zhang, 2018: 66). State reforms have aimed to standardize and consolidate this system of supply to create "large markets and extensive distribution networks" and "nationwide buying and nationwide selling" (Zhong, online early). So-called Dragon Head enterprises have been created to coordinate finance and develop monopoly local buyers (Rogers et al., 2023) as part of state-promoted vertical integration (Leung, 2022). These are meant to serve as

coordinating firms providing finance, equipment, and seed to farmers who in return were contracted for a fixed output at a guaranteed price – a system that by 2014 covered some 60% of cropland and involved around 40% of households (Day and Schneider, 2018: 1233).

In 2005 agricultural cooperatives were launched, originally just for marketing but, as Schwoob (2018: 191–195) outlines, coming to increasing prominence in high-level plans, until now they officially encompass something like 46 million farmers, though the on-the-ground reality of informal pooling of equipment or sharing marketing and leasing land seems rather different than the formal structures. Moreover, rather than being farmer led, previously existing processing companies have created cooperatives, an "industry plus farmers" model, to access targeted subsidies. And yet, precepts of national self-sufficiency in cereals have been breached with surging grain imports of more than a fifth of that produced domestically. The state has enacted a 120 million hectare "redline" – demanding that this total area be kept in cereal production in the face of pressure on land from urban development. That said it is also clear that competition from food imports has meant more marginal land is left idle (Xu et al., 2019). The scale of land beyond China now committed to feeding China is dramatic. Brazil has turned over some 13–30 million hectares of farmland and forest to soybean cultivation to meet Chinese demand, largely for livestock feed (Zhang, 2018: 9). China has become a major exporter of a variety of foodstuffs but also a large importer. If those trade balances are converted to "virtual land" trades then net virtual land required overseas to feed China increased from 2.37 million hectares in 1987 to 33.51 in 2013, or around a quarter of the total of China's farmland (Xu et al., 2019: 36).

Self-sufficiency at an urban scale is also part of the food security strategy. Back in the 1970s, most large cities in China maintained rates of vegetable self-sufficiency that were greater than 85% (Skinner, 1978) based on largely agricultural districts that were included in the municipal area. Village collectives would supply food by quota to the Municipal Vegetable Company, or its equivalents, while distributing foodstuffs was grouped under the Municipality's Second Commercial Bureau that would supply a hierarchy of its outlets down to each district in the city with a major food outlet serving approximately 27,000 people. It was then a system of centralized supply and monopoly retail (Zhang and Pan, 2013). Cities were, though, strongly connected to the local rural area – in terms of seasonal produce and local foodstuffs even if urbanites and peasants were sharply legally and socially demarcated (Klein, 2014). That changing urban-rural connection is something we revisit in our ethnographic research discussed in Chapter 7, as migrant respondents in particular narrate their relationships with distant rural home region foods.

Over and again consumers report that there are trade-offs for the new range of choice of distant and out of season foodstuffs. As Bunkenborg and Hansen (2020: 247) put it, "People in most parts of China now rejoice at the fact that tomatoes are available all year round, but they also complain that they do not taste right". This feeling is not confined to the cold northeast of China; talking to residents of Kunming in the sub-tropical south west, Klein (2014: 125) noted that while those who remembered pre-reform days spoke highly positively about both the diversity

and abundance of foods now available, all grumbled about what they saw as a now deteriorating quality of food. They would describe foodstuffs as flavourless and referred to them as often being "unnatural" (*bu ziran*) and "contaminated" (*wuran*). Those terms implied the foods came from distant places and thus out of season and that agrichemicals had been extensively used in their production, possibly in "unnatural" plastic greenhouses. In Guangzhou, the districts Skinner (1978) lists as producing all the vegetables in the 1970s are now densely built over. That said, some other large cities, such as Nanjing, do continue to have considerable urban agriculture (Veeck et al., 2021).

Often unproductive and uneducated peasants are framed as the problem, and industrialized agribusiness is seen as increasing yields and creating governable large producers (Schneider, 2015). The upshot of developing large agribusinesses is that now in a country that now produces and consumes half the world's pork, it is not uncommon for a single enterprise to produce 100,000 hogs in a year (Schneider, 2017). This is achieved by concentrating animals in feedlots and drives the imports of soybeans for feed. Another consequence is that in 2010, the country's first national pollution census (*Zhongguo wuran yuan pucha*) revealed that agriculture was a bigger source of water pollution than industry (Schneider, 2017). To put that in context, if we look at industrial pollution, Zhang (2018: 66–67) reports that nationally 10% of cereal crops are unsafe for human consumption due to heavy metal contamination and a 2011 study found that in industrialized Guangdong, only 11% of the arable land is *not* affected by pollution.

The massive expansion of yields has been underpinned by massive increases in chemical inputs, whose sourcing and composition is subject to widescale, financially motivated frauds, and whose use has been liberal and largely unregulated. The result is

> a new kind of "biosociality" (Rabinow, 1996: 99) whereby following the market logic, farmers will use more chemicals in commercial food production, while in family and social life they use less (Lora-Wainwright, 2009). These scholars argue that rather than immorality, there has been a change in the rationality of social actors.
>
> (Li and Loconto, 2019: 18)

The ethics of what is prioritized and who (or what) is the object of concern or everyday ethics among producers is something to which we will return, particularly in Chapters 6 and 7, but the prevalence of a "two systems" of production among peasant farmers using fewer chemical inputs for food that they themselves and their family will consume is widely reported in the literature (e.g. Bunkenborg and Hansen, 2020; Si et al., 2019a).

Pork is perhaps emblematic of what Schneider (2017) terms "an industrial meat regime" that since 1980 has supported a quadrupling of per capita annual meat consumption in China, to the extent that in 2010 the FAO calculated that the average person ate 61 kg of meat per year, which is well above the world average of 42 kg (Schneider, 2017: 90), and this understates the quantity as the official data

does not include meals out of home (Zhou et al., 2014). The primacy of pork is echoed in a 2014 survey of meat-eating households in Guangzhou, which found that monthly per person purchases for home consumption of pork, chicken, beef, and mutton were 2.90 kg, 1.47 kg, 0.77 kg and 0.33 kg, respectively (Zhang et al., 2018). Moreover, all kinds of meat showed positive income elasticities, that is as income increases so does the consumption of every kind of meat rather than just more expensive ones displacing cheaper kinds (Zhang et al., 2018).

The rise of new middle classes

We flag here the rising consumption of foods and its relationship to income to begin to open out the concerns around the rise of middle-class consumers in China with new tastes and levels of demand for food. The existence of an increasing middle class in China in many ways is self-evident, but defining its exact composition and extent is rather more complicated in both popular and scholarly terms. Popular imaginaries of "the middle class", fed by lifestyle advertisements, are not "middling" but rather of an "elite" (Zhang, 2010) to the extent that many with lower mid-range incomes may choose other self-descriptions such as "salaried class" (*gongxin jieceng*) (Miao, 2016). More formal terms often found in the academic literature reviewed by Lu (2010) are *zhongjian jieceng* (middle stratum) which can be translated as *middle class*; more sporadically, and with a more strictly financial emphasis, is the term *zhongdeng shouru qunti* (middle-income group). The latter is sometimes tied with the term *xiaokang* for moderately prosperous, or reasonably well-off, and the high profile of this term is because a *xiaokang* society was a goal set by Deng Xiaoping in 1978 – and revisited by President Xi making it a centenary goal for 2021. In terms of the literature on consumption in China, then, these senses of middle class have been linked with the emergence of *xiaozi* (petit bourgeois) taste (Cao, 2023; Wang, 2014).

To give a broad sense of scale, the National Bureau of Statistics (NBS) defines the "middle-income group" as a typical three-person household that earns between RMB 100,000 and RMB 500,000 (approx. US$14,844 to US$74,221 in 2022) per year, on which basis, in a widely quoted figure, China's middle-income group surpassed 400 million people, or 140 million households, in 2017. Alternately, the China Family Panel Studies (CFPS), a national longitudinal general social survey project, suggested an elite of some 3%, 13% upper or wealthy middle class and 29% mass or middling middle class among urban residents. In our surveys we used income as the key indicator of respondents being part of at least the mass middle class.

Most working definitions, as elsewhere on the planet, then take in a mix of educational background, type of occupation and income. Li (2010) thus suggests that among the well off in Chinese society we might see a *capitalist class* of private entrepreneurs; then the *new middle class* of professionals, managers and government officials; then the *old middle class* composed of small employers, small business owners and the self-employed; and finally, the *marginal middle class* of low-wage white-collar and other workers. Historic data suggests somewhat confusingly that the old middle class started from a smaller base than the new middle

class after the Maoist period but is now possibly larger. What further bisects the classes is "public" versus "private" sector where "political capital" remains a significant factor, and there is a cohort effect on consumption habits with those now approaching retirement or retired who can remember Mao's China, the legacies of the Cultural Revolution and the comparative poverty of the 1980s and early "opening up" period (Tsang, 2014).

The sense of Chinese middle-classness is also defined through what it does and especially what it consumes. The drive to acquire specific consumer goods, often Western, has long been noted in this burgeoning middle class. Indeed, traditional values of *mianzi* (honour or "face") play into the need to display that they are both affluent and enjoying life, while showing a cultured taste to avoid straying into appearing nouveau riche or in Chinese *baofahu* ("explosively rich") (Wang, 2014: 17), a derogatory term suggesting that they are culturally unsophisticated, poorly educated and lacking good taste (*pinwei*) and personal quality (*suzhi*). Tasteful conspicuous consumption has been suggested as a *modus vivendi* among younger middle-class aspirants who need to impress possible business associates or clients (Tsang, 2014: 90). Others draw the lines of old middle classes associated with education (*zhishifenzi* or intellectuals) against a *xinfu* (new rich) and suggesting a rising commercial elite against professional "salariat" (Osburg, 2013). In this case too, tastes, consumption and lifestyle figure as part of a vision of a competitive positioning in a society changing so fast it disorients formerly assumed identities and anchor points.

From peasant agriculture to new farmers

The relationship of urbanites to peasant farmers has been one of social disdain and structural exploitation. From the founding of the People's Republic, the deliberate aim of policy was to extract surplus from the countryside in favour of the cities. In the reform era, and not withstanding concerns for food security, the same prioritization can be seen. It is, as Schneider (2017: 90) terms it, "a system that 'wastes' the rural in service of capital". Small-scale, traditional farmers, called *tu yang* (liberally translated as "sons of the soil"), Chan and Enticott (2019) show, have been blamed by the state for poor animal hygiene and the outbreaks of things such as porcine reproductive and respiratory syndrome that saw 2 million animals infected across 12 provinces. It is notable that "*tu"* has a series of negative connotations of backward, low *suzhi* and more. In response to this diagnosis of peasants holding back progress in agriculture, the state has attempted to modernize (*xiandai hua*) farming and impose standardization (*biao zhun hua*) as a form of governmentality to create "good farmers" (Chan and Enticott, 2019). This has been cast as promoting a rural *suzhi* – farmers of good personal quality. In the Number 1 Central document of 2012, the Chinese state promoted the category of "professional farmer" and implemented training expected to reach some 20 million farmers by 2020 and fostering larger officially termed "family farms" of up to 12 hectares (Zhang, 2018: 70).

There have been pro-peasant movements, most notably the National Rural Reconstruction activist movement in the 1990s and 2000s, prioritizing peasant and rural people rather than agricultural improvement or modernization (Day and Schneider, 2018). Its agenda of promoting rural development against productivist approaches and large-scale producers has been picked up by some of the Alternative Food Network (AFN) agenda, discussed in detail in Chapter 6 (Si and Scott, 2016). Attempts to promote an "agrarian renaissance" (Leung, 2022: 74) draw upon endogenous regenerative agriculture utilizing a revival of peasants' indigenous knowledge (*xiangtu zhishi*) and respect for the environment. An example is the Partnership of Community Development based in Hong Kong (Leung, 2021), which tries to counteract the reliance on new rice varieties dependent on high inputs of chemical fertilizers and, instead, promotes traditional systems like the fish-duck-rice-paddy (*yuyadao*) symbiotic system (Leung, 2022). Organizations such as *Cheng Xianghui* ("city and countryside meet") based in Guangzhou seek to promote a rural-urban and human and non-human conviviality. They look at creating a circulation of knowledge between farmers and consumers, gradually building up from farmers' markets to cookery sessions, to farm visits, to online and offline buying groups (Leung, 2021). Our research speaks to these connections in Chapter 6.

This "post-productivist" countryside in China (Xie, 2021), or possibly more accurately what Liu and Ravenscroft (2020) term a "new ecological productivism" of low inputs and environmentally sensitive but commercial farming, is being driven by a back to the land migration of non-rural dwellers. There are organizations encouraging young professionals, so-called returned youth, moving from cities to the countryside, to act as intermediaries linking traditional producers to markets, as they are better able to link agricultural practice, produce and market authentic products (Tassin, 2021). Other returnees are setting up their own farms – the so-called New Farmers also discussed in Chapter 6. Typically, these are (former) professionals who are motivated by environmental or ecological values, alongside a desire to escape urban living either temporarily or permanently. This "back to the land" movement and desire for rural products has been seen as part of "*xiangchou*" zeitgeist of middle-class urbanites. "*Chou*" means worry or anxiety and "*xiang"* means both home and countryside (Yuan, 2022: 132). That said, some share the dim view of traditional peasant farmers, and relations of these incomers to local villagers can be thorny. There can be a clash of new ideas and ideals with peasant practice, for instance where villagers' customary usage rights to land may clash with incomers who see it as exclusively theirs (Wang et al., 2023: 6).

Migrant histories and changing tastes in Guangzhou

The story of changing tastes and consumption in Chinese cities has often been written through the rapid proliferation of "foreign" foods and international brands and outlets in metropolitan cities. We would draw attention to the more recent moves to revalue traditional foodstuffs. For instance, reinvented and revalorized tea rituals (Chee-Beng and Yuling, 2010) speak to the same reinvestment and

valorization of traditions in middle-class consumption tastes that we saw in terms of the rise of New Farmers – a revalorization that can be seen around the periphery of major cities like Guangzhou where rustic eateries (*nonjiale*) have sprung up selling "authentic" or "traditional" cuisine (Park, 2014). Some traditional foods, long rejected as difficult to cook or associated with poverty and famines, have been rendered fashionable (Wu, 2016). We earlier encountered "*tu*" as a pejorative term for backward "earthbound" farmers, but recently it has also acquired "more positive connotations of 'local', and 'traditional', and also of 'pure', 'uncontaminated', and 'natural'" or implying free range farming or heirloom varieties (Klein, 2014: 116). This trend is something we explore through our ethnographic research with households in terms of how these values and connotations inflect notions of good food and their purchase and incorporation into daily life.

We would caution that simple, if common, appeals to "local" foods also have to be read through the mobilization of people and foods. Guangzhou houses 56 different ethnic groups from within and beyond China but the city is 98% Han Chinese (Zhang et al., 2018). However, among the Han there has been colossal immigration that has grown the city from under 2 million people in 1978 to more than 15 million now. Of Guangzhou's 11 districts, 80.8% of rural migrants live in the districts of Haizhu, Tianhe, Baiyun, Huangpu and Panyu (Yuan et al., 2022) in which our field research was largely undertaken. As to the origins of these "migrants", some of whom have lived in Guangzhou for decades, around 70% come from rural areas of Guangdong province and 30% from other provinces (Su et al., 2018). Therefore, although the most famous traditional food of Guangzhou is a meat soup, also called old fire soup or "*lou fo tong*", it may not be traditional to migrant populations with other regional traditions (Zhong, online early).

Residents of Guangdong not only celebrate their cuisines discursively, but also its residents on average spend 23% more on food more than those in the capital (Su et al., 2022). Commercially there has been a huge surge in restaurants selling regional cuisines, now comprising around 35% of Chinese restaurants in Guangzhou, which deploy sometimes staff, sometimes celebrations and music, and sometimes imagery of specific parts of China to sell either "home" to migrants or "difference" to locals (Zeng et al., 2019). NGOs have mobilized hometown discourses among migrants to position their green foods as "pure and sacred" (Leggett, 2020: 97). We thus see "regional cuisine" restaurants enacting a tension between more or less standardized commercial repertoires (of for instance what dishes typify Hunan or Shanxi to someone from Guangdong) and more varied and less accessible restagings of different regional cuisines that appeal to migrants from there (Zeng et al., 2019).

Foodscape in the city

A multichannel retail environment for food shopping has emerged in China, so that while there has been a "supermarket revolution" of large food supply establishments, these coexist with both local convenience outlets and more traditional wet markets (Bai et al., 2008; Zhong et al., 2020). While it is remarkable that the "weekly shop" at the supermarket does now exist in China, it has not simply

replaced more traditional avenues of provisioning and is being challenged by others. The assumption that traditional wet markets would be outcompeted may not be surprising when we look at the foodscape before retail liberalization:

> The state-run retail system, while easily accessible to urban residents, was notorious for its poor services, lack of choice and heavy wastage (Veeck and Veeck, 2000). Food markets were in poor physical condition. Even many of the larger general food markets were not housed in permanent buildings, but simply in tents on the streets or temporary sheds. These markets were traditional "wet markets" in the true sense: the floor was constantly wet from the spraying of vegetables and cleaning of meat and fish and littered with waste.
>
> (Zhang and Pan, 2013: 502)

It is also true that prior to the opening up of retail, there were negligible amounts of dried, canned or frozen vegetables in the urban food system (Skinner, 1978: 739). However, one might say there has been a lopsided attention to supermarkets as bringing modernization and rather less on continuity and innovation in other parts of the food supply system (Zhang and Pan, 2013).

There was a process of regularization and improvement of wet markets through the 1980s and into the 1990s, that meant they were much improved by the time of the emergence of supermarkets. The fragmented supply system in China has also meant that supermarkets have found it hard to leverage their buying capacity up the food system into integrated, secure and cheap supply chains. Largely, with some exceptions we note in Chapter 6, they have defaulted to using the same wholesale markets as vendors in wet markets do (Zhang and Pan, 2013; Yuan et al., 2021) but the higher overheads of supermarkets mean that on a range of fresh produce, they were found to be on average 30% more expensive than wet markets (Yuan et al., 2021). As of 2021, Guangzhou had 543 wet markets (*caishichang*) (Zhong, online early), which are typically covered commercial complexes with vending stalls organized in rows along which independent vendors primarily sell fresh foodstuffs. These markets meet a cultural demand for everyday fresh supplies sustained through a practice of frequent shopping that is especially strong in southern China. The wet markets compete not only on price but also on a value of "freshness" that is the opposite of wrapped and processed, even frozen, foods in supermarkets (Zhong et al., 2020). This we explore in Chapter 7 in terms of the visceral aspects of food shopping and consumption practice incorporating the moment of food acquisition.

The persistence of wet markets is not unique to Guangzhou. For instance, in Nanjing with a population of seven million, there were some 170 supermarkets identified as selling fresh produce, owned by 13 brands, alongside which, in the same neighbourhoods, were 351 wet markets (Yuan et al., 2021: 3). The supermarket sector ownership is also significantly less concentrated than in the United States and United Kingdom, with the five leading supermarket operators in China in 2021 occupying around 11.2% of the market (Statista Dec, 2023).[1] Table 3.1 identifies the leading ten retail chains which include food provisioning, indicating their retail

Table 3.1 Ten largest food and provisions retail chains in China (2019 sales).

Rank	*Enterprise*	*Retail sales (10,000 USD)*	*Store numbers*	*Year-on-year store number increase (%)*
1	China Resources Vanguard	1,449,324	3234	1.3
2	RT Mart	1,443,228	414	1.7
3	Yonghui	1,419,606	1440	12.9
4	Walmart	1,253,947	442	0.2
5	LianHua Supermarket	832,564	3381	−0.6
6	Hema	609,600*	250	67.8
7	Wumart	577,691	475	13.1
8	Carrefour	476,775	233	−2.5
9	Jiajiayue	421,127	755	85.5
10	Bubugao	369,614	355	33.5

* Estimated.

Source: Wang and Coe (2021: 3)

revenue, the number of stores and rate of growth at the time of the fieldwork for this book (Wang and Coe, 2021). Which supermarket chains are largest varies widely by region, size of city, and produce or market segment, and indeed what might be called a supermarket, a hypermarket, or a convenience outlet also varies by location. For instance, aiming at middle- to lower-end incomes, Wumart has stores varying in size from hypermarkets to convenience stores and has a strongest presence in Beijing and Shanghai. RT Mart specializes in large-scale hypermarkets selling affordable produce serving less-affluent, lower-tier cities. By contrast, Jiajuyue's focus on quality and a diverse range of products tends to aim at more affluent customers. Yonghui focuses particularly on fresh produce and is a leading firm in the development of online ordering.

In terms of the foodscape, it is important to note that consuming food away from the home (FAFH) has risen rapidly with rising incomes. With per capita consumption from hotels, restaurants and cafes growing at around 13% per year since 2002 and a shift in composition of meals roughly inverting the home proportions of cereals and meat, which has seen the total ecological footprint of the sector, increase nearly 33-fold, with that of Guangdong province expanding the most (Li et al., 2019). Guangzhou's total number of restaurants has been estimated at over 45,000 (Zeng et al., 2019: 56). Eating out tends, though, to be under-represented in official data where the State Statistical Bureau food expenditure data is also seen as suspect following various state campaigns against corruption suppressing food entertainment expenses, or at least suppressing the amounts reported (Zhou et al., 2014). However, to give an indication of significance, FAFH accounts for an average of 17% of all calories consumed (Bai et al., 2016: 1085) and it is correlated with rising incomes; in 2011, national figures suggested the poorest decile spent 12% of food expenditure on FAFH, the third and fourth quintile of middling incomes spent

20–22% but the wealthiest decile some 33% (Zhou et al., 2014). However, if we are looking at sustainability and types of diet, then the official data showing increases in urban pork consumption over time (up more than a quarter between 2001 and 2011) is an understatement as it does not include food consumed outside the home (Zhou et al., 2014).

Also rising fast in the multi-channel foodscape is the role of delivery. There has been a massive expansion connected to digital technologies and the availability of cheap labour in terms of delivery riders, a ubiquitous sight on downtown street corners, waiting for orders to come. In Guangzhou, this can be connected to commuting time in the megacity affecting young workers in particular – where a commute from Tianhe to neighbouring Panyu might take an hour (Liu and Chen, 2021). Delivery systems are now competing to provide food for residents and jobs for migrants that used to be serviced by street vending of both foodstuffs and cooked food. Street vending still continues but is increasingly policed and regulated into marginal spaces servicing the urban poor and away from prominent locations in campaigns to make the city modern and attractive to visitors (Xue and Huang, 2015). This picture of a diverse and variegated urban foodscape mirrors Reardon et al.'s (2019) recognition of co-existing traditional, transitional and modern food supply channels in rapidly urbanizing economies.

If customers are seeking to source quality ingredients, then the official environmental standards certification has three grades: hazard-free food (*wugonghai shipin*), green food (*lüse shipin*), and organic food (*youji shipin*) with progressively higher standards (Scott et al., 2014). Between them, all three standards only account for a little over 25% of total production (Scott et al., 2014). Total production of organically certified food was around 10.8 million tonnes, in 2013, from an organic acreage totalling 3.529 million hectares (Dendler and Dewick, 2016: 239). In the foodscape of Guangzhou, certified foods can be found in wet markets but more prominently in supermarkets and typically are applied by large producers – not least since certification costs are significant and apply for each foodstuff a farmer produces. The process of certification is, though, not trusted by many consumers who suspect both mislabelling and fraudulent awarding of certification by corrupt officials (Dendler and Dewick, 2016).

Other food providers then seek to offer different assurances of the quality of their produce via different channels. "Direct selling" from small rural producers has been enabled through the expansion of "big capital" e-commerce actors into rural areas and their mobilization of express delivery services to enable the speedy and refrigerated shipment of food items marketed on Taobao (an online marketplace, a little like Ebay) or other platforms (Guohua, 2019). These are often not very "alternative" in terms of explicit environmental values, as rural producers have seen the possibilities in the revalorization of traditional foodstuffs and are active on livestream selling programmes – with live videos of food preparation offering (some) assurance to consumers about the provenance. Thus

> to sell agricultural products to urban consumers through livestreaming, these sellers must play with the urban imaginaries of the Chinese rural, deploying

> a series of dichotomous discourses, including urban vs. rural, industrial production vs. handmade, and supermarket sales vs. direct sales. . . . A standardization of production juxtaposes the packaging of "authentic" rural images, meeting the platform logics of commerce along with the urban tastes and imaginaries of Chinese ruralness.
>
> (Duan et al., 2023: 259)

It is an imaginary, where traditional and quality foods are often signified by showing producers as "grandmas" even if in reality most actual producers are not. Direct sales and buying via different online platforms and buying groups is increasingly part of the foodscape for those seeking quality foods. One of the marks of quality most often sought and deployed is location and origin, though accordingly one of the most common forms of food fraud is mis-labelling products' origins. For this reason, apparent directness of supply from visible, knowable online sellers offers consumers a way of "verifying" the source of products as much as they are able (Guohua, 2019).

The consumer concern with authentic sellers providing safe and high-quality food extends into using AFNs adopting a community supported agriculture (CSA) approach. A range of different organizations that we discuss in Chapter 6 have worked to establish both online selling and in person farmers' markets in Guangzhou. CSA suppliers largely cannot afford the costs of official certification so use systems like Participatory Guarantee Schemes, where consumers can visit producers, or provide extensive online information and stories about producers to provide assurance. We should not overplay the revaluing of the rural, where:

> [m]any CSA members in China trust CSA managers but not the peasant farm workers who are the direct producers of their food. These peasants are typically portrayed as selfish and shortsighted.
>
> (Si et al., 2015: 303)

The case where a fruit farm supplying to the Guangdong CSA initiative Green Fingers was found inadvertently using prohibited chemicals is instructive – for all the talk of producers and consumers learning from each other, Green Fingers immediately terminated relations for fear of consumer response (Leung, 2021). Indeed, previous work has found consumer concern centres very largely on securing healthy food rather than ecological outcomes and even less on rural well-being (Scott et al., 2018). It is worth noting that there are also diverse goals among producers and thus "establishing a concept of organic that can bridge the gap between producers and consumers–outside of the control of the State–requires significant boundary work to bridge multiple social worlds" (Li and Loconto, 2019: 18). We assess how far this is accomplished in Chapter 6.

If AFNs are often heralded as a new sustainable form of provisioning being created, then it is worth recalling our focus on the everyday and existing practices of sustainability. Doing so means also recalling the extent of other existing non-market food supplies in Chinese cities. There are legacies of urban and peri-urban farming

that have in part transmuted to practices like plot rental in peri-urban areas for those who want to be "weekend farmers" or to provide opportunities for elderly parents and migrants who had been farmers to use their skills (Si et al., 2015). Surveys in Nanjing suggest up to 20% of households engage in this sort of practice and in a further channel of informal food circulation connected with the large rural migrant population, at least a third of households received food from rural relatives or associates at least once a month (Si et al., 2019b). Jehlička et al.'s (2024) multi-city survey found a truly remarkable 68% of urban respondents owned or used a garden or plot of land for food production.

Summary

This chapter has outlined the broad changes in Chinese food systems and the situation in terms of the foodscape in the city of Guangzhou in particular and big city China more generally. It has highlighted the struggles to provide food security, and how meeting that need has contributed to unsustainable agro-industrial practices, in terms of chemical use and large-scale food factories, and consumer insecurity with unsafe and fraudulent food production. Middle-class consumers' quest to find good food that they can trust is then mapped out across the multiple channels through which they provision their households. The range of choices and practices available underpin the later chapters. It should also be said that our focus is on the middle classes where the range of options are greater and motivations a little different than among the poorer residents of the city. In Jehlička et al.'s (2024) survey, for example, the urban poor were motivated to garden by financial pressure, while the middle classes for personal fulfilment – but both groups also valued securing healthy food.

Note

1 https://www.statista.com/statistics/1229104/china-market-concentration-of-supermarkets/ (accessed 12/07/2023)

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4 Researching sustainable food consumption across urban China and Guangzhou

Introduction

In this chapter, we outline the methodology used for the research underpinning the book. We embrace the value of multiple methods, explaining our use of a consumer survey, interviews with influential food sector actors and consumers, and ethnographic methods for engaging with consumption practices across the foodscape. In so doing, the chapter offers correctives to both the "values-knowledge-action" gaps approaches associated with surveys and interviews engaging more directly with the cognitive realm of consumer agency on the one hand, and solely practice-focused consumption studies of households on the other (Barnett et al., 2011). The chapter proceeds by first explaining the geographical dimensions of our methodology, addressing the Chinese urban foodscape more broadly as well as focusing in greater depth on consumption practice in Guangzhou. It then fleshes out the rationale for our multi-method approach. Following that, we detail in turn: the design and implementation of our consumer survey; interviews with influential commercial, regulatory and third sector actors; interviews with middle- and upper-middle-income consumers in Guangzhou's neighbourhoods; and ethnographic methods to engage with ordinary food consumption in the city. In the case of each method, we describe not only the details of its design and application but also how it contributes to specific forms of situated knowledge of sustainable food consumption, connecting back to the concepts and perspectives discussed in Chapter 3. We emphasize our study's approach to understanding sustainable food consumption across Chinese urban foodscapes, where it is less a case of observing how publicly circulating discourses of sustainable consumption have traction, as these have not been constructed in the same way as they have in the neo-liberalizing West. Rather, we explain how our research seeks to apprehend the actual and potential levers for achieving environmental and social sustainability in different ways across Chinese urban foodscapes, particularly in Guangzhou, and the ways in which different versions of sustainability might be embedded (consciously or subconsciously) in the ordinary practices of everyday life in Guangzhou. We finish by providing an overview of our approach to data analysis.

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The geographical scope and focus of the research

As explained in the opening chapter, our research on sustainable food consumption in China was part of a larger ESRC-funded project investigating the growing middle classes in "rising power" economies and given their increasing spending power, issues of ethics and sustainability regarding their food consumption choices, values and practices. It addressed middle-class consumers and their connections to foodscapes and challenges of food system sustainability in Brazil and South Africa as well as in China. Specific case study cities were therefore selected as key sites for the emerging middle classes in each country. In each case, they were large metropolitan settings identified with economic growth, new spaces of consumption and foodscapes that are in rapid transition, with changing balances of retailers, markets and significant online organizations. This identified appropriate urban settings (Rio de Janeiro in Brazil and Johannesburg in South Africa) in which to investigate current and potential roles of middle-class spending power for exercising choices and performing practices that can influence food system sustainability.

For our research in China, we selected Guangzhou, which is the third largest city in the country and the largest in the mega agglomeration of the Pearl River Delta for working-age consumers (McKinsey, 2016). The region has been at the forefront of the "opening up" of China since 1978 in terms of attracting huge flows of population, with Guangzhou expanding from around two million people in 1980 to 15 million now in a wider metropolitan area of 25 million, with the City Majors Foundation 2018 survey ranking it in the world's top 40 cities by GDP at purchasing power parity. Guangzhou had also been identified in the business press and consultancy literature just prior to our research as a key location for marketing to growing middle classes (Oxford Economics, 2016). Moreover, in terms of an appropriate urban setting for appreciating levers for influencing more sustainable forms of food production, distribution and consumption, Guangzhou is a centre in Southern China known for entrepreneurial advancement of Alternative Food Networks (AFNs) (Zhong et al., 2022), innovation in online retail (Liu et al., 2022), and its history of openness to trade and migration has led to experimentation in cuisine and diets (Klein, 2012). We aimed, however, to situate that specific urban focus in a wider context of urban China in order to appreciate national regulatory context and broader commercial and cultural trends that influence (though not determine) dynamics in Guangzhou. Chapter 3 introduced that geographical context, which is picked up again in Chapter 5 to address some of the sustainable consumption values and trends across urban China, surveying Beijing and Shanghai as well as Guangzhou. Against that backdrop, Chapters 6 and 7 delve more deeply into the foodscapes of Guangzhou and the consumption practices of its residents, respectively. Essentially, the geographical pitch of the book is to address the forms, values and framings of sustainable food consumption across urban China and to treat Guangzhou as an "observatory" for understanding how these values are articulated and performed in practice.

Addressing sustainable food consumption through a blended methodology

Our research combines deductive quantitative and inductive qualitative approaches spanning three sets of approaches identified by Barnett et al. (2011) that have been used to research ethical consumption, which we take to extend to sustainable consumption. The first set of methods is survey-based and has tended to be adopted by researchers in business and management studies predominantly but is also used in sociological research. Structured questions in surveys, Barnett et al. (2011) argue, are effective at identifying the attitudes and values of consumer respondents, explained in Chapter 2 in terms of their association with perspectives on consumer behaviour. Typically, what this methodology has shown when applied to questions of ethical and sustainable consumption is a gap between consumers' attitudes on the one hand, which can express support for various forms of sustainable consumption identified in the survey questions, and behaviours on the other that can run counter to imperatives of sustainability. This approach, therefore, has been associated with studies of the cognitive dimensions of sustainable consumption. To determine the drivers of sustainable consumption, our survey built specifically on the values-beliefs-norms (VBN) theory of environmental concern and behaviour. VBN theory, as Chapter 2 briefly introduced, emphasizes the link between values that consumers hold and decisions that they make about the environment (Stern et al., 1999). Further, VBN theory proposes three fundamental determinants of environmental concern in people: biospheric altruism, humanistic altruism and self-interest (Dietz et al., 2005). The approach, however, has been critiqued for depending on various Theories of Planned Behaviour that imply a dominant role for individual conscious intentions that are turned into actions mediated by attitudes, social norms and constraints (Shove, 2011; Warde, 2014)

The second set of approaches identified by Barnett et al. (2011) involves qualitative methodology addressing "discourses of responsibility" (page 118). These methods can involve more open-ended or semi-structured interviews with consumers and focus groups (group interviews) that seek to engage with consumers' more complex and reflexive evaluations of values, attitudes and behaviours, acknowledging consumers as knowledgeable subjects able to reflect on their beliefs and practices (Jackson et al., 1998). Barnett et al. (2011) explain that these approaches do not necessarily assume that participants' accounts accurately match their attitudes and behaviours. Rather, what is produced through the interview process are "evaluative accounts" and "ordinary reasoning" on the part of participants (page 119). While these "talk-based" methods are more directly engaged in discourses and participants' narratives than practices, Barnett et al. (2011) prefer to see the possibility of *connecting* them to practices. We concur with their argument that "talk and action need to be understood as reflexively related in practices" (Barnett et al., 2011: 120).

The third set of approaches they discuss are concerned with practice-based understandings of sustainable consumption (Shove, 2011; Warde, 2014), also

discussed in Chapter 2. Methodologies linked to this approach have tended to be more ethnographic, including participant observation, and sometimes they have incorporated "the visual" (Wills et al., 2016). Such methods are effective in engaging with the routine and habitual nature of consumption and the ways in which consumption is embedded in ordinary practices of everyday life.

We argue that adopting a multi-method approach to understanding forms and practices of sustainable food consumption across urban China is particularly important in a context where sustainable food consumption has not been constructed as an agenda in public discourses as explicitly it has in Western, advanced capitalist contexts. For research in the United Kingdom, for example, surveys- and interview-based methods have engaged with "how people from a range of social backgrounds attribute meaning to publicly circulating discourses that attempt to position them as *consumers* with *responsibilities* to various global issues" (Barnett et al., 2011: 123; original emphasis). But what if there are no (or very few) publicly circulating discourses on ethical and sustainable consumption, and people as consumers are *not* being positioned as responsible agents of change as they are in neo-liberalizing economic contexts? Does this mean there are no forms of sustainable consumption to study? These questions are central to the objectives of our research, and hence we have devised a multi-stranded methodology for discerning just exactly what multifarious versions of sustainability *are* and *could be* circulating through Chinese food systems and consumption practices. This means establishing whether and what values, actions and behaviours might be operating among middle-class consumers, which calls for a classic consumer survey to grasp these beliefs and planned behaviours. Recognizing that values and processes of food sustainability circulate through food systems, incorporating commercial and regulatory actors as well as retailers and consumers, we also argue for engagement with the voices of these influential actors and consumers through semi-structured interviews. And given the absence of neo-liberal forms of consumer "responsibilization" that compel citizens to consciously espouse principles of sustainable consumption connecting to environmental protection and livelihoods of producers, we must also engage in nuanced ways with everyday food consumption practice through more ethnographic modes of inquiry to appreciate ordinary practices of consumption, some of which may have sustainability effects (to paraphrase Gregson and Ferdous, 2015).

In all phases of the research, we followed United Kingdom Research and Innovation (UKRI) research data management principles and Newcastle University's research ethics framework and procedures that fed into project information and debriefing sheets about the research and management of data and written consent forms concerning participation and data handling.

Surveying the behaviours and values of sustainable food consumption across urban China

To ensure a broad reach of our research and to generate insights with potential to gain traction with policymakers, commercial actors and third sector practitioners,

we sought to gather quantitative data on the prevalence of values and behaviours associated with food system sustainability and their influence on consumption. We used a combination of existing literature on sustainable food consumption and our qualitative research, described below and which was executed before the survey, to identify these values and behaviours. In designing a survey of middle-class consumers across urban China, we aimed to (i) assess how these identified values and behaviours applied across a larger sample of consumers than we were able to engage through the interviews and ethnographic research and (ii) identify values and behaviours associated with, but also transcending, the specific context of Guangzhou. In so doing, quantitative data were gathered through a web-based survey of the drivers of sustainable food consumption and the behavioural intentions arising from them (e.g. intentions to purchase sustainable food). We reached a sample of 529 consumers (53.5% female, 45.9% male and 0.6% recording no gender) covering three major Chinese cities – our case study city of Guangzhou and the two largest Chinese cities of Beijing and Shanghai. Our sample sizes for each city (see Table 4.1) reflect the relative sizes of these cities. The sample across the three cities represents a middle-class demographic with annual household income of between US$13,000 and US$48,000 (equivalent to between approximately ¥90,000 and ¥340,000, depending on the exchange rate), with survey questions asking respondents about how they identify with other middle-class indicators such as levels of education, professions and assets.

The questionnaire was developed in English and was translated into Cantonese and Mandarin using double-back translation procedures. For quality and cost effectiveness, we accessed survey participants using Qualtrics, a commercial provider of online survey panels (http://www.qualtrics.com/survey-panels/) used for studies published in highly regarded marketing and management journals (see, e.g., Long et al., 2011). The survey was conducted online in 2021 to assess how sustainable consumption and curtailment behaviours identified in the qualitative research phases and through the wider literature applied across this sample of consumers, determining intentions to engage in such behaviours in future, and identifying values transcending local context and scale that drive sustainable consumption. We adapted measures from the literature for motivations to engage in sustainable food consumption. We measured values (Van Doorn and Verhoef, 2015), self-expression (Wilcox et al., 2009) and self-presentation tendencies (Malär et al., 2011); health, price, fitness and quality consciousness (Lichtenstein et al., 1993; Verstuyf et al., 2012; Moorman, 1990; Ailawadi et al., 2001); food nostalgia (Gao et al., 2020);

Table 4.1 Consumer survey sample characteristics.

Cities	*China*	*Guangzhou*	*Beijing*	*Shanghai*
Participants	529	126	189	214
Female	53.5%	50.0%	53.4%	55.6%
Male	45.9%	50.0%	45.5%	43.9%
Other	0.6%		1.1%	0.5%

and preference for natural foods (Dickson-Spillmann et al., 2011) as potential drivers of sustainable food behaviours. The survey therefore addressed expressions of sustainable consumption, as well as what drives and discourages it.

The first step of the analysis of this survey data provided descriptive statistics (i.e. means) on the various values mentioned in the preceding paragraph. This analysis was performed with SPSSv28. The second step involved an examination of the relationship between our drivers (e.g. self-expression, preference for natural foods) of sustainable consumption and curtailment behaviours as well as intent to engage in sustainable behaviours. This second step adopted partial least squares (PLS) structural equation model analysis using SmartPLS 4.0. More specifically, the analysis was performed first for the full China sample consisting of the three cities (Beijing, Shanghai and Guangzhou) and then separately for the Guangzhou sample. This approach enabled us to evaluate whether there were distinct patterns in the tested relationships between the overall Chinese and Guangzhou samples. A more in-depth explanation of the survey and the results of the analysis are presented in Chapter 5.

Interviewing across the foodscape to understand the framing, marketing and governance of sustainable consumption

Another key part of our methodology was a set of interviews engaging with influential actors in the food systems provisioning Chinese cities, and Guangzhou in particular. Viewing responsibility for sustainable forms of food consumption as distributed in practice – and not sitting solely with consumers and their choices – it is important to engage with the strategies and decision-making of influential actors in food systems. In so doing, listening to the voices of influential regulatory, commercial and third sector actors is important. We drew on the methodology of elite (including corporate) interviewing to do this, which in Geography gained momentum from the early 1990s onwards as a part of the discipline's "cultural turn" (Clark, 1998; Schoenberger, 1991). This approach values the active role of interviews in constructing positioned and situated knowledge of political-economic processes and spaces rather than striving to create an objective, singular and impartial "truth" of corporate and regulatory reality (Hughes, 1999). Use of the method acknowledges the intertwining of culture (including values, norms and traditions) and political-economic structures. Since the method gained traction in Geography and other parts of the social sciences, corporate, regulatory and third sector data has of course become significantly more readily available through online sources. Prior to the interviews, we thus engaged in comprehensive reviews not only of academic literature but also of non-academic online sources, including corporate, governmental and non-governmental websites, policies and reports. However, we also saw value in using interviews to engage with the more *discursive* aspects of organizational roles in food system sustainability and their relations with spaces and practices of consumption. This allowed us to *query* and *interrogate* changing strategies and initiatives of sustainable consumption and to delve more deeply into

the stories behind product ranges and programmes of work that relate in different ways to environmental and social sustainability.

In advance of the main ESRC-funded field research with influential actors in the Chinese food system, we had conducted scoping interviews in the Guangdong region. This involved meetings in March 2018 with six organizations, including a food certification institution, government departments responsible for food quality and safety, NGOs and experts from the research sector. These scoping interviews were conducted in Mandarin and translated into English. They served not only to set the scene for our study, alongside engagement with academic and grey literature, but also to create contacts and networks through which the team could gain access to a wider set of influential food system actors for the main fieldwork. We also reviewed "grey literature" including policy documents and media reports, which helped to establish the settings for sustainable food consumption across China and specifically in Guangzhou. This included engagement with government policy documents from the Ministry of Health, the Ministry of Agriculture, the General Administration of Quality Supervision Inspection and Quarantine, the State Administration for Industry and Commerce and the State Food and Drug Administration. Both the scoping interviews and the review of grey literature painted a picture of embryonic engagement with sustainable food consumption as an object of policy and regulatory strategy, suggesting a predominantly producer-focused set of policies and initiatives with greatest emphasis on issues of food safety. This scoping work also helped to identify some of the standards and labels regarding food sustainability, including ecological and organic standards, and "green food". On the commercial side, the review additionally covered some high-profile retail and marketing campaigns including those conducted online, along with corporate use of Weibo and WeChat. NGO engagement, not only with agricultural producers but also with farmers markets and consumers themselves through consumer education initiatives, was also picked up in this scoping work and literature review.

Table 4.2 details the main set of semi-structured interviews conducted from September to December 2018 as part of the core ESRC-funded research. We aimed to interview a spread of actors across the Chinese urban foodscape, prioritizing Guangzhou, including the following categories of organization: government departments responsible for food procurement and standards; campaigners; leading supermarket chains operating in Guangzhou (by market share); leading wholesalers and wet markets and prominent restaurateurs and alternative food organizations promoting sustainably sourced food. Our sample of 35 listed in Table 4.2 included 2 interviewees representing government departments, 9 representing campaigners and NGOs, 8 from the restaurant and hospitality sector, 14 retailers and wholesalers (including supermarket chains, wholesalers and wet markets) and 2 cultural influencers.

We took different approaches to access each group of respondents. For government officials, we initially contacted them tentatively. We were not able to interview many government officials because issues related to the agricultural and food sectors, especially food safety, represent an extremely sensitive topic in

Table 4.2 Interviews with food system actors.

Interview code including category of organization	*Description of organization*	*Role of interviewee(s)*
C&N.01	Organic farm organization in Pearl River Delta	Marketing manager and general manager
R&H.02	Vegetarian restaurant chain using organic and ecological ingredients	Owner
R&W.03	State-owned, regional wet market chain	Outlet manager
R&W.04	Regional wholesale market	Vice president
C&N.05	Guangzhou-based organic farm	Owner
C&N.06	Guangzhou-based organic farm	Owner
C&N.07	Guangzhou-based organic farm	Owner
R&W.08	Online retailer of ecological and organic food	Marketing staff member
C&N.09	Sustainable food consumption advocacy group	Owner of hotel; activist
C&N.10	Community Supported Agriculture (CSA) activist group	Activists (six)
R&H.11	National restaurant chain with base in Guangzhou and specializing in Cantonese regional cuisine	Owner
G&C.12	Public health department in Guangzhou	Vice director; staff member
R&W.13	A company operating an online Business-to-Business (B-to-B) platform for food supply chains specialized in Guangdong produce	Owner
R&H.14	Restaurant chain specializing in Cantonese regional cuisine	General manager
R&W.15	Regional wet market chain	General manager
R&W.16	Supermarket chain (overseas owned and with large store network in Guangdong)	Outlet manager
R&H.17	Bakery and bistro specializing in ecological and organic products	Owners (two)
R&W.18	Online retailer of ecological and organic food	Founder and owner
R&W.19	National community food market chain with outlets across Guangzhou	Founder and owner
R&W.20	National Chinese-owned supermarket chain	Vice president
R&H.21	National restaurant chain	Regional manager
R&H.22	Regional restaurant chain specializing in Cantonese cuisine	Manager
R&H.23	Hotpot-style restaurant	Manager
G&C.24	National level food and drug administrative department	Staff member
C&I.25	Freelance writer and celebrity in sustainable lifestyle	Activist
R&W.26	A regional neighbourhood store chain	Founder and owner
R&H.27	Luxury hotel in Guangzhou	Chef
R&W.28	Community food retail chain	Outlet manager

(*Continued*)

Table 4.2 (Continued)

Interview code including category of organization	*Description of organization*	*Role of interviewee(s)*
C&I.29	Restaurant specializing in European cuisine	Chef and activist
R&W.30	Educational organization food catering department	Procurement manager
R&W.31	Vending stall in a wet market	Owner
R&W.32	Vending stall in a wet market	Owner
C&N.33	Guangzhou-based organic farm	Owner
C&N.34	Guangzhou-based organic farm	Owner
C&N.35	Guangzhou consumer buying group	Activists (five)

Key to food system actor groupings:
C&N: Campaigner and Non-governmental Organization (NGO)
R&H: Restaurant and Hospitality
R&W: Retailer and Wholesaler
G&C: Government and Civil Society
C&I: Celebrity and Influencer

China. Government officials typically were reluctant to talk via unofficial channels, including to academic researchers. For campaigners and NGOs operating in the field of Alternative Food Networks (AFNs), we approached them by participating in farmers' markets, workshops and seminars they organized. This group proved to be open and informative. For retailers and wholesalers, we contacted them through existing relationships built through previous research projects, as well as by introduction through colleagues at Sun Yat-sen University. The interviews in this group included Community Supported Agriculture (CSA)-based organic retailers and mainstream wet markets, supermarket chains and convenience store chains in Guangdong Province. We accessed the group of restaurant and hospitality participants and cultural influencers through similar means.

We conducted the interviews in a semi-structured format. This enabled us to ask interviewees about their roles in their organizations and the background to the organizations in terms of market niches in the case of commercial actors, regulatory responsibilities in the case of Government departments and initiatives and projects in the case of third sector organizations. In the interviews, we avoided, as far as possible, going in with preconceived ideas, definitions and criteria of sustainable food. Rather, we were interested in understandings of sustainable food emerging through the interviews from the perspectives of the participants. We therefore asked interviewees to tell us what they saw as emerging food consumption trends. We asked about any trends in policy and public discourse regarding food safety and sustainability. We also asked them which criteria and knowledge sources they used in the development of sustainable food policy, product ranges, supply chain strategies, programmes and initiatives. In the case of the commercial interviewees, we asked about their markets and consumer demographics and their relationships to the

middle classes that shape consumption trends. Interviews also touched on the ways in which the interviewees and their organizations seek to actively influence consumption trends and values through programmes of work, product lines and initiatives and through particular tools and tactics. We also asked interviewees to explain their organizations' media strategies, whether through commercial programmes or influencing work on the part of the third sector. Interviews also engaged with participants' understandings of the local, regional, national and wider global contexts in which they are embedded when it comes to values and trends of food sustainability. Participants were also asked to reflect on the opportunities for developing greater food system sustainability, as well as the challenges they confront. We found that some interviews were heavily choreographed, particularly those with large state-run organizations, often in boardrooms and with several members of both our project and the respondents' teams in attendance, and sometimes involving a formal presentation by respondents prior to interview questions and discussion. At these times we were conscious of performing our parts, as "honoured overseas guests" and "distinguished academics" from the most prestigious university in the city, and we were also in these cases conscious of the expectations we assumed they might have. Meanwhile other interviews were less formalized, more open-ended and sometimes involved "look-see" tours, including of wet markets and organic farms. Such scenarios enabled continuation of conversations through, and prompted by, these spaces and enabled the inclusion of some visual dimensions of this research. As well as these visual recordings, data produced through the interviews largely took the form of interview transcripts, where respondents consented to interviews being recorded while field notes documented the different institutional performances around the research process. This interview-based and observational data most directly shapes the content of Chapter 6 on conventional and alternative food systems and sustainability.

Articulating values of sustainable food consumption: engaging consumer voice through interviews in Guangzhou's neighbourhoods

Appreciating the regulatory, commercial and cultural dimensions of the foodscape, established through the food system interviews as the context and "infrastructure" shaping sustainable consumption in Guangzhou, what then do consumers in Chinese cities, particularly citizens of Guangzhou, make of these foodscapes and product ranges? And how do we research the connections they make, consciously or subconsciously, to questions about the environmental and social impacts of these foodscapes and the supply chains provisioning them?

Barnett et al. (2011: 123) see qualitative methods such as interviews with consumers as generating "an understanding of the interpretive mediation of public discourses of ethical consumption into contexts of everyday life". This perspective fits with these authors' argument for understanding discourses as informed by, and informing, practices. While we acknowledge that publicly circulating discourses explicitly naming sustainable consumption are not in evidence in China in the same way as they are in the neo-liberalizing West, we are nonetheless interested

to understand how consumers relate to the existing foodscape and diverse product ranges and how they narrate the food consumption choices they make. We follow Barnett et al. (2011) in not assuming that interview narratives reflect pre-given attitudes. Rather, the accounts and discussions in interviews reflect the navigation of the foodscape and decision-making the respondents engage in through their everyday lives. As Barnett et al. (2011: 80) go on to say when justifying their choice of using group interviews to understand ethical consumption as embedded in practice:

> [T]aking practice seriously does not require doing only various forms of mute observation and disdaining talk-based research as "representational". Quite the contrary, practice theory opens up talk-data and key concepts such as discourse to a narrative-based understanding.

Our intention with assembling our sample of interviewees, as with Barnett et al.'s (2011) study, is not to identify a representative sample of Guangzhou's large and diverse population, but rather to gain a range of different perspectives across the middle classes, defined in a similar way to the survey sample and covering different age categories, residential locations, gender, employment, income groups, household composition and education levels. Annual household income of our sample was between ¥60,000 and ¥229,000.[1] As such, 30 semi-structured interviews were conducted from January to March 2019 across different districts of Guangzhou – Tianhe, Huangpu, Haizhu, Yeuxieu, Liwan, Baiyun, Panyu and Conghua – listed in Table 4.3 and the districts depicted in Figure 4.1. Participants were accessed largely through the research team's professional, social and kinship

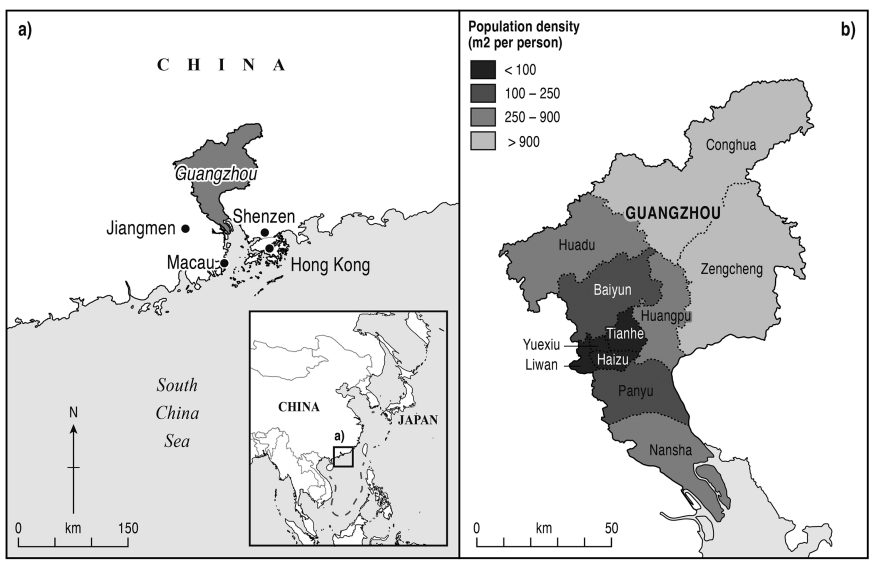

Figure 4.1 Maps of China (a) and Guangzhou (b).

Table 4.3 Interviews with Guangzhou consumers.

Interviewee	*Income category (upper/mass middle-class)**	*Education level*	*Employment hours*	*Current district of residence in Guangzhou*	*Place of birth*	*Gender*	*Age category*	*Household composition*
G.INT.101	Mass	Vocational	Retired	Tianhe	Jiangxi Province HE Country	Female	60–69	Sharing with three generations of family
G.INT.102	Upper	Higher degree	Full-time	Huangpu	Guangxi Province	Female	30–39	Sharing with three generations of family
G.INT.103	Upper	Higher degree	Full-time	Haizhu	Guangdong Province Guangzhou City	Female	30–39	Sharing with three generations of family
G.INT.104	Mass	Vocational	Retired	Haizhu	Guangdong Province Guangzhou City	Female	50–59	Couple
G.INT.105	Upper	Higher degree	Full-time	Haizhu	Guangdong Province Shao Guan City	Female	30–39	Single person
G.INT.106	Upper	Higher degree	Full-time	Haizhu	Liaoning Province Shen Yang City	Female	50–59	Sharing with two generations of family
G.INT.107	Upper	High school	Full-time	Yeuxieu	Henan Province	Female	20–29	Couple
G.INT.108	Upper	High school	Part-time	Liwan	Henan Province	Female	40–49	Sharing with two generations of family
G.INT.109	Upper	High school	Full-time	Yeuxieu	Hubei Province Jing Zhou City	Female	40–49	Sharing with two generations of family
G.INT.110	Mass	High school	Full-time	Liwan	Guangxi Yu Lin City	Female	40–49	Couple
G.INT.111	Upper	Other	Retired	Tianhe	Guangzhou	Female	70–79	Sharing with three generations of family
G.INT.112	Upper	Higher degree	Full-time	Baiyun	Guangdong Province Jiang Men City	Female	40–49	Sharing with three generations of family
G.INT.113	Upper	Higher education	Full-time	Baiyun	Jiang Su Province Changzhou City	Female	50–59	Couple

(*Continued*)

Table 4.3 (Continued)

Interviewee	*Income category (upper/mass middle-class)**	*Education level*	*Employment hours*	*Current district of residence in Guangzhou*	*Place of birth*	*Gender*	*Age category*	*Household composition*
G.INT.114	Upper	Higher degree	Full-time	Tianhe	Shan Dong Province	Male	30–39	Sharing with two generations of family
G.INT.115	Upper	High school	Retired	Tianhe	Guangdong Province Guangzhou City	Female	50–59	Sharing with two generations of family
G.INT.116	Upper	High school	Full-time	Panyu	Guangdong Province Shan Wei City	Male	30–39	Single person
G.INT.117	Upper	High school	Unemployed	Tianhe	Chongqing	Female	50–59	Sharing with two generations of family
G.INT.118	Mass	Higher education	Unemployed	Yeuxieu	Shanxi Province Xi An City	Female	40–49	Sharing with two generations of family
G.INT.119	Upper	Higher education	Full-time	Liwan	Guangdong Province Guangzhou City	Female	40–49	Sharing with three generations of family
G.INT.120	Mass	Higher education	Full-time	Panyu	Guangdong Province Guangzhou City	Female	30–39	Single person
G.INT.121	Upper	High school	Full-time	Haizhu	Guangdong Province Guangzhou City	Female	30–39	Sharing with two generations of family
G.INT.122	Upper	High school	Retired	Huangpu	Sichuan Province Shi Zhu City	Female	50–59	Sharing with two generations of family
G.INT.123	Mass	Higher education	Full-time	Haizhu	Hainan Province Haikou City	Female	20–29	Sharing with friends
G.INT.124	Upper	High school	Full-time	Baiyun	Henan Province Jiaozuo City	Female	30–39	Couple
G.INT.125	Upper	Higher education	Full-time	Tianhe	Guangdong Province Guangzhou City	Female	40–49	Sharing with two generations of family

(*Continued*)

Table 4.3 (Continued)

Interviewee	*Income category (upper/mass middle-class)**	*Education level*	*Employment hours*	*Current district of residence in Guangzhou*	*Place of birth*	*Gender*	*Age category*	*Household composition*
G.INT.126	Upper	Higher education	Full-time	Huangpu	Guangdong Province Guangzhou City	Female	50–59	Sharing with two generations of family
G.INT.127	Upper	Higher education	Full-time	Panyu	Guangdong Province Guangzhou City	Male	40–49	Sharing with two generations of family
G.INT.128	Upper	High school	Unemployed	Tianhe	Guangdong Province Shen Zhen City	Female	40–49	Couple
G.INT.129	Upper	Higher education	Unemployed	Haizhu	Guangdong Province Zhanjiang City	Female	30–39	Couple
G.INT.130	Mass	High school	Full-time	Conghua	Henan Province Zhengzhou City	Female	40–49	Sharing with two generations of family

* According to statistical data in China (REF), annual income between ¥106,000 and ¥229,000 RMB denotes upper middle class, while annual income between ¥60,000 and ¥106,000 RMB denotes mass middle class.

networks, in line with effective strategies identified for accessing participants in qualitative research (Crang and Cook, 2007). The interviews produce narratives on everyday food consumption practice, reflecting on the decision-making and rationales people engage in when they purchase food and incorporate it into their household cooking and diets.

In terms of the composition of the sample, we note that there are only three male participants. This reflects a cultural context in which women tend to be the key household decision-makers when it comes to food acquisition and key practitioners in its preparation. As with much in-depth qualitative research, we recruited 26 participants based on the team's social networks, including those of Sun Yat-sen University students who supported with the fieldwork. We recruited a further four via the researchers' visits to the farmers' markets and who identify as consumers supporting AFNs, though we did not want our whole sample to be comprised those most obviously supporting such initiatives.

Themes in the interviews were designed to capture a range of "vector[s] of responsibility" influencing food consumption values and practices (Barnett et al., 2011: 70). Interviews addressed household food consumption practices, judgments about "good" food and influences on notions of ethicality and environmental and social values. Respondents were also asked to reflect on (and demonstrate) their online practices as consumer-citizens, including how they collected information, shopped and/or reviewed online. Specifically, we asked respondents about their social and economic background and their households before moving on to questions about shopping for food, including the kinds of food purchased, where they shopped (including the kinds of markets and stores) and how these foods are part of everyday life. This reflects the importance of food purchase, as well as consumption beyond acquisition, to issues of sustainability (Goodman, 2013). Interviews also touched on the frequency of cooking at home and eating out. We also asked a set of questions around food values, care and ethics, initially as open-ended questions, asking respondents to consider what matters when choosing ingredients for meals and what matters to them in terms of how that food was produced. Where appropriate, we probed their understanding of food production methods, questions of environmental protection and the livelihoods of farmers and workers. However, first we attempted to allow these issues to emerge through the interview where possible. For example, we asked the question, "When you choose food, is there anything that matters to you about where and how that food was produced?" Where respondents were members of households involving others, we also asked about those other members' food values and considerations. Following the more open-ended discussion on this theme, we did also ask a question about whether there are any foods carrying ethical or sustainability labels that they and/or their household members purchased, and if there were, we then probed into any of those labels mentioned, asking whether these might be locally produced foods, foods carrying animal welfare credentials and/or ecological or organic product ranges. This informed our survey discussed earlier and helped establish whether any product ranges or initiatives discussed by our food system actors had gained traction with respondents as well, and if so, how, and why. We also asked respondents how

they understood healthy food as well as good food, enabling us to make connections between values of environmental and social sustainability and considerations of health and well-being. On the theme of online food consumption, we asked about the different forms that online food consumption can take, including influences of social media, online shopping and banking, information and games. We also were interested in asking respondents about their use of digital devices to aid food purchasing, including QR code scanning and for what purposes.

Another key part of the interviews focused on the influences of memories, traditions and change on respondents' food consumption patterns and practices. We used the tactic of "tell me about" (Valentine, 1997; see also Crang and Cook, 2007), forming questions such as, "Tell me about memories of the kinds of foods you ate growing up", and we probed into the ways in which food memories shape current food choices. We asked interviewees to reflect on differences and/or similarities between how they ate growing up and how they shop, cook and eat now and also delved into issues of affordability of food influencing choices. We extended our questions to consider how food memories may also shape food choices of any other household members, and we sought to establish geographical influences of regional, national and international food cultures on both an individual and a household level. Moreover, we specifically asked respondents to reflect on western as well as Guangdong and wider cuisines. Although we were interested mainly in everyday food consumption practice, we included some questions about consuming food on special occasions and aspirational aspects of consumption, and we closed each interview asking participants whether they would be willing and able to take part in the follow up ethnographic research. Data produced through the consumer interviews, as with those involving food system actors, largely took the form of interview transcripts, where respondents consented to interviews being recorded.

Identifying inflections of sustainability in the ordinary practices of everyday food consumption of Guangzhou

The final part of our methodology involved ethnographic research including "go-along" (Kusenbach, 2003, 2018), accompanied shopping trips and co-cooking sessions with a smaller group of research participants to capture the complexities and nuances of food choices, judgments, engagement with government and corporate ethical initiatives and, most importantly, the ordinary ethics of food purchase and use. As part of this phase, digital ethnography also explored the role of social media and online tools as devices implicated in ethical judgements and the creation of markets for sustainable foods. Twelve household food ethnographies, including both go-along shopping trips and co-cooking with participants following the shopping trips, inspired by Kusenbach's (2003, 2018) methodology, were thus conducted in June and July 2019 to engage with household food consumption in practice, spanning the public foodscape and the private spaces of the home. Participants also provided photo diaries of meals to capture the incorporation of food into everyday life beyond each ethnographic encounter. This was supplemented with records of online shopping and food ordering.

The aim of this ethnographic phase of the study was to embrace the ordinary practices of everyday life in which food consumption is embedded and to show not only forms of consumption involving conscious consumer engagement with environmental and social dimensions of food purchase and use, but also ordinary food choices and uses with environmental and social effects. This part of the research underpins Chapter 7 on sustainable food consumption and the lived experiences of Guangzhou's foodscape. It aligns with Gregson and Ferdous's (2015) argument for attention to ordinary consumption with ethical effects, particularly in global South settings where ethical and sustainable consumption is not always labelled and consciously practised as sustainable. In so doing, our chosen methods for this research phase were strongly influenced by studies of sustainable consumption emphasizing the routine and habitual practices of daily life (Shove, 2011; Warde, 2014). Moreover, our ethnographic work incorporates the six dimensions of consumption identified by Warde (2014) and Evans (2019) – acquisition, appropriation, appreciation, devaluation, divestment and disposal – outlined in Chapter 3. The go-along shopping trips inspired by Kusenbach (2003) helped to capture the importance of the act of food purchase (acquisition) and engagement of Guangzhou citizens with different parts of the city's foodscape. This method has been used in other consumption studies (Thompson et al., 2013) and reflects Goodman's (2013: 258) point that "shopping is . . . ideologically and practically central to the practices of ethical consumption". The co-cooking sessions engaged with how consumers incorporate food into their lives in their private home spaces, shedding light on gendered responsibilities for food preparation (Meah and Jackson, 2013) and the embodied and visceral nature of food appropriation and appreciation (Longhurst et al., 2009; Roe, 2006). This helps our research to address how the embodied nature of food consumption is interwoven with sensory dimensions of care and valuing, including for the self, for the family and for distant producers and environments.

In terms of accessing participants to engage in this ethnographic work, during the interviews with consumers (discussed earlier), there were 12 interviewees willing to participate in accompanied shopping and cooking. However, six of them were eventually unable to take part due to a range of personal circumstances occurring between the time of the interview and the household ethnography. We therefore added six new participants.[2] We aimed to diversify the sample in terms of household income, occupation, household composition, age and gender. Some of these interviewees are acquaintances of our research team, and some were recruited through social and kinship networks of university students. Others were identified by our previous interviewees through a form of "snowballing". We accessed them initially by establishing a WeChat group (similar to WhatsApp), introducing our project and asking them to complete photo diaries of their food consumption over a week. Following this, we then scheduled a day to complete go-along shopping and home cooking. We conducted interviews for extra questions in their homes for those participants not already interviewed as part of the preceding study phase. In most cases, we ate with the participants after cooking, which was hospitality at the insistence of the participants. Each household ethnography (see Table 4.4 for the list of households), combining shopping, cooking and in some cases eating,

Table 4.4 Households included in the ethnographic research.

Participant	*Included in first round of consumer interviews*	*Education level*	*Employment*	*Income category*	*Current district of residence in Guangzhou*	*Place of birth*	*Gender*	*Age category*	*Household composition*
GE1 (G.INT.1.01)	Yes	Not given	Retired	Mass	Tianhe	Jiangxi	Female	Not given	Sharing with three generations of family
GE2 (G.INT.1.14)	Yes	Higher Education	Lecturer at a community college	Upper	Tianhe	Shandong	Male	30–39	Sharing with two generations of family
GE3	No	Masters' degree	Government official	Mass	Panyu	Guangzhou	Female	30–39	Couple
GE4	No	Masters' degree	Retired professor	Mass	Haizhu	Shanghai	Female	60–69	Sharing with two generations of family
GE5	No	Bachelors' degree	Corporate	Upper	Tianhe	Not given	Female	40–49	Sharing with two generations of family
GE6	No	Grade four	Housewife	Upper	Panyu	Guangzhou	Female	60–69	Sharing with three generations of family
GE7	No	Masters' degree	Public sector employee	Upper	Panyu	Guangzhou	Female	30–39	Sharing with two generations of family
GE8 (G.INT.1.26)	Yes	Bachelor's degree	Government official	Upper	Huangpu	Guangzhou	Female	50–59	Sharing with two generations of family
GE9 (G.INT.1.03)	Yes	Teaching qualification	Teacher	Upper	Haizhu	Guangzhou	Female	30–39	Sharing with three generations of family
GE10 (G.INT.1.16)	Yes	High school	Corporate employee	Mass	Panyu	Shanwei	Male	30–39	Single
GE11 (G.INT.1.12	Yes	Higher degree	Lecturer at a community college	Upper	Baiyun	Jiangmen	Female	40–49	Sharing with three generations of family
GE12	No	Masters' degree	Corporate employee	Not given	Tianhe	Zhaoqing	Male	Not given	Sharing with two generations of family

lasted 2.5 to 5.5 hours. In a similar pattern of gender distribution to the sample of consumer interviewees, we included ten females and two males for the ethnographic work. However, for most encounters, male members of the household also joined the conversations and activities. Most participants work in higher education or government fields.

For the go-along shopping trips, some of the issues to address in conversation with participants were suggested to be the location of shopping trips, how the shopping trip fits into daily and weekly life, the choices of retail outlet(s) and the reasons for those choices, the products purchased and any use of digital devices and lists. Issues also concerned how foods are valued, along with considerations of product quality, health attributes, ethical credentials, prices of items and food providence. Conversations with participants were guided around asking respondents about their different considerations of these of these issues and how they are weighed up. This approach aligns with the work of Meah and Jackson (2017), who argue that consumption often involves consumers weighing up multiple considerations, or "vectors of responsibility" as Barnett et al. (2011: 70) refer to them, when they are making purchasing choices and incorporating food into their everyday lives. We used a guidance document that also included prompts for observation of physical spaces, senses, practices and suggestions for sketches to prompt memories when writing up the field diary entries. The latter relates to the work of Wills et al. (2016) on the use of visual methods (see also Clark-Ibanez, 2004, specifically on photo-elicitation interviews).

For the co-cooking sessions, talk-based prompts included asking participants about choices of ingredients and what matters in terms of those ingredients, influences of food memories, and how choices have persisted or changed and why. Prompts also included issues of frugality (e.g. use of leftover foods and recycling). It included questions about use of kitchen space and particular materials and aesthetics and kitchen equipment. Researchers were guided to ask about any food with labels of ethics or sustainability and household members' needs, values and roles in cooking practices and mealtimes. Other prompts were around influences on mealtimes and ingredients choices and brands. Talk-based themes also included consideration of the influence of convenience and routines and work-life, relationships and household dynamics. As with the go-along shopping trips, there were prompts to observe and make sketches of physical spaces and objects in homes, incorporating the use of food storage such as cupboards, fridges and freezers, as well as practices of cooking, frugality, cleaning and waste disposal that might relate to ethical considerations and dimensions of sustainability. Another prompt was to consider any elements of practice that might be part of a performance in front of the researchers.

With the digital ethnography, prompts included asking respondents to demonstrate online browsing, if they have Wi-Fi, what apps they use on their phones to support food shopping, and about their cultural influences. Asking about the use of online recipes and platforms aimed to assess the role of social media and online

Table 4.5 Top ten food bloggers at Weibo (as of 12/12/19).

Weibo blogger	*Follower number*	*Features*
Gourmet TV (*meishitai*)	45103333	Sharing recipes
Li Ziqi	20158636	Rural food and lifestyles
Food Diary (*rishiji*)	18018259	Sharing recipes
Mr. Mizi (*Mizijun*)	13862534	Food broadcasting
Cai Lan	10482037	Gourmet, food history
Kitchening (Xiachufang)	6520549	Sharing recipes
Wenyi	6060321	Sharing recipes
Dianxi Brother	3108781	Local food
Junzhi	2652134	Bakery recipes
Chef Wanggang	2515924	Cooking video clips

tools as devices implicated in ethical judgement and the creation of markets for sustainable foods.

To study how consumers' dietary behaviours are influenced by internet celebrities, and to supplement the digital ethnography, we also gathered all the Weibo posts (a social platform similar to Twitter) made in 2019 by the ten most influential food bloggers (Table 4.5) and conducted a content analysis. During interviews and participant observation with consumers, we asked for their opinions on these food bloggers.

For all phases of the ethnographic research, we followed the guidelines in a flexible manner. We sometimes changed the sequences of the research steps based on local contexts. We typically asked participants to send photo diaries for a week before we conducted the go-along shopping, co-cooking and digital observations with them. Notably, we interpreted questions listed in the guidance document flexibly in order for the fieldwork to capture the broad range of consumption choices and values practised by participants who by and large were unfamiliar with the term "sustainable consumption". Three researchers were involved in each household ethnography, with one person conducting conversations, one observing and taking notes and one taking photos and recording. Data collected through this ethnographic research included the photographs informants provided, photographs and sketches taken in the field, recordings, and video clips, where participant consent was granted, and field notes.

Interview-based and ethnographic data analysis

The interview transcripts and ethnographic field notes were analysed and combined with visual materials using NVivo, with coding initially involving nodes linked directly to our original research objectives as follows: (i) to identify the different institutional forms of sustainable food consumption mobilized in Chinese food systems and their potential as levers for positive change; (ii) to explain consumer agency in sustainable food consumption, including forms intentionally linked to civic action as well as ordinary practices of food consumption with ethical and sustainable effects; and (iii) to delimit and evaluate the cultural influences, trends and

technologies affecting sustainable dimensions of food consumption. There were 19 top level codes grouped into four themes.

The first group of codes derived from the analysis of interviews with the food system actors on the theme of "supply chain priorities, transparency, and traceability" with the six top level codes in that theme as follows: (i) what is happening now regarding sustainable consumption and agrifood ethics priorities; (ii) what is progressing regarding those priorities; (iii) direct food supply; (iv) tracing some food supply chains; (v) tensions; and (vi) power and responsibility. The second and third themes derived from interviews with food system actors and consumers, as well as from the ethnographic work. The second theme was "people" with the six associated codes as follows: (i) demographics; (ii) understandings of sustainability and ethics; (iii) the importance of sustainable consumption and agrifood ethics; (iv) knowledge of primary food production; (v) knowledge of food; and (vi) accessing food. The third theme was "storytelling around food and food relations" with the following three top level codes sitting underneath it: (i) food as a socio-cultural practice; (ii) storying understandings or beliefs; and (iii) modes and approaches of storytelling. The fourth theme, "consumers and priorities, aspirations, practices, and concerns", came out of the consumer-focused research, both the interviews and participant observation. Four top-level codes sitting within this field were as follows: (i) self-care motivations for sustainable consumption practices; (ii) other care motivations for sustainable consumption practices; (iii) motivations for not practising sustainable consumption of food; and (iv) good food.

We then refined our analysis by identifying a larger number of more specific nodes sitting underneath each top-level code. The data in the form of interview transcripts and raw survey data, where participant consent was given, is held in the UK Data Archive (https://reshare.ukdataservice.ac.uk/854444/) in order to create open data from this project and in line with UKRI funder requirements.

The following chapters are all underpinned by the research explained in this chapter, with Chapter 5 reporting and explaining the consumer survey on sustainable consumption values and trends across urban China, including Guangzhou. Then Chapters 6 and 7 delve more deeply into the foodscapes of Guangzhou and the consumption practices of its residents, drawing on the interview-based and ethnographic research.

Notes

1 This range differs from that used to establish the survey sample. While the range covers comparable income levels, the precise parameters for the small qualitative research sample were shaped, at least in part, by which households agreed to participate in the research.

2 The six participants listed in Table 4.4 where it is noted that they also participated in the preceding consumer interviews do not use the same participant code number as any consumer interviewees because we also recorded information of family members in the household ethnographic research. For instance, the present GE1 is G.INT.1.01's partner. In phase 2b, household members additional to the interviewees typically joined the process as they wanted to be good hosts. Regarding the district of residence, it is worth noting that some interviewees have multiple places to live.

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5 Trends in sustainable food consumption

Values and drivers across China

Introduction: surveying trends in sustainable consumption across urban China

This chapter focuses on the findings of our consumer survey outlined in Chapter 4, forming the deductive, quantitative component of our methodology designed to evaluate cognitive dimensions of sustainable consumption and prevailing trends and values. As Chapter 4 has explained, our overall aim with the survey was to establish how consumer characteristics and values affect the extent to which consumers in China engage in behaviours reflective of food sustainability. We assessed consumer characteristics and values of both a self-oriented nature (e.g. health concerns) and an others-oriented nature (e.g. altruism). We also considered two types of consumer behaviour reflective of food sustainability, explained below, which we term sustainable food behaviours for parsimony. We use the terminology of "sustainable food behaviours" throughout this chapter to align with the marketing and policy-focused literature pertinent to surveys and the cognitive aspects of sustainable consumption they seek to engage. However, it is important to note that we see this as *a part* of the wider sphere of sustainable consumption practice, as explained in Chapter 2. Respondents' cognitive and "narrative-based" (Barnett et al., 2011: 80) accounts of consumption, along with values of sustainability mobilized through the food system, are acknowledged as being *interconnected with*, rather than separable from, performed daily practice.

When defining sustainable food behaviour, we followed calls by Prothero et al. (2011) for sustainable consumption research to focus on not only consumption choices (e.g. the choice to purchase an organic product) but also post-consumption decisions (e.g. the choice to compost the waste arising from the consumption of that organic product). Thus, we considered sustainable consumption behaviours such as consuming homegrown or fairtrade labelled goods as well as those concerning disposal flagged by Evans (2019) as vitally important to sustainable consumption practice. Further, we looked at sustainable *curtailment* behaviours, such as *reducing* one's consumption of animal products or dairy. In addition, we explored how consumer characteristics and values impact on consumer intentions to engage in sustainable food behaviours in the future.

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Specifically, we followed two objectives with the survey. First, we sought to establish which sustainable behaviours (consumption and curtailment related) are more prevalent among the middle classes in China in general and Guangzhou specifically. Second, we aimed to establish which personal characteristics of consumers would influence the extent to which middle-class consumers engage in those behaviours today and will do so in future. Overall, our survey sought to complement the other data gathering phases of the research by generating insights into broad-level trends and values of sustainable food consumption and consumers' conscious behaviours before interrogating their deeper embeddedness in ordinary practice of everyday life and identifying some of the quieter articulations of sustainability.

Choosing the drivers of sustainable consumption to research

To determine the drivers of sustainable consumption, we built on the values-beliefs-norms (VBN) theory of environmental concern and behaviour, introduced in Chapter 2. As explained, VBN theory emphasizes the link between values consumers hold and decisions that they make about the environment (Stern et al., 1999). Further, VBN theory proposes three fundamental determinants of environmental concern in people: biospheric altruism, humanistic altruism and self-interest (Dietz et al., 2005). A broad question we aimed to address related to the extent to which sustainable food consumption is driven by altruism, that is, by the intention to benefit the eco-system or the welfare of other human beings, as opposed by self-interest.

Others-oriented consumer characteristics

Even though sustainable food consumption can benefit both the individual and others as well as the environment, research shows that altruism – an "others-oriented" value – is a stronger driver of such consumption than self-interest (Haider et al., 2022). Specifically, studies have found that people whose concerns focus on issues beyond their own immediate interests, that is, those with self-transcendent, pro-social, altruistic or biospheric values, are more likely to engage in pro-environmental behaviour (Steg et al., 2005). On the one hand, research has focused on biospheric (or ecospheric) values defined as a value orientation reflecting concern with non-human species or the biosphere (Dietz et al., 2005). People who consume sustainably for biospheric reasons are concerned, for example, about preventing pollution, protecting the environment, respecting the earth, and achieving "unity with nature" (Steg et al., 2005). On the other hand, humanistic altruism reflects concern for the welfare of other human beings (Steg et al., 2005). Thus, the concerns of people with such humanistic altruism focus on the welfare of others in a form of desire for social justice, equality and reaching a world at peace (Steg et al., 2014).

We measured the prevalence of both socially and environmentally oriented altruistic values using scales from Steg et al.'s (2005) work, which were also more recently used by Van Doorn and Verhoef (2015). Hence, we measured human

altruism as a value using items that reflected agreement or disagreement with the extent to which equality and social justice were seen as a guiding principle in the respondent's life. Meanwhile, we measured a biospheric altruism using items that reflected agreement or disagreement with protecting the environment and preventing pollution. Engagement with altruistic values was deemed important given the incipient importance that alternative food networks (AFNs) play in parts of urban, middle-class China (Martindale, 2021). AFNs comprise small-scale family-based farms focused on localized production and distribution, social justice and fair trade (Tregear, 2011) and are addressed in greater depth in Chapter 6.

Self-oriented consumer characteristics

In contrast to others-oriented values, which are concerned with self-transcendence in the work of Schwartz (1992), self-oriented values arise from the psychological need for self-enhancement. Others-oriented motivations are described as self-transcending because they pertain to the enhancement of others (those others being other people or the environment), while self-enhancement values refer to the improvement of the self via, for example, power and achievement (Dietz et al., 2005; Schwartz, 1992).

In our survey, we considered a range of self-oriented motivations derived from an in-depth analysis of the literature as well as from the qualitative phases of research in this project, reported in Chapters 6 and 7 but conducted before the survey. These were egoistic values, self-expression, self-presentation, price consciousness, health concerns, intentions to be fit, quality consciousness, preference for natural foods and food nostalgia. In those later chapters, we observe some complex ways in which those motivations can shape practices that can in fact have positive effects on the environmental and social sustainability of food systems. For this cognitive component of the research, however, we address these as motivations in and of themselves.

First, we considered *egoistic values*, that is, the concern with people to focus on safeguarding or increasing their own resources. Egoistic values are values related to authority, wealth and social power (Steg et al., 2005). Research shows that while people with strong biospheric values are more likely to be intrinsically motivated to engage in pro-environmental behaviour, people with strong egoistic values are more likely to do so because of extrinsic factors, for example, to satisfy an external demand related to rewards or constraints (De Groot and Steg, 2010). We measured the prevalence of egoistic values using a scale developed by Steg et al. (2005), with items measuring the extent to which ambition and wealth are guiding principles in the respondents' lives.

Second, we focused on two drivers related to the consumers' self-identity or self-view: self-presentation and self-expression. Research shows that consumers make consumption choices based on their self-view (Gonzalez-Jimenez, 2017). Hence, consumption choices that are congruent with one's self-view, for example when such choice reflects one's values, are more likely to be made than those that are not (Malär et al., 2011). In our case, we expected consumers who see

themselves as, for example, environmentally conscious, to make sustainable consumption choices owing to that self-understanding. However, we expected such choices to be driven by two separate motives related to the self: *self-expression* and *self-presentation*. This distinction follows from the theory of attitudes by Katz (1960), according to which people hold and communicate specific attitudes to express their central values to others as opposed to gaining approval in social situations. Self-expression and self-presentation are similar in that they both involve the communication of values to outsiders. They differ in their motivation to do so, that is, a focus on expression versus one of image management. In sum, we considered the possibility that consumers in China would be driven to consume sustainably because doing so reflects their self-view (i.e. a view in which caring for the environment or others plays a central role) rather than because of the potential status gains that such behaviours could deliver, as outsiders notice that consumption and make inferences about its performer. The potential status gains arising from pro-environmental behaviours have been described in research (see, e.g., Griskevicius et al., 2010), who showed that conspicuous displays of altruism can help build and maintain prosocial reputations.

Third, we considered the respondents' *price consciousness*, that is, the willingness of consumers to spend time and energy to shop around to purchase (grocery) products at the lowest price (Lichtenstein et al., 1993). We used the scale by Ailawadi et al. (2008), which includes statements such as "to me, price is important when I choose a food product". Fourth, we accounted for participants' *intentions to be fit* (Verstuyf et al., 2012), which was centred on a person's intrinsic motivation to stay fit and healthy (e.g. "I want to keep fit"). Fifth, we considered *quality consciousness*, that is, the extent to which a consumer prefers high-quality products rather than compromising on quality and buying at a low price (Ailawadi et al., 2001). We adopted established scales from the sources presented in brackets (e.g. "Quality is decisive for me when buying food").

Finally, we measured preference for natural foods and food nostalgia. We generated statements from those themes to measure, first, preference for natural foods, drawing on Dickson-Spillmann et al. (2011), for example, "I try to eat foods that do not contain additives". *Food nostalgia* is the extent to which people want to maintain a stable food taste and refuse to accept food made from non-traditional ways (Autio et al., 2013). This entails statements such as "Food makes me think of precious times in the past", which we adapted from the work of Gao et al. (2020).

As outlined in Chapter 4, we gathered our quantitative data through a web-based survey of middle-class consumers in Beijing, Shanghai and Guangzhou in 2021, with a total of 529 responses. To measure our sustainable behaviours, we adopted the distinction used in the work of Dermody et al. (2018) between sustainable consumption and curtailment behaviours. We took their original list and considered the applicability of that set of behaviours to the Chinese context. These considerations led to a final list of sustainable consumption behaviours that we used in our research (Table 5.3). That list covered the following behaviours: eating home grown food, organic/free-range/ecological food, food that is certified as pro-poor, fair trade, or family agriculture, food which is locally/regionally grown, vegetarian or vegan

food, food that is in season, home cooked food, more fresh food (e.g. fruits and vegetables), and food that is produced in a traditional way. Similarly, the final list of sustainable curtailment behaviours (Table 5.4) covered eating lower quantities of animal products (e.g. meat or eggs), eating lower quantities of milk and dairy products and eating less processed food. Further, the list of curtailment behaviours also covered behaviours focused on minimizing household waste through: using fewer bags when you go food shopping, bringing your own bag when you do food shopping, reusing food containers (e.g. from takeaway food), reducing food waste at home (e.g. by using up leftovers), composting kitchen waste, choosing products with less or better packaging (e.g. paper instead of plastic), ordering less and/or taking doggy bags home when visiting a restaurant. Finally, we measured intentions to engage in sustainable behaviours related to food in future using two original statements: "I will increase the amount of sustainable/ethical food that I buy in the next 12 months" and "I will reduce household food waste/trash in the next 12 months".

Contemporary and future-oriented patterns of sustainable consumption behaviours across urban China

Aggregated scores on sustainable behaviours today and in the near future

Table 5.1 presents the aggregated scores for sustainable consumption behaviours (SCOB) and sustainable curtailment behaviours (SCUB) in China overall as well as individually for the three cities of Guangzhou, Beijing and Shanghai. As introduced earlier, the list of SCOB covered the following behaviours: eating home grown food, organic/free-range/ecological food, food that is certified as pro poor, fair trade or family agriculture, food that is locally/regionally grown, vegetarian or vegan food, food that is in season, home cooked food, more fresh food (e.g. fruits and vegetables) and food that is produced in a traditional way. The list of SCUB covered eating lower quantities of animal products (e.g. meat or eggs), eating lower quantities of milk and dairy products as well as eating less processed food. Further, the list of SCUB also covered behaviours focused on minimizing household waste through: using fewer bags when you go food shopping, bringing your own bag when you do food shopping, reusing food containers (e.g. from takeaway food), reducing food waste at home (e.g. by using up leftovers), composting kitchen waste, choosing products with less or better packaging (e.g. paper instead of plastic), and ordering less/taking doggy bags home when visiting a restaurant.

Both the scores for China and the three cities taken individually show a positive tendency towards engagement in SCOB, as all mean scores fall above the midpoint of 2.5 (we used four-point Likert-type scales where scores of 1 reflected "never" and 4 "always"). Interestingly, Guangzhou presents the higher value (2.98) compared to China as a whole as well as the other two cities. In terms of SCUB, a similar picture emerges, as all scores lie above the midpoint of 2.5. Again here, Guangzhou respondents deliver the highest score on SCUBs (2.97) compared to both China and the other two cities taken individually. Overall, the data show

Table 5.1 Aggregated mean scores for Sustainable Consumption Behaviours (SCOB) and Sustainable Curtailment Behaviours (SCUB).

Sample	*China*		*Guangzhou*		*Beijing*		*Shanghai*	
Frequency of engagement in sustainable food behaviours measured on 4 point scales (1 = never; 4 = always)	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
Sustainable consumption behaviours (SCOBs) include eating home grown food, organic/free-range/ ecological food and food which is locally/regionally grown	2.93	0.40	2.98	0.45	2.91	0.40	2.92	0.39
Sustainable curtailment behaviours (SCUB) include eating lower quantities of animal products (e.g. meat or eggs) as well as behaviours focused on minimizing household waste through, e.g., using fewer bags when you go food shopping and choosing products with less or better packaging.	2.92	0.45	2.97	0.52	2.91	0.46	2.91	0.46

that respondents in our survey samples currently positively engage in sustainable consumption and curtailment behaviours, with Guangzhou leading the trend.

The high prevalence of sustainable food behaviours in the middle-classes of Guangzhou may reflect the economic development that China has undergone over the past decades and specifically the fact that the city of Guangzhou enjoys a relatively high GDP at purchasing power parity, even by international standards (Oxford Economics, 2016). As cities grow economically, and as we explore further and ethnographically in Chapter 7, their people experience a shift in food consumption preferences from eating to satiety to eating well (Zhong, 2023). This is particularly true of the wealthier middle classes. The wish to eat well may explain why Guangzhou is a centre in Southern China known for entrepreneurial advancement of AFNs (Zhong et al., 2022), as detailed in Chapter 6. Furthermore, Guangzhou has a history of openness to migration, which Chapter 7 shows has fostered, for instance, migrants cooking foods from their hometowns, a form of sustainable food consumption shaped both by the desire on the part of migrants to recreate the food of the towns and regions of their origin and the mobilization of hometown discourses by NGOs explained in Chapter 3.

With regard to future intentions to engage in sustainable behaviours (ISB) (see Table 5.2), data from both urban China more broadly and Guangzhou specifically show mean scores of above 4 on a 5-point Likert scale ranging between scores of 1 reflecting "strong disagreement" and 5 reflecting "strong agreement" with the two statements presented: "I will increase the amount of sustainable/ethical food that I buy in the next 12 months", and "I will reduce household food waste/trash in the next 12 months". Similar to SCOB and SCUB, the mean value in Guangzhou (4.40) is higher than that in China as a whole as well as in the two other cities considered individually. These scores suggest that individuals are not only engaging in sustainable food behaviours now but they are also keen to increase their engagement in them in the near future, especially in Guangzhou. This behaviour may be shaped by some of China's recent educational programmes on reducing waste and protecting resources (see Chen and Liu, 2022), though imperatives to reduce food waste are shown by these authors to be more connected to household thrift.

Overall, the data suggest that middle-class consumers in China and specifically Guangzhou are both engaging and willing to engage in sustainable behaviours. These entail both consumption behaviours, that is, a "better" kind of consumption, and curtailment behaviours, that is, the creation of less waste through consumption. This picture presents a challenge to suggestions that discourses of sustainable consumption are lacking in China. Moreover, given the leading role that Guangzhou takes as a centre in Southern China for entrepreneurial advancement of Alternative Food Networks (AFNs) (Zhong et al., 2022), we would make the case that the data for Guangzhou may be taken as a "bellwether" for the future extent of sustainable food behaviours in the whole of China.

Table 5.2 Aggregated mean scores for future intentions to engage in sustainable behaviours (ISB) in the next 12 months.

Sample	*China*		*Guangzhou*		*Beijing*		*Shanghai*	
Extent of agreement measured on 5 point scales (1 = strongly disagree; 5 = strongly agree)	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
Intentions to engage in sustainable behaviours (ISB) were measured based on agreement to two items: (1) *I will increase the amount of sustainable/ethical food that I buy in the next 12 months*; (2) *I will reduce household food waste/trash in the next 12 months*.	4.25	0.53	4.40	0.49	4.15	0.53	4.26	0.47

The extent to which specific sustainable food behaviours are performed today as well as intentions to perform them in the near future

Table 5.3 shows detailed mean scores for specific sustainable consumption behaviours (SCOB) in China as a whole as well as for the three cities. Scores were measured along a spectrum ranging from 1 to 4 (never (1)/occasionally (2)/often (3)/always (4)). Overall, the data highlights that, for both China and Guangzhou, consumers engage in all of SCOBs at least occasionally, as all mean scores are above 2. This suggests that Chinese consumers are willing to engage in sustainable food practices.

The data highlights that in particular "eating home cooked food" and "eating more fresh food" are key SCOB in China and in Guangzhou. Consumers in China and Guangzhou also value particularly "eating food that is locally/regionally grown" as well as "more fresh food". Interestingly, these values are highest among consumers from Guangzhou. Scores for these SCOBs all lie above 3, thus reflecting behaviours in which people engage at least frequently in comparison. This finding is substantiated by our qualitative research on sustainable consumption practice reported in Chapter 7, through which participants in Guangzhou expressed their preference for fresh and some local foods, many of which are often obtained from local wet markets (see also Zhong, 2023). It is worth noting that the reasons for a preference for fresh and locally grown food may not be related to a concern explicitly for environmental and social sustainability, but rather with public concern about food safety, which is widespread in China (Jin et al., 2020). Moreover, our qualitative research shows that freshness is the primary concern when choosing food on the part of the middle classes we studied, which may suggest that home-cooked food is a vehicle for guaranteeing food freshness to its buyer rather

Table 5.3 Sustainable Consumption Behaviours (SCOB) data by items.

SCUB data by items (Measured on a 4 point basis where 1 = never and 4 = always)	*China*	*Guangzhou*	*Beijing*	*Shanghai*
Eating home grown food	2.45	2.55	2.39	2.43
Eating organic/free-range/ecological	3.01	3.02	3.02	3.00
Eating food that is certified as pro poor, fair trade, family agriculture	2.64	2.77	2.61	2.59
Eating food which is locally/regionally grown	3.17	3.28	3.12	3.16
Eating vegetarian or vegan food	2.38	2.39	2.38	2.38
Eating food that is in season	3.16	3.10	3.19	3.15
Eating home cooked food	3.23	3.28	3.21	3.22
Eating more fresh food (e.g. fruits and vegetables)	3.36	3.41	3.30	3.38
Eating food that is produce in a traditional way	2.98	3.00	2.95	2.99

than a consequence of people's biospheric or human altruistic concern. That difference notwithstanding, this imperative can still have sustainable effects and needs to be evaluated from that angle, hence the importance of complementing our quantitative research on the cognitive dimensions of consumption with practice-focused ethnographic research capturing "doings" as well as "sayings" and some of the infrastructural and food system aspects of sustainable consumption.

In contrast, "eating home grown food" and "eating vegetarian or vegan food" lie between 2 (occasionally) and 3 (often) in both China and Guangzhou. These results suggest that such consumption options are engaged in and generally seen as positive by middle-class consumers in China and Guangzhou yet less frequently than are the alternatives previously mentioned. This may be associated with the phrasing of the question that asked explicitly about consuming vegetarian and vegan food, which is less common when it comes to people eating food labelled as such and associated with those diets, whereas the consumption of vegetables, particularly leafy vegetables, is a cultural norm in Guangzhou (see Zeng et al., 2024). The relatively lower prevalence of eating homegrown food is in line with our qualitative findings discussed in Chapter 7, which suggests that only a small number of respondents grow their own food in an urban context with limited affordable opportunities to engage in this practice. Indeed, urban spaces in such Chinese megacities have seen vast development and rising real estate prices over the last decades (Liu and Ou, 2022), hence making the development of agricultural activities within the city a difficult endeavour for consumers, even if they are interested in such practices. Meanwhile, the lack of a focus on vegetarian or vegan food reflects a generally slower trend towards vegetarianism/veganism in China compared to the United Kingdom, for instance.[1]

Overall, the findings on SCOB show that consumers in China and Guangzhou report already frequently engaging in a range of sustainable consumption behaviours in relation to their food. Strikingly, the scores for Guangzhou are, except for "food that is in season", consistently higher than those for the other two cities. The findings overall suggest a potential leadership position of Guangzhou middle-class citizens relative to wider urban populations across China when it comes to sustainable food consumption behaviours.

Table 5.4 shows detailed mean scores for specific sustainable curtailment behaviours (SCUB). The data highlights that, in particular, minimizing waste "by reducing food waste at home", "by bringing your own bag when you do food shopping" and "by ordering less/taking doggy bags home when I visit a restaurant" are key SCUB in both China and Guangzhou. These scores are very similar in China and Guangzhou, and all lie above 3 in the scale, that is, between "often" and "always".

In contrast, "eating lower quantities of animal products" and "eating lower quantities of milk and dairy products" is mostly around the midpoint (2.48/4 to 2.38/4) of the scale in China and Guangzhou (2.57/4 to 2.46/4), suggesting that such behaviours are performed by middle-class consumers in China and Guangzhou between occasionally (2) and often (3), thus less frequently than the behaviours previously mentioned. These findings are consistent with our findings on SCOB showing that consumers are relatively less often looking for, at least labelled

Table 5.4 Sustainable Curtailment Behaviours (SCUB) data by items.

SCUB data by items (Measured on a 4 point basis where 1 = never and 4 = always)	*China*	*Guangzhou*	*Beijing*	*Shanghai*
Eating lower quantities of animal products (e.g. meat or eggs)	2.48	2.57	2.42	2.49
Eating lower quantities of milk and dairy products	2.38	2.46	2.39	2.33
Eating less processed food	2.70	2.81	2.69	2.64
Minimizing household waste/trash . . . by using fewer bags when you go food shopping	3.05	3.06	3.05	3.04
Minimizing household waste/trash . . . by bringing your own bag when you do food shopping	3.19	3.19	3.14	3.25
Minimizing household waste/trash . . . by reusing food containers (e.g. from takeaway food)	3.12	3.16	3.12	3.10
Minimizing household waste/trash . . . by reducing food waste at home (e.g. by using up leftovers)	3.19	3.23	3.25	3.11
Minimizing household waste/trash . . . by composting my kitchen waste	2.78	2.82	2.74	2.79
Minimizing household waste/trash . . . by choosing products with less or better packaging (e.g. paper instead of plastic)	3.10	3.14	3.06	3.11
Minimizing household waste/trash . . . by ordering less/taking doggy bags home when I visit a restaurant	3.24	3.24	3.23	3.25

versions of, vegetarian or vegan food alternatives. Similarly, it is also possible that some consumers in our sample are indeed reducing the amount of meat they eat. However, this may not be because of sustainability concerns but rather a consequence of the relatively high proportion of migrants living in Guangzhou. This aspect may be relevant because of research showing that migrants often suffer from food anxiety (Liu et al., 2013) as they fail to encounter the quality of meat that they are used to from their hometowns and regions. Indeed, our findings discussed in Chapter 7 highlight that many migrants to Guangzhou bring back meat from their hometowns when they go there to visit. As for dairy consumption, the relatively moderate scores on this question may be related to the fact that, while recent generations in China have increasingly included milk products into their diet, dairy consumption remains relatively low compared to other countries worldwide (Ma, 2022). As such, the baseline dairy product consumption may already not be very high, hence not motivating Chinese consumers to lower it further. In sum, our findings show that consumers in China as well as in Guangzhou are indeed willing to consume more sustainably yet not specifically by refraining from consuming animal products.

As for household waste, Chinese and Guangzhou consumers already take steps to reduce it, both at home and in the supermarket or at restaurants. However, composting kitchen waste is a relatively less popular measure, possibly because of the need for outside space to engage in composting. Our ethnographic research highlighted that for many middle-class respondents they live in homes with small kitchen spaces. This observation, and reasons behind it, corresponds to the SCOB related to the growing of food at home. Both composting and growing food at home require additional space, which comes at a premium in large cities. The importance of space ties in with the notion that Chinese consumers in urban areas rely on abandoned buildings or public areas to engage in urban agricultural practices (Fang et al., 2023). For instance, this includes the establishment of school gardens, home micro-gardens and agricultural spaces in populated places (Wang et al., 2021).

Finally, Table 5.5 presents the detailed mean scores regarding intent to engage in sustainable behaviours in the next 12 months. Middle-class consumers both across urban China and particularly in Guangzhou show positive intentions to engage in sustainable consumption and curtailment behaviours in the near future, as their scores lie above the 4 out of 5 mark. In particular, the intention to engage in curtailment behaviours is higher than consumption behaviours in both China and Guangzhou. Furthermore, the data here again consistently show higher scores from middle-class consumers in Guangzhou compared to those in the other two cities. These relatively high intentions to increase both sustainable consumption and curtailment behaviours may reflect a growing concern for sustainability among Chinese middle classes. However, the higher intentions we find for increasing curtailment behaviours, compared to consumption behaviours, may also be driven by financial considerations, as the acquisition of sustainable foods often entails an extra financial effort while the reduction of food waste does not. Finances may play a role here, as part of the lifestyle of Chinese middle-classes entails increasing

Table 5.5 Intentions to engage in sustainable behaviours (ISB) by item.

Intentions to engage in SCOB and SCUBs Measured on a 5 point basis where 1 = strongly disagree and 5 = strongly agree)	*China*	*Guangzhou*	*Beijing*	*Shanghai*
I will increase the amount of sustainable/ethical food that I buy in the next 12 months	4.09	4.28	3.91	4.14
I will reduce household food waste/trash in the next 12 months	4.42	4.52	4.38	4.38

expenses for their children's education and housing to name a few spheres of economic concern (Liu and Ou, 2022; Ponzini, 2020).

Drivers of sustainable consumption across urban China: identifying values and consumer dispositions

We move on now to establish the drivers of these patterns of SCOB and SCUB both for urban China more broadly and for Guangzhou specifically. Figure 5.1 shows these drivers of sustainable consumption and curtailment behaviours as well as future intention to increase sustainable food behaviours for the overall Chinese sample, which includes the three tier 1 cities Beijing, Shanghai and Guangzhou. We then explain the relationships between the drivers and behaviours depicted in this diagram, exploring in turn the significance of "others-oriented" and "self-interest" motivations.

The influence of others-oriented motivations on current and future behaviours – China

Our findings on the impact of others-oriented motivations on sustainable consumption and curtailment behaviours as well as on intentions to increase those in the future are striking. As expected, having altruistic values increases someone's intentions to engage in sustainable food behaviours in future. The perhaps unexpected findings relate to how biospheric and altruistic values affect current sustainable

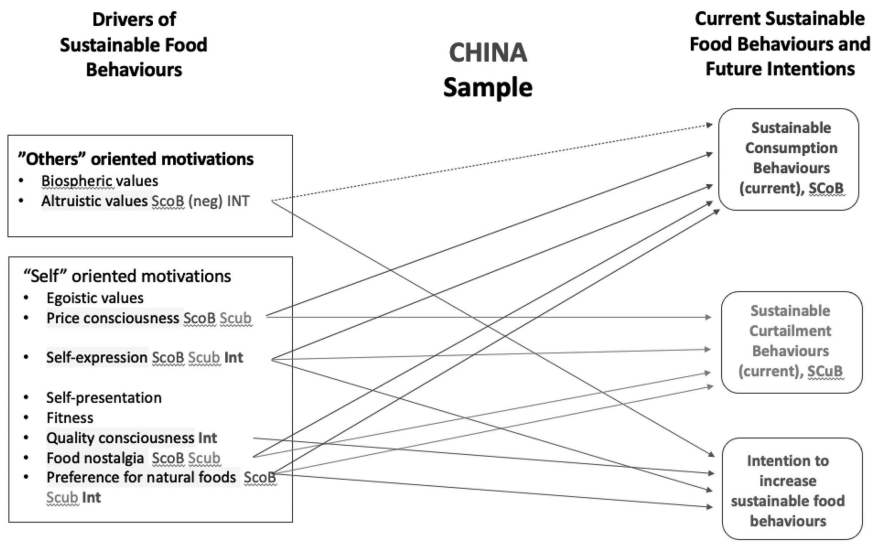

Figure 5.1 Drivers of current sustainable food behaviours and intentions to increase them for urban China.

food behaviours. Specifically, across urban China, we find that having biospheric values (i.e. valuing nature and the environment) does not lead people to perform more sustainable food behaviours, while having altruistic values (i.e. caring for other people's welfare) makes people engage less – and not more – in sustainable food behaviours. We consider these findings in turn.

First, we find that people with higher biospheric values in our sample do not engage in more sustainable consumption or curtailment behaviours than those with lower values. This finding is surprising because according to the literature people whose concerns focus on issues beyond their immediate own interests, that is, those with self-transcendent, prosocial, altruistic or biospheric values, are more likely to engage in pro-environmental behaviours (see, e.g., Dietz et al., 2005; Steg et al., 2005). However, it is possible that biospherically minded middle-class consumers in our sample may not engage in sustainable food behaviours because of scepticism around green labelling in China (Leggett, 2020). "Green scepticism", a tendency towards disbelief in green promises, arises as consumers in China do not see green consumption choices (such as buying organic or fairtrade food) as able to make a meaningful contribution to improving the state of the environment. Empirically, such scepticism has been demonstrated in reactions to green advertising in China (Luo et al., 2020). Green scepticism may reflect the lack of trust in state regulation around sustainable consumption choices, and research has shown that such scepticism reduces the amount of green food consumption choices (Rossi and Rivetti, 2023).

Second, we find that altruistically minded people engage in less sustainable food consumption than those with a lower altruistic orientation. It is possible that the green scepticism discussed earlier also plays a role in these reactions. This finding may be explained by the notion of psychological reactance (Brehm, 1966). Reactance is a cognitive bias that describes an extreme reaction in someone as they see their freedom of choice threatened (Hinsch et al., 2021). In the context of green consumption, consumer freedom of choice may be restricted by what they perceive as the lack of availability of "true" sustainable alternatives caused by green scepticism. In such cases, consumers with higher altruistic values may rebel against the performance of ostensibly sustainable behaviours as they find them unable to improve the lives of, for example, the farmers producing those sustainable products. However, it is interesting also to note that altruistic consumers do indeed show higher intentions to embrace food-related sustainable consumption behaviours in the future, compared to less altruistic ones. This finding suggests that altruistic consumers may see green regulation as currently improving.

The influence of self-oriented motivations on current and future behaviours – China

In contrast to others-oriented motivations, we find a range of positive effects of self-oriented motivations on sustainable food behaviours. Our findings show an effect of price consciousness, self-expression, quality consciousness, food nostalgia

and preference for natural foods on sustainable food behaviours. Meanwhile, we do not find that egoistic values or fitness considerations impact sustainable food behaviours.

Price consciousness shows a positive association with both sustainable consumption and curtailment behaviours. This finding may be explained by potential thrift behaviour reflected in the Chinese value of frugality (Zanasi, 2015). For instance, in our survey, cooking home cooked and farm foods, including from wet markets, are part of sustainable food consumption practices. These food practices may in fact be more affordable in China when compared to buying more processed foods in the supermarket (Todayonline, 2020). Furthermore, eating less processed foods and fewer animal products (e.g. proteins), which are generally more expensive than carbohydrate rich foods (Drewnowski, 2010), may also fit the narrative that ties SCOB and SCUB with potential thrift motives. Noteworthy, though, is the fact that our participants still appear to value organic foods, although these are generally more expensive. This suggests that while Chinese consumers are price conscious, they may not be willing to compromise fully on organic foods. Moreover, buying from trusted vendors that assure the quality and safety of the food also emerged as criteria that motivated consumers to pay extra, as evidenced in our interviews discussed in Chapter 7.

Our findings on the impact of *self-expression* and *self-presentation* as drivers of sustainable food behaviours paint an interesting picture. They show that self-expression leads to sustainable consumption and curtailment behaviours as well as intentions to increase sustainable food behaviours in the future while self-presentation does not. Individuals who behave sustainably for self-expression purposes derive satisfaction from expressing attitudes appropriate to their personal values (Katz, 1960). For them, behaving sustainably is a consequence of intrinsic desires (Snyder and DeBono, 1985). In contrast, individuals who behave sustainably for self-presentation purposes do so to gain approval in social situations. Griskevicius et al. (2010: 392) called this phenomenon "going green to be seen" as he found evidence for status-related motivations to consume sustainably among American consumers. We do not find evidence for the same phenomenon in China. Instead, our findings show that the middle classes in China engage in sustainable food behaviours to communicate their self-related central beliefs, attitudes and values (Wilcox et al., 2009).

We find no association between *fitness considerations* and sustainable consumption behaviours. This lack of an association shows that consumers in China who seek to be fit do not expect sustainable food behaviours such as consuming organic food or less meat to deliver that benefit. Instead, they do expect such behaviours to deliver on food with fewer additives as elaborated below.

We find *quality consciousness*[2] not to drive current sustainable food behaviours but indeed intentions to increase such behaviours in the future. Arguably consumers may perceive that currently sustainable foods may not live up to the expected quality standards. This notion ties in with the idea of green scepticism

(Luo et al., 2020). However, the positive future intent suggests that they are more optimistic about the future in terms of sustainable foods satisfying their quality expectations. Interestingly, as later shown in Chapter 7, food from migrant respondents' hometowns was perceived as higher-quality food, thus potentially explaining why the foods available in large urban centres may not live up to their expected standards.

Food nostalgia shows a positive association with both sustainable consumption and curtailment behaviours. This finding suggests that positive food associations from the past motivate consumers to engage in sustainable food practices in the present. Indeed, food can drive various sensations, and it can take consumers back in time and be part of their identity (Baker et al., 2005; Locher et al., 2005). For instance, food nostalgia can be tied to consumers' food related memories that are also part of their racial identities. As previously mentioned, sustainable food is associated with consumers' self-expressive tendencies. Hence, Chinese consumers' nostalgic feelings may be linked to a positive self-view, which is also linked to sustainable food practices. In addition, many urban residents are rural-to-urban migrants. Food memories (e.g. nostalgia) about their rural pasts can motivate them to seek more sustainable foods such as homegrown vegetables (Si et al., 2019; Zhong, 2023). This notion also emerged in our interviews (see Chapter 7), as participants expressed a wish to consume their hometown food regularly. Interestingly, we find no association between food nostalgia with intention to increase sustainable behaviours in the future. Potentially that is because current consumption and curtailment behaviours are already high in the sample. Moreover, it may also be because hometown and homegrown foods may not explicitly be associated with environmentally sustainable consumption per se, which reinforces the importance of recognizing quieter, unlabelled forms of sustainable consumption practice.

Lastly, *preference for natural foods* shows a positive association with sustainable consumption and curtailment behaviours as well as consumers' intention to increase sustainable food behaviours. This finding is not surprising as sustainable food consumption and curtailment behaviours are generally associated with healthier lifestyles. Such lifestyles are exemplified by lower consumption of processed foods and animal products, and eating more organic and homegrown food (see, e.g., Rock et al., 2020), which were all represented in the sustainable behaviours measured in our survey. Indeed, such trends, regarding organic foods, had been previously identified in China (Li et al., 2019). This finding also ties in with the concept of Yangsheng "nourishing life", discussed in Chapter 7, suggesting that health preservation and healthcare are part of "traditional" Chinese culture.

The influence of others-oriented motivations on current and future behaviours – Guangzhou

Figure 5.2 shows the drivers of sustainable consumption and curtailment behaviours as well as future intention to increase sustainable food behaviours for the survey respondents in Guangzhou.

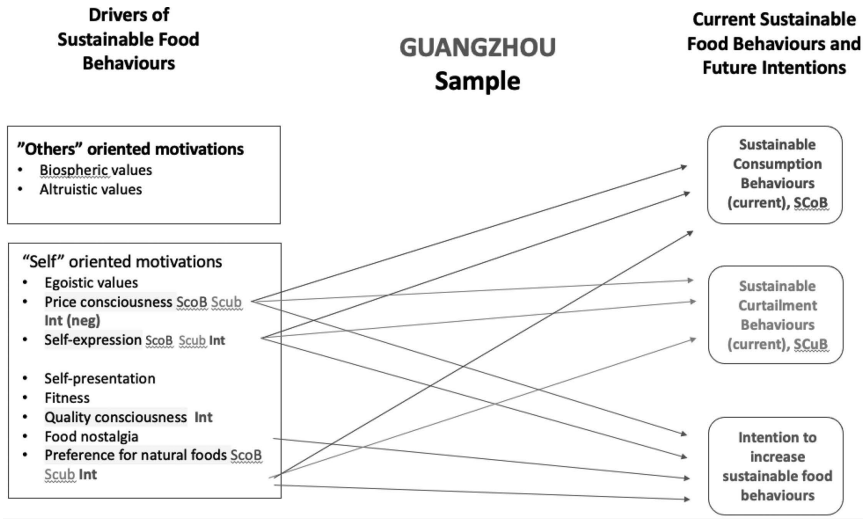

Figure 5.2 Drivers of current sustainable food behaviours and intentions to increase those in Guangzhou.

Our findings in Guangzhou show no effect of others-oriented motivations on sustainable food behaviours. Specifically, in Guangzhou, having neither *biospheric values* nor *altruistic values* leads to increased sustainable food behaviours. Although initially surprising, the finding on biospheric values is consistent with the overall Chinese sample. In other words, neither in China as a whole nor in Guangzhou do middle-class consumers engage in sustainable food consumption to "save the planet". This finding may be explained by the intention-behaviour gap, as Chinese consumers, including those in Guangzhou, are increasingly aware of the altruistic value of consuming products that help others, but there may still be barriers for translating this awareness and intent into actions (Qi et al., 2020).

The Chinese sample showed a negative effect of altruistic values on sustainable consumption behaviours, potentially reflective of a disbelief that such consumption will indeed deliver the intended benefits. Meanwhile, for Guangzhou, there is no relationship between altruistic values and sustainable consumption. Similarly, altruistic values do not seem to motivate middle-class consumers in Guangzhou to increase their intention to engage in sustainable food behaviours either. We explore these patterns below.

The influence of self-oriented motivations on current and future behaviours – Guangzhou

In contrast to others-oriented motivations, we find a range of positive effects of self-oriented motivations on sustainable food behaviours in Guangzhou as well. As for the Chinese sample, the findings do not show an effect of *egoistic values* on

sustainable behaviours in the Guangzhou sample. As elaborated earlier, as an egoistic value orientation is a context unspecific general construct, a potential impact of egoistic values on such food behaviours may not have been detected in our data.

As is the case for the full urban China sample, *price consciousness* is positively associated with both sustainable consumption and curtailment behaviours in Guangzhou. Sustainable behaviours such as eating home-cooked or farm foods purchased from wet markets may be performed not because of their explicit associations with environmental sustainability but because they are cheaper alternatives. Hence, consistent with the Chinese sample, this finding may be explained by thrift seeking, which is associated with the Chinese value of frugality (Zanasi, 2015) and which aligns with quieter forms of sustainable consumption observed in other regions of the world and introduced conceptually in Chapter 2 (McEwan et al., 2015; Smith et al., 2015). Recent research further supports our findings as it shows that consumers with high price sensitivity perceive that the benefits of organic products (e.g. high quality, good taste and environmentally friendly) are not worth the higher price. However, consumers with low price sensitivity may focus on the benefits of organic food and ignore the premium price point (Xing et al., 2022). In sum, our findings paint an interesting picture according to which sustainable food behaviours are performed by middle-class consumers even if not motivated explicitly by intentions to protect planetary health and distant others producing and distributing food.

As for China more broadly, in Guangzhou, *self-expression* shows a positive association with all three outcome variables related to sustainability, namely, sustainable consumption and curtailment behaviours as well as consumers' intention to increase sustainable food behaviours. As mentioned earlier, this finding suggests that consumers in China as well as specifically in Guangzhou use sustainable food practices to communicate their self-view to others. This finding further substantiates the notion of food consumption as a means of constructing a consumer's identity, introduced conceptually in Chapter 2 and building on the work of Bell and Valentine (1997). Our findings suggest that across urban China, sustainable food consumption is a means to represent who consumers are and the identities to which they aspire. As a next step, a consumer may then engage in self-expression to reflect socio-cultural identities tying in with sustainable consumption practice (Evans, 2019) As for the Chinese sample, among consumers in Guangzhou, *self-presentation* was not associated with current or future sustainable food behaviours. Thus, further validating the idea that in terms of sustainable consumption and the self, consumers focus on using consumption to express their identity (i.e. for self-expression purposes) rather than to gain acceptance by others via performing "the right" behaviours in public (i.e. for self-presentation purposes).

Also, as with the overall Chinese sample, the findings from Guangzhou do not show an association between *fitness considerations* (e.g. how much value they attach to being physically fit) and sustainable consumption behaviours. Hence, the samples provide a consistent pattern on this phenomenon. As in China, the fitness benefits of sustainable consumption behaviours play no role in the extent to which consumers in Guangzhou engage in them.

Consistent with the Chinese sample, for consumers in Guangzhou, *quality consciousness* shows a positive association with their future intention to increase sustainable food behaviours. However, as in the Chinese sample, this effect is not evident in current sustainable consumption behaviours. In other words, quality conscious middle-class consumers in Guangzhou do not engage in sustainable consumption behaviours more frequently than less quality conscious ones. A potential explanation here is that consumers in Guangzhou do not currently see a quality benefit in sustainable food consumption choices. Interestingly, we do find an association between quality consciousness and intentions to increase sustainable food behaviours in future. This discrepancy may show that middle-class consumers are becoming aware of the quality benefits that sustainable food consumption behaviours do entail. Thus, they may be growing more aware that their current practices are not "ideal" and thus considering a positive change in the future. Such change would allow middle-class consumers to foster their green self-identity, which is described as a means both to differentiate and to adhere to the values of the people to which an individual wants belong (van Gils and Horton, 2019).

In contrast to the Chinese sample, in Guangzhou *food nostalgia* does not show a positive association with both sustainable consumption and curtailment behaviours. In the Chinese sample, the finding may suggest that nostalgic feelings from the past, especially positive ones, may motivate consumers to engage in sustainable food practices. However, in Guangzhou this pattern was not evident. Hence, for consumers in Guangzhou, food nostalgia does not affect the extent to which they engage in sustainable food consumption and curtailment behaviours. Perhaps, this difference could be explained by the idea that participants in the Guangzhou sample represent a smaller proportion of rural-to-urban migrants compared to the Chinese sample. Those born and raised in the city may therefore lack nostalgic experiences from the country life and associated food consumption patterns. However, this post hoc explanation is not empirically validated as we did not control for such differences in our data; hence the validity of this arguments remains to be verified empirically. Moreover, the role of nostalgia is seen to be significant for our sample of households in the qualitative part of our methodology, and this might be because we interviewed and conducted ethnographic research with a significant number of migrant respondents.

As for the larger sample representing urban China more widely, in Guangzhou, *preference for natural foods* shows a positive association with all three, namely, sustainable consumption and curtailment behaviours as well as consumers' intention to increase sustainable food behaviours. This finding confirms consumers' perception that sustainable foods may also contain less additives and thus may be healthier food options.

The impact of middle-classness and income

To gain deeper insights, we further broke down the samples by middle-classness and income levels. Our intention here was to establish whether consumers in our samples would engage in sustainable food consumption and curtailment

behaviours – as well as intend to increase such behaviours in future – depending on their belonging to a lower- or upper-middle-class as well as to a lower- or upper-income level. Details on the categorizations are provided below.

Middle-classness

The scores below were based on a median split in terms of consumers' middle-classness in order to categorize them as low versus high middle-class (Table 5.6). The middle-class index was based on five items considering ownership or engagement with the following: car, home, private health insurance, fee-paying school and studying at university. Each of these items contributed 1 point, with scores ranging from 0 to 5. The median was 4; therefore, participants below 4 were classified as low in terms of middle-classness, while those with scores of 4 and above were classified as high in terms of middle-classness.

Overall, when comparing consumers scoring low versus high in terms of their middle-classness, increases in mean SCOB and SCUB scores between the two groups are evident in the Chinese sample (Table 5.6). Interestingly, in Guangzhou, the scores are actually reversed. However, we must bear in mind that the differences in scores of SCOBs and SCUBs between low and high in terms of middle-classness groups are very small (0.01 to 0.08). Further, the frequency of engagement in such behaviours is rather high (around the score of 3 in a 4-point scale). In sum, we conclude that the level of middle-classness does not seem to affect the level of engagement in food consumption behaviours in either Guangzhou or China.

In terms of intentions to engage in sustainable behaviours (ISB), the data paints a clearer picture in that the upper middle classes show greater intent to increase their sustainable food behaviours than the lower middle classes. Here, the scores in both the Chinese and Guangzhou samples show larger differences by middle-class split. In Guangzhou, the intent to engage in sustainable consumption behaviours increases from 4.30 to 4.46 (+0.16). More evident is this jump in the Chinese sample, demonstrating an increase from 4.08 to 4.33 (+0.25). Overall, these findings suggest that high middle-class consumers intend to engage in more sustainable behaviours in the future. Our findings in this respect are significant because they show that what middle-class consumers do versus what they intend to do in future

Table 5.6 Aggregated scores by middle-classness (low versus high).

	Guangzhou		*China*	
	*Low (47)**	*High (79)*	*Low (161)*	*High (368)*
SCOB	3.02	2.95	2.88	2.96
SCUB	2.97	2.96	2.89	2.94
ISB	4.30	4.46	4.08	4.33

* Numbers in parentheses represent the sample size for each subsample.

about their sustainable food behaviours are two different things. The higher intentions in the upper middle classes to place more emphasis on sustainability of their food in future may reflect a higher awareness in this socio-economic group as to the importance of sustainability for society and in terms of planetary health.

Although our sample size was statistically adequate, future research could fruitfully evaluate the effects of income and middle-classness variations on sustainable food behaviours with larger samples, especially in Guangzhou. Such steps would enable an analysis based on higher statistical power to validate whether these patterns hold. Nevertheless, we cannot rule out that the way in which we measured middle-classness may have affected our results. As explained earlier, we used a set of five items to create the middle-class index (i.e. car ownership, home ownership, private health insurance, fee paying school for children and studying at university). While we derived this categorization from the literature, it is possible that alternative definitions of the level of middle-classness might deliver different results.

Income

The obtained income data was divided into six income ranges (see Table 5.7). Low income (within middle class) corresponds to the first three income ranges, while high income (within middle class) corresponds to the three top income ranges. Table 5.8 shows a summary of the low- (1–3) and high- (4–6) income middle-class

Table 5.7 Income ranges.

	Low middle-class income ranges (RMB)	*High middle-class income ranges (RMB)*
China & Guangzhou	5,80–8,750	17,501–21,500
	8,751–13,000	21,501–26,500
	13,001–17,500	26,501–30,500

Note: RMB = Renminbi

Table 5.8 Sustainable Consumption Behaviours (SCOB), Sustainable Curtailment Behaviours (SCUB) and future intentions to engage in sustainable behaviours (ISB) aggregated by low- versus high-income ranges.

	Guangzhou		*China*	
	*Low (49)**	*High (77)*	*Low (178)*	*High (351)*
SCOB	2.96	2.99	2.85	2.97
SCUB	2.90	3.01	2.84	2.97
ISB	4.33	4.45	4.10	4.33

* Numbers in parentheses represent the sample size for each subsample.

ranges. Overall, when comparing consumers scoring low versus high in terms of their income, increases in SCOB and SCUB are evident both in China and in the Guangzhou sample. Our findings on sustainable food consumption mirror findings on food consumption in a broader sense in China, showing that changes in the income distribution clearly affect food consumption patterns that also entail consequences for sustainability initiatives (Li et al., 2021). In terms of ISB, the pattern holds also in both China and Guangzhou. Consumers in the high middle-class income range report greater intent to engage in sustainable consumption in the future. Indeed, the increases in terms of future intent between low and high middle-class income groups are more notable than for current sustainable consumption practices. Hence, the findings suggest (i) a pattern in terms of a positive association between income and sustainable practices and (ii) a positive trend looking toward the future.

In sum, our results suggest that when it comes to identifying variations in their sustainable food behaviours of the middle classes, income alone is a better explanatory variable than middle-classness.

Conclusion

The aim of the survey was to identify the values and drivers of sustainable food behaviours, understood as the cognitive dimension of sustainable food consumption, among consumers in China. Specifically, our large-scale survey sought to establish how consumer characteristics and values drive the likelihood of middle-class consumers engaging in those behaviours. We focused on drivers of behaviour of both self-oriented (care for oneself and close others) and others-oriented nature (care for distant others and the environment). We looked at sustainable food consumption behaviours (SCOB) such as consuming home-cooked food, and curtailment (SCUB) behaviours such as recycling and composting, essentially covering a full range of consumption moments identified by Evans (2019) and Warde (2014). The data showed that consumers in our sample demonstrate a positive tendency towards engagement in SCOB and SCUB across the Chinese cities, with Guangzhou specifically exhibiting higher values. Similarly, consumers' future intent to engage in sustainable behaviours was also evident. These patterns support the notion that food-related sustainable behaviours are on the rise in China and that Guangzhou may be taking a leadership position in this respect. We also found clear evidence of the varied nature of drivers of current and future intentions of sustainable food behaviours. For instance, consumers' price consciousness, self-expression and preference for natural foods emerge as consistent drivers of SCOB and SCUB in both China and Guangzhou.

The findings of the survey suggest that an interplay of factors related to economics such as frugality, preference for natural products, and identity-related motives is determinant in driving sustainable consumption practices when it comes to food. Interestingly, the data suggest that "others-oriented" drivers (i.e. biospheric and altruistic values) are less of a concern to Chinese consumers, including in Guangzhou, when it comes to determining their sustainable food practices. Instead, "self-oriented" motivations surrounding the aforementioned

factors such as price consciousness and preference for natural foods appear to be key. The relative importance of these motivations for Chinese consumers may be influenced by their need to balance economic factors with the consumption of healthy and natural foods in their household. However, the picture emerging from our study is that consumers in China do not, as suggested in the literature from the "Global North", engage in sustainable food behaviours to save either the planet (biospheric altruism) or distant others (human altruism). And this may be that unlike in neo-liberalizing contexts of the West (see Barnett et al., 2011), there are not discourses being produced of citizens as ethical consumers becoming active agents of change in protecting planetary health through the commercial realm of purchasing choice. Instead, Chinese consumers surveyed largely report sustainable consumption and curtailment behaviours being influenced by "self-related" reasons, which dovetails with Dermody et al.'s (2018) research concerning pro-environmental self-identity. This corresponds to an extent with Chen and Liu's (2022) finding that consumers in the same region suggest that reducing food waste, for example, is more connected to household frugality than a response to environmental campaigns. We would caution against judgmental readings of these findings, arguing instead that it is important to acknowledge that sustainable food consumption and curtailment behaviours can have positive consequences for the environment and others irrespective of the drivers. This also leads us to pursue some empathetic engagements with the practices as the "doings" of sustainable food consumption, both apparent in the food systems we discuss in Chapter 6 and the everyday lived experience of households we engage with in Chapter 7. This reinforces the value of a mixed-method approach to researching sustainable food consumption that can capture both broad-scale trends in values and consumption behaviours in the conscious, cognitive realm and cultural and material practices embedded in everyday life and urban infrastructure.

Finally, we find that both income and higher degrees of middle-classness have a slight effect on the likelihood to engage in SCOB and SCUB in China in general and Guangzhou in particular. In other words, the higher the person's income and the higher their middle-classness, the more they engage in such behaviours. However, more noteworthy was their effect on the future intent to engage in sustainable behaviours. Both income and middle-classness have a clear positive effect in terms of driving future intent, suggesting a positive outlook especially among consumers with that "extra" income that may be needed to engage in some sustainable food consumption practices. This might further be important in identifying levers for positive change in the context of a growing economy and citizens with increasing spending power, where balancing economic and planetary health is increasingly urgent.

Notes

1 https://www.statista.com/statistics/1280079/global-country-ranking-vegetarian-share/ https://www.statista.com/statistics/1064068/share-of-people-following-a-flexitarian-diet-in-europe-by-country/.
2 Note that our measure of quality in the survey is not directly related to freshness.

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6 Locating values of sustainability through conventional and alternative foodscapes

Introduction

This chapter places the spotlight on the diverse supply chains shaping Guangzhou's foodscape, which were introduced in Chapter 3. This responds to Warde's (2014) plea to connect understandings of sustainable consumption with political economies of production and distribution, mentioned in Chapter 2. Against the backdrop of a Chinese food system prioritizing food security and safety, it considers how issues of sustainability underpin, either conspicuously or inconspicuously, the workings of traditional and modern parts of the mainstream food system, as well as how they are dealt with overtly in niche alternative food markets. We also show where sustainability, both its environmental and social dimensions, can be compromised, particularly in mainstream and modernizing parts of the food system. Through our analysis we draw out where agency and responsibility are located, emphasizing how state, commercial and third sector influences intertwine through diverse supply chain structures.

Existing studies have challenged the dichotomy between Conventional Food Networks (CFNs, hereafter) and Alternative Food Networks (AFNs, hereafter) due to the increasing intertwining of the two (Goodman et al., 2012; Sonnino and Marsden, 2006). However, in the Chinese food system, there is still value in the CFNs-AFNs categorization to describe the multiple and complex actors involved. This is because AFNs are relatively new in China and have limited intersections with CFNs. CFNs in China encompass various actors, including producers practising conventional farming, supermarkets, online food retailers, and restaurants that use conventional produce. Supply chains provisioning the wet markets can also be viewed in China as a part of the conventional food system. By contrast, China's AFNs consist of small-scale "new farmers" (i.e. educated and urban-rooted producers "returning to the land"), as Chapter 3 described, adopting eco-friendly farming practices and distribution networks for alternative agricultural products, such as farmers' markets (Si et al., 2015).

Previous studies across the globe have effectively highlighted the detrimental impacts of CFNs on the sustainability of the global food system (Steinfeld, 2006). These include environmental degradation, non-renewable resource use, loss of agricultural diversity, social inequalities and animal welfare concerns, among others

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(Goodman et al., 2012). Against this backdrop, AFNs have been regarded by scholars as a potential solution due to their focus on localized production and distribution, short and transparent supply chains, social justice and fair trade (Tregear, 2011).

The chapter embraces how particular values, including those associated with sustainability, are mobilized and circulate through the supply chains provisioning cities in China. To begin with, we situate our analysis of conventional and alternative food supply chains and foodscapes in a national context prioritizing food security and safety in its food system policies. In this context, we highlight how participants at different scales of the Chinese food system understand sustainability and how national discourses and policies are implemented and presented locally in a heterogeneous manner. This captures how, although our research uses Guangzhou as an "observatory" for exploring sustainable consumption, materials and cultural influences work through and across spatial scales, globally, nationally, regionally and locally. We identify how different notions and values of food sustainability circulate through conventional and alternative foodscapes across China and specifically in Guangzhou, focusing on the practices through which food is acquired and the diverse commercial influences on values of sustainability. To do this, following an overview of national food policies, the chapter engages with CFNs whose production side consists mainly of industrialized, large-scale farms and millions of small farmers who often use pesticides and fertilizers, and whose markets and associated landscapes of consumption consist of supermarkets, wet markets, community stores and online stores. It also identifies the emergence of the niche AFNs, which comprise small-scale farms adopting organic farming and niche sales networks and markets. The chapter discusses how these different sectors of the food system and associated foodscapes understand and practice sustainability. We question whether all CFNs and their foodscapes are inherently unsustainable. For example, we delve into the crucial role of wet markets in China, which, despite being part of CFNs, can generate some positive sustainable effects. Finally, the chapter engages in a discussion of suitable sustainable pathways in China through this food system diversity.

Encouraging sustainability at the national scale in China: food policies

China's food policy

The types of policies implemented by a state can serve as indicators of its commitment to addressing sustainability concerns in food production and consumption. When faced with the task of feeding a population of over 1.3 billion people, ensuring an adequate food supply becomes the primary consideration for the state, as Chapter 3 highlighted. In the case of China, its food policies prioritize food security, safety and self-sufficiency. This has meant that the Chinese state's focus on sustainability primarily centres on ensuring food security and safety rather than placing emphasis on ecological issues. Recent Five-Year Plans include statements

on environmental issues but focus mainly on production rather than connecting explicitly to consumption. Essentially, China's food security policies are designed to guarantee a steady and affordable supply of food for its citizens (Zhan, 2022a), which appears to align with consumer emphasis on affordability and price consciousness reported in Chapter 5.

China's food security strategy has been approached from two perspectives: ensuring stable domestic production and supply and seeking global allocation and utilization of food resources through increased imports (Zhan, 2022a). Research indicates that these two aspects are interconnected, with domestic production serving as the foundation for global engagement. China's ability to occupy a favourable position in the global food market relies on maintaining high levels of stable domestic food production, enhancing negotiating power in trade and investment, and strategically managing imports (Zhan, 2022b). The 2019 report "China's Food Security" released by the Central People's Government emphasizes the shift from "basic self-sufficiency" to a strategy based on the domestic market, ensuring production capacity, moderate imports, and scientific and technological support (Information Office of the State Council of the People's Republic of China, 2019). This approach reflects China's commitment to independent production while seeking global resource allocation.

The Vegetable Basket Project

A well-known Chinese proverb states that "people regard food as their heaven" (*Min yi shi wei tian*). China's policy system recognizes food supply as comprising "the rice bag" and "the vegetable basket". Driven by strong political support, China has consistently achieved a self-sufficiency rate of over 95% in cereals for human consumption. The "Vegetable Basket Project" (VBP, hereafter) is a critical component of the Chinese Government's food security strategy, specifically targeting the shortage of non-staple foods for the population. Launched in 1988 by the Ministry of Agriculture, this project has transformed China's food supply pattern from overall scarcity to surplus in some categories over the past three decades. The implementation of the VBP can be divided into three distinct phases. The initial phase, before 2000, focused on addressing insufficient vegetable supply in large cities. From 2000 onwards, the VBP shifted its focus to building a market distribution system. The government recognized the cost inefficiency of the old policy of urban self-sufficiency and growing vegetables around major cities, instead aiming to establish a unified national supply chain, forming a "big market, big circulation" (*dashichang, daliutong*) pattern (Zhong et al., 2023a: 3). The slogan "*buy nationwide, sell nationwide*" (*maiquanguo, maiquanguo*) conveyed the determination to create a nationwide food market (Zhong et al., 2023a: 3). Infrastructure development, such as wholesale markets, specialized trading markets, and robust transport and logistics networks facilitated the integration of local food systems in major cities with the national market (Zhong et al., 2023a). For example, Beijing's vegetable cultivation area reached 115,000 hectares in 2002, with 5.07 million

tonnes of produce marketed. However, by 2017, it had shrunk to 42,000 hectares, with 1.57 million tonnes of marketed produce (Wang et al., 2019). This decline in self-sufficiency necessitated reliance on neighbouring provinces and even distant regions like Hainan Province during winter.

After 2010, the VBP entered a phase of routine, systematic and high-quality development. The General Office of the State Council of China implemented the Mayor's Responsibility System for the project in 2017, with related assessments conducted every two years in 36 key cities nationwide. Mayors are evaluated based on criteria such as production capacity (vegetables, meat and aquatic products), market distribution capacity (e.g. wholesale market planning and low-temperature treatment), quality, safety supervision capacity (inspection systems and traceability), regulatory and safeguarding ability (price control, reserves and early warning systems) and public satisfaction (assessed by a third-party organization). This systematic approach ensures ongoing progress and accountability in implementing the VBP.

In both the 2019 and 2021 assessments, Guangzhou received an officially excellent rating as a result of the municipal government's implementation of various measures. Special funds have been allocated to support the construction of production bases. By 2020, Guangzhou had established 26 provincial-level food basket bases, 9 Ministry of Agriculture and Rural Development (MARD) standardized demonstration farms for livestock and poultry breeding, and 24 MARD demonstration farms for healthy aquaculture. Table 6.1 presents the production of agricultural products in Guangzhou. Apart from meat, poultry and eggs, all other categories have shown a steady, slight increase in production. According to Table 6.1, Guangzhou has maintained a self-sufficiency rate of over 100% for vegetables, over 90% for aquatic products, over 60% for fruits, but below 20% for meat, poultry and eggs. The low self-sufficiency rate in meat, poultry and eggs can be attributed to the closure of numerous farms in 2012, which aimed to address environmental pollution issues in the farming industry. It is important to note that the self-sufficiency rate does not equate to complete self-sufficiency. While Guangzhou's self-sufficiency rate for vegetables exceeds 100%, it simply indicates that overall production surpasses consumption. In reality, the variety of locally produced vegetables in Guangzhou is limited, and a significant proportion of vegetables consumed in the city is sourced from elsewhere (Guangzhou Statistical Yearbook, 2021).

In addition to expanding food production, Guangzhou City follows the "big market, big circulation" (Zhong et al., 2023a: 3) principle. The city boasts 35 wholesale markets for "vegetable basket" products, with an annual trading volume exceeding 8.8 million tonnes. The Jiangnan Fruit and Vegetable Wholesale Market ranks among the largest wholesale markets in China, while the Huangsha Aquatic Market serves as one of the major import and export wholesale markets for aquatic products for southern China. Furthermore, Guangzhou has established 127 monitoring points across different links in the industrial chain of "food basket" products to strengthen price monitoring. The city also strategically manages pork reserves to increase market supply and stabilize prices when needed.

Table 6.1 Production associated with the Vegetable Basket Project in Guangzhou.

Variety		*Unit*	*2016*	*2017*	*2018*	*2019*	*2020*
Vegetables	Sown	10,000 mu	218.77	213.26	218.93	222.10	226.46
	Yield	10,000 tones	374.02	384.77	368.79	385.32	403.82
Fruits	Sown	10,000 mu	93.82	95.86	93.62	95.69	105.63
	Yield	10,000 tones	49.48	52.81	60.57	64.26	79.25
Pigs	Yield	10,000 head	96.99	76.35	58.20	41.20	42.22
	Production	10,000 tones	7.27	5.73	4.46	3.16	3.10
Poultry	Yield	10,000 head	11048.38	6038.10	6715.16	6828.73	6713.20
	Production	10,000 tones	14.34	7.90	8.90	8.19	8.02
Aquatic products	Yield	10,000 tones	48.25	47.16	45.42	46.52	50.75
Eggs	Yield	10,000 tones	2.51	1.35	2.36	2.30	2.06
Milk	Yield	10,000 tones	4.97	3.79	3.57	3.22	3.09

Source: Guangzhou Statistical Yearbook (2021).

Guangzhou collaborates with neighbouring cities to identify vegetable basket production bases nationwide, creating a "government + dragonhead (leading) enterprises" alliance (Schneider, 2017: 3). The selected production bases must meet certain criteria, such as vegetable planting bases exceeding 6.66 hectares, fruit bases exceeding 13.32 hectares, pig farming with over 5,000 hogs and broiler farming with over 100,000 birds. There are approximately 210 million small farmers in China with cultivation areas averaging less than 0.66 hectares (The Central Government of China, 2017). However, the Government primarily focuses on large-scale agriculture. By 2021, Guangzhou had recognized over 1,200 food basket production bases across 24 provinces and 138 prefecture-level cities. The government provides subsidies, tax incentives and project funding to these recognized production bases. Additionally, the products from these bases carry a uniform government-designed logo, and the government assists in connecting them with sales channels. These bases prioritize supplying their products to the Guangzhou market and are subject to government dispatch during emergencies.

Overall, the VBP exemplifies the "comprehensive food system planning" implemented under the Government's active intervention, effectively contributing to the national goal of food security (Zhong et al., 2023b: 1). After years of effort, the government has largely achieved the objective of ensuring food security. The VBP has yielded positive impacts in terms of food availability, ensuring a steady supply of food throughout the year by establishing large-scale production bases. It has also enhanced accessibility through well-designed wholesale distribution networks, ensuring that consumers from different social classes and geographic areas have access to fresh produce and eliminating food deserts. Moreover, stability has been maintained through price monitoring, subsidies, government stockpiling and market regulation, preventing drastic fluctuations in food prices.

The VBP, however, also faces a series of challenges. One major concern is the excessive focus on output at the expense of product quality, resulting in food safety issues at various stages of the supply chain. The pursuit of quantity has also led to significant waste and negative environmental impacts. Additionally, while large-scale, standardized producers have benefited from policy support, the situation of small-scale producers, who make up the majority, has been overlooked. Furthermore, the project exhibits low resilience to risks, as cities rely heavily on national supply networks and strong government regulation. For instance, during the outbreak of COVID-19 and subsequent lockdowns, Shanghai experienced a month-long shortage of fresh produce. Therefore, the VBP can be characterized as exhibiting "high modernism" (Dai, 2022: vi), satisfying the demand for quantity but also harbouring some hidden risks.

The food traceability system

Food safety is a key priority connected to sustainability at the national scale, as Chapter 3 highlighted. In recent years, food safety issues in China have become frequent, constituting a pressing and complex challenge for Chinese society and a key threat to the sustainability of the food system. As a result, China has implemented a range of policies aimed at improving the safety and quality of food products. This has included stricter regulations and oversight of food production and processing, as well as efforts to improve food testing and monitoring systems.

Existing food systems in China are characterized by numerous layers, complex players and opaque information, resulting in various safety hazards (Yasuda, 2015). The importance of food traceability was emphasized multiple times during the 19th National Congress of the Communist Party of China (CPC), which put forward the implementation of food safety strategy to ensure people can eat with peace of mind. In response to the central Government's directive, many cities have embarked on the construction of "farm-to-table" food traceability systems. In 2017, the Guangzhou Municipal Government released the "Guangzhou Meat and Vegetable Circulation Traceability System Construction Work Programme". Its systems cover various links in the meat and vegetable circulation chain, including pig wholesale, slaughtering, meat and vegetable circulation, food processing, wholesale, retail and consumption. The goal is to integrate with the national and provincial meat and vegetable circulation traceability management platforms, implement electronic import, sale and inventory ledgers and realize functions such as batch tracking and tracing, quality testing and supervision, real-time data collection and transmission, data analysis and utilization. These measures are intended to ensure traceability and control over the quality and safety of meat and vegetables.

According to the governmental plan, demonstrating a highly state-led approach in China, the food traceability system's implementation was to occur in three stages. In the first stage, the construction of the meat and vegetable circulation traceability management information system was to be completed, including the

development and deployment of the meat and vegetable circulation traceability management platform, the construction of an operation and management centre, and the development of various types of distribution node traceability sub-systems. The second stage was to involve steadily promoting the construction of the retail node traceability system, expanding the coverage of the meat and vegetable distribution traceability system, and including over 50% of the identified nodes at the retail end of the city's meat and vegetable supply chain by December 2018. In the third stage, efforts were to increase the number of traceability points and expand coverage, aiming to achieve full coverage of the identified nodes at the city's meat and vegetable retail end by December 2020.

By 2021, the government's plan had still not been fully realized due to difficulties encountered in various areas. The situation remained unchanged at the time of writing. At the retail end, the Guangzhou Municipal Government engaged a technology company through a tender process to develop software and promote its adoption in supermarkets and vegetable markets. In 2019, QR codes began to be displayed in front of meat and vegetable stalls in pilot wet markets (see Figure 6.1), allowing consumers to scan the codes and learn about the origin and flow of the products. However, during the research process, it was discovered that while the traceability system appeared advanced, it had several shortcomings. All the information relied on stall owners voluntarily updating and uploading the data every day. Considering that a vegetable stall can sell over 40 types of vegetables daily, manually updating

Figure 6.1 The traceable QR code of a fish in a food market in Guangzhou. Photograph by the authors.

information becomes an arduous additional task for stall owners. As a result, many stall owners only updated the information when facing market inspections, leading to significant delays or inaccuracies in traceability information.

A vegetable market manager stated that some stallholders were reluctant to use the system as they did not see direct benefits for their business. Nonetheless, they had to cooperate with the management team to promote its adoption. Additionally, two stallholders did not know how to use mobile phones, so technicians from the traceability system development company were sent to teach them (Interviewee R&W.03). Even if wet market stallholders are conscientious and responsible, achieving accurate traceability remains challenging. For example, the carrots from one stallholder encountered in a wet market our research team visited came from the Jiangnan Wholesale Market in Guangzhou, but the stallholder only had a receipt from the wholesaler to prove that the goods were traded in the wholesale market. They thus could only take a picture of the purchase order and upload it to the traceability system. In other words, many products can only be traced back to the wholesale market, with no way of knowing specific product origin information (Interviewee R&W.03). If carrots are distributed by a large-scale, first-tier wholesaler, the wholesale market management will have information about where the carrots came from, but this information often fails to interface with scattered vegetable market vendors. If carrots are produced by small farmers around the periphery of Guangzhou, their products are purchased by distributors and then flow into the wholesale market, blurring the production information. For products such as marine fish and meat, due to inconsistent traceability requirements from various origins, it is likely that information has been lost in the distribution process, making it challenging to pass on to the retail end of the supply chain entirely. So, while a state-led system for food traceability has been constructed, its implementation at the time of the research was highly uneven.

Reading into what these (imperfect) food traceability systems mean for consumption, research with traders suggested that few consumers actively scan the code to learn about traceability information. For example, a retailer commented that

> consumers go to the market to buy food, and knowing where the pigs come from and what they eat has nothing to do with their purchasing decision. Consumers don't care about traceability, as long as the food tastes good.
>
> (Interviewee R&W.19)

The market manager explained that the traceability system is about "presence". The fact that the market and the stalls display the QR code is about the *presentation* of confidence in the quality and safety of the products. The existence of the QR code can send a signal of food safety to consumers. Whether consumers in

practice access the traceability information appears to be secondary. This demonstrates the importance of the performance of traceability but highlights some key material limits.

Food safety regulation

The central government amended the Food Safety Law in 2015 and promulgated it. The law provides strict and clear regulations on the supervision of food production, processing, storage, transport and sales. The law also provides for management measures such as food safety risk assessment, food inspection and testing and food recall to strengthen the protection of food safety. In addition, there are other laws that make up the legal system in the area of food safety. However, food safety has been plagued by many problems in terms of the implementation of regulation and law enforcement. First, there is the problem of collaboration among law enforcement agencies. Food safety involves the collaboration of a number of departments including the Food and Drug Administration (FDA) as well as the Market Supervision Administration and the Environmental Protection Bureau (EPB). These organizations are themselves continually undergoing mergers, reorganization and restructuring. In addition, they are subject to dual leadership, which is related to the "*tiao, kuai*" setup of Chinese politics (Yasuda, 2015). In the case of the FDA, for example, the "*tiao*" refers to the fact that vertically, there is a food and drug administration department at every administrative level, from the central Government to the provinces, municipalities and districts. The "*kuai*" refers to the local government level to which the FDA belongs.

The Guangzhou FDA is under the leadership of both the Guangdong FDA and the Guangzhou Municipal Government. At the time of writing, many of the law enforcement dimensions of food safety are funded by local governments, but the specific work tasks are assigned by higher-level organizations. Local governments may also have additional work requirements, and therefore a food safety enforcement department must fulfil multiple tasks. This leads to the deferring of various responsibilities, such as addressing the issue of waste management in catering establishments. The EPB and the FDA may pass the buck to each other, resulting in relatively low regulatory efficiency, as this respondent explains:

> Complaints are more troublesome to handle. For example, if the public wants to lodge a complaint about bad food, diarrhoea, and not paying the bill, then we have to go to the shop concerned to inspect the complaint. Moreover, the complaint is already filed, their office automation system has time limit requirements, so this work is very important. After the inspection, if the complaint is true, the offending merchant will be asked to file a case for investigation or a fine, which is the enforcement part; if there is no problem, the complainant will be asked to withdraw the complaint. At this point in time, we

> are equivalent to a coordinator. We have to negotiate these two parties, and we also have to defend ourselves to avoid being held accountable. If the matter is not handled well and the complainant is dissatisfied, he [sic] will file a complaint at a higher level or go to the Disciplinary Committee, and the pressure on us at this time will be even greater, so we all take complaints very seriously.
>
> (Interviewee G&C.24)

Law enforcers also have to face the dilemma of interpreting the law. The reality is that many ambiguous situations in the course of law enforcement require flexibility. Experienced law enforcers play the role of a coordinator:

> FDA grassroots officers feel that unclear and inconsistent rules from the top make them overly cautious. Directors unfamiliar with the law constantly seek to clarify guidance from superiors, often imitating neighbouring offices or seeking their advice. Conversely, legally knowledgeable directors maintain a clear understanding of legal boundaries. Some adeptly manage to interpret violations ambiguously, for instance, during inspections, if evidence is not concrete, they avoid declaring a legal violation. This often leads to negotiated compensations between consumers and businesses, where businesses usually opt to settle to avoid higher fines and ongoing consumer complaints.
>
> (Interviewee G&C.24)

From the perspective of grassroots law enforcement officers, food safety is thus seen as a process of "resolving issues" by satisfying complainants and avoiding further problems. However, this enforcement logic only serves as a deterrent to problematic retailers or producers and fails to address other stakeholders in the food system.

Furthermore, with significance for our focus on sustainability, there is an issue with the current testing mechanism regarding aspects of environmental sustainability that are linked to safety. Currently, routine testing of food circulating in the market covers only a small proportion of pesticide residues or additives. Moreover, testing personnel can lack specialization. In Guangzhou, each market is required to have a food safety sampling room where different types of food are sampled daily. However, market staff conduct the sampling using simple test strips and reagents, rather than involving people from the FDA system. Additionally, the testing for many harmful substances requires professional testing, which incurs significant costs and necessitates appropriate facilities and equipment. As a result, serious food safety incidents often come to light through consumer complaints rather than being detected during routine testing (Interviewee G&C.24).

It can be argued that current food safety regulation relies on a "stimulus-response" punitive mechanism. Grassroots authorities only take action when food safety issues are brought to their attention. Food safety inspection serves as a complementary mechanism to market actors and operates as more of a responsive rather than a routine and preventative apparatus.

Executing sustainability at the local scale: responses of conventional food networks

As discussed earlier, food security and food safety have become the highest priority aspects of sustainability at the national scale. The government promotes these objectives through various policies and strategies, such as VBP, traceability systems and food safety regulations, as we have highlighted. However, different operators within the food system need to balance the national objectives with their own commercial objectives, leading to varying understandings and actions regarding sustainability through supply chains provisioning cities.

Wholesale markets, supermarket chains and standardization across the "modern" Chinese foodscape

In Guangzhou, there are two key strategic categories of supermarket chain based on price and target audience. One is the mass-market supermarket chain selling mass-produced food at low prices (Interviewees R&W.03, R&W.16 and R&W.20). The other is high-end supermarkets, primarily targeting the upper class and foreign residents in Guangzhou. The latter specialize in labelled organic products, imported goods and ethnic foods (and as this market segment is small, it was not included in our interview sample). Although the latter sells organic food, it does not necessarily indicate a clear environmental sustainability focus but rather a high-quality and high-margin strategy (Loebnitz and Aschemann-Witzel, 2016). Our main focus is on the sustainability considerations of mass-market supermarkets. In these supermarkets, sustainability is a process that "meets the bottom line and standards of food safety" (Interviewee R&W.04)

One of the main supply sources of mass-market supermarket chains is the Jiangnan Wholesale Fruit and Vegetable Market, located in Guangzhou's Baiyun District and discussed earlier. In 2022, the market traded a total volume of 5,177,300 tonnes of fruit and vegetables, with a turnover of ¥26.385 billion. The Jiangnan market plays a crucial role in Guangzhou's VBP, and it accounts for over half of the country's total imported fruit trading volume. Market managers emphasize their special quality inspection department, ensuring that every truckload is thoroughly tested for food safety and operated by staff according to national standards. If pesticide residue exceeds the national standard, the products are destroyed. Therefore, only "qualified" products can enter the Jiangnan market for trading (Interviewee R&W.04).

A well-known supermarket chain with more than 50 outlets in Guangdong Province purchases goods from the Jiangnan Market. The General Manager of an outlet of this supermarket chain believes that Government supervision of food safety is robust, with frequent inspections and penalties in case of problems (Interviewee R&W.16), hence, ensuring food safety is their top priority. As the interviewee explained, the supermarket sends orders for the following day to the purchasing department, which includes statistics from wholesale sources like the Jiangnan market. Products undergo sampling in the warehouse quality inspection room

before being stored and distributed to the shelves. Major categories of products are sampled on a rotating basis, with around 50 varieties sampled daily. Supermarket vegetables are typically sold on the same day. Supermarket chains such as Walmart China and Vanguard have developed independent supply chains, as supermarkets often do in the West, directly connecting with production bases to save costs and gain a price advantage.

Concerning food safety and related aspects of sustainability, some supermarket chains believe that standardization is the key to profitability (see Figure 6.2 for a typical supermarket shelf display of packaged, standardized produce). Although fresh food is challenging to standardize, many supermarket chains are compelled to purchase standardized products due to competition from online shopping platforms. Some supermarkets have also started offering online ordering and home delivery services. The General Manager of a supermarket chain explains that

> the trend of standardization in the fresh food industry presents challenges for agricultural products, which are not easily standardized by weight. The distribution system now mandates such standardization . . . The benefits of standardization include facilitating purchases and enhancing convenience.

Figure 6.2 Packaged and standardized vegetables sold in a supermarket. Photograph by the authors.

> Moreover, product quality improves as standardized items are carefully selected, such as matching eggplants with the same weight. Standardization is implemented at every stage, from distribution to selection to sales. If products were not standardized but sold by weight, it would be challenging to enable online consumption or place orders. For instance, if a customer wants to buy a catty [equal to around 500 grammes] of eggplants, the variation in weights may result in it being slightly over or under a catty. This creates difficulties in calculating the price. To address this, many fresh businesses are adopting standardization methods, which also incorporate the concept of internet thinking, aiming to bridge the gap between online and offline experiences.
>
> (Interviewee R&W.20)

According to supermarket operators, including Interviewee R&W.20, fresh products sell well if they meet freshness and quality requirements. They considered that the geographical boundary of local food is relatively unimportant, as consumers desire to eat food from all over the country while being based in Guangzhou. Supermarkets strive to meet consumers' demand for new products, encouraged by the "buy nationwide" policy, and they collaborate with large-scale suppliers from across the country to offer a wide range of innovative products. This approach breaks down the geographical constraints of food distribution. However, it is worth noting that according to Chapter 5's reported survey findings, the consumer quest for quality (not necessarily equating with freshness) does not appear to drive current sustainable consumption behaviour. This form of quality is though very much driving the retail demand for standard products, with assured characteristics from larger suppliers.

Neighbourhood store chains: forging localized foodscapes and short supply chains

Neighbourhood store chains are rapidly growing with China's urbanization. They usually open in front of newly developed, gated communities and have a few notable features. The first feature is their small size, usually less than 50 square metres. To reduce costs and achieve economies of scale, most neighbourhoods adopt the chain business model. For example, China's famous neighbourhood store brand "Qian Da Ma" covered 30 cities across the country as of October 2021, with over 3,700 shops. Another feature is the high proportion of fresh food. These shops mainly provide primary fresh products such as vegetables, fruits, meat and seafood, but they only offer common and popular categories. By virtue of their geographical location, community residents can conveniently make frequent purchases.

Similar to supermarkets, neighbourhood store chains prioritize food safety in their operations. They commonly employ a marketing strategy of discounted sales to guarantee foodstuffs do not go off. Fresh products arriving at the shops are sold out on the same day and are not kept overnight. For instance, in the case of Qian Da Ma, all products are discounted by 10% at 7:00 p.m., and the discount is gradually increased every

half an hour until the entire store is given out for free at 11:30 p.m. We observed that goods are typically sold out by the time the discount reaches 50% at 9:00 p.m. This strategy caters to Chinese consumers' preference for freshness and creates the impression that everything in the shop is fresh and thus safe (Zhong et al., 2020). However, it is important to note that many of the goods arriving at the shop have already been stored in warehouses beforehand for varying periods (Interviewee R&W. 26).

Strong neighbourhood stores are also extending their reach to the production side of the supply chain, aiming to control the quality of their products at the source. One company, founded in 2006, now operates more than 200 shops in Guangzhou, Shenzhen and Shanghai. The company's main product is an antibiotic free pork called "Black Mountain (*Shanxiahei*)", which is sold at twice the price of ordinary pork. However, due to its recognized quality, it sells well among consumers. This business strategy involves a limited franchise model, where the company controls the core product (pork) that is in high demand and has high profitability, while other products come from the wholesale market, serving as complementary offerings. The company's Chair briefly shared the story of their pig farming:

> 98% of China's pigs are imported breeds, including three major breeds – Duroc, Long White, and Large White – originating from the US, UK, and Denmark, respectively. They have a high feed conversion rate, high leanness, and are considered easy to raise, which is favoured by farmers. However, these pigs are lean but not flavourful. We recognized this gap in the market. Since 2009, we have hired scientists from the Jiangxi Academy of Agricultural Sciences to help us breed new pig breeds, incorporating the advantages of a local black pig and a large white pig. By continuously optimizing the breed, the size has become smaller, but the fat content in the lean meat has increased, and it can show beautiful marbling, making our pork flavourful. In addition, we raise pigs without antibiotics throughout. Currently, all pig enterprises in China use antibiotics in large quantities, up to five to ten times the recommended dosage by the State Ministry of Agriculture. However, we never use antibiotics, ensuring that our pork is absolutely safe and healthy.
>
> (Interviewee R&W.26)

Initially, the company emphasized "antibiotic-free pork" as its primary selling point but found that consumers did not fully understand its significance (Wang et al., 2022). This corresponds with other studies elsewhere in the world that pinpoint limited understanding on the part of the public when it comes to antibiotic use in food production (Hughes et al., 2021). Consumers generally rely on their previous experiences of judging meat quality based on colour, smell, texture and taste at home. The Chair stated that

> initially, we repeatedly advertised that our pork was antibiotic-free, but consumers wanted to know more details, such as when exactly we did not use antibiotics and what effects antibiotics have on pigs.
>
> (Interviewee R&W.26)

To convey the value of "antibiotic-free" to consumers, the company has implemented various strategies. First, they livestream feeds from the farms directly in their shops, showcasing the entire process of pig breeding, from newborn care and daily management to special protection, slaughtering and distribution. This transparency transforms the previously mysterious black box of pig farming into a comprehensible farm-to-table process that consumers can easily understand. By visually witnessing that the pigs do not receive injections or medication, consumers are encouraged to appreciate the direct connection between antibiotic-free practices and high-quality pork. Additionally, the shops organize on-site tastings where pork is cooked and offered for consumers to sample. Salespeople continuously employ persuasive techniques to spread the message about "antibiotic-free" pork, such as highlighting that antibiotic-free pig livers lack toxin residues, stopping unpleasant odours. Through these various channels of information and communication, consumers gradually develop a strong association between "antibiotic-free" and "healthy, high-quality" pork (R&W.28).

Furthermore, some neighbourhood stores adopt a cooperative farming approach based on developing ties with specific farms. Products with traceability stories can be sold at double the price within these community chain shops. The company also places great emphasis on the language used by salespeople, tailoring their words to different consumer profiles within each property. The Chair of a company with more than 100 shops, explained:

> Our company offers around 300 SKUs [Stock Keeping Units], of which approximately 60 are cooperatively self-produced. We have implemented a migratory bird program, where we collaborate with farmers to grow products for us. For instance, if I need a variety of vegetables, I ask local farmers to grow them using their best methods, and I provide them with a commission if the products sell well. Although we present it to our customers as employing the farmers, in reality, it is a partnership. Pricing based on labour is more effective, and the farmers are devoted to cultivating the finest vegetables. When you ask a farmer about the quality of their chickens, they might mention raising them for the full 90 days. However, we delve into the details and inform consumers that the chickens are free-range, living under fruit trees and typically consuming a diet that consists of half fruit and half feed. Our shop managers actively engage customers through WeChat groups, repeatedly sharing these stories tailored to their preferences.
>
> (Interviewee R&W.19)

Overall, the sustainability strategies of community store chains are similar to those of supermarkets in that they emphasize food safety. However, these community stores employ a short supply chain approach to ensure food safety. The use of short supply chains, reducing or eliminating middle links in the supply chain such as wholesalers, allows retailers to achieve high levels of transparency and control over producers, production methods, farming processes and distribution from product source, which indeed contributes to improving food safety. Moreover,

using control over production to reduce the use of antibiotics and chemicals in the production process also enhances environmental sustainability.

The short supply chain model adopted by neighbourhood retailers effectively places all information under the control of retailers, leaving consumers passive. This centralized control over product details, availability and pricing allows retailers to dictate market conditions without substantial consumer input. Consequently, consumers lack the ability to directly influence or alter the supply chain dynamics, such as sourcing practices, product variety and even pricing strategies. Although driven by operational efficiency and market positioning, there are material effects of this model when it comes to particular kinds of environmental sustainability.

Restaurant chains: coordination and standardization of food sustainability in the mainstream food service sector

The catering industry places a primary focus on ingredient purchasing when it comes to sustainability. Nearly all respondents expressed great concern for ingredient safety. For instance, the CEO of a regional restaurant chain specializing in Cantonese cuisine emphasized the value sequence as safety over flavour over health. He stated:

> I think food safety is more important than freshness of ingredients. Serious issues involve heavy metals, hormones, and lean meat extract [the Chinese colloquial term for the toxic chemical Clenbuterol]. However, these aspects cannot be visually detected; we rely on the supplier's license and business history. Freshness, on the other hand, is visible. We ensure that our ingredients are always fresh. We prioritize safety and never compromise it for flavour. While nutritional nourishment is a bonus, taste takes precedence over nutrition as long as safety is maintained. This progression reflects the development of society, where initially people focus on acquiring enough food, but once that is achieved, they strive for better and safer options. Conflicting priorities arise at different times.
>
> (Interviewee R&H.22)

To guarantee ingredient safety, nearly all restaurant chains exclusively collaborate with qualified large-scale suppliers. One chain believes that ingredients obtained from national-level wholesale markets possess a quality endorsement. Another chain with numerous outlets shared:

> For domestic procurement of bulk raw ingredients like rice, oil, and flour, we primarily work with the top three companies. If sourcing internationally, we also choose top-ranked companies worldwide. We source all our flour domestically, partnering with well-known or local leading enterprises. Compliance with national standards, including EU and global standards, is a prerequisite for our suppliers. Each batch of goods undergoes a three-way authority verification upon arrival before we accept it. Our technical department

> conducts self-inspections to verify the source. For imported pork, we maintain long-term partnerships with suppliers and conduct our own testing. This approach applies to seasonings as well, where we rely on local leading enterprises to ensure quality.
>
> (Interviewee R&H.21)

From the expressions used, it is evident that the leading enterprises possessing significant resources in the food industry are more likely to be favoured by restaurant chains in the market. The scale itself becomes a testament to quality. Chain restaurant operators also believe that frequent food safety inspections by government agencies serve as effective supervision. Therefore, they are inclined to use ingredients from formal channels and reputable companies. In the event of a problem, the source can be easily traced, allowing some responsibility to be shifted to the supplier (R&H.21). This is a pattern common to conventional food systems globally, where large, resource-rich suppliers are preferred over smaller enterprises due to their scale and level of resource enabling them to comply with a range of product standards (Neilson and Pritchard, 2009).

Beyond safety, food quality is emphasized in two ways. First, some restaurant chains are establishing their own production bases and thereby control over the supply chain. For instance, a catering company is building its own pig farm, maintaining 3,000 pigs year-round, and selling surplus pork to local businesses. The owner explained:

> The breeding base is our own investment, which not many catering companies are willing to do, but we consider it important. We have implemented a scientific approach to the pork transport process. We conduct on-site slaughter and employ low-temperature technology for deacidification, reducing or eliminating pork acidity. We ensure that pork is transported within one day to a warehouse in Guangzhou, where a specialized department manages and distributes the materials, followed by delivery from a third-party company.
>
> (R&H.22)

The second approach is the more common approach of using certified ingredients. While none of the interviewees mentioned purchasing ingredients with organic certification on a daily basis due to cost control considerations – a significant finding from our research – some restaurants source ingredients from Mainland China labelled as "supplied to Hong Kong". To be so labelled, they must pass Hong Kong's food standards, and consumers in Guangzhou perceive Hong Kong's testing standards of food safety to be more rigorous (Interviewee R&H.11). Additionally, companies actively seek ingredients labelled as "zero-added" or "non-GMO", the standards of environmental certification below organic introduced in Chapter 3, to cater to the consumer market's demand for healthier products (Interviewee R&H.21).

The catering industry demonstrates a clear trend towards standardization using these labels and forms of certification. This is also exemplified by the widespread adoption of central kitchens. The central kitchen serves as the driving force behind

the rapid growth of Chinese restaurant chains. According to the Annual Report on China's Catering Industry 2021, released by the China Hospitality Association, 68.3% of chain catering enterprises with more than 10 shops currently employ central kitchens. While the operational cost of central kitchens is not insignificant, the efficiency advantages become more pronounced as the chain expands. In this context, a central kitchen refers to a system where the headquarters procure ingredients; standardize procedures for cleaning, cutting and packaging; process food into semi-finished or finished products; and efficiently distribute them to individual shops.

One interviewee shared their experience with a sub-brand specializing in pickled and spicy fish, which had 286 shops nationwide as of 2020. For their shops located in South China, most of the ingredients are managed by three central kitchens responsible for distribution. The central kitchens handle tasks such as slicing live fish, preparing seasoning packets and cutting vegetables. At the individual shops, the chefs are only responsible for basic operations like simmering soup, blanching the fish and drizzling oil. The pre-processing in the central kitchen means that from placing the order to serving the food takes less than 15 minutes. This standardized, efficient and convenient operation has been viewed as a success within the industry, characterized by rapid expansion and profit growth for the brand (Interviewee R&H.21).

The benefits of central kitchen intensification are evident. It ensures flavour consistency and helps Chinese food chains to save on raw material costs, labour costs and shop rent (as most ingredients are pre-processed, requiring smaller back-of-house spaces). Pipeline design and standardized procedures propel catering companies into a fast lane of expansion through replication. Central kitchens symbolize catering companies' ambition to compete with the demanding delivery times of the takeaway business.

Overall, restaurant chains prioritize food safety considerations and employ specific strategies such as partnering with large corporations, establishing their own production bases, and implementing central kitchens to strike a balance between food safety and profit maximization. However, these measures also indicate a lack of attention to certain aspects of sustainability. Traditional Chinese food culture emphasizes the use of local seasonal ingredients, allowing the season and soil to be reflected in the dishes, embodying what is seen as a natural perspective on the unity of humans and nature, which we explore in Chapter 7 from consumer perspectives. Increasingly, restaurant chains can prioritize consistency and uniformity of quality at the expense of local flavours. Furthermore, Chinese cuisine has traditionally placed significant importance on the skills of the chef, as a skilled chef has been considered the foremost guarantee of good taste, with many customers even seeking out particular chefs based on their reputation. Central kitchens, with their highly mechanized processes and various mechanical equipment such as vegetable cutters and bone saws, can deskill the role of the chef. The result an interviewee (R&H.23) suggested is that chefs in chain restaurants are no longer the "masters of flavour", and their high level of expertise or experience is no longer a requirement, as they can be easily replaced.

Additionally, centralized kitchens often require transportation of ingredients and finished products over longer distances, leading to increased carbon emissions and packaging waste. Centralization can limit opportunities for small-scale, local producers to participate in the food service sector resulting in the further consolidation of power among larger suppliers, potentially threatening the livelihoods of small farmers and artisan producers. This move towards centralization in the food service sector and accompanying vertical coordination of the supply chain – versions of food system modernization – is an example of environmental and social sustainability in the food system becoming compromised through change.

The critical role of wet markets

The increasing standardization of products and product lines by supermarket and restaurant chains in the modernizing parts of Guangzhou's mainstream foodscape has resulted in the marginalization of small-scale producers and retailers. In this context, wet markets play a critical and distinct role in China's food system, as they embody a dimension of sustainability that can be overlooked at the national scale – maintenance of livelihoods for small and medium-sized producers and distributors and reduction of negative environmental impacts of lengthening and industrializing supply chains.

Wet markets are abundant and widely spread throughout Chinese cities, regardless of their size, as Chapter 3 has highlighted. These markets hold immense importance in many people's daily lives, seamlessly integrated into the streets and alleys while providing sustenance for thousands of households. As of 2020, there were over 800 registered wet markets in Shanghai, 584 in Guangzhou, and 360 in Nanjing (see a Guangzhou wet market entrance photographed in Figure 6.3). These figures clearly demonstrate that wet markets continue to thrive in Chinese cities, serving as a vital source of food for residents (Zhong et al., 2020). Wet markets embody characteristics of both the formal and informal economy. While they were initially planned and established by the Government, most wet markets are now privately owned. Simultaneously, wet markets consist of independent, small-scale vendors characterized by low investment, low barriers to entry, and labour-intensive operations. Wet markets effectively serve as a crucial link connecting food production and consumption in China.

These markets and the millions of small producers within the Chinese food system, discussed in Chapter 3, mutually reinforce one another (Yuan et al., 2021). Without wet markets, the products from numerous small producers would have no outlet, given the model of food production and distribution being driven by the supermarket and restaurant chains. Fresh products with unique (non-standardized) qualities circulate through wet markets rather than supermarkets, e-commerce platforms and other food service channels. Product ranges sold in wet markets include non-standardized and irregularly produced items, such as aesthetically imperfect homegrown vegetables and wild seafood. They also include products for which it is challenging to preserve freshness and transport over long distances, such as summer mushrooms in the southwest of China. Moreover, they incorporate regionally

Figure 6.3 An entrance to a wet market in Guanghzou. Photograph by authors.

specific, niche ingredients, such as Guangdong herbs for soup. Large-scale retailers tend to favour suppliers who offer stable quantities, meet specific product quality and technical standards and maintain minimal price fluctuations, thereby rejecting the products of thousands of small farmers. In contrast, wet market vendors are creative and flexible and can access any part of the food system as their business requires, including produce from smaller producers.

At an ordinary vegetable stall in a wet market in Tianhe, Guangzhou, the research team noted the presence of vegetables produced directly from the suburbs, purchased by small wholesalers from small farmers in the suburbs. Many wet markets have designated areas called "self-production and self-sale zones", charging daily stall fees, where small farmers in the suburbs can sell their own produce, avoiding intermediary links in a form similar to that of the western farmer's market (Goodman et al., 2012), though significantly the production standards may not be organic.

Wet market vendors are themselves an important part of small-scale commerce (see a typical vendor depicted in Figure 6.4). As well as sourcing from small producers, they are home to some small vendors. These vendors come from all over China and are mostly migrants from rural to urban areas. According to estimates by the Guangzhou Meat and Wet Market Association,[1] wet markets in Guangzhou between them provide some 91,000 jobs. The education level of the vendors is generally low, typically primary or middle school, and renting a unit in a wet market to do business has become a hope for many migrants to put down roots in the

Figure 6.4 A vendor selling locally produced food. Photograph by authors.

city. The barrier to entry for wet market business is relatively low, but it usually requires an introduction from an acquaintance, demonstrating the importance of social networks in this urban economy. Fellow villagers form an effective information network and help each other to enter the sector. For example, most of the seafood stallholders in Guangzhou wet markets are from the Chaoshan area. Work in wet markets is very hard; most vendors only have a few days off each year, typically for Chinese New Year. The working hours are up to 12 hours a day, so it is common for households to collaborate in the business and take turns to rest. Surveys estimate that there is a very wide income gap between vendors, but most of the vendors who manage to stay in business earn slightly more than the average income of Guangzhou citizens.[2] There is thus a social sustainability dimension to wet markets associated with supporting trader livelihoods, although with issues of variable incomes and long hours.

In addition, wet markets connect to a large informal catering economy. If wet markets were erased from the urban foodscape, thousands of snack bars, fast food shops and night stalls would also be threatened with closure. According to a 116-vendor survey in Hainan Province, 61% of stallholders maintain a relatively stable relationship with catering operators. For some of the stallholders, they earn more from supplying the neighbourhood snack bars on a daily basis than from provisioning scattered household customers. Small restaurateurs are attracted by the diversity of choices, cheap prices and efficient delivery service of wet markets. Wet market vendors can also provide door-to-door delivery service and can help to purchase

other needed ingredients upon clients' requests. Cantonese cuisine restaurants also like to use local seasonal ingredients from wet markets. Wet markets are thus at the heart of the non-chain, independent food service sector, supplying a constant stream of fresh ingredients, in contrast to the sourcing networks used by restaurant chains described earlier. Wet markets are thus a tightknit part of the currently decentralized and low-intensive part of the food system, connecting upwards to the livelihoods of small producers, horizontally to the hopes of itinerant vendors and downwards to the supply of small-scale restaurants and ordinary households across the city.

Wet markets serve as the perfect showcase for local lifestyles and food cultures in various places. In Guangzhou, the sources of goods in the market stalls are diverse. Taking vegetables as an example, some stall owners do also go to Jiangnan Market to purchase from large-scale wholesalers, resulting in their sources being similar to those for supermarkets. This indicates significant hybridization, where modern and traditional parts of the food system combine. In addition to this, vegetables produced by rural households on the outskirts of Guangzhou are also traded in the wholesale markets. Interestingly, these "imperfect", locally produced vegetables can be seen as the secret to attracting customers to the market. Furthermore, some vegetable stall owners bypass the wholesale markets and establish private contacts to source special categories of supplies, such as fresh medicinal herbs needed by Guangzhou consumers for soup. The individual and independent operating model of the wet market stalls makes it easier for them to become sales outlets for locally produced food (Interviewee R&W.15). During a visit to a wet market, we witnessed a vegetable stall that sourced its goods from a small farmer in the suburbs of Guangzhou and was crowded with consumers. This stall only accepted cash payments, but that did not deter the enthusiasm of the shoppers. According to Respondent GE3, consumers in Guangzhou greatly appreciate the local, small-scale products available at wet markets, an observation we revisit in Chapter 7.

Wet markets not only showcase fresh ingredients but also feature many familiar cooked food stalls in the neighbourhood. Interviewee R&W.31, for instance, has been selling mushroom chips in a Guangzhou wet market for 30 years. Similar to crisps, his arrowhead mushroom chips are made from sliced mushrooms that are deep-fried, becoming a popular snack with local people. Every year, from September to April, when arrowhead mushrooms are in season in Suzhou, he handpicks the best mushrooms, slices them and deep-fries them slowly over a controlled fire. Thirty years of experience have allowed him to master the oil temperature and cooking process, resulting in crispy, salty and non-greasy mushroom slices. Sliced mushrooms are commonly given as gifts during festivals, leading this vendor to be busiest around the Spring Festival. His sliced mushrooms have gained such a loyal following that he and his wife often receive 30 to 40 orders per day from citizens living in other cities such as Beijing and Hong Kong. He stated that "in fact, those outside Suzhou miss the taste. They buy my mushroom chips for a sentimental experience (*qinghuai*)", reflecting cultural influence and connecting with discourses of "hometown" foods introduced in Chapter 3 and revisited in Chapter 7 (see also Zhong, 2023).

One customer left a lasting impression on Interviewee R&W.31. An elderly man in his eighties used to live near the market but moved to a place that is a two-hour drive away. Despite the distance, the elderly man would make the trip several times a year specifically to buy mushroom chips from this vendor because his grandson loved them. Despite the elderly man's mobility challenges, when the vendor offered to courier the mushrooms to him, he declined, considering the journey across Suzhou to buy the mushroom chips as his way of expressing his love for his grandson. The elderly man never informed the vendor in advance, but they had an unspoken agreement that he would show up at his stall every year. Countless stallholders in wet markets share similar stories to this one. Through perseverance, they preserve the flavours of various localities, bringing people, food, place and time together (Zhong, 2023). 50% of the 18.67 million permanent residents in the wider Guangzhou metropolitan area originate from outside the city. As a result, food cultures brought in by immigrants are incorporated into the wet markets of Guangzhou. It can be possible to discern the demographics of the surrounding neighbourhood by observing the ingredients displayed in the wet markets. For example, if a wet market in Guangzhou prominently features olives and mandarin oranges, it is likely that there are a significant number of Chaoshan immigrants in the area. Similarly, a wet market selling a variety of chilli peppers would indicate the presence of immigrants from Sichuan or Hunan (see Figure 6.5). Since many of the vendors themselves are immigrants, they often bring specialty ingredients

Figure 6.5 Chilli pepper vending stall in Guangzhou. Photograph by the authors.

from their hometowns to sell in Guangzhou, displaying their regional origins on their signboards, such as taro from Guangxi or oysters from Zhanjiang. Some ingredients even come through special supply channels unique to their hometowns. This again reflects both the material and symbolic importance of food cultures to the interconnected supply chains and landscapes of retail in the city, with significance for aspects of environmental and social sustainability.

A former chef in a renowned Guangzhou hotel (Interviewee R&H.27) spends his retirement days indulging in his favourite activity of visiting wet markets. During his time working in the hotel kitchen, he had limited control over ingredient selection, as it was determined by the purchasing department. However, he explained that he was always fascinated by the vibrant array of ingredients found in wet markets. The seasonal changes in the stalls and the bustling crowds create a rhythmic connection with nature. The rhythm of the wet market is not solely dictated by the spatial and temporal structures of the modernized parts of commodity society. Within the numerous small vegetable stalls, one can find the rhythm of changing seasons and local flavours, stimulating diverse sensory experiences echoing Lefebvre's (2000) argument about the satisfactions to be found in harmony between the rhythms of daily life and those of nature. Those who appreciate wet markets can always find pleasure and surprises in their day-to-day encounters.

Wet markets are thus a pivotal part of "comprehensive food system planning", (Zhong et al., 2023b) offering an efficient, affordable and accessible supply of fresh food to all segments of society, particularly low-income and elderly individuals. China's wet markets are a result of government planning, starting in the 1980s with the VBP discussed earlier, which led to the construction of new indoor wet markets that continue to thrive today.

The price range of products sold in wet markets is wide, accommodating the needs of different income groups from imported high-end items to reasonably priced foods. Interviewee R&W.32, who operates a stall in a wet market in Guangzhou, specifically targets low-income groups in the city. He focuses on selling imperfect products from the wholesale market, such as yams that are disconnected into two sections, close-to-expiry-date milk, and surplus Chinese cabbages that wholesalers need to sell at a discounted price. The nutritional quality of these products is not compromised. His business strategy involves selling at a low profit margin, as his purchase price is already exceptionally low, allowing him to offer affordable prices to families with limited food budgets.

The primary consumer demographic in wet markets is disproportionately older consumers. According to data provided by the Nanjing Wet Market Association and informal correspondence, 80% of consumers in Nanjing's wet markets are more than 60 years old. Our interviews in Guangzhou suggest a similar demographic profile for the city. Many senior citizens are unfamiliar with modern food access channels such as online shopping due to their limited proficiency in using electronic devices. Traditional wet markets are the most familiar and trustworthy places for them to source their food. Additionally, wet market shopping remains an important aspect of daily life for older people, combining shopping, socializing and recreation.

In Guangzhou, many old markets are being modernized and integrated into catering areas, providing convenient dining options to appeal to surrounding white-collar workers. These markets also offer the purchase of fresh ingredients and on-site food preparation (Interviewee R&W.15). Additionally, they are complemented by flower shops, bakeries, cafes and other facilities. Newly planned market sites are strategically located near primary and secondary schools and community service centres to enhance their appeal to the public. These new markets are designed as one-stop destinations, incorporating cultural activity rooms, centres for the elderly and convenience services such as locksmiths and tailors. The goal is to transform the wet market into a social space for all community residents, not just a place for buying and selling food.

Wet markets in China are thus currently facing a challenging situation, despite their demonstrated sustainable value in supporting small-scale participants in the food system, preserving local food cultures and promoting community cohesion. The challenges arise from two sources: competition in the marketplace and the changing consumption tastes of younger generations. The fresh food sector is highly competitive, with supermarkets, which grew significantly in China in the 1990s as Chapter 3 outlines, not completely replacing wet markets but now experiencing a decline alongside them (Zhang and Hardaker, 2021). The aforementioned neighbourhood community store chains, which emerged in the 2010s, have gained popularity, particularly in newly built districts. These kinds of shops, characterized by miniaturization and franchising, have expanded rapidly as cities have expanded with new districts. Meanwhile, online giants like Alibaba and Jingdong have also entered the community store market, offering convenience shop brands such as Hema Fresh, which promise to deliver online orders to customers' homes within 30 minutes. This convenience, unmatched by wet markets, has been favoured by younger users born since the 1980s. In the 2020s, online platforms introduced a "click and collect" model, where users place orders on their mobile phones one day in advance and collect the goods the next day from neighbourhood restaurants, convenience stores and other pick-up points (Interviewee R&W.19). Group purchases through these platforms cut cost, such as storefronts and labour power, and create a significant price advantage, further squeezing the market space for both wet markets and conventional supermarkets.

Amidst fierce market competition, wet markets struggle to attract the patronage of young people. The fast-paced work and lifestyle of younger individuals can leave them with little time to attend to household chores. Relying on takeaways for weekday meals has become the norm, making home cooking a luxury. When they do find time to cook, younger working people tend to opt for convenient and time-saving options for grocery shopping, such as community store chains or online platforms (Interviewee R&W.19). This dimension of convenience shaping changing consumption choices, with implications for food system sustainability, is similar to patterns observed and theorized elsewhere (see Meah and Jackson, 2017, discussed in Chapter 2).

Furthermore, government support for wet markets has decreased (Zhong et al., 2020). Wet markets used to be an integral part of the Government's public services,

with urban plans for new wet markets based on population density. However, since the 1990s wet markets have been privatized. At the time of writing, wet markets are not mandatory in urban planning for new developments. From the government's perspective, wet markets serve primarily as a retail site, a function that emerging channels can fulfil, resulting in a lack of recognition of the importance of supporting wet markets' survival. In cities like Guangzhou, the opening of new community store chains and pick-up warehouses embedded in residential areas by online shopping platforms does not require planning approval; a simple business license suffices. Essentially, the government has left fresh food retailing to market competition. In the context of this retail competition across the urban foodscape, wet markets struggle to maintain the patronage of younger consumers (Interviewee R&W.15).

We argue that wet markets can and do play a crucial role in enhancing the sustainability of China's food system. First, wet markets accommodate locally produced and non-standardized agricultural products, providing many small-scale farmers with a means of livelihood. Second, the fresh and affordable ingredients available in local wet markets ensure equitable access to food for urban residents. Third, wet markets serve as centres for community engagement, where people from different backgrounds and social classes mingle together, promoting community cohesion. The significant cultural, commercial and public threats to wet markets discussed earlier thus pose challenges to socially sustainable aspects of the food system they have embodied. These aspects are not those forms of conspicuous environmental sustainability associated with western-style certification standards and labels but rather are conventional models of smallholder production and retail that inherently involve lower food miles, less-industrialized production, and socially embedded trade.

Alternative food networks as a market niche for food system sustainability

AFNs in China, introduced in Chapter 3 in terms of their background in some of the policies and "back to the land" movements in China (Yuan, 2022), currently occupy only a small niche market. The market share of AFN products is unclear, but in 2018, the retail sales of certificated organic food in China accounted for only 0.8% of all food retail sales of the year. The AFN market is even smaller than the certified organic food market. The sustainability credentials of AFNs significantly differ from those of CFNs. Rather than distributing produce to traditional wet markets or supermarkets, agricultural products from AFNs are typically sold directly to consumers through independent channels, bypassing intermediaries. AFNs were initially established with the vision of addressing the pressing issues of unhealthy diets, unsafe ingredients and opaque food sources for urban dwellers. Some AFN participants, as we saw in Chapter 3, hold ideals related to environmental protection, animal welfare and sustainable rural development. However, their voices have remained relatively weak until recently.

AFNs in Guangzhou are also in their nascent stages. Similar to the national situation, they occupy a very small niche market. Guangzhou's AFNs consist of

ecological farms, farmers' markets, some retailers specializing in ecological farm products and consumers. The number of ecological farms in Guangzhou is in continuous flux due to a high turnover rate. As of 2021, it was estimated that ecological farms around Guangzhou were growing more numerous, with their main products including various vegetables, freshwater fish, poultry, pork and a limited variety of fruits (Interviewees C&N.5, C&N.6 and C&N.7).

Participants in AFNs

The backgrounds of AFN participants are diverse and complex, distinguishing them from traditional agriculture practitioners. A significant number of producers, as Chapter 3 explained, are what are termed "new farmers" who have entered the industry with limited agricultural experience but possess a college education and some capital. Interviewee C&N.7 had to learn agricultural techniques from scratch and employed nearby villagers to provide labour while he focused on the business side of the farm. These individuals were inspired by eco-agriculture for various reasons. For example, Interviewee C&N.7's father was diagnosed with terminal cancer a few years prior to the research, and the doctor introduced them to biodynamic therapy, which involved consuming organic fruits and vegetables. Though there was some effect, his father's cancer indicators were too high, and he ultimately could not be saved. This experience brought the potential benefits of organic food to this interviewee's attention. Coincidentally, he had a friend involved in e-commerce who advocated investing in the health industry. They decided to rent more than 40 hectares of land in the suburbs of Guangzhou to cultivate organic vegetables. However, eco-agriculture requires significant investment and takes several years to see any results. The interviewee's farm faced annual losses, and he relied on their own trading company to sustain the operation. This situation where the eco-farm relies on another profitable core business is quite common in the Pearl River Delta.

There are also new farmers who view eco-farming as a way of life rather than just a business. Among the eco-farmers interviewed, some previously worked in state-owned enterprises or technology companies with demanding schedules and became tired of the monotonous and unfulfilling nature of their jobs (Interviewees C&N.01 and C&N 10). They felt trapped in their lives and sought a way out. Living close to nature and the idea of self-sufficiency became a hopeful vision for many, motivating them to return to their "hometowns" and engage in farming (Xie, 2021). However, not everyone can achieve the idealistic lifestyle to which they aspire, and most soon discover the challenges and hardships associated with eco-agriculture.

Eco-farms use various sales channels. Typically, farms have their own consumer groups and retail outlets to directly sell agricultural products to consumers, often using online sales platforms – and we discuss the consumer experience of these in Chapter 7. Specialized eco-farms that grow seasonal fruits, such as cherries and peaches, often rely on various online channels as they need to ship large quantities within a short period of time. In western countries, farmers' markets play a crucial role as offline trading venues. Eco-farmers in China also frequently set up open-air

stalls in vibrant parts of cities, engaging in convivial exchanges with consumers. While China is seeing an increasing number of cities hosting farmers' markets, currently only the Beijing organic farmers' market operates smoothly. Guangzhou has struggled to replicate the successful experience of that northern organic market, with the Guangzhou Farmers' Market occurring sporadically a few times a year. It is small scale, incorporating some 20 vending stalls each time it assembles. One of the main reasons for this is the difficulty of competing with the abundance of wet markets providing farmers' stalls or selling locally produced foods, along with rapid development and fierce competition from other fresh food retailers.

Executing sustainability in AFNs

Although AFNs represent only a small part of China's food system, they still play an important and positive role in it by performing a particular vision and example of sustainability (Cody, 2019). First, the agricultural practices of new farmers contribute to ecological sustainability in the following way. The rise of AFNs in China, despite being small in scale, has been influenced by global AFNs, and new farmers inherit the core values of international AFNs by incorporating the concepts of ecological sustainability and respect for seasonality into their daily agricultural production. The original intention of new farmers in establishing ecological farms is their concern about the poor conditions of food safety, so they have strict requirements for their production (Interviewees C&N 05 and C&N 07). They actively learn various new agricultural methods such as permaculture and regenerative agriculture and eliminate the use of chemical inputs. Most new farmers believe that their products exceed the national organic standards, but they do not seek organic certification due to the high cost involved (Interviewee C&N.10). This alternative to certification is a significant difference from many AFNs in the West.

In Guangzhou's AFN community, the Participatory Guarantee System (PGS) is used to ensure that agricultural products meet ecological standards. The standard requires that the production process does not use chemical fertilizers or pesticides, ensures safety and transparency and guarantees a high level of consumer participation. It is an alternative approach to third-party certification involving active participation and direct collaboration between farmers, consumers and agricultural specialists. Consumers in Guangzhou, together with new farmers, visit farms, supervise production details and exchange production techniques (Interviewee R&W.08). However, Guangzhou's PGS does not establish unified standards for agricultural products, so the improvement suggestions made during farm visits are not mandatory. Active participation in the PGS does allow new farmers to enhance their knowledge and skills through peer-to-peer exchanges, as well as strengthen face-to-face communication with consumers, creating mutual trust (Interviewee C&N.10) (see Figure 6.6 depicting a PGS farm visit in suburban Guangzhou).

AFN products are not only local and seasonal but also partly traditional in terms of crop varieties. AFN participants consciously conserve some old varieties of some products such as tomatoes and corns. China's Farmer Seed Network is an active social organization focusing on the dynamic conservation, utilization and

Figure 6.6 A Participatory Guarantee System (PGS) farm visit in suburban Guangzhou. Photograph by the authors.

innovation of community-based agricultural biodiversity and traditional knowledge. The Farmer Seed Network closely collaborates with new farmers and ordinary farmers, holding seed conferences every year to provide a platform for seed exchange. Some flavourful old varieties of tomatoes and corn have disappeared from commercial agriculture but have regained vitality and gained recognition among consumers in the AFN community (C&N.07).

The international vision of AFNs is to establish small-scale local food systems where agricultural products can be circulated within a close geographical range, bypassing intermediaries and going directly from the field to the table, facilitating direct connections between producers and consumers (Goodman et al., 2012). In contrast, the connection between producers and consumers in China's AFNs is often more locationally distant. Many alternative farms are established in remote rural areas due to cheaper land rent, while their target consumer base of the middle classes is in the cities (R&W.08). The connection between producers and consumers is thus facilitated largely through online networks and occasional offline

interactions. Each successfully operated alternative farm has its own loyal consumer base, forming the core of AFNs' social sustainability.

The social sustainability of AFNs is also reflected in the growing alliance of actors. New farmers and consumers are not the only participants. Various social welfare organizations are in many cases active within the AFN community. Some organizations are permanently based in rural areas, empowering small farmers and encouraging young people to start their own businesses in their hometowns. Others aim to unite eco-farmers, consumers and activists to promote sustainable values and advocacy. Some organizations also strive to amplify the voices of China's eco-farmers on the international stage (C&N.10). While these organizations may have different philosophies and objectives, they provide significant financial and intellectual support to facilitate the development of AFNs.

Challenges for AFNs in contributing to sustainable food systems

The first challenge that new farmers in eco-agriculture face is the failure to grow crops on the land and the highly unpredictable yield. Interviewee C&N.33, who was a university student in the 1980s and recently retired, was searching for a venture in the health industry. They found a small farmyard with dozens of acres of land on the outskirts of Guangzhou, situated in front of a river and behind a mountain, and decided to set up an eco-farm. In the first year, she attempted to grow shiitake mushrooms by building fruiting chambers and purchasing more than 1,000 sticks from Beijing for a cost of ¥12,000 . However, after half a year of effort, she was only able to sell the mushrooms for ¥8,000 more, not covering labour costs and infrastructure expenses.

Interviewee C&N.33 realized that shiitake mushrooms were not a viable option. In the second year, she adopted a different approach and decided to plant vegetables based on market demand. However, she soon discovered that vegetable farming was much more challenging than she had anticipated, and she struggled to achieve successful harvests. This interviewee, distressed by the realization that her biology degree was insufficient to deal with her challenges, began studying and seeking guidance from other eco-farmers in Hong Kong, Huizhou and Conghua. Gradually, she gained more knowledge and experience, and in the third year, she successfully harvested her own soybeans. She was initially delighted but soon became concerned about selling the harvest. After five years of hard work on the farm, she had to sell her house in Guangzhou to sustain the business. This example illustrates the challenges of small-scale sustainable food production in AFNs.

The eco-agriculture community encompasses numerous, sometimes international, farming methods, including popular ones like Biodynamic Farming from Australia, Permaculture and Natural Farming from Japan. These farming schools have their own well-defined concepts of human-land relationships, principles and operational practices. Farmers' groups and social organizations often organize online and offline training courses to facilitate technical exchanges, enabling new farmers to learn these overseas agricultural techniques through various channels. It is common to see new farmers watching farming method videos on their laptops

and implementing what they learn in the field. However, some eco-farmers find that simply adopting a specific farming method is inadequate when faced with the realities of agriculture. They find themselves struggling to achieve successful cultivation and may even reach a dead end by rigidly adhering to their chosen method, believing it to be the only correct and advanced approach (Interviewees C&N.01 and C&N.05). It is important to note that international farming methods may not provide guidance on dealing with the high temperatures and humidity of the summer climate in the Pearl River Delta. Therefore, new farmers need to adapt to local conditions and learn from experienced local farmers to effectively manage the constant challenges of pests and diseases and thus translate international farming techniques into methods and approaches suitable for local environmental settings.

Eco-agriculture, without the use of chemical fertilizers and pesticides, is slow. Despite efforts to improve production technology and enhance soil quality, such as permeability, water retention and fertility, it often takes three to five years to see significant results. Thus, it is common for new farmers to experience difficulties in growing vegetables during the initial years. While the yield of eco-agriculture with a normal cycle is not necessarily lower than that of conventional agriculture, the limitations of production technology often result in lower yields, usually less than half of conventional methods. In other words, unless they seek external technical assistance or start from a more advanced stage, new farmers often need to be prepared to face consecutive years of financial losses in the initial phase of their eco-farm.

Some farms receive substantial financing to expand their operations, but the quick return on investment sought by capital conflicts with the slow pace of eco-agriculture. A well-known farm in the Pearl River Delta, established in the 2010s, received hundreds of millions of dollars in financing but failed to keep up with advances in production technology. To maintain supply, they had to rely on constructing greenhouses and investing heavily in organic fertilizers and biological pesticides, compromising the organic standards. After three years of high-speed operations without fallow periods, the land became sandy and saline, and the farm unfortunately became a casualty of the industry (Interviewee C&N.07). It is gradually becoming a consensus within the industry that for farms to thrive, they must focus on strengthening their internal capabilities to improve production.

Individualized efforts will not be sufficient to achieve sectoral success in eco-agriculture. As global climate change intensifies, new farmers are increasingly experiencing more frequent extreme weather events. For example, in early 2022, Guangzhou faced a severe drought, followed by rare low temperatures and intense flooding in April and May of that year. Low-lying farms were particularly affected, resulting in the loss of melon and other fruit crops. Previous production experiences were inadequate in dealing with such extreme weather events, causing significant disruptions in production schedules and rhythms.

Similarly, an alternative farm located in Zhuhai experienced two typhoons from 2017 to 2019, causing greenhouses to be destroyed, vegetables and rice crops to be ruined, fruit trees to be uprooted and fishponds to be flooded with seawater (Interviewee C&N.01). The first typhoon struck just as the farm was starting to make a

profit in 2017, causing losses of nearly ¥57 million and resetting everything back to square one. Fortunately, consumer donations helped the farm to overcome its difficulties. These extreme weather events highlight the vulnerability of eco-farmers while also strengthening their resilience. Eco-farmers continue to search for ways to adapt to changing climate.

AFNs and consumer trust

The market for alternative products is still in its infancy. Currently, products sold via AFNs have few links with conventional channels, and the two operate independently from each other. Due to issues such as low production, high prices, lack of certification and relatively low acceptance of organic products by consumers at a broad level, products from AFNs rarely enter conventional channels. Most alternative farms sell their produce directly to consumers.

At the time of writing, AFNs continue to struggle with establishing a significant market for their products, as the environmental and social credentials of their products and systems do not easily resonate with mainstream consumer knowledges and values in Guangzhou. New farmers have absolute confidence in their own products. From the producers' perspectives, their products are not only free from pesticides and chemical fertilizers but also natural and organic. In addition to the quality of the food, these products embody respect for small producers, support for ecological protection, and concern for rural development. In other words, by consuming eco-food, not only do consumers benefit but also the people, communities, and environment around them benefit as well. However, when it comes to publicity, because of prevailing public concerns about food safety and health, it is still necessary for those involved in AFNs to emphasize safety and health aspects of product quality over and above environmental and social credentials (Interviewees C&N.05 and C&N.06).

Currently, alternative food prices are significantly higher than those for conventional food. Alternative vegetables in the Pearl River Delta cost ¥15–20 per kilogram, local chicken costs ¥120—180, and pork and fish cost ¥60—100 per kilogram, which is three to five times the price of ordinary agricultural products (Interviewee C&N.06). A new farmer shared their story, explaining that

> once a customer asked his daughter to buy Chinese cabbage in our shop, and when we sold it for more than ¥80 per piece, she scolded us for being a rip-off and instinctively thought that Chinese cabbage was not worth the price.
>
> (Interviewee C&N.07)

High prices raise consumers' expectations regarding the quality of ecological ingredients. However, the taste of alternative ingredients may not always be high in quality. Eco-agriculture allows plants and animals to grow naturally and more slowly, which theoretically allows food to accumulate more flavour. This difference in flavour may be more noticeable in categories rich in fatty acids and amino

acids, such as meat and fruit, but in categories such as vegetables, the taste difference between ecological and conventional products is often minimal. Moreover, the flavour of food is closely related to its place of origin and variety, and conventional food from favoured locations may not necessarily be inferior. Consumers who expect ecological produce to always taste better may thus sometimes be disappointed.

Some consumers not only expect ecological ingredients to taste good, but they also want them to look good. However, there is minimal intervention in eco-growing, and so-called ugly food is more common, with bug-eyed leaves, spotted fruits, uneven sizes and distorted appearances. Moreover, farms are in rural suburbs while consumers are in the city, so the geographical distance between the farms and the city means that alternative ingredients can only be purchased through delivery, contributing to significant food miles. Meat needs to be cut up and frozen before being transported, and vegetables may wilt in the summer heat. Consuming alternative ingredients can therefore become a struggle against the desire for freshness (Interviewee C&N.05).

In the eyes of consumers, alternative foodstuffs are expensive, not always tasty, can be unattractive, and their effects on the body are not visible. So, who will pay for them? When the quality of the product does not meet consumer expectations and consumers do not recognize the value of the new farmer, there is an issue with establishing and maintaining markets. Currently, alternative ingredients only attract a small share of the market (Martindale, 2021). Individuals purchasing foods sold through AFNs may not necessarily be middle class, but they have high demands for food safety. According to Interviewee C&N.10, they are mostly young mothers or individuals actively seeking more reliable food sources due to their own health changes or the health changes of their loved ones. There are also loyal consumers who recognize the value of alternative farmers. These consumers have visited the farms to closely observe the growing process, engaged in in-depth conversations with the operators, and have been impressed by their stories (Interviewee C&N.10), which we pick up again in Chapter 7.

Overall, when analysed from the perspectives of community connection and consumer trust, AFNs are in a state of near-suspended dis-embeddedness (Zhong et al., 2022). AFNs lack the participation of traditional small farmers and have become a form of food supply chain dominated by a few well-educated, capitalized "new farmers". However, few of them appear to have intentions of integrating into the rural communities where they are based.

Conclusion: food system challenges and ordinary foodscapes with sustainable effects

This chapter has examined various dimensions of sustainability across contrasting parts of the Chinese food system, highlighting the need for an understanding that considers local context and socio-economic factors. The translation of sustainability goals from global to national scales is not a straightforward process, and in the case of China, the central Government's prioritization of food security

and safety over environmental protection reflects the priorities and development needs of most of the population and food system formats. The role of the state in implementing policies to achieve the sustainability goals of food security and safety is undeniably significant. Strategies such as the VBP, traceability systems and complex food safety regulations have been key in ensuring food availability, accessibility and price stability.

Participants in the CFNs, including supermarket chains and community convenience stores, generally comply with state regulations and prioritize food security and safety. However, their efforts towards standardization and increasing their influence in the food supply chain can contribute to other sustainability challenges associated with the industrialization of agriculture. These include the disappearance of small producers, loss of biodiversity, marginalizing local foods and contributing to environmental pressures (e.g. overuse of chemical inputs).

There is no one-size-fits-all solution to sustainability. Relying on AFNs to promote sustainability may not be entirely suitable for the Chinese context, and indeed AFNs represent a very small fraction of the Chinese, including Guangzhou, food system. Rather, China has its own pathways towards sustainability, with wet markets playing a key role in supporting small producers, preserving local food cultures and fostering community solidarity, an example of ordinary foodscapes with some sustainable effects. However, these traditional markets lack adequate policy support.

The future of sustainability in China's food system would appear, therefore, to rely on a multi-pronged approach. This includes shifting sustainability goals from national-level food security to grassroots-based welfare. Such a shift would consider the rights of small producers, the benefits to local communities, and environmental impacts. It would involve the development of wet markets and more support for the growth and maturation of AFNs. Such a multifarious approach would allow for a balanced view of sustainability that takes into account China's particular socio-economic and cultural contexts and heterogeneous foodscapes.

This setting of a diverse and heterogeneous foodscape across urban China and in Guangzhou, featuring different forms of alternative and conventional food system and retail formats, provides the active context for sustainable food consumption agency. And it is to this agency – the everyday practice of sustainable food consumption – that we now turn in Chapter 7.

Notes

1 Personal correspondence.
2 In 2020, the average disposable income Guangzhou citizen was 68,304 yuan (Guangzhou Municipal Government, 2021). https://www.gz.gov.cn/zwgk/sjfb/tjfx/content/post_7217822.html

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7 Practising sustainable food consumption through the lived experiences of Guangzhou's foodscape

Introduction

This chapter shows how versions of sustainable food consumption are practised by Chinese consumers, focusing on those residing in the neighbourhoods of our Guangzhou study. We acknowledge that food consumption in Guangzhou takes place in an urban setting where the state is more powerful in shaping strategies and narratives concerning environmental sustainability than has tended to be the case in most western economies, and where government policies concerning sustainability have been more focused on food production and distribution than on consumption. We also acknowledge, as explained in our earlier chapters, that food security and safety have been dominant concerns for the government rather than questions of environmental and social sustainability.

As we have shown in previous chapters, consumption in Guangzhou is practised through a foodscape where modern and highly digitized supermarket formats and food delivery services gaining purchase with generally younger consumers operate alongside thriving traditional wet markets, emerging alternative markets and a growing restaurant sector, with digital influences increasingly threaded through all formats. In a setting where sustainable consumption is not strategized and labelled in quite the same way as it is in western economies and societies, and where citizens as consumers are not generally seen as conscious agents of environmental and social change to be mobilized, there is a risk that the agency of Guangzhou citizens and their consumption practices is downplayed. However, as we have argued in previous chapters, if we only look for western expressions of sustainable consumption involving goods labelled as environmentally and socially sustainable and consumers' narratives of altruistic care for the sometimes distant environments of food production, then we risk overlooking important food consumption practices that in variegated ways can involve connections with the environment, communities and their sustainability. These connections can suggest both existing and potential levers for improving sustainable food consumption in Guangzhou and across urban China.

We acknowledge the values of food quality, safety and security shaping food consumption across urban China, and increased spending power of citizens in the context of economic growth, as explained in previous chapters. Against this

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backdrop, we critically engage with everyday food consumption practised through Guangzhou's diverse foodscape to identify various contextualized considerations of sustainability. We advance understanding of how citizens as consumers navigate Guangzhou's complex food system, how they regularly make informed choices about their food and how their ordinary practices of food consumption can relate in various ways to concerns of sustainability. We hone in on the following interconnected fields through which ordinary food consumption involving human-environment relations with implications for sustainability can take place: (i) the pursuit of food freshness; (ii) valuing cultural heritage, memory, and place; (iii) considerations of health; (iv) emerging connections with foods supplied through Alternative Food Networks (AFNs); (v) food fashions and digital influence and (vi) urban food production. Through the chapter, engaging with these themes, we thus attend to the ways in which both conspicuous and quiet, unlabelled forms of sustainability are practised through different moments of consumption associated with food acquisition, appropriation, appreciation, divestment, devaluation and disposal (Evans, 2019; Warde, 2005).

Expressions of sustainable food consumption in Guangzhou

The pursuit of freshness

Valuing freshness

Among our interviewees, consumers stress that freshness is a central consideration when choosing food (e.g. G.INT.1, G.INT.12, G.INT.26). In terms of a time dimension, for many of our study respondents, freshness in Chinese food ingredients implies immediacy, measured in minutes and seconds from the field to the table, with a sense that the shorter the time, the fresher the food (see also, Zhong et al., 2020). For example, fish that meets Guangzhou's prevailing consumer freshness standards must be swimming live in water and freshly killed, with the transition from animal to food completed within a few hours. Live poultry slaughter used to be allowed in Guangzhou's traditional markets, and only since the SARS epidemic in 2003 and the subsequent outbreak of avian flu has the sale of live poultry in retail markets been gradually banned. Some consumers still lament this regulation (e.g. Interviewees G.INT.1. 3 and G.INT.1.11). This extreme pursuit of immediacy is sometimes at odds with food science. For example, food science suggests that beef should be hung for a period after slaughter, commonly up to 28 days, to be tender and for the best flavour. A respondent, however, said that her favourite beef hotpot is made from freshly slaughtered cattle before the blood has had time to drain from the meat, and even if the muscles are still twitching (G.INT.1.16).

In terms of flavour, freshness refers to *umami*, a Japanese word that means "delicious". In Chinese cuisine, freshness is widely accepted as the fifth flavour in addition to sour, sweet, bitter and salty (Chong, 1993). It is understood as a light taste that stimulates saliva production and is suggested in popular culture to "make the palate tingle". Scientifically, freshness is understood as the taste of substances

such as glutamates and nucleotides and is found in extremely high levels in foods such as seaweed, bean paste, tomatoes and spinach (Klein, 2007). In Cantonese cuisine, freshness refers, to a large extent, to the original flavour of the ingredients. Ingredients that are believed to be fresh often require only the simplest of cooking, and white searing and steaming are seen as the only ways to retain the maximum freshness. For example, Cantonese cuisine is famous for its blanched chicken and blanched choy sum (Klein, 2007). The freshness of the dish can ensure people feel that the more they eat, the healthier their diet.

From a western context, freshness has been argued to have "multiple ontologies", one of which is freshness as a technical achievement (Jackson et al., 2019: 79). The development of modern cold chain technology has standardized food production and stabilized storage and transport. For example, bananas from Southeast Asia, still green and hard when picked, can be technically controlled to ripen just before they hit the shelves. Technology affects the appearance, colour, smell and even taste of food, and processes can produce highly consistent and stable forms of freshness. Freshness through technology can thus defy various limits of time and space, as in the case of out-of-season fruits grown in high-tech greenhouses, which have begun to take off in consumer markets across the globe (Chang et al., 2013). Our research found that consumers in Guangzhou are not completely averse to technologically created freshness. On the contrary, consumers recognized that it enables food from distant locations to reach them (Respondent G.INT.1. 24). However, technological freshness has not quite become a mainstay in the Chinese market. Some foods produced to stay fresh longer are not widely accepted, such as canned foods and frozen foods (Wang et al., 2022). Data shows that between 2016 and 2020, the annual per capita consumption of canned food in the United States was 90 kg, Western Europe was 50 kg, Japan was 23 kg, while China was only 5.5 kg (People's Daily, 2023). Although canned food producers in China continue to work to persuade people that canned foods with no preservatives are nutritious, are processed in a very safe manner and can be consumed without fear, the Chinese market has largely rejected them (Wang et al., 2022).

Rejection of technological preservation by some consumers reflects another ontology of freshness in Guangzhou, where food is considered fresh when it is original, true and close to its natural state. Many Guangzhou consumers, particularly older people, dislike the cold and frozen meat sold in supermarkets but feel that meat that has just been transported from the slaughterhouse to the market in the morning and still retains a hint of body temperature is fresh (Zhong et al., 2020). Deeply processed foods such as instant noodles are labelled as junk food (Zhou et al., 2014). Freshness, as defined by many Guangzhou consumers including those in our sample (and foregrounded and explained by Interviewee G.INT.1.4 below), thus also implies a rhythm of time and space, with local ingredients that are in season being seen as the freshest. While logistical developments mean that some food can be produced out of season, consumers still tend to consider foods that are in season to be fresh. For example, lychee and longan can only be eaten at the height of summer, and while there are now also counter-seasonal longans imported from Thailand in the winter, these are considered not as tasty or to have a "strange

taste" (Interviewee G.INT.1.14). The same ingredients, if produced in Guangzhou and surrounding cities and counties, can be perceived by consumers to have more flavour (Interviewee G.INT.1.14 and Respondent GE3). Freshness is, therefore, a composite concept of immediacy, flavour and perception of time and space and has become a central criterion for defining good food for Guangzhou consumers.

The search for freshness through the foodscape

Wet markets, described in Chapters 3 and 6, are one of the most important channels for people to obtain fresh ingredients across urban China, including in Guangzhou (Zhong et al., 2020). Overall, our research found that most consumers in Guangzhou consider food from food markets to be fresher than goods from supermarkets, a view we explore in greater depth later in this section. However, it is important to note that for consumers under 40 in our study, shopping in supermarkets in Guangzhou is becoming increasingly popular, as well as the use of the many local community supermarkets and proliferating online apps. Respondents GE. 7, GE. 9 and GE. 10 in our household ethnographic research, for example, were all working people in their thirties with dependants and busy home–work lives who narrated their choice of purchasing certain foods including fish, meat, vegetables and seasonings, from supermarkets and community stores, as well as via apps such as Meituan (Respondent GE. 9). Our interviews, too, showed that for younger generations and single person household interviewees, brands can be important markers of quality and freshness, with these consumers suggesting they place trust in purchasing platforms of large companies, such as HEMA Fresh and Jingdong Fresh Produce. Many of our younger respondents reported that they seldom shop at wet markets and often choose well-known supermarkets, where food is usually sold in packaging. Moreover, they explained that when they trust the store, they sometimes do not pick the foods themselves (many modern retail formats increasingly enable pre-ordering and store collection or delivery options for consumers). This contrasts with older generation households in our research, where freshness is more typically judged directly through bodily senses in ways enabled more obviously by the spaces of wet markets. This difference in our sample illustrates the intersectional nature of dispositions shaping everyday practice. For example, age and generation and middle classness intersect in ways that affect different choices when it comes to judging – appreciating – food freshness and purchasing – acquiring – food in diverse retail outlets.

Consumers across the age spectrum maintain the habit of shopping multiple times and in small quantities to minimize the time food is stored in the fridge. In Hainan Province, many consumers even go to the wet market every day, which is less common in the West (Zhong et al., 2020). Our interviews revealed that although many Guangzhou consumers rarely go to the wet market every day due to their fast-paced work, it still plays an important role in their dietary life and many of them pay frequent visits. According to the data provided by the Meat and Vegetable Market Association of Guangzhou, as of 2021 there were 584 vegetable markets in Guangzhou, embedded in residential areas, supporting the high-frequency

shopping habits of the population. Crucially, although the normalized frequency of shopping trips embedded in most respondents' daily lives, whether involving modern or "traditional" retail formats across Guangzhou's foodscape, was rarely explicitly linked to deliberate attempts to reduce or eliminate household food waste, respondents frequently made reference to purchasing enough for mealtimes and using leftovers in subsequent meals (e.g. GE.1). This shows how concern about waste (food disposal) minimization as a dimension of consumption interweaves with preferences for freshness and imperatives of convenience, dovetailing with Meah and Jackson's (2017) view of multiple values combining in daily practice.

Turning attention to wet markets as key formats in the Guangzhou foodscape (see Figure 7.1), freshness deeply involves the senses. The lively atmosphere of wet markets enables consumers to feel food freshness. In wet markets, the morning rush at the market starts at seven o'clock. At this time of the day, small tricycles with all kinds of fresh produce enter the market, whole pigs are still warm from the slaughterhouse, fish and shrimps swim in their tanks, vendors sell in a frenzy, aisles are crowded with people and the air is filled with the smells of fish, meat and the earthy smell of vegetables. Long queues form at the entrance of the old *baozi* (bun) shops, with steam rising and aromas overflowing. Amidst the constant stimulation of the senses, consumption is wrapped up in freshness.

Figure 7.1 A bustling wet market in Guangzhou. Photograph by the authors.

Buying food requires the full use of all five senses, and looking, smelling and touching are essential. Regular marketgoers, including those in our study sample, have developed their own personal rules for judging freshness over time and are well versed in the characteristics of everyday ingredients. Examples of views of freshness include but are not limited to leafy greens with straight and dry leaves, squash tips that are still green and not wrinkled, sea fish with non-dented eyes, fish that is firm when poked and pork that is shiny and odourless (Interviewee G.INT.1.01). The following field note from a research team member accompanying a participant in the wet market for go-along shopping captures Respondent GE.3 demonstrating her knowledge in selecting fresh meat (see Figure 7.2):

> *Heading deeper into the market, we came across a Chaozhou beef shop, and [the participant] introduced us to this stall. When asked why she was confident that their beef was genuinely from Chaozhou, she answered, "We ourselves also go to Chaozhou to eat beef, and these shops are chain stores there. Because many people in Guangzhou have started to eat beef, they have expanded into the Guangzhou market". Regarding this shop, [the participant] said, "The beef is very fresh at this time because in Chaozhou, they*

Figure 7.2 A respondent (GE.3) carefully selects fresh pork ribs in a wet market. Photograph by the authors.

are very particular about the freshness of the beef. So it is all transported here after being slaughtered on the same day. This time is exactly when they start processing after transportation, so there is a wider selection available now. Although most beef in Chaozhou is eaten in hotpots, the prices for different cuts vary". She then stopped in front of a pork stall to ask the vendor about the price of ribs. While communicating with the vendor, she carefully examined and selected from the several strips of ribs hanging on the stall, touching and flipping them by hand, and taking a careful sniff. A damp cloth was placed on the pork stall for customers to wipe their hands. She ultimately chose the cuts from the front. There were clearly flies buzzing around the meat on the stall, to which [the participant] nonchalantly said, "It's normal for flies to be on the meat in this kind of weather; if there weren't any, it would actually suggest that something has been added to the pork".

On the go-along shopping trip with Respondent GE.8, our field diary describes the embodied moments of consumption involving product acquisition and appropriation, also at a wet market:

[Respondent GE.8] picks up a bag of vegetables, examines it, and then puts it back. She repeats this with another type of vegetable, observes it, and puts it back as well. After a few repetitions, she stops examining the vegetables and spends some time at the meat section, but she feels the meat isn't very fresh and she didn't plan to buy any meat anyway, so she soon leaves. Arriving at the fruit and vegetable counter, she quickly selects two tomatoes, a bell pepper, and an onion. When asked about her choices, she says, "These are for cooking today, to be used with the meat we have at home, so I already knew what I wanted to buy. For the vegetables, I can be a bit more selective based on their freshness". After these purchases, she returns to the vegetable counter, and after some more deliberation, she decides to buy a pack of lettuce.

The above example demonstrates the visceral nature of consumption practice involving product acquisition and appropriation through Guangzhou's foodscape, in this case the wet market, and which also clearly incorporates culturally inflected values of food appreciation. Such practices, while habitual, are far from subconscious, supporting Evans's (2019) point that sustainable consumption needs to be understood as being culturally charged and executed in part through consumer knowledge. Such culturally charged decision-making also involves a balancing of considerations, from concerns about freshness to meal-planning working around work-life responsibilities and rhythms.

Knowledgeable consumers in our research were able to pinpoint local vegetables among the hundreds of stalls, which for them were viewed as culinary treasures. Our study participants discussed how local vegetables are considered to have more flavour because they are produced around the city and transported over shorter distances, making them fresher (Respondent GE.8 and Interviewee C&N.10). Consumers also associate local vegetables with certain characteristics, such as being

packed in large, airy iron frames, as opposed to foam boxes used for vegetables transported from outside the city. Some wet markets have temporary vendor areas on the outskirts where local farmers set up stalls to peddle their homegrown vegetables. These stalls are easily recognizable, with small quantities of each type of vegetable, mixed together, and often not very good-looking, in the form of what one interviewee described as "ugly food" (Interviewee G.INT.26).

Building up a trusting relationship with individual vendors is also seen by our respondents as key. One household in our ethnographic research has become used to buying their food from familiar stalls and has long bought pork from a particular stall (Respondent GE. 5). They explained how vendors will treat their familiar customers warmly and introduce them to the fresh goods of the day. When there is enough trust between the two parties, the vendor will even make an informed food choice for the consumer. It is in the long-term, mutual interest of both buyers and sellers to establish a familiar relationship, with vendors proactively sharing food information with consumers to ensure a steady flow of customers and consumers receiving a fresh, safe supply as a result. This illustrates the importance of trust and social networks practised through wet markets in Guangzhou when it comes to maintaining the retail and consumption of "fresh" food, which although not explicitly labelled as "sustainable" forms of food distribution nonetheless reinforces localized forms of shorter and often less-industrialized supply chains.

Visceral experiences of consuming freshness

Consumers' interaction with fresh food begins at the point of retail and continues through the processes of preparing, cooking and eating the food, which combines visual, gustatory and embodied experiences. Some food labels contain information about local production, but our respondents explained that they do not always trust them and choose to use their physical senses to gauge and judge the quality of the food (Interviewees G.INT.1.6 and G.INT.12). The chicken meat produced in Qingyuan (a city near Guangzhou) is well known in Guangzhou, and some chicken meat in supermarkets is also labelled as Qingyuan chicken. However, when some consumers bought it for soup, they found that the meat was very chewy and did not have a "chicken flavour" (G.INT.1.12 and G.INT.13). One participant shared her experience as follows:

> Many Qingyuan chickens are now industrially raised and do not taste as good as the free-range chickens of my childhood. But there is a farm next to where I work, and we see their chickens being free-range and fed grain every day, so we go to that farm to buy these chickens and sometimes share them with friends.
> (Respondent GE.11)

From this respondent's perspective, the freshness and originality of the chicken from Qingyuan need to be confirmed by the taste of the product, and even if the chicken from the retail channel does come from Qingyuan but does not taste as she expects, she does not consider it "good food".

Another participant discussed the difference between non-local and local vegetables:

> It is only when shipped from very far away that many [have been grown with] preservatives. They are prone to rotting, and much water comes out when stir-fried, leaving an astringent sensation on the tongue after eating, while [water from] locally produced vegetables does not come out in the stir-frying process and returns to sweetness after eating.
>
> (Interviewee G.INT.1.30)

Fresh local vegetables are not only judged to be better than mass-produced vegetables transported over long distances, but they are also considered to be seasonally appropriate and healthier. Many consumers describe their visceral experience of freshness as "*feeling good after eating it*". (Interviewee G.INT.1.04). The assessment of food quality is thus closely linked to bodily responses (Hayes-Conroy and Hayes-Conroy, 2010). By feeling the texture, tasting the food and absorbing its nutrients into the body, the sensory experience of the body connects the materiality and cultural significance of food. Locally produced ingredients and eating styles in Guangzhou can therefore be seen as part of a cultural complex, once again supporting Evans's (2019) argument about acknowledging the cultural dimensions of agency shaping sustainable consumption practice. While embedded in routinized, everyday shopping practices, the roles of knowledge, judgment and choice are clearly articulated.

Regarding freshness working through food preparation beyond purchase, fresh ingredients tend to be cooked by our respondents in relatively simple ways to bring out the original taste of the ingredients. The district of Zengcheng, for example, is a famous producer of *choy sum* with a sweet and non-fibre taste, which is best cooked in boiling water. Consumers who have moved to Guangzhou from other provinces expressed that they were not used to the light tastes associated with culinary preferences in Guangzhou at first but have since adapted and enjoy them, now feeling physically uncomfortable eating heavily oiled and spicy dishes (Respondents GE.2 and GE.6). The continuous adjustment of the body's response to foods can enhance understanding of new items, continually reshaping what is valued and appreciated as "good food". People therefore can be seen to construct the freshness of food in Guangzhou through their complex sensory experiences, showing that the moment of consumption associated with appreciation (Evans, 2019; Warde, 2014) for many involves sensory and embodied experiences that also connect to the geographies of production and consumption, in this case practised through the foodscape of the city of Guangzhou. Nonetheless, versions of freshness materially and culturally associated with the modern technologies and processes of supermarket, and some community store, formats are gaining increasing traction with consumers, implying a changing balance and diversity of "ontologies of freshness" (Jackson et al., 2019: 79) working across Guangzhou that shape dimensions of food sustainability in transforming ways.

Valuing cultural heritage, memory and place

Getting "hometown" food

When it comes to food choices, our interviewees and participants in the ethnographic study who were born and have lived in Guangzhou spoke of various norms and conventions they follow when seeking freshness. The previous section described these in terms of the senses engaged to judge freshness when selecting produce in markets. For those who migrated to Guangzhou from other provinces and cities, they reflected on how it took time for them to adapt to the rhythm of Guangzhou food (Respondents GE.4 and G.INT.1.16). Initially unfamiliar with Guangzhou's local supply and distribution channels, they demonstrated a practice of blending these with traditional culture, memory and nostalgia and, in doing so, established a deep connection with their home and the place they moved to, as well as with different food cultures (Interviewees G.INT.1.12 and G.INT.1.24). This illustrates a cross-cultural and material hybridization of different food and culinary cultures between regions of origin in China and those associated with Guangzhou.

Figure 7.3 shows Participant GE.2 in the ethnographic research. She resides in a neighbourhood in Tianhe District and she is pictured with her 8-year-old son sitting down to a typical lunch in June 2019. She is from Shandong Province and remained in Guangzhou to work after graduating from university in the city. Initially, she did not cook for herself and would eat at the company's cafeteria or order takeout

Figure 7.3 A typical lunch of a respondent's (GE.2) family. Photograph by the authors.

food. After the birth of her son, she became increasingly concerned about her family's diet and even taught herself traditional Chinese medicine. She explained that the cooking seasonings from her hometown in Shandong are quite strong and that the diet is mainly based on red meat. Maintaining such a diet in Guangzhou, she said, would "burden the digestive system". She communicated with local friends in Guangzhou and learned the art of soup-making. Soup-making is an essential part of Cantonese cuisine, generally involving seasonal ingredients, including medicinal herbs, dried vegetables and meat, combined according to the characteristics of the ingredients and simmered for one to two hours. The soup is considered to be nourishing. Often, her lunches are primarily vegetable based, including ingredients such as stir-fried green beans and boiled taro. However, she also often makes chicken soup with seasonal mushrooms. The fruit served after the meal in the photograph was cherries sent from relatives in her hometown, a taste she cherishes from her childhood memories. Her meals demonstrate a hybridization where her diet is leaning towards Guangzhou culture while also incorporating ingredients and flavours of her hometown, influenced in part by feelings of nostalgia and bound up in her work-life and household rhythms and responsibilities.

When asked about their daily diet, most respondents who had migrated to Guangzhou mentioned their hometown food, and ten narrated a regular practice of consuming food from their "hometown". For example, some bring a lot of pork, local eggs and even corn to their homes in Guangzhou every time they return to their hometowns and often ask their relatives back home to send more when those are finished. Some, such as Respondent GE.1, even have a special freezer at home in Guangzhou filled with food from their hometown, thousands of miles away. These hometown ingredients were obtained from the vegetable market near the interviewee's hometown or from ordinary ingredients produced directly by relatives working in agriculture. It is believed that the "taste of place" is rooted in the most familiar parts of their lives and is constantly evoked by their experiences over the years. As the saying goes, "a place where the land nurtures its people (*yi fang shui tu yang yi fang ren*)", the qualities of the food of the hometown are imprinted on people in the form of memory, becoming enduring cultural reference points.

Respondent GE.1, who insisted on eating pork from their hometown, for example, said, "I feel that the meat here in Guangzhou does not smell good and does not taste like pork". Childhood experiences and memories have laid the foundation for food taste, and the longer they are embedded in their hometown, the stronger the foundation can become. Therefore, middle-aged and older respondents in our group of respondents who moved to Guangzhou with their children showed a stronger attachment to food from their hometowns, relying heavily on the supply of ingredients transported from their hometown.

Emotionally, by experiencing the taste, texture and aroma of food from their hometowns, respondents who are migrants living in Guangzou experience nostalgia and build a spiritual bridge between their hometowns and their new homes (see also Holtzman, 2006). The food from their hometowns is also a powerful tool to

maintain a connection with their heritage while incorporating new local elements in Guangzhou. Interviewee G.INT.1.7, from Henan, believes that she has adapted to Guangzhou food cultures and likes to make soup every day, but she also explains:

> I like to eat Chinese toon in the spring, and I also like to make tea and cakes from acacia flowers, and the ferns in my hometown are also very good, and I like everything that can be used in dishes. It is only when I eat them that I feel that spring has arrived.

In the absence of changing seasons in Guangzhou, this respondent recreated seasonal food from her hometown to express her nostalgic feelings. This case shows that migrant groups tend not to abandon their old ways of eating altogether, but that they maintain a certain degree of connection with their hometowns while incorporating new local elements.

Consumption preferences and practices involving embodied and culturally inflected notions of food *appreciation* involve cooking and eating fresh, unprocessed food in all kinds of ways that may not at first sight be explicitly about sustainable consumption – though it may link to the mobilization of hometown discourses referred to in Chapter 3 – but they may have sustainable effects in terms of shunning industrialized food production.

Some interviewees even returned to their hometowns specifically to taste the local food. As one respondent (G.INT.1.14) explains:

> Since the way we live nowadays makes each of us detach from our hometowns, we can't eat fruits [that] grew in hometown all the time. I especially miss the cherries in my hometown, in Laoshan, Qingdao, Shandong Province, but they are not easy to transport, and perish, so I am going home this year to visit my relatives to eat them.

Another respondent (G.INT.1.16) said that "Chaoshan people have a Chaoshan stomach" and would often return to their Chaoshan hometown for beef hotpot and various kinds of vermicelli because the ones in Guangzhou are "not authentic". For migrant communities in Guangzhou, enjoying delicacies of their hometown is important for maintaining their identities and relationships with their places of origin, which in turn fosters well-being.

The respondents' act of bringing food from their hometown to Guangzhou embodies multiple sustainable implications. Food nostalgia not only contributes to the preservation of culinary traditions but also bolsters the cultural sustainability of communities. As migrants share their traditional food knowledge with locals in Guangzhou, they also potentially foster the growth of a sustainable food culture. Although transporting hometown food to Guangzhou does not directly reduce the carbon footprint associated with long-distance transport, it indeed supports small-scale, hometown-based agriculture, a form of social value and sustainability (Respondents GE1 and GE10). Moreover, many so-called traditional diets that have evolved over generations lean towards sustainability, as they typically depend

on local and seasonal ingredients and employ cooking methods that minimize food disposal and waste. This interplay of tradition and sustainability reflects a respect for both cultural heritage and environmental stewardship.

Alleviating food anxiety through hometown foods

The use of hometown ingredients is a positive strategy, shaped to an extent by mobilized hometown discourses (see Chapter 3), for migrant communities to alleviate their food anxiety regarding products available in Guangzhou. Our research respondents who are migrants in Guangzhou expressed concerns about food safety, with conventional food in Guangzhou being a concern for some (G.INT.1.8). Instead, they sometimes opt for the security of food from their hometowns because of their unfamiliarity with the Guangzhou food system. One respondent (G.INT.1.22) believes that the food from home is of high quality:

> Our pigs over there eat cooked pig food, unlike here where they are fed raw feed. All our pigs over there have to grow to 400 or 500 kg and have to be fed for at least eight months or even a year. Over here, they can be killed in four or five months.

Similar comments treat the conventional foods they encountered locally as the product of an industrial assembly line. In contrast, hometown food is seen to have the superiority of local food and the flavour of the hometown terroir, appearing "original and ecological" (G.INT.1.17).[1] One respondent we spoke to in our ethnographic research hails from Guizhou, and he, along with his spouse, is retired. They moved to Guangzhou two years ago due to their daughter's employment. He previously lived in Guangzhou for a while but insists that the pork in Guangzhou lacks flavour and may not be safe; hence, he persists in bringing home-raised pork from his hometown. They make soup with his hometown pork, often specially prepared for their grandson, showing connections of food choices to relations of care for proximate others (Meah and Jackson, 2017; Miller, 2001). They also often consume smoked meat brought from his hometown. And, as part of a tradition of frugality, the couple typically save meat leftovers for consumption as part of the next meal. A favourite dish they cook is called "*Cai Doufu*" (vegetable tofu), which is a classic taste of Guizhou and commonly found in its wet markets. However, it is unavailable for purchase in Guangzhou, so the couple make their own tofu. However, they sometimes have to substitute some ingredients ("*We usually add pumpkin vine to the tofu, but it's not available here, so we had to use Chinese cabbage instead*"). Another favourite dish is tossed and seasoned asparagus lettuce, with ingredients bought from a market in Guangzhou. The respondent's wife prefers to soak the vegetables in water for an extended period, reflecting that "[t]he vegetables here are different from those at home; they might have pesticide residues, so soaking them longer is better".

Each immigrant family in our research discussed how they managed predominantly to use ingredients brought from their hometown but reflected on how time consuming and labour intensive that can sometimes be. Respondent GE.5, a

middle-aged resident who has lived in Guangzhou for more than 20 years, actively chooses to integrate into the local food markets of Guangzhou. She establishes relationships of trust with vendors to buy high-quality ingredients (see Figure 7.4 for an illustration of a seafood market vendor). Explaining how these relationships of trust help to address anxiety regarding food safety, she says:

> Whether it's meat or vegetables, I always buy from a few specific vendors. The price of the food is secondary. While it's good to have affordable options, ensuring safety is the priority. If it's not cheap, we can still accept it. But generally, these vendors won't deceive their regular customers.

Additionally, and showing digital influence, there is an online WeChat group organized by residents in Respondent GE.5's community, dedicated to sourcing high-quality local agricultural products. The group leader is a neighbour, and the products are recommended by the community members, with quality being spread by word of mouth, which has also attracted significant numbers of customers.

A key reason cited by migrant respondents for viewing their hometown ingredients as being high in quality is their knowledge of the production process and the high level of trust in the food provider. Consumers are currently facing what has been termed in the critical literature on consumption as a "knowledge fix" (Eden et al., 2008: 1044), which refers to the fact that industrial food can be contaminated at many stages from the field to the table and that opaque processes

Figure 7.4 Seafood vendor in market. Photograph by the authors.

constitute a knowledge barrier for consumers, undermining their confidence in the quality of food. Theoretically, the quality and safety of food produced by consumers themselves is completely knowable, but with each additional step in production, transportation and retail that lacks consumer involvement, the "black box" of food information expands, and consumer trust can decrease. This appears to be particularly the case in Guangzhou and more widely across China in light of food safety issues. Hometown ingredients are often produced by respondents' hometown relatives or acquaintances, effectively creating a short chain of food connecting producers and consumers. Some hometown food comes from vendors who are familiar with local markets in regions of migrants' origins, in which case, the vendors effectively become proxies for food information, providing assurance of food quality based on a long-term relationship of trust with the consumer.

Local food has traditionally been defined as food produced and consumed within a certain geographic area (e.g. a farm-to-table distance of 200 miles) (Chambers et al., 2007). Our research shows that migrant communities have been able to recreate the meaning of local food in Guangzhou by transporting hometown food across local boundaries and alleviating anxieties about food safety. The significance of hometown food also manifests itself in the promotion of the local social integration of migrant communities (see also Johnston and Longhurst, 2012). Hometown food has a strong social attribute of a gift rather than a commodity. Some respondents (G.INT.1.1, G.INT.1.7 and G.INT.1.30) reported that food from friends and relatives back home was given to them as a gift. They also often shared the hometown food they acquired with their friends in Guangzhou and received hometown food from colleagues from time to time.

In the existing literature, trust and emotion also become important drivers when people trade local food in settings such as farmers' markets, where interpersonal interactions in the community are aggregated through the sharing of food (Sage, 2003). In other words, local food implies embedded sociality, acting as an icebreaker and a catalyst for social bonding. Hometown food can have a similar effect, the difference being that instead of building new social relations from scratch, hometown food tends to form a snowballing pattern of co-benefits from existing social relationships. Migrant communities can form new social circles in Guangzhou and social relationships are strengthened and reinforced based on continuous reciprocal giving, resulting in long-term reciprocity. This shows the interwoven nature of dimensions of consumption involving the appropriation and appreciation of food with quiet forms of sustainable food consumption associated with social as well as environmental value, showing again that some actual and potential forms of sustainable consumption need to be understood through Evans's (2019) cultural lenses rather than theories of practice focused solely on routine and habit.

The sustainability of hometown food is based on migrant communities' identification with their hometown and long-term trust with food providers in their hometown. Emotionally, hometown food ignites nostalgia and sustains attachment to the hometown. The sustainability of hometown food in migratory contexts can differ from the emphasis on "food miles" in that, despite the long distances required for transport (Blake et al., 2010; Schnell, 2013), it forms a socially short chain of

supply, with direct links between producers and consumers, effectively becoming a guarantee of food safety and quality.

Considerations and cultural values of health: yangsheng and "nourishing life"

Some respondents (G.INT.1.14 and GE.4) say that *yangsheng* is an essential principle in daily food consumption. "*Yangsheng*" (often translated as nourishing life) is a term in traditional Chinese medicine and culture referring to the practice of health preservation and self-care (Farquhar and Zhang, 2012). The concept of *yangsheng* emphasizes the importance of maintaining a balanced and harmonious relationship between the body, mind and environment to promote health and prevent disease. In traditional Chinese medicine, *yangsheng* practices include a variety of techniques such as dietary therapy, physical exercise, meditation, herbal medicine and massage. These practices are believed to help maintain the balance of *Yin* and *Yang* in the body and promote the free flow of *Qi* (vital energy) to enhance the body's natural healing abilities.

Yangsheng emphasizes eating according to solar terms. Traditionally, the Chinese used the 24 solar terms to mark the changing of seasons and the progress of the natural year. Interviewee G.INT.1.10, who is now in her forties, says:

> Diet should be in accordance with the time and place, and the seasons. I used to follow the rules (of the 24 solar terms) very strictly to prepare food for my children. For example, in the summer, I am very careful not to drink cold drinks because they can damage the spleen and stomach. In summer, you should eat things that help the spleen and stomach to be healthy. In winter, it's actually about astringency, so you have to avoid eating things that cause sweating.

Respondents believe that food that grows in response to the seasons and soil is energizing and nutritious. Interviewee C&I.25, who likes to grow her own vegetables in the garden, explains:

> We in China have always talked about the 24 solar terms, and we have to grow according to the seasons. The right climate, the right soil, the right varieties to grow, the only thing that comes out of this is healthy and good. Take growing luffa for example, the weather in Guangdong is very hot, and the summer season is very suitable for eating luffa, which is also very suitable for growing in summer. In winter, the luffa become cold food and not very tasty. If you insist on growing it, for example in November, it will grow, but it will not grow well, and it will be bitter and high in nitrite. If the environment is not suitable for it to grow, it will grow painfully, and its melon will have toxins in it. Some vegetables are not poisonous, but because they are not suitable for growing conditions, they excrete something to protect themselves, but the excretion is precisely what is poisonous. So, what is healthy and good food is that it has to be suitable for the conditions in which it grows.

By conforming to the time of natural conditions, this respondent reflects on how the body and the environment are in harmony, which is the traditional Chinese concept of 'the unity of heaven and humanity'. In that concept, heaven represents the universe, nature, all things in heaven and earth; humanity represents human beings; and unity refers to the intrinsic connection between the universe and human beings, expressing the close relationship of interaction and interdependence between humans and nature. Consumers like Interviewee C&I.25 believe that food that is in accordance with "heaven" will bring full energy and health to the body.

In addition, *yangsheng* is about the balance of *Yin* and *Yang*. *Yin* and *Yang* represent two extremes in Chinese medicine used to describe the phenomena of life in nature and the human body. *Yin* is associated with negativity, darkness, coldness and moisture, while *Yang* is associated with positivity, brightness, warmth and dryness. In the view of *yangsheng*, the balance between *Yin* and *Yang* is key to keeping the body healthy, and when they are out of balance, disease can occur. For example, if the body has too much *Yang* (heat), symptoms such as dry mouth, heartburn and dizziness can occur, and if the body is too *Yin* (cold), symptoms such as cold hands and feet and a pale complexion can occur. Many people believe that some foods have corresponding *Yin* and *Yang* properties, such as spicy foods, beef and mutton, which are *Yang* foods, and durian, which is also a *Yang* food. Chinese herbs and bitter gourd, on the other hand, are *Yin* foods, and seafood such as crab is also a *Yin* food. Chicken and most vegetables, on the other hand, have no obvious *yin-yang* properties and are relatively mild, as Respondent GE.2 explained to us.

The balance of *Yin* and *Yang* can, moreover, be viewed as different for everyone and requires consumers to feel their body with care, as this respondent (G.INT.1.14) explains:

> Some dietary ideas are popular, but I will judge whether to follow the trend based on my own empirical approach. For example, the mainstream advocates are now saying that eating fruit is good and helps with skin care, but my own body experience tells me that after eating so many cold things, I need my body's temperature to warm them up. For me, eating fruit instead depletes our energy. So I don't deliberately obsess about eating fruit.

More consumers simplify the balance of *Yin* and *Yang* to a mixture of dietary types by not eating too much meat, which is considered to be prone to causing the body to experience *yang* symptoms and adopting a plant-based diet. For example, a married couple in respondent household GE.3, who avoid repetitive meals during the week, are careful to buy enough vegetables and fruits when they go to the market. Respondent GE.3 explains, "I think the most nutritious thing is the seeds of plants, especially grains and cereals, which are very nourishing".

The equivalent term to a "square meal" is "three dishes and one soup" in Guangzhou. Of the three dishes, one must be a vegetable, preferably one with green leaves.

Figure 7.5 Ingredients purchased in a go-along shopping (Respondent GE.8). Photograph by the authors.

Food diaries kept by our respondents showed that plants are an integral part of the daily family meal. Meals solely made of meat are considered by most to be unhealthy.

Figure 7.5 shows the ingredients purchased by our Respondent GE.8, a 52-year-old local resident of Guangzhou. She pays great attention to *yansheng* and likes to buy groceries at the supermarket near her home. She explains:

> There isn't a big wet market near our home; you have to drive there. Moreover, our daily needs are not that large. I don't eat meat in the evenings, and my husband often doesn't eat at home. So, we generally buy meat only once a week, while we buy vegetables every day. We drive to the wet market for meat on weekends, but we can buy vegetables at the supermarket right outside our community.

During the go-along shopping trip with Respondent GE.8, she first carefully chose eggs from a specialty egg store and, after trying them, said she felt happy with the quality. Continuing to explain her choices to purchase different food items from different retail outlets, she narrated how she prefers to buy the eggs from a specialty store, vegetables from a local supermarket and meats from a further afield wet market on a weekend when she has more time, demonstrating a common practice of shopping across multiple outlets. Navigating the diverse urban foodscape through the rhythms of her weekly life, showing how multiple economic and cultural

considerations are continually weighed up (Meah and Jackson, 2013), preferences for locally produced and quality-based foods are key:

> We prefer local agricultural products, and when shopping for groceries, we try to choose produce from Guangdong. The same goes for the eggs; I pick the ones produced locally in Guangdong. Perhaps most Guangdong people do; they prefer locally produced agricultural products.
>
> (Respondent GE.8)

The concept of *yangsheng* emphasizes the body's active perception of food and the achievement of a subtle balance with the natural environment. It encompasses the idea that humans should respond to "natural" change rather than resist or damage it. Together with wider notions of freshness and nostalgia, *yangsheng* thus contributes to the values shaping many consumers', including those in our research, daily consumption practices and thus can be argued to embody further culturally inflected discourses of sustainable consumption associated with contemporary (and historically shaped) Chinese food cultures. The fusion of "the contemporary" with "the traditional" is important to grasp when it comes to understanding actual and potential agency in practice-based terms.

Consumers of "alternative" foods

A small proportion of consumers in Guangzhou associate the concept of "good food" with the ingredients circulated through alternative food networks (AFNs) (referred to as alternative food in this chapter hereafter and discussed in Chapter 6). Alternative food is produced by small-scale producers following organic and ecological farming methods. Chapter 6 discussed in detail the development of AFNs in China and the difficulties they face. This section, drawing on research with some of the influential AFN actors and buying groups involving consumers as intermediaries, explores the motivations and lived experiences of consuming alternative food from a consumer perspective.

AFNs in China, as we have shown, are at a nascent stage, with very limited production occupying only a niche market and influencing only a small proportion of consumers (Zhong et al., 2022). In 2019, the price of alternative vegetables was typically three times that of the conventional vegetables selling in supermarkets. However, affordability is a necessary but not sufficient condition for the consumption of alternative foods. Loyal consumers of alternative foods tend to be, firstly, highly educated, secondly, mothers who have just had children, and finally, those who have experienced serious health issues themselves or in their family (Interviewee C&N.1). Highly educated consumers are more likely to understand the values that producers want to convey including ethical considerations beyond the quality of the food, such as the interests of the producer, the sustainable development of the countryside and the relationship between humans and nature (Interviewee C&N.10). According to Interviewee C&N.10, young mothers are very conscious of their children's diet and the deteriorating dietary environment and

food safety crisis, which has prompted them to actively seek out beneficial alternatives, hence the strong demand for alternative foods. Once again, this shows the significance of intersectionality shaping consumption practice, incorporating in this case class-based dispositions along axes of income and education, stage in the life course, and gender.

However, Chinese alternative food enthusiasts cannot simply be equated with the "conscious" consumers of the West, who take into account ethical considerations such as animal welfare, producer rights and environmental protection when making their consumption choices, some even making altruism a primary criterion in their food choices (Lewis and Potter, 2013). Our research, as Chapter 5 shows, found that while a small proportion of Chinese consumers do begin explicitly to consider the complex ethics associated with food consumption, the starting point tends to be concern for food and their bodies, extending for some to "distant others" who produce the food. Moreover, care for others or the environment tends to be understood in reference to so-called traditional cultures, such as the *yangsheng* traditions discussed in the previous section. It is to these traditions and values and their role in shaping embedded forms of environmentally sensitive forms of sustainable food production and everyday consumption that we now turn.

In terms of understanding how consumption in terms of acquisition is shaped by Guangzhou's foodscape, we explain here how consumers can access alternative foods through different channels in and beyond the city. One of the most prominent channels is through online shops or WeChat groups run by farmers. Organic farms and farmers that operate their own WeChat buying groups face the technical constraint that a privately run group is limited to 500 users and thus they have to set up and run multiple groups. Consumers place orders online and have food delivered to their homes. In this case, direct communication between producers and consumers, often associated with AFNs, is minimal (Interviewee C&N.5). In a study of such alternative online buying, Chen and Tan (2019) found that despite the eager promotion of the values of nature by farmers, this only comprised 10% of the traffic, with the rest being transactional. Therefore, another alternative food provisioning system involves larger-scale intermediary platforms, which source alternative foods from all over the country. They then sell these items in their online shops, with consumers placing orders according to their individual needs. Many transactions are long-distance and may also go through different intermediaries, so the direct consumer-producer connection typically pursued in western alternative food networks appears absent (Interviewee R&W.8). The consumer is also left to communicate with the intermediary in the event of a quality problem with the product. In both channels, then, the consumers can thus be frustrated by their limited agency (Interviewee C&N.10).

Considering that consumers can proactively create and join alternative food-related initiatives, in 2018, a number of enthusiastic consumers formed the Guangzhou Buying Group. This group is essentially a loose consumer network in which consumers themselves actively find alternative food sources that meet their consumption needs. They initiate group purchases, collect scattered orders from consumers and connect directly with farmers. There are five or six core members

of the group, each with a different role, including negotiating with producers, management of orders, finance and distribution of supplies. All of them have their own jobs and join on a voluntary and unpaid basis. As of 2022, the WeChat group for this network had reached some 490 members.

The core members of the buying group are all loyal consumers of alternative foods and are familiar with producers in different parts of the country. The buying group can collect scattered orders, ship them uniformly to an address in Guangzhou and then have members collect them individually, thus saving on postage costs, which can be costly over long shipping distances. However, some of the fresh produce can only be sent separately due to its perishability. The co-purchasing group has some bargaining power, and the farmers offer preferential prices when demand reaches a certain level. The average consumer is able to put forward their own demand for a product, but the co-buying activities are usually initiated by the core members. This is not because of any inequality of power between the members but because the group needs to ensure the quality of the product.

The buying group selects cooperating farmers in a similar way to a Participatory Guarantee System (PGS), discussed in Chapter 6. The PGS incorporates the participation of farmers, technical experts and consumers. Unlike official organic standards, it relies on stakeholders such as smallholder farmers and consumers to work together to develop and comply with organic standards. In the practice of the buying group, there are no written standards for organic production, and the group relies on existing social networks to meet smallholders and organize visits. Farm visits are open to all members, creating an opportunity for a very close producer-consumer connection, though sometimes the farmers are located too far away, and only a few core members are actively involved.

In the process, consumers come to know the farmers' production details, philosophies, personalities and lives. Once trust is established, their products are then purchased and reviewed by consumers, and if the feedback is good, purchase continues (Interviewee C&N.10). As the alternative small farmers around Guangzhou have their own WeChat groups, and their products are well known to consumers, the co-purchase is not limited to Guangzhou but spread across the country. For example, they will co-purchase cherries from Sichuan in summer and lamb from Inner Mongolia in winter. Members of the Guangzhou Buying Group also share resources and information with those in other cities such as Nanning in Guangxi and Xi'an in Shaanxi (Interviewee C&N.35).

The buying group plays an important role in several ways. First, it is a platform for shared learning, giving members diverse and in-depth information and knowledge about food and improving their understanding of organic farming. One of the core members said:

> Many consumers don't understand the difficult process of growing organic food and think that once farmers stop using pesticides and fertilizers, we can immediately eat safe and healthy food. But what they don't know is that organic production is not only determined by the farmers' will or technology but also by the soil. Because our soil is damaged, it takes time to recover

> its flora. This may not happen in two or three years, sometimes it takes ten or eight years, while sometimes suddenly after being contaminated, even after years, it does not restore a balanced ecology. So eco-organic is far from being the same as not using pesticides and fertilizers. The process is not easy, even painful. As consumers, do you have the patience to accept products that are not perfect during the transformation period? If one participates more in the discussions in the buying group, knowledge will increase, and tolerance for food will be higher.
>
> (Interviewee C&N.35)

Second, the buying group and the smallholder farmers form a deep trusting relationship that is more cohesive and tighter than that of a socially distant sale:

> We need to know not only the farmers' products but also to follow up on their state of production, their economic state, for years on end. All their customers, we need to know not just the simple fact that they supply us. We want to understand every aspect of their life. Many farmers experience sudden natural disasters and need emergency sales or need help because their production has been reduced. We do everything we can to support them, understand their difficulties, try to market their products and help them through difficult times, in a completely voluntary way.
>
> (C&N.35)

In addition, some consumers' perceptions of food, place and value were also enhanced by their participation in the buying group. After visiting a farm in Guangxi together, one participant said:

> I have lived in a city environment, but after having more contact with the countryside, I felt its diversity. There are all kinds of plants in the farmland, and the life of the farmers is full of life. In contrast to city life, where I feel that life is a bit monotonous, and this opportunity to visit the countryside allows urban consumers to really experience it and find out that the world is a lot different.
>
> (Interviewee C&N.35)

The buying group developed some shared values based on their long-term interaction and trusting relationships with the farmers. They began to care for and reflect on the soil, the living conditions of the farmers, and the system behind the food. In previous studies, these reflections were usually triggered by initiatives such as local farmers' markets. What is unique about the Guangzhou Buying Group case is that they also broke through locational constraints and took the initiative to participate and move around themselves, to connect with the producers of the food and to compile a system of meaning in relation to their own experiences. However, members of the buying group also acknowledge that only a minority of consumers, even in the buying group, are this active. Most members choose to purchase

products because they trust the choices made by the core group members. Consumers actively orchestrating AFNs comprise a very small demographic in the wider Guangzhou foodscape and food system, thus suggesting that more explicit and radical forms of sustainable food consumption involving consumption of organic produce and close producer-consumer relations are small in scale in this city-region.

Food fashions and digital influences

Consumers' food consumption practices are influenced not only by their social networks but also increasingly by social media. And analysis of social media influence on food consumption practice in China, as with our survey and qualitative research, shows the dominance of food appreciation values associated with quality, taste and culinary creativity, with very little content explicitly referring to environmental sustainability. The top ten food bloggers with the largest number of followers on China's largest public social media platform, Weibo (similar to X), are shown in Table 4.5 in Chapter 4. Among those mentioned by our study respondents were Li Ziqi, Cai Lan and Kitchening. The project captured the content posted by the top ten bloggers in 2019 and conducted a high-frequency word analysis. The ten most mentioned words were: food (6,928), recipe(s) (4,789), tasty (2,004), taste (1,453), easy (1,418), like (1,154), ingredients (1,017), meat (1,008), and delicious (1,003). Terms relating to environmental sustainability were notable for their absence. The most influential food bloggers on China's largest social media platforms do not appear to engage directly with issues of sustainability. Their Weibo content does not incorporate the origin of ingredients and almost never discusses the producers, the environment or the socio-cultural mechanisms behind the food. This appears to contrast markedly with the content of food bloggers in the West (Joosse and Brydges, 2018).

Seven of the top ten bloggers focus on tasting and recommending the quality of the food itself, promoting the recipes they create. Using cooking methods that can also be applied in the home kitchen, they create recipes to make the food as beautiful and tasty as possible. Mizi Jun, a food blogger with more than 10 million followers, is a young woman who mainly writes about affordable and tasty restaurants and then films herself eating and appreciating the food.

The case of the second-ranked blogger, Li ZiQi, shows dimensions of influence that, while they do not explicitly reference environmental sustainability, nonetheless incorporate values pertaining to the environment and sustainability in some of the implicit ways discussed earlier in the chapter. Her videos focus on traditional Chinese culture and rural life, showing the detailed processes of planting, harvesting and then cooking food. Many of the utensils she uses in her daily life are handmade. Her videos have been described by her fans as soul-healing because of their unique style, which shows the beauty of the Chinese countryside. Her videos present a simple, natural, quality-conscious approach to humanism and life, and her influence extends internationally with a large following on her YouTube channel. Li Ziqi's videos resonate with many people as her advocacy of slow living including food production and consumption contrasts with busy urban life. Respondent

GE.9 noted that she likes watching Li Zi's videos for relaxation. However, Weibo critics argue that the country life shown by Li Ziqi constructs an idyll based on a marketing-style country life, and indeed linked to her product lines on sale in cities, and some have questioned whether the ingredients used in the preparation of the food in the videos are local specialties or whether they have been specially selected and processed. Here, though, the performative effects of this digitally mediated influence are significant.

Cai Lan, the fifth ranked blogger, is a famous Chinese gourmet writer, and his blogs deal with the history and locality of food. An interviewee (G.INT.1.2) mentioned Cai Lan, reflecting on the somewhat aspirational lifestyle his consumption of particular foods portrays:

> When I was a kid, I watched a TV show hosted by Cai Lan, just introducing where he went to eat and what he bought. He had many seasons of his food show, going to eat here and there, but going into each shop and eating just a little bit, like caviar, and then leaving. It felt like he had a great life at the time. His show can attract people, but it's more distant from our lives.

Internet celebrities such as Li Ziqi and Cai Lan draw public attention to China's rural and traditional food cultures in carefully choreographed ways. They create largely aspirational narratives tapping into, and forging links between, both the "imaginaries of Chinese ruralness" (Duan et al., 2023: 259) introduced in Chapter 3 and progressive notions of urban living for consumers to emulate. However, these idealized narratives of rural agricultural idylls and aspirational food consumption are rarely taken by knowledgeable consumers at face value. Rather, many prioritize drawing practical knowledge from the blogs they consume. Younger consumers, for example, follow bloggers who recommend easy cooking methods and cover topics like light meals, health and baby supplements, as this interviewee describes:

> I don't follow anyone in particular, but I do follow the overall direction of healthy eating, for example, when I'm pregnant I think about how to eat better for my baby, so I search for things like pregnancy nutrition. The general keywords would be stages of the body and nutrients.
>
> (G.INT.1.07)

Our respondents discussed searching digital media for information on how consumption of particular foods can address specific health issues, linked with themes discussed in the previous section, such as "what to eat when you have a cold" (Interviewee G.INT.1.20) or "how to watch your diet during menstruation" (Interviewee G.INT.1.16). Many of our respondents discussed using Weibo for garnering good quality public data regarding family meals and infant nutrition. They also reported downloading cooking apps and searching for interesting dishes and recipes based on their cooking needs (Respondents GE.3, GE5 and GE7).

Although discussions on sustainability occasionally occur on Weibo, for example, promoting forms of vegetarian diets (Zeng et al., 2024), most of the information

on social media tends to have a more immediate practical utility for consumers. Respondents turn to the internet most often for practical purposes regarding food and not to assess environmental sustainability. Food consumption is heavily mediated, from recipes, to cooking instructions, to online ordering, to posting food pictures on We Chat through to reviews on popular sites like *Xiaohongshu* that can sometimes have positive environmental effects but just as easily have negative ones. While there are promotions of rural sustainability by many influential vloggers, there are as many *deweiwang* ("big stomach stars") videos depicting contests of who can eat the most the fastest.

Urban food production: lived experiences of consuming homegrown food

Turning now to arguably quieter forms of sustainable food consumption on the part of households, a small number of our research respondents engage in food production themselves, involving urban farming and smaller scale growing at home. It is common to find statements on social media such as "growing vegetables is engraved in the Chinese DNA" and growing vegetables can be deeply embedded in some people's daily consumption practices (see Fang et al., 2024). While many of those who regularly buy ecological ingredients do not have time to grow vegetables on a regular basis, some, mostly middle-aged and older people and those with experience of rural life, engage in growing some of their own produce. For some older respondents, who have followed their children to Guangzhou, gardening has become a way of rekindling memories of their past lives and regulating the pace of their current lives (Respondents GE.1 and G.INT.1.13). This illustrates the embeddedness of this form of sustainable food consumption (and production) in social practices of everyday life connected to stage of life, work-life balance and familial relationships (Respondent GE.1).

As illustrated by Figure 7.6, the locations for growing vegetables are very flexible, and any free space in the city can be used (see Roast, 2022, for discussion of farming in the peri-urban spaces of Chongqing in China), such as the balconies of homes, rooftops of residential buildings and the vacant lots of abandoned and dilapidated buildings (see also Figure 7.7). Through ethnographic research, we found that many respondents plant edible plants on their balconies. This mainly involves planting varieties of vegetables that are easy to take care of, such as shallots, wolfberry leaves, mint and tomatoes. Respondents reflected on how they enjoyed growing vegetables on the balcony, which as well as a source of pleasure can also help produce safe and healthy food. For some elderly respondents who used to live in the countryside, planting vegetables on the balcony is still a way to meet their emotional needs of missing land and plants after leaving the countryside.

Many of the participants have experience of growing their own vegetables, some connecting to China's agricultural past, as outlined in Chapter 3:

> I have been growing vegetables since I was a child because I lived through the famine years when there was nothing to eat, and I had to clear the land myself. We only started using pesticides and fertilizers in our country in the

Figure 7.6 Growing vegetables at the vacant lots of dilapidated buildings (Panyu District, Guangzhou). Photograph by the authors.

Figure 7.7 Balcony greenery showing an urban village amid high-rise buildings (Guangzhou). Photograph by the authors.

> 1970s, but back then people were very poor and couldn't afford to use pesticides and fertilizers. I had no concept of pesticides and fertilizers as a child, but it was still very productive.
>
> (Interviewee C&I.25)

Many respondents reported the enjoyment and appreciation they get from growing their own food, especially in the hustle and bustle of the city, and the vegetable garden seems to be a "playground" created by growers, reclaiming the memories of what once was, that is, the feeling of connection with the land. Community cohesion as a result of growing vegetables is also narrated. For example, Respondent GE.5 started a small vegetable garden on the edge of a rotting building and received significant help from strangers, such as a young man who helped dig a well, and a supervisor from the factory next door who also helped connect the water pipes to the vegetable patch. After three years of running the vegetable garden, Respondent GE.5 once shared the extra harvest with a neighbour she met in the lift, who found the handful of vegetables particularly tasty and thus befriended her and joined in the gardening. Gradually, the garden mobilized everyone's childhood memories of taste and labour, and more and more neighbours who met by chance joined the vegetable gardening group (see also Fang et al., 2024).

Not only is vegetable gardening a social catalyst for community building including people who have not previously met but it also plays an important role in sustaining interaction in urban communities where people are already familiar with each other. The exchange of seedlings and harvests between relatives and friends is common. In the urban village in Tianhe where interviewee G.INT.1.11 lives, many families grow their vegetables, some deliberately differentiating their planting from that of their relatives and neighbours, which at harvest time means that more varieties are shared.

Showing the relationship of urban agriculture to sustainable consumption and reducing food waste, and linking to values of thrift shown to be significant in Chapter 5's reported survey findings, the growers practice frugality and reuse food waste in their daily lives:

> We also have a vegetable garden in our community, which was originally planned as a reserved development site, but then no more villas were allowed to be built, and that empty space was developed for growing vegetables. We promote natural farming methods to grow vegetables without the use of pesticides. I tell people that rubbish is a treasure, and they don't have to throw it away. They can grow a pot of potatoes from a bucket of rubbish and film the process of growing potatoes from rubbish. This way, leaves and weeds, food waste, and expired food don't have to be thrown away. Instead, they are buried in the soil and can be recycled, which is cheap and healthy. People will throw away less rubbish, and there will be fewer carbon emissions.
>
> (C&I.25)

Interviewee C&I.25, who shared this story, is an environmentalist and continues to gain knowledge in agriculture. While many citizens engaged in growing are not familiar with terms like "carbon emissions", they nonetheless practise the principle of reducing carbon and waste in their ordinary lives. Interviewee G.INT.1.11, who is in her seventies, and her friends are serious about collecting food waste and making it into enzymes for use in fertilizing their vegetable gardens. However, terms such as "sustainable", "low carbon" and "food footprint" did not resonate with the majority of participants in the study, and altruistic motives of environmental protection and waste reduction were not widely communicated. Rather, taste and quality were foregrounded as follows:

> A lot of the vegetables I grow I give to my neighbours so they can compare them to the ones they buy from the supermarket. The taste of the fruits and vegetables we grow with organic fertilizer is much better. The flavour has very natural and rich layers. For example, a tomato is not exactly sweet; it's sour and sweet. Then there is celery, for example, the fragrance is very strong and can float a long way. Celery grown in a greenhouse is completely different.
>
> (Interviewee C&I.25)

Overall, there is less evidence from our survey data reported in Chapter 5 and narratives of our interviewees and respondents in our qualitative research, with the exception of the AFNs and the Guangzhou Buying Group, of the kinds of conscious and responsibilized consumption articulated in western ethical consumption discourse where clear narratives of environmentally friendly products and consumption are produced through marketing and campaigns and internalized and reproduced through consumer narratives and practice. However, there are many examples of daily practices of food production and consumption that, without explicit altruistic intention and motivated instead by preferences for high quality and tasty food, can nonetheless involve waste reduction, reduction in food miles, lower use of pesticides and, importantly, compassion and care of particular kinds.

Conclusion

This chapter has explored everyday food consumption practices in Guangzhou and identifies the values inflecting interconnected moments of purchasing, appreciation, use and waste, some of which pertain both directly and indirectly to sustainability.

We argue that sustainable food consumption in Guangzhou is achieved through the creation of various forms of "relational proximity" (Zhong, 2023: 14), which transcend geographical boundaries. Relational proximity is the close connection between various actors or elements such as food, body, culture, place and nature. Meanings of sustainability effectively, and often implicitly, emerge in the process of relational connection. From the perspective of relational proximity, sustainable food consumption in Guangzhou frequently foregrounds a desire for freshness,

which constitutes a fundamental point of embedded food ethics of sorts. In Guangzhou, freshness is almost synonymous with "good food", meaning a quick transition from field to table and food that is in its original and natural state and often in season. People's understanding of freshness intersects with concepts such as locality, seasonality, and immediacy and embodies quality. Freshness exists as a particular sensory experience of food constituted by the body being integrated into place through eating. In addition to the proximity of the body to food, there is also the close connection between the body and the homeland, which emerges from links people make to various notions of heritage, memory and community. In the context of mobility, "good food" is sometimes significantly food that is given a rich "local" connotation, demonstrated in the case of migrant communities in the form of trust and bodily sensations. The consumption of hometown food in Guangzhou is not only a window into the past and a link to the emotions of the hometown but also helps to grasp the present as an integral part of contemporary everyday life and to alleviate food anxiety. Mobilization of hometown discourse is worth noting as a form of significant mobilization, perhaps indirectly affecting food system sustainability in China. The practice of migrants bringing their hometown food to Guangzhou has sustainable dimensions. It helps maintain culinary heritage, enhances cultural sustainability and is often part of a moral economy of food exchanges outwith the market. While this act does not reduce food miles, the ways in which it often entails shorter supply chains nonetheless can support small-scale agriculture from consumers' regions of origin. Moreover, "traditional" diets may enhance sustainable practices due to their reliance on local, seasonal produce and waste-minimizing cooking techniques.

Additionally, a relational proximity between people and producers can be significant through different everyday forms of food consumption. The various practices of pursuing "good food" often connect otherwise distanciated producers, distributors, retailers and consumers, even though sometimes they do not live in geographically proximate communities. In wet markets, for example, the trusting relationship between vendor and customer is seen to ensure a fresh supply of food. By giving each other food from their hometown, people on the move establish new emotional links and facilitate social integration in Guangzhou. There are also actions based on people growing vegetables together, uniting once-unfamiliar neighbours and sharing pleasures and appreciation of food. In practising the Participatory Guarantee System and visiting the farms, the co-purchasing groups in Guangzhou, although small in scale and quantitative significance, also connect with small farmers.

Finally, an ethics of sustainability is also reflected in the proximity of the body to "the environmental" around notions of nature. The popularity of concepts of wellness such as "the unity of heaven and humanity" shows that people's perception of and respect for nature is integrated with the care for emotional and bodily health. Sustainable forms of food consumption in Guangzhou can be seen as resulting from a combination of relations not restricted by geographical boundaries but rather forged through various associations between human and more-than-human elements such as food, body, culture, place and nature.

Research in western contexts has emphasized the political mobilization of consumers to purchase and use goods more sustainably, with the responsibilized consumer as a key agent of progressive change in the face of globalization and industrialization. In contrast to western approaches to sustainable food consumption as explicit political, marketing and campaigning initiatives working on consumers to alter their behaviour and, where successful, consumers consciously responding, we argue that sustainable food consumption in China appears to be practised in some different ways. Most significantly this is through both routinized practices where sustainability works through materialities produced through the outcomes of state-led policies for production and distribution and retail formats and product offerings and through various relational geographies described earlier and "ordinary ethics" of consumption. This is therefore less about consumers consciously and strategically engaging in more environmentally and socially sustainable consumption using those terms and more about "tactics" embedded in everyday life (De Certeau, 1984). We thus challenge the assumption that a lack of publicly circulated discourses of sustainable consumption and responsibilized consumers in Guangzhou equates to an absence of sustainable food consumption in practice. In Guangzhou, sustainable food consumption is far from being limited to niche consumer support for alternative foods. Rather, "good food" can sometimes, though certainly not always, be embedded in sustainable modes of production, distribution and consumption that are not always labelled as such.

Sustainability can thus be a series of effects that can result from people's actions rather than always conscious intentional and rational behaviour, and Warde (2016) points out that eating is a hybrid, integrative practice. Food consumption practice is shaped by a combination of social conventions, social networks, environmental cues and institutionalized reward systems. It is not always deliberate, with strategies calculated according to values, is sometimes nuanced and not always marked, branded or labelled as "sustainable" or "ethical". The pursuit of fresh food, for example, is a choice connected to wider sets of traditions, norms and routines for Guangzhou consumers. In everyday life, participants in our research are not operating within an environment-focused discourse of sustainability, but at least some of their daily actions do have some sustainable impacts.

Despite recognizing some of the sustainable outcomes of various forms of ordinary food consumption, we have also acknowledged major industrialization of Chinese food systems, "supermarketization" (Humphrey, 2007), and long supply chains with challenges for addressing climate change and economic conditions for producers. Indeed, our evidence shows that some of the actions that can have significant sustainable effects are still marginal and niche, such as the Guangzhou Buying Group, alternative food networks and home growing. Our research also demonstrates that social media is also often not currently playing a positive role in encouraging people to think about sustainability issues. What we argue as a result of our research is that positive change in the sphere of food consumption practice in Guangzhou and across urban China more broadly, when considering issues of environmental and social sustainability, must be engendered appropriately through

contemporary food systems, state-capital relations, foodscapes and cultures of consumption in these settings. Taking practice-based approaches, on the one hand, means altering the infrastructural dimensions of these systems, foodscapes and everyday life to shape more sustainable practice through purchasing, cooking and eating routines. But responding to Evans's (2019) plea to grasp the cultural and conscious aspects of consumption practice when considering sustainability, it also means considering how more environmentally and socially responsible forms of consumption have actual and potential links to the identities, values and preferences of citizens when they buy, cook and eat food, tapping into cares about freshness, associations with heritage and place, health, fashion and relations with the environment, whether distant or proximate. This is thus an argument for engaging consumers in geographically and culturally sensitive ways, translating UN Sustainable Development goals through place-based food systems, state-capital relations and ordinary practices of everyday life.

Note

1 Most migrants come from economically less developed regions in which food tends to be more sustainably and less industrially produced.

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8 Conclusion

Introduction

We began this book responding to the alarm over increasing consumption among the globalizing middle classes. “The new middle classes are positioned as gravediggers of our common and sustainable future, in terms of the OECD-Observer: ‘a catastrophe’” (Lange and Meier, 2010: 3). If patterns of consumption associated with these hundreds of millions of newly prosperous consumers replicate those of the Global North, then the pressure on a finite planet will be extreme. A great deal has been written on the need for transitions, indeed transformations, in how consumers in wealthy countries behave and we do not mean to displace this need onto the Global South. Nonetheless, it is also evident that the welcome prosperity in new regions of the globe will bring fresh challenges. No example poses this as starkly as food in China. In quantitative and environmental terms, the expanding demand for food and the consequences of producing it create massive problems of unsustainable agricultural practices, leading to soil degradation and contamination, along with polluted watercourses and lands. We have acknowledged through the book wider research addressing the challenges, logics and workings of food systems. Our specific focus has been on the realm and role of consumption in these systems. In the moral economies of consumption in China, food exposes the seeming contradictions of widespread fear of unknown immoral actors and attempts to create forms of trust, of a distrust in strangers and the development of particular moral groups, which we unpack below.

Through this book, we have attempted to broaden concerns from seeing consumer ethics as limited to the purchase of goods labelled according to various ethical criteria. We have additionally looked to the “ordinary ethics” of care around consumption to see what Jehlička et al. (2024) call “already existing sustainability”, which seems an especially appropriate term in a post-socialist society. As they argue, rather than just looking for new practices or products, modes of organization or exemplars that might herald a transformed future, we also need to look for sustainability in the present and to appreciate trajectories associated with that. Throughout the book, and developed below, current food consumption practice with implications for sustainability can be seen through different lenses on what constitutes “good food”.

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Good food as protecting the Earth?

As Liu et al. (2019a: 1309) point out, "Sustainable consumption is more than a personal behaviour or choice simply motivated by an individual's attitudes towards sustainability". We have therefore engaged with attempts to think of sustainable consumption not as an outcome of individual choice or even the aggregate sum of individual choices, but as an outcome of shifting historically situated complexes of social practices embedded in wider (consumer) cultures, infrastructure, material contexts, supply chains and social changes. This develops a more expansive vision that does not simply see the issue as exchanging food as a commodity, but seeing it enmeshed in living systems of practice (Rinkinen et al., 2020; Liu et al., 2019a). In that sense, we have attended to the variegated urban foodscapes with sustainable, as well as unsustainable, dimensions, to the culinary heritage of China, and to the habits of routine creating a dynamic set of "ordinary ethics". Examining the values and understandings of food and the meanings of food in practice and understanding them as always laden with ethical and sustainable dimensions of all sorts enables us to think of the possibilities for more sustainable outcomes. In so doing, this conclusion offers approaches that go beyond the notion of individualized consumers embedded in various neo-liberal, market-led approaches and encoded in much of the literature that sets out to address a "values-action" gap in terms of "willingness to pay" (Costanigro et al., 2011) a premium for sustainably sourced food. Instead, we show how evolution in food consumption in China is embedded in wider cultures, as an evolving "habitus" (Bourdieu, 1977) shaping practices. We thus unpack the varied values ahead of or behind the times, of possibly fragmenting fields of practice as evidenced in the field materials.

Chapter 5 showed that middle-class consumers in China are both currently engaging and willing to engage in sustainable food consumption, drawing on survey findings associated with food acquisition, appropriation and appreciation, as well as food re-use and disposal (Evans, 2019). The forms of engagement captured by the survey were not necessarily configured in ways that the many market studies of willingness to pay higher prices for more sustainable products would find visible. The prominent categories and practices were couched in terms of appropriation and appreciation when respondents frequently spoke of "eating home cooked food" and "eating more fresh food", which are key parts of the already existing sustainable practices, or practices with sustainability effects. Our survey likewise picked out sustainable curtailment practices. In terms of re-use and disposal, the survey shows that "minimizing household waste by reducing food waste at home" and "minimizing household waste by bringing your own bag when you do food shopping" are key. In contrast, "eating lower quantities of animal products" and "eating lower quantities of milk and dairy products" are considered but are not a priority for middle-class consumers. This chimes with our in-depth look at actual consumption that highlights the role of traditional, but very much conventional, wet market consumption, where desires for freshness and consequently frequent shopping reduce food waste.

Rather than a "green purchasing model" (*lüse goumai moshi*), this draws on a wider ethical sense or indeed a sense of acting rationally through *qinjian jieyue*,

which is about thrift or frugality that sees waste as shameful (*langfei kechi*) (Liu et al., 2019a). These values touch on the linked yet different senses of "thrift", which are about doing more with less, through crafty and clever practices, like avoiding waste, versus "frugality" that is a financially or ethically impelled reduction in the amounts of food consumed (Evans, 2011). The former seems closer to some of the narratives coming through from our research, but there is evidence of the latter especially in terms of resisting over-consumption and shaped in part by Confucian injunctions of moderation. We have pointed in the book to wider cultures of consumption, their insertion in the urban foodscape and the ways they modulate values in practice. Again, this is not to focus on a "values-action" gap, but to see the different values at play in different times and places sometimes for the same people. In as much as *jieyue* or thrift is seen as virtue, so is hospitality or "keeping face" (*mianzi*) in a social group. Thus there can be large and popular campaigns such as the "Clear Your Plate" campaign against food waste started in 2013 by a non-profit "IN_33" emulating a South Korean "Clean Plate" movement started in 2004 by a Buddhist NGO named EcoBuddha, which was revivified in the context of food security and supply issues in the pandemic (Wang et al., 2022) and that also saw an Anti-food Waste Law 2021. These campaigns draw on values from religious traditions of Confucianism and Buddhism. On the other hand, in the context of showing hospitality in restaurant gatherings, the scale of over-ordering can be tremendous, with the Committee of the National People's Congress suggesting more than 34 million tonnes of food are wasted just in restaurants in Chinese cities every year. So, while the data suggest that the consumption part of the supply chain is the single largest source of food waste in China, wasting some 7% of all cereals, we should also note that the loss is lowest in canteens at around 5%, a bit higher at home at around 7%, but reaches 19% in restaurants where people must perform affluence through abundance (Liu et al., 2013).

These competing moments of different values coming into play might explain why our survey indicated that "eating lower quantities of animal products" and "eating lower quantities of milk and dairy products" are considered but are not a priority for middle-class consumers. This lack of enthusiasm for this curtailment behaviour is despite China having varied and multiple traditions of vegetarian culture. Against the backdrop of historic roots of differing vegetarianisms and different cultural resources, the rise of meat in Chinese diets has been associated with attempts to westernize and forms of culinary modernism. Curtailment or reduction of meat has also been linked to different ethical motives, some of which are tied to Buddhist ethics (Liu et al., 2015) and others to the many injunctions around abstinence and moderation in eating meat associated with Confucian teachings (DuBois, 2024). There is therefore a range of cultural traditions mobilized around the ethics of food in China. And yet the recent online furore when renowned Chinese actress Zhang Jingchu endorsed a documentary titled "Vegetarian" reveals a resistance to ethical calls seen as not aligned to local cultures and habits (Zeng et al., 2024). We argue that attending to those local modulations of desire is thus essential to creating sustainable effects through consumption, rather than appealing to abstract, even if they are Chinese, value systems.

We have endeavoured to outline the cultural energies in different places and how they help drive behaviour and practice. From our survey, it is clear that neither altruism nor concern about the environment appears to drive current sustainable food behaviours, but instead current values and sustainable food practices in China are driven mainly by forms of self-expression and health benefits and concerns. In addition, incorporating aspects of food acquisition, appropriation and appreciation, the sustainable food behaviours of the Chinese middle classes are further driven by quality (positively) and price consciousness (negatively), as well as food nostalgia. However, and strikingly, altruistic and biospheric values do drive intentions to engage in *future* sustainable food behaviours. These findings demonstrate that concern for others and the environment is not yet a reason for most of the Chinese middle classes to engage in sustainable food consumption practices, but it could become significant in the future. The middle-class consumers surveyed are driven predominantly by self-interest in terms of their current sustainable food practices. The survey results show that they do not view their consumption choices as having potential to improve producers' livelihoods or the environment. Future intentions to engage in sustainable food behaviours in China are also driven by self-interest in a form of self-expression, quality consciousness and health concerns (including fear of food additives). It thus acknowledges the presence of discourses of consumer behaviour change and some market-based identifications of sustainable consumption but demonstrates that they are created and land differently in China compared with many western economies.

Good food as safe food

The key context of food safety, or the worry about the lack thereof, is clear in much of the book. Food safety incidents caused by human actors accounted for more than two thirds of the total recorded with the illegal use of food additives (30.71%), fake and shoddy products (19.81%) and mislabelling (7.6%) all too frequent (Liu et al., 2019b: 4132). The state has responded with increased enforcement and supervision. Since 2013, the regulatory tasks and staffing of China's Food and Drug Administration have increased significantly. It now has nearly 300,000 employees compared to the US Food and Drug Administration's 15,000 . However, the fragmented and complex food supply system in China means that they are supervising around 12 million food production and operation enterprises compared to some 50,000 companies in the US (Liu et al., 2019b). In other words, though there are 20 times as many employees in the regulator in China, there are 220 times the number of enterprises to supervise. The result as we showed in Chapter 6 is that the regulatory system is responsive rather than working on preventative compliance. As we completed this manuscript in the summer of 2024, China was rocked by reports of tanker lorries moving straight from carrying fuel oil to shipping vegetable oils without cleaning in between in order to cut the expense (Ding, 2024a). The public exposé resulted in a government investigation that was published with fanfare that only two trucks in two firms were involved, and the firms were fined, and drivers faced charges (Ding, 2024b). The state narrative repeatedly then plays

to a popular stereotype that the problem is down to "*huairen*", which is unknown bad people (Fihl, 2019), rather than a systemic failure.

The resulting lack of trust from cases such as those described earlier comes through as one of the major cultural energies shaping consumption practice. The legacies of China's particularist ethics, that is, emphasizing ethical commitments to particular people – due to kinship and loyalty – and the rapid change over the last century have produced a situation of a low trust society where local trust in known groups may be strong but the ethical intent of strangers is regarded as questionable (Lee, 2014). In terms of food supplies, the unchecked application of fertilizers and pesticides alongside financially motivated food fraud and the resulting scandals play into this meaning that Alternative Food Networks (AFNs) are not simply seen as a solution but are themselves subject to "trust pressure" rather than building a moral economy of reciprocal relations (Martindale, 2021). This could be seen in the speedy punitive action towards specific producers to prevent a collapse of trust around the chemically contaminated, though safe, food in the Zhuhai based CSA initiative Green Fingers (Leung, 2021).

Good food as green food

We have shown the scepticism of consumers with regard both to official forms of credentializing food, in terms of categories of safety, and the hollow performativity of traceability devices where QR codes purportedly allowing consumers to follow products can be out of date or can provide incomplete or generic information, discussed in Chapter 6. Widespread scepticism is only fuelled when, for example, as Bunkenborg and Hansen (2020) report, a programme like China Central Television's Focus Report broadcast in May 2018 with an undercover reporter visiting a Beijing supermarket to find that China National Organic Green Food Corporation sells both organic and conventional vegetables side by side with the same logos at the counter for organic products. When the reporter then scanned the QR codes on various ordinary vegetables, she found their ostensible place of origin to be a farm north of Beijing City. However, when she went there, workers told her that those products were either out of season or not grown there at all, and at the organic produce distributor were boxes and labels from ordinary wholesale suppliers. When the undercover reporter rang those suppliers, they confirmed that they did not deal in organics but offered to provide the reporter with whatever certificates she needed.

In the context of this we found that consumers sought reassurance not just through official credentials but through personalized networks and building trust. In Miller's (2001) terms, this is more about "moral" economies linking close or known others rather than an "ethics" foregrounding care in the more abstract for distant strangers. In this sense, the practices of building more known worlds of trusted actors – be they through buying groups, participatory guarantees of organic farms, or known vendors in wet markets discussed in Chapter 7 – can be seen as defensive strategies. Hanser and Li (2015) suggest these are, then, forms of what Andrew Szasz (2007) calls "inverse quarantine", where instead of isolating threats to secure the public, the consumers isolate themselves from the dangerous

environment, or choosing a different analogy we can recognize forms of "gated sustainability" to go with "gated communities". It is relatively clear as we focus upon the middle class that:

> [S]trong consumption drives for high quality foods within the context of widespread public anxiety over food scares has seemed to translate organic agri-food into a means to solve food safety issues for a limited subset of the population (Si et al., 2015).
>
> (Li and Loconto, 2019: 20)

One might instead look at this as diverse economies of supply, to see the many alternative currents threaded through the mainstream economy. We have pointed to the plurality of channels for procuring food across the Guangzhou foodscape as a central concern in the book. The exchange of hometown foods for migrants, self-provisioning and platform-mediated prepared food deliveries are existing side by side. It must be said that the bevvies of uniformed *kuaidi* or express delivery riders are rather more visually evident in the urban foodscape of downtown Guangzhou. However, those other forms of consumption are indeed practised as rather more "quiet" forms of sustainability (Smith et al., 2015). Nor should we necessarily overdraw the divisions of market and moral economies or of the visceral and the virtual. As Scott et al. (2018: 96) suggest:

> Explanation for the emergence of garden plot rentals is the extreme popularity, between 2009 and 2013 among Chinese white-collar workers, of Happy Farm, an online social network game for multiple players. It allows players to virtually grow and harvest their own crops, trade them with others, and even steal from neighbours.

Good food as tasting good

One hope among many of our respondents organizing alternative food systems is that a flight to quality, to better tasting food, could be harnessed by more traditional or environmentally sensitive producers whose products would be chosen for quality of taste and might then also have environmental benefits. Caring about food might lead practically and possibly then consciously into caring about the environment and producers. This is neatly captured by the slogan of the Green Fingers CSA initiative we have mentioned: "Foodies save the Earth" (see also Leung, 2021). Thus asking consumers in Guangzhou about chickens, Zhong found the highest praise was actually having a "chicken flavour" rather than the 50-day-old industrially farmed white feather chickens that tasted "flat, like boiled water", and consumers harked back to free-range chickens raised in the lychee forests of Conghua district on the edge of the city (Zhong, online early: 10). However, we need to note that, as Martindale (2021) cautions, it is not inevitably the case that organic food tastes better, and some of our respondents agreed that they cannot discern from the quality of some foods that they are grown without artificial chemicals, and

there is also the case that visual defects and the condition of products may be taken as proxies for quality or "goodness" (Eden et al., 2008).

Our research showed the tie of many consumers to senses of a nostalgic better quality of food, often entwining past time and hometown in reminiscences of place mediated through foodstuffs. There has been a fashion across China of the confusingly named "local dishes" in restaurants that refer to speciality dishes associated with specific places, but which are now sold nationally. This has produced remarkable revalorizations of some foodstuffs. For instance, as David Wank (2010) recounts, sorghum has long been thought to be the coarsest of grains and associated with North China's poverty and mobilized as a signifier of economic backwardness and stultifying traditions in Zhang Yimou's classic film "Red Sorghum". Forty years ago, Chinese colleagues would assure him that no one would eat those pink rubbery sorghum noodles if any other foods were available. Yet they became part of the "local dish" trends. There is therefore something of a revalorization of the rural responding in part to the effects of the Revolution in China, where the loss of cultural connections and population mobility for nearly 30 years meant that cuisine in Guangdong had become the most insular and unchanging it had perhaps ever been. Even up until the late 1980s, there were only really Cantonese restaurants in Guangzhou. Other provincial cuisines then appeared to cater to the waves of internal migrants fuelling the growth of the city and renewed appetite for experimentation (Klein, 2012), even if that experimentation is with traditional foods.

There is a sense that the welcomed, relatively recent, proliferation of foodstuffs – in both quantity and kind – has been linked with a loss of quality, reflected in narratives emerging through our research. The rich and varied culinary traditions in China thus form a cultural grammar through which to talk about food and its quality, sometimes, as Chapter 7 narrates, through *Qi*-based theories of balance and life energies, sometimes through repertoires of heritage foodstuffs and their forms of consumption. The latter often offer an implicit critique of contemporary agribusiness and the direction of food production in China. The recovery of *yuyadao*, or a "fish-duck-rice paddy", form of agriculture, where each element's waste supports the others, provides rhetorical support for a recovery of peasant practice and knowledge.

Conclusion

At the inception of this book, a key question we asked was whether the ways in which consumers in China are mobilized or "conscientized" towards the ethical relations around food they consumed varied from the patterns in the Global North. We have suggested that one of the "solutions" to unsustainable food in Europe and North America, in terms of Alternative Food Networks (AFNs), has indeed travelled into China and been taken up enthusiastically by activists, who are well versed in the arguments that have been formulated around them. What is less clear is how all the elements have travelled and how they land with consumers. In Guangzhou, we have the tension of a rapidly transforming foodscape and powerful culinary traditions. There are also the remnants of a pattern of collective

mobilization by the state. Around food policy this has centred on food security and safety, and where the environment is concerned, the focus has been more sharply on food production and distribution than on consumption. Mobilization of influential hometown discourses by NGOs was also noted (Leggett, 2020). However, many of the variegated practices of food consumption either overtly or quietly incorporating dimensions of sustainability observed in Guangzhou appear not to be about responding to explicit calls or campaigns for citizens to consume in more socially or environmentally sustainable ways emblematic of a neo-liberal model of change. Instead, they are more about practising food purchase and use in ways shaped by a combination of place-based and often digitally mediated socio-political histories, supply chain logics, landscapes of retail, and a wealth of discourses on aspiration, health, and well-being. We suggest that to understand sustainable food in China requires a culturally enriched sense of "distributed agency" (Sahakian and Wilhite, 2014). This is not to simply invoke "timeless" cultural traditions but to look at the modulations of consumer demand in one of the fastest changing and largest food systems on the planet. Western-based alternative food systems draw upon cultural resources and food grammars that do not quite fit Chinese foodscapes as practised environments.

A central contribution of the book to the developing literature on Chinese sustainable food consumption has been to foreground the urban foodscape, in order to appreciate how food consumption is practised through diverse retail and domestic spaces. This has illuminated a very wide range of ways in which ordinary consumption can have sustainability effects, to paraphrase Gregson and Ferdous (2015), and appreciates forms and practices of sustainable consumption including but also crucially beyond western-style ethical labels and initiatives. If we are to look towards pathways for potential progressive change, it is vital that the infrastructural and cultural influences of such a variegated foodscape, blending highly capitalized and modern retail formats with those that are more "traditional", are taken into account. Overlooking how consumption is routed through these spaces, with all the many barriers and opportunities they pose for food system sustainability, risks only ever seeing the limited presence of ethically labelled goods and services and "gaps" when it comes to people's patronage of them.

While we want to avoid overly celebratory accounts of quiet sustainability where such practices may seem marginal to an increasingly industrialized food system, pointing out some sustainable effects of traditional wet markets and recent attempts in the city to build on their roles in community building and service provision is important and not insignificant in scale. Recognition of these and other diverse forms of sustainable consumption chimes with a wider literature on ethical consumption in settings of emerging and rising power economies including research in South Africa (McEwan et al., 2025) and Brazil (Afonso et al., 2024) as connected studies in our ESRC-funded research. However, there is also an important point to make about theorizing back to the Global North from this research. Geographical research foregrounding the role of place-based socio-political histories, state-capital relations and urban economies in shaping ordinary practices

of everyday life in which sustainable consumption is embedded is vital to understanding how agency for change is distributed, in all its richness and diversity. This applies not only to China and rising and emerging economies where models of consumer mobilization do not tend to hold sway but also to western economies where those models have registered very limited benefits when it comes to challenging consumption's role in contributing to environmental change.

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