

Food Environments in Islamabad, Pakistan

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Abstract

This dissertation examines how concerns about food system transformations affect how middle class consumers in Islamabad, Pakistan, perceive and approach food consumption in their everyday lives. The dissertation is situated in the context of risky food environments and food fears resulting from intensified, industrialised, and increasingly lengthened global food systems. Working within food geography and food environments paradigms, this dissertation explores how the transformation of food systems is associated with increasing anxiety about food security and safety for middle class urban consumers in Islamabad. Qualitative data gathered from semi-structured interviews and participant observation is used to illustrate the effects external influences, such as energy scarcity and violent events, have on everyday food environments. The dissertation examines the ways in which conceptualisations of 'good food', and trust relationships are negotiated in these dynamic food environments. The intensely geographical nature of these food environments and food systems, and the role of place-specific contexts on perceptions and adaptations related to food anxieties are emphasised. Situated in literatures on food anxiety and food consumption emerging from geography, food studies, and anthropology, this dissertation challenges dominant discourses on alternative and ethical consumption in a globalising food system. The results of this research not only contribute to literature on South Asia, but also contribute to consumption practices of a burgeoning middle class in developing countries.

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List of Abbreviations

AFN	Alternative Food Network
APO	Agricultural Pesticides Ordinance
BRC	Bio resource Centre
BRIC	Brazil, Russia, India, and China
BSE	Bovine Spongiform Encephalopathy
CDA	Capital Development Authority
CNG	Compressed Natural Gas
COA	Certified Organic Agriculture
DOTS	Directly Observed Treatment Short Course
DPP	Department of Plant Protection
EFTA	European Fair Trade Association
FAO	Food and Agriculture Organization
FATA	Federally Administered Tribal Areas
FLOI	Fairtrade Labelling Organizations International
FVC	Food Value Chain
GDP	Gross Domestic Product
GIS	Geographic Information Systems
HIES	Household Integrated Economic Survey
ICT	Islamabad Capital Territory
IFAT	International Federation for Alternative Trade
IFOAM	International Federation of Organic Agriculture Movements
IRIN	Integrated Regional Information Networks
ISO	International Organisation for Standardisation
UNICEF	United Nations Children's Fund
NEWS	Network of European Shops
FINE	FLOI – IFAT – NEWS – EFTA
LPG	Liquid Petroleum Gas
MFD	Marine Fisheries Department
MNFSR	Ministry of National Food Security and Research
NARC	National Agricultural Council
NGO	Non-Governmental Organization
NIOA	National Institute of Organic Agriculture

NOAP	Network of Organic Agriculture in Pakistan
PARC	Pakistan Agricultural Research Council
PATCO	PARC Technology Company
PAWS	Pakistan Animal Welfare Society
PBS	Pakistan Bureau of Statistics
PBUH	Peace Be Upon Him
PFA	Punjab Food Authority
PIDE	Pakistan Institute of Development Economics
PIHS	Pakistan Integrated Household Survey
PKR	Pakistani Rupee
PPP	Purchasing Power Parity
PPQ	Plant Protection Quarantine
PSI	Pakistan Standard Institute
PSLM	Pakistan Social and Living Standards Measurement
PVS	Pakistan Vegetarian Society
SPCA	Society for the Prevention of Cruelty to Animals
TB	Tuberculosis
TIED	Technology Induced Environmental Distancing
UPS	Uninterruptible Power Supply
USD	United States Dollar
WAPDA	Water and Power Development Authority
WFP	World Food Programme
WSPA	World Society for the Protection of Animals

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Chapter 1: Introduction

I accompanied Laila on her monthly shopping trip to the produce market. It took about half an hour to reach there by taxi because she was unsure how to get there with the detours created for the Metrobus construction project. The market has been reduced in half and most of the parking spots and gates have been removed. We carefully navigate to the main entrance and walk through the broken metal detector. Laila has spotted her usual shopping carrier Fareed, an old man with a woven basket which he carries on his head. He follows us as we go down Laila's usual route: the chicken and fish first, bird feed for her husband's parrots, a cookware shop to buy new spatulas, and finally the produce section. The chickens are selected, butchered, and the bags collected and deposited in the basket by Fareed. The fish is carefully examined and the bird feed is collected while the fishmonger guts and slices the fish according to Laila's preference. It is a salt water fish, brought in frozen from Karachi. We move on to the cookware shop, where besides the spatulas, she also purchases storage boxes. Finally, we reach the busier side of the market where many vendors are still setting up their stalls. Vegetables are washed in barrels of filthy water, (shown in Figure 1.1); and fruit is arranged in aesthetically pleasing piles. Working down her shopping list, Laila heads to her favourite vendors, who let her select the produce herself before they weigh it for her. She chooses those which are undamaged but "not too perfect". There is little concern about pricing as every vendor must follow the government mandated pricing noted on chalkboards tied to each stall. At one, she asks where the pears are from, as the crates have Chinese characters on them, and they are a variety she has not seen before. The vendor confirms their non-Pakistani origins, and she moves on. She then purchases mangoes advertised with a

sticker from a nearby farm which she prefers because the crates have no evidence of ripening powders (see Figure 1.2). One last purchase is made: freshly fried samosas from a lady who stands out as being the only female vendor in the produce section, and the only one selling prepared food. We get ready to leave and Laila carefully crosses the makeshift stairs (shown in Figure 1.3) and hails a cab while Fareed and I take turns to move the contents of the basket to road-level. With the front passenger seat loaded with groceries, we head back to Laila's house. The entire excursion took three hours, and marks her last visit to this market. Next month she will move to another market, which is more expensive and has a smaller selection; but is easier to reach and is less dangerous to navigate.¹



Figure 1.1 Water used to wash vegetables at the produce market – Photograph by Saher Hasnain

¹ This vignette is an extract from my field diary kept during my fieldwork in 2013-2014. This particular vignette was written on July 29, 2014. Pseudonyms for the participants are used throughout in the dissertation, and the quotations used are translated from Urdu and Punjabi.



Figure 1.2 Laila's favourite mango vendor - Photograph by Laila



Figure 1.3 Temporary exit from Produce Market - Photograph by Laila

This project began with an interest in urban food environments and the rise of organic food consumption in developing countries, particularly in Pakistan. This interest was driven by articles on pesticide contamination of fresh produce (Ilyas 2012; Ansari 2015), in major national and local newspapers, and the popularity of businesses like Isloo Fresh that claim to provide organically grown produce (see Figure 1.4):



Figure 1.4 Brochure of Isloo Fresh, collected at a farmers market in Islamabad – Photograph by Saher Hasnain

This dissertation considers the urban food environment in Islamabad from the perspective of food-secure middle class consumers. It contributes to literature on food environments in developing countries and discusses how consumers in transitioning economies develop and interact with their personal food environments within the context of food anxieties such as chemical contamination and imported food goods. More specifically, the dissertation explores (1) how personal food environments are affected spatially and temporally by Pakistan's economic and seasonal rhythms, (2) how conceptualisations of ideas of 'good' food relate to discourses of food consumption in South Asian countries, (3) how trust functions for consumers in Islamabad, and (4) how middle class consumers manage everyday situations of food anxiety. Finally, this dissertation presents an analysis of how Pakistani consumers handle problematic food items such as the broiler chicken in their everyday lives and adjust to the changes in different food commodity networks through personal adaptations and the use of framing devices like spatial metaphors. Therefore, this dissertation considers how consumers in Islamabad deal with food issues and interact with their food environments in the context of endemic food risk.

Contemporary Food Anxieties and the Geography of Food

Risky consumption habits have been studied in the context of changing food systems² primarily from the perspective of western countries (Fonte 2002; Blay-Palmer 2008; Lavin 2013). This is further exemplified by Peter Jackson's recent book 'Anxious Appetites' (2015) which focuses on consumer anxieties in modern western societies and is representative of the dominantly western leaning of scholarship in food studies and food geographies. This text presents a useful discussion of the concept of anxiety in relation to food, and the impact it has on consumption habits in western countries. Despite its importance, there is comparatively little literature on anxiety and risky consumption from the purview of developing countries in the global south; members of which are participating in and experiencing the same expanding and industrialising food system. Pingali's (2007) discussion on food system and diet transformations in Asian countries, Klein's (2013) work on contemporary food safety issues in China, and Garnett and Wilkes' (2014) analysis on socio-economic and environmental changes associated with the transformation in China's food system, serve as prominent exceptions. However, while one may argue that that contemporary experiences and concerns with changes in the food systems in developing countries are similar to those in western countries, the potential differences in context, attitudes, and adaptations have not been studied thus far. Exploring these local contexts is particularly important in times when food trends emerging from particular countries cross borders and are introduced to populations living in different socio-cultural contexts. It is necessary to see how these movements fare in countries with different consumption cultures and approaches to risky food. This dissertation also extends the debates of food in a developing country which has historically focused primarily on food security and issues of nutrition (Hussain

² For the purposes of this dissertation, 'conventional' food systems refer to food networks that depend on intensification of food processes through mechanisation, chemical inputs and specialisations of geographic regions (Morgan and Murdoch 2000). Alternative food systems will refer to food networks such as the organic and local networks developed to counter the practices and consequences of conventional systems.

and Akram 2008; Dorosh et al. 2010; Balagamwala 2013; Fazal et al. 2013; Guriro 2013), and bypassed the burgeoning food-secure, middle class urban populations which are having a significant impact on the country's economic and political situations in favour of lower socio-economic classes. Finally, studying a different regional context can also reveal how the consumers in these areas understand and respond to the information available in the media about such themes. Their experiences may also have the potential of guiding future policy and locally grounded food safety projects, highlighting the geographical and cultural differences between and within consumer groups and contribute to theoretical debates on food in geography.

Food is one of the few things in everyday life that is intimately geographical, linking scales of interest from the body to the globe, production sites to consumption and waste disposal sites and actors and institutions at every point of the food system (Goodman and Sage 2014). This dissertation contributes to geography not only by presenting a place-based and locally grounded analysis, but also illustrates how space is an integral consideration in the engagement with the food system for urban residents (Parham 2015). Through a focus on the middle class in Islamabad, Pakistan, the dissertation highlights the intensely geographical nature of the contemporary, globalized food system, and the influence of specific local contexts on perceptions of food, food anxiety, and food consumption. While there are similarities in coping with food anxieties between the respondent group in Islamabad and groups in developed and developing countries, the dissertation also shows that the context of Pakistan creates a unique landscape of urban food consumption in an age of food anxiety.

Justification of Research Focus

Urban populations have significant influence on shaping global economic markets and food systems through their purchasing decisions (Riley and Legwegoh 2014). Recent research in developing countries reveals consumption and health patterns that are similar to those in developed countries; an alarming trend that has consequences for the health and well-being of their populations, particularly because of high rates of obesity, diabetes, and cardiovascular diseases (Jafar et al. 2004; Yadav and Krishnan 2008; Torres 2011; Leung et al. 2015). Studies that investigate the consumption habits of urban populations in developing countries are therefore more important than ever because of the implications on agriculture, urban planning, food policies, and for creating preventative measures to avoid the dangers other countries are already facing (Battersby 2012). These studies are important alongside studies on the alternative food networks (AFNs) emerging in developed countries. As stakeholders in developing countries become aware of the issues linked to conventional food systems, it is vital to understand the principles connected to AFNs and evaluate their transferability to different regional contexts. For example, in Islamabad, Pakistan, although food fears are increasingly a concern, with media reports focusing on dangers of different food items and publicizing restaurant closures, organic and local food movements may not be best suited to address the sources of food fears (Junaidi 2015).

Existing research on food-related issues in Pakistan has tended to focus on food security and nutrition (Balagamwala 2013; Gazdar and Mallah 2013; Khan 2013b). This body of research uses the Food and Agriculture Organization's (FAO) 2003 definition of food security:

“a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets

their dietary needs and food preferences for an active and healthy life”
(FAO 2003: 28).

Similarly, ‘nutrition security’ is also defined by the FAO:

“Nutrition security exists when all people at all times consume food of sufficient quantity and quality in terms of variety, diversity, nutrient content and safety to meet their dietary needs and food preferences for an active and healthy life, coupled with a sanitary environment, adequate health, education and care” (FAO/AGN 2012)

These issues have been at the forefront of Pakistan’s national policies since its inception. Food security analyses have tended to focus on either availability of food at different spatial levels within the country or on caloric consumption at household levels (Gazdar and Mallah 2013). As a country that depends on agriculture and livestock for economic growth, employment, and food provision, a significant amount of research has also gone into improving production processes in the country, with the Pakistan Agricultural Research Council (PARC) taking the fore on much of this work, followed by universities concentrating on agriculture (Hammad et al. 2011). From the food security literature, the policy and research focus is on the availability of staples like wheat for urban and rural populations (Malik 2005; Dorosh et al. 2010). While efforts are made to protect vulnerable population groups from shocks such as price inflations, shortages, and hoarding, shocks from the influence of seasonality and other temporal rhythms also have a significant influence on food insecurity and have not yet been explored (Balagamwala 2013). Studies on food safety challenges are scant and primarily concerned with the quantitative effects on health and economics of the country (Akhtar 2013). However, studies like these do provide an overview of the microbiological and chemical contamination of foods in the country, the biological impacts of negligent use

of pesticides during production, and the effects of intentional adulterants have been discussed extensively (Tariq et al. 2007; Akhtar 2013; Wadhwa et al. 2013).

Where the scholarly literature is lagging, the media and the civil society has stepped in, with articles and blog posts extolling the benefits of eating organic produce and the dangers of industrially produced food (Ilyas 2012; Khan 2013a; Ali 2015; Ilyas 2015). Pesticides in particular are a common culprit, with dangerous levels having been identified in fresh produce and certain proportions of the population who consume them (Ali et al. 2013; Staff Reporter 2013). However, most of the civil society's efforts at information provision have thus far been limited to print and online media, and there is little organization in terms of consumer-organizations and associations (discussed further in Chapter 3). However, national newspapers such as DAWN News have provided a platform for allowing those who are not journalists to publish on their 'blog' and 'magazine' sections. Concerns associated with food increased drastically after the bird flu scare in Pakistan in 2006, which resulted in many thousands of birds being culled across the country (Jalil, et al. 2013). Such issues, combined with the increasing popularity of farmers' markets and the promotion of foods labelled as 'organic' in Karachi, Lahore, and Islamabad, indicate that consumers are devoting attention to food safety.

The research presented in this dissertation was conducted in a period when concerns regarding food safety and organic or local food were entrenched, and consumers had easy access to information about AFNs abroad, and some access to alternatively produced food. The dissertation fills the gap in geographical literature on Pakistan which has predominantly been concerned with food security and has yet to address the perceptions and practices of the food-secure proportion of the population in relation to food safety issues in the context of a volatile urban environment. It also begins to address the gaps in the global literature on food geography and food environments that

currently are dominated by research from North American contexts and are only now beginning to examine food anxieties (Jackson and Everts 2010; Cannuscio et al. 2013).

Why Islamabad?

The choice of Islamabad as a research study site is justified because of its vibrant, growing population which has displayed an interest in alternative food production because of the increasing popularity of projects like farmers' markets and urban gardening. It also presents a unique opportunity to study food environments in Pakistan, as it is a new city and has an urban layout that differs greatly from older and larger cities like Karachi and Lahore. Islamabad's urban design also offers significant advantages and opportunities for food research. As a planned and young city, the proportion of the population that identifies as being 'from Islamabad' is quite small, which crucially allows for the examination of food habits of Pakistanis from geographically and ethnically (ethnic Pakistanis) diverse backgrounds. This characteristic is important because Pakistanis have very diverse and location-specific cuisines (Ramzi 2012) (discussed further in Chapter 3), which potentially indicates different sources of food anxiety, food rationalities, and adaptation strategies (Johnston and Longhurst 2012). While older, established Pakistani cities also reflect the multi-ethnic nature of the country, they are more spatially delineated into historical ethnic neighbourhoods, and do not have the same degree of cultural mixing like Islamabad (Dani 1995; Major 2011; Long 2015).

Secondly, the planned nature of the city and its relatively small size also provides particular limitations to an individual's personal food environment: with only three large locations for purchasing bulk amounts of produce, and very few large retail locations like malls, the city's food environment is quite restricted in comparison with older cities. This not only facilitates methodological logistics in accessing these locations, but also provides an opportunity to observe how consumers may have very different

relationships with each food consumption site. Additionally, as a long term resident of Islamabad, I am accustomed to the social environment and, despite having lived abroad for higher education for the past five years; I am familiar with the city. As a result, I believe that I have more 'local' knowledge of the city than an outsider, which facilitated my access to my participants and exploring the city as a researcher while also being a resident. However, I am also cognizant of the fact that being local may also let me overlook concepts and factors that outsiders may be more sensitive to (discussed in Chapter 4). Finally, the focus on the middle class in Islamabad is justified because of their influential role in shaping markets and consumption trends (Maqsood 2014). As a highly diverse group with different values and priorities, the nuances in aspirations, expectations, and practices are particularly reflected through consumption. Specifically, I argue that food environments provide a context to explore how perceptions and strategies can differ even within socio-economic groups, and that these differences have significant consequences for food systems in relation to which supply systems gain prominence and what information sources are trusted (Cohen 2004; Chen and Goodman 2013). At this point, it is also important to acknowledge that although the respondents for the project shared their everyday food consumption habits and their food anxieties, conditions such as anorexia, bulimia, obesity, and malnourishment are not included in the scope of this dissertation. It is not my intention; however, to undermine this literature, but rather to focus on the food anxiety issues driven by concerns of industrialisation and intensification of food systems. I also argue that the food issues faced by the food-secure proportion of the population are quite significant in light of the developments of the food system in Pakistan.

Research Questions

The overarching research aim of this dissertation is to examine the factors that influence food consumption conceptualisations and practices in the context of a risky food environment for the middle class residents of Islamabad. This is achieved through an investigation of the following research questions:

1. How do middle class respondents in Islamabad deal with external influences and disruptions to their food environments?
2. How do middle class consumers in Islamabad conceptualise the idea of 'good' food?
3. What role does trust play in the risky food environment experienced by middle class residents in Pakistan?
4. How are certain food items like the broiler chicken perceived and how do they 'travel' across different spaces during their production?

Organization of the Dissertation

This dissertation is organized according to the paper-route, and therefore consists of four main papers, each of which responds to one of the research questions above.

Chapter 2 frames the dissertation within the geography of food and food consumption habits in a risky food environment. As the literatures relevant to each paper are discussed within the papers, this chapter will focus on the overarching literature to which the dissertation as a whole contributes. This includes an exploration of the food geography and food environment literature, the concepts of anxiety and risk in developing food systems, trust in food, and debates around definitions of the middle-class.

Chapter 3 provides a context to Pakistan, discussing the food landscape within the country, as well as the current status of food-related research in the country. It concludes with an evaluation of the literature on the Pakistani middle class.

Chapter 4 presents an overview of the methods used in this dissertation and describes the three phases of fieldwork, and how the data analysis was carried out. It provides further explanation on the choice of Islamabad as a research site, the process of recruiting the study participants, and an exploration of researcher positionality is also included.

Chapter 5 (Paper I), 'Disruptions and Food Consumption in Islamabad: The Role of Anticipatory Logic and Preparedness', investigates the influence of disruptions on consumers' everyday food consumption experiences by exploring seasonal fuel scarcities and violent events. It draws upon literature on rhythms in daily life and coping mechanisms used in times of insecurity and disruptions to usual food environments. In particular it explores issues of physical access and affordability of food for cohorts of the population who normally consider themselves as food secure.

Chapter 6 (Paper II), 'Consuming 'Good Food' in Islamabad, Pakistan', explores how ideas of 'good food' are conceptualised by food-secure urban residents and focuses on how these ideas have been influenced by the changes in the food system and the risks associated with them. This paper is concerned with how the 'alimentary mentalities' of the consumers in Islamabad are primarily responsive to the risks they perceive in their food environments and how the mentalities are tied to ideas of place. It also explores how these ideas may potentially be analogous to ideas of organic and local foods as considered in western countries.

Chapter 7 (Paper III), 'The Changing Nature of Food Risks and Consumer Trust in Islamabad, Pakistan', discusses how consumers negotiate trust relationships and information sources within the context of food risks. It specifically illustrates how trust is

linked to the actors, places, and processes associated with the food system, and how it has changed with time. It also explores the different approaches used by consumers when dealing with food-related anxieties and risks.

Chapter 8 (Paper IV), 'Fowl Problems: Distancing Chicken Consumption in Pakistan' takes the broiler chicken as its main subject and explores how consumers perceive it as a problematic food commodity. It uses the chicken as a case study to illustrate the subjects discussed in the previous papers and discusses what consumers consider as 'good' food in relation to animal products, how they trust the information available to them, and the efforts expended in discovering the commodity geography of specific things. This paper draws upon and contributes to the literature on commodity geographies and shows how the concept of place may be valued in the context of food anxieties.

Chapter 9 concludes the dissertation with a final discussion and summary of the four empirical papers. It provides an overarching view of the dissertation and discusses its contribution to the literature, potential avenues for further research, and the limitations and implications resulting from this research.

Chapter 2: Literature Review

The main focus of this dissertation is to explore food-related anxieties and adaptation strategies used by urban middle class consumers in Islamabad, Pakistan. It investigates these anxieties at a household level and, (1) considers food fears resulting from an industrialised and intensified food system, (2) the effects of energy scarcities and violent events, and (3) adaptation strategies developed by the consumers in response to these fears. Since the dissertation is organised in the four-paper format, each paper includes a highly focused literature review specific to the arguments and contributions contained in the chapter. Therefore, the purpose of this chapter is to orient the reader by providing an overarching literature review and discussion of the common themes explored in the subsequent four papers. Importantly, recurrent themes of the relationship of the consumer to place and the anxieties associated with the changing food systems are present in all four papers.

The four papers present and discuss the evidence related to consumers' perceptions of food and explore the different adaptation strategies adopted to adjust to the food system. Collectively, they work primarily within the food-anxiety paradigm as discussed by Peter Jackson and colleagues (Jackson and Everts 2010; Jackson 2015) and offer a different perspective to some dominant concepts of risks related to food consumption (Jackson et al. 2013). Therefore, the papers draw from and contribute to literature on food consumption and food anxieties emerging from the fields of food studies, geography, area studies, anthropology, and sociology. Particularly, the dissertation shows how food anxiety functions in everyday routines and practices in society, and how these narratives contribute to and transform some of the dominant discourses in these fields. This chapter is divided into two main parts. The first section presents the literature on food anxieties and locates it within broader debates in food geography and alternative food networks. The second section is an overview of the literature on middle class and consumption, focusing specifically on issues of food security and vulnerability.

Food Anxieties: Contemporary Food Stresses and Alternative Solutions

In the past few decades, 'food scares' emerging in countries across the world have driven much of the research, consumer activism, and development of alternative food production techniques (Ashbolt 2004; Jackson 2015). These developments in research and food networks have been associated with the idea that conventional food systems have created a risky food consumption environment by encouraging microbial contamination, chemical overuse, biological threats, and intentional adulteration. These risks can be seen in the scares associated with the presence of listeria in cheese and chicken in the United Kingdom in 1989 (Farber et al. 1989), polychlorinated biphenyls (PCBs) and dioxins in meat from Belgium in 1999 (van Larebeke et al. 2001), Bovine Spongiform Encephalopathy (BSE) in cattle in the United Kingdom in 1996 (Jasanoff 1997), and the melamine-contaminated milk scandal in China in 2008 (Pei et al. 2011). However, even without the occurrence of fairly discrete events like food scares, food production practices expose individuals to more systemic food safety issues such as the presence of pesticide residues (Carvalho 2006) and microbial contamination in food (Crepet et al. 2007).

A focus on food anxiety in a geographical context is justified by how food anxieties can be located within space and time, particularly in the example of food scares (2000). It can also be argued that beyond discrete events like food scares, contemporary food anxieties also have a geographical component because they are linked with spaces of conventional food production and consumption. This factor has been argued by Fischler (1988) from a sociological perspective, suggesting that specialisation associated with food production has reached the scale of countries and continents, thus resulting in consumers being disconnected from most places of production. However, this

specialisation also has the advantage of increasing global food availability and increasing the food diversity for many consumers.

Scope of Food Geography Research

Food geography is concerned with questions of the production and consumption of food, as well as the patterns and linkages between the locations and people involved in food-related activities.³ Food geography and related studies of food environments and food landscapes are emerging fields that have significant implications for everyday life, the development of policies and social programs, and the prevention of social and spatial inequalities (Cook et al. 2007; McEntee and Agyeman 2010; Cannuscio et al. 2014). The interest and contribution of geographers to these fields can be seen in the creation of dedicated special sections such as 'Local Food Systems and the Applied Geography of Food' in *Applied Geography*, edited by Jay Gatrell, Neil Reid, and Paula Ross in 2011 and more recent publications, represented by Hillary Shaw's (2014) recent book on the geographies of food, focusing on the themes of diet, obesity, and food deserts. Although there are related themes of analysing and mapping access to food and health and discussing local practices of production, there is substantial difference in the scales, areas of concern, approaches, theoretical and conceptual frameworks, methods, and definitions with the fields of geography and food studies. These differences will be discussed in further detail later in this section.

³ Interestingly, many articles engaging with the concept do not define 'food geography' despite the emphasis of place in the analyses. This can be seen in Fraser and Edwards' (2010) paper using Geographic Information Systems (GIS) to explore the relationship of fast-food joints and childhood obesity in Leeds, United Kingdom, Fox and Smith's (2011) article on geographies of care and food in the context of obesity food access issues in Rotherham, England and Johnston and Longhurst's (2012) article on embodied geographies of food, belonging, and hope in Hamilton, New Zealand.

Food geography has had a historically and thematically⁴ wide remit extending from spatial analyses of food access (Zenk et al. 2005; Larsen and Gilliland 2008) to agri-food analyses about production and retail food geography, as evaluated from an economic geography perspective (Crewe 2000; Lewis and Le Heron 2015). Although the field is heterogeneous, the focus on food and its relationship to place sets it apart from food studies and anthropological and sociological analyses of food. The interest in agriculture has had a strong presence in the field of food geography, but has experienced rejuvenation in recent years, partly because of popular publications like economist Michael Pollan's 'Omnivore's Dilemma' (2011), which explores industrial and organic food chains and how food systems have changed in recent years. Another recent example of a popular book on global food production is 'Hungry City: How Food Shapes our Lives' by Carolyn Steel (2013), which outlines the damage done to the environment because of conventional food systems, the paths food follows from its place of production to disposal, and the historical processes that have resulted in each contemporary step in the food network and the issues present. The increase in interest is associated with the rise in importance in the policy agenda for many countries, connected with food crises caused by flooding, drought, and price inflations (Winter 2003b; 2005). Finally, as noted by William Mosely (editor of the journal *Food Policy*) in an analysis of geography, planning, and development journals (2016), academics are now more appreciative of the strength of geography's tradition of combining research from the human experience, data from the social and physical sciences, multi-method approaches, and spatial analysis tools in studying cross-disciplinary and cross-continental themes like food.

⁴ Claude Thouvenot's (1978) exploration of food geography in France is one of the earliest papers on the subject. This paper represents some important aspects of food geography which will be engaged with in this dissertation: it illustrates that industrialisation and urbanisation are important drivers influencing food habits, demonstrates how individuals adopt food habits observed in their older generations, and in rural areas. Examples of other early food habit focused studies are: Brown and colleagues' (1968) study on food habits in Nepal, and Chakravarti and colleagues' (1974) exploration of regional food preferences in India.

In particular, there is an increasing body of geographical research on the spatial aspects of food security (Smith et al. 2000; Hopma 2014), medicine and nutrition (Day and Pearce 2011; Eyles and Woods 2014), socio-economic and environmental effects of food system transformation (Garnett and Wilkes 2014), agricultural intensification (Adams and Mortimore 1997; Tscharntke et al. 2005), vulnerability to climate change (Hulme 2008; Lyle 2013), and alternative modes of food production (Sonnino 2013; Feldmann and Hamm 2015). These areas are of particular interest in Asian and African countries where issues of climate vulnerability, rapidly increasing populations, socio-economic issues, violent events, and poorly-performing arable land have been linked with food security issues (Gregory et al. 2005; Knox et al. 2012; Garnett and Wilkes 2014). The Green Revolutions in Asia and Africa therefore provide examples on how agricultural productivity, livelihoods, and nutritional profiles can be increased without damaging the environment (Rashid et al. 2013). The interest in the Green Revolutions is further associated with issues of food insecurity, hunger, and malnutrition, and this association can be exemplified by Amartya Sen's (1981) work which built upon previous literature on famine to argue that the presence of food in a market had to be combined with a household's ability to access and afford the food. This was then followed by Michael Watts' (1983) work on Nigerian famines, which revealed that colonial involvement and participation in global markets were more strongly associated with creation of famine than with overpopulation, climate problems, and inefficient production techniques. More recently, geographers have examined factors associated with Chinese (Fotheringham et al. 2012) and Irish famines (Garnaut 2014), further bolstering the understanding that political and social factors have a stronger role in producing food insecurity over a longer term, than interactions with climatic factors.

Food geography has seen a shift in focus from agri-food studies rooted in production to a recent turn to consumption. This turn has included explorations of food aspects that extend beyond food access, to using food for navigating everyday life, and investigating

the role of food in relation to the human body and emotions (Valentine 2002; Hayes-Conroy 2009). This has resulted in research emerging from varied fields such as economics, anthropology and medicine, some of which has been discussed in the previous sections. This body of literature is relevant for this dissertation because it represents the potential of theorising different areas of the field in relation to food security and vulnerability, and the relationship of individuals with global and regional food systems that influence their everyday lives. This dissertation has recognised that food geography's strength lies in its flexibility at being applied across different scales and considering a multitude of factors. However, for the purposes of this dissertation, the next section presents a focused lens of analysis for exploring local place relationships of food (Desjardins 2011; Cannuscio et al. 2013).

Focusing on Food Environments

Having acknowledged the broad remit of food geography as a field, this section explores how concepts like 'foodscapes' and 'food environments' have been approached in the literature and then presents a description of 'food environments' that this dissertation is engaging with in order to set up a local and place-based theoretical context (Mars and Mars 2004; Parham 2015). The value of a narrow focus for food geography research can be noted in Panelli and Tipa's (2009) article that has discussed food and urban geography in the context of food practices of indigenous tribes and proposed the value of using food landscapes, or 'foodscapes', as a conceptually focused approach for evaluating health and well-being with culture and place relationships. In doing so, they discuss how studying the geography of food and health not only provides us with the opportunity to understand one's well-being, but also to explore the linkages between people, nature, and place, a finding that is reflected by Smith and Jehlicka (2007) in

their study on food, politics, and change in Poland and the Czech Republic in the context of the organic food sector.⁵

Glanz and colleagues (2005) provide one of the earliest and most detailed descriptions of food environments, which considers four components of the food environment: (1) the physical environment in terms of type and location of outlets, (2) the nutrition environment available to consumers in the form of healthy eating options, price and the availability of nutritional information, (3) the organisational environments of homes, schools and workplaces, and (4) the informational environment in the form of advertising and the media. Glanz and colleagues' (2005) study is then used in a variety of ways: Townshend and Lake (2009) conceptualise the concept of food environments broadly, to include (1) food accessibility and availability, (2) with advertising and marketing, (3) an examination of food access pathways, and (4) consumption in different environments. Both sets of authors build on existing research that proposes a stronger focus on social aspects of food consumption.

On the other hand, Burgoine and colleagues (2009) conceptualise foodscapes broadly and use the idea of 'food microenvironments' to consider baked goods and foods eaten out of the home. This is further broken down in their analysis into how individuals interact with the food-based locations in their environment and how major changes in the environment affect food consumption. These studies represent the expanding body of work examining the relationship between urban factors such as built environments with food consumption and physical exercise. The results of these studies reveal an association between urban form and health, although the significance of different factors

⁵ Food environments and foodscapes have been approached in a variety of ways in geographical literature. However, the terms are frequently used interchangeably to illustrate the value of focused analyses of spaces for evaluating food and health. Examples of such studies include: Kestens and colleagues' (2010) in measuring food exposure and how food spaces are experienced in Montreal and Quebec, Canada; Lake and colleagues (2010: 666) in using secondary data to explore foodscape measures in the United Kingdom acquire food. Both papers consider physical, socio-cultural, and politico-economic influences at micro and macro levels for describing food environments and food landscapes.

and the transferability of these principles to other urban areas and other countries need to be questioned. For example, even within developed countries, features like urban density vary considerably within a country, which may then be associated with different health factors, such as obesity due to poor physical access to food (Townshend and Lake 2009). This dissertation uses the concept of food environments to further debate the transferability of certain principles by showing how place-specific features and influences affect food consumption habits. This is addressed specifically in Paper I by demonstrating external influences on food environments that have thus far not been encountered or explored in other countries. The results of this paper emphasise the fact that the food environment research has been conceptualised primarily with issues emerging from the global North and demonstrate that concepts like food environments need to be theorised more broadly in order to be inclusive of realities in the global South.

Therefore, in this scholarly context and following this examination of food environments and foodscapes in the literature, this dissertation uses the concept of food environments, combining the description put forward by Glanz and colleagues' (2005) and Townshend and Lake (2009), to propose that food environments at an individual and household scale include: the built environment, in the form of food purchase and consumption sites; transportation routes and modes; foods and food information in the form of labels and marketing techniques; and the influence of social, cultural, economic, political, institutional, and environmental factors that affect an individual's engagement with food. Importantly, this dissertation also focuses on the dynamism of food environments, a factor that has thus far been largely neglected in literature.

This inattention to dynamism in food environments is surprising considering how food systems change over time across scales; for example, the introduction and closure of shops on a micro-scale, or the introduction of new food networks and their brands in countries and regions. The few current studies that consider temporality and food

environments do so primarily in the context of food accessibility and store locations (Cummins and Macintyre 1999; Chen and Clark 2013). Notable exceptions to these studies are Larsen and Gilliland's (2008) GIS mapping project on how food deserts in London, Ontario, transformed between 1961 and 2005. However, this project only used supermarket locations, but added factors like socioeconomic characteristics and access to public transit in its analysis. A recent and comprehensive exception is Widener and Shannon's (2014) exploration of the value of including time in analyses of food environments. Citing works on the modelling of geographic and spatial data in food environments (Chen and Clark 2013; Horner and Wood 2014), Widener and Shannon (2014) emphasise how changes of various food purchase locations (including mobile food vendors) and activities like retail restructuring over time contribute to richer analyses of food environments. Importantly, particularly for the purposes of this dissertation, they demonstrate how the consideration of individuals capable of movement and actively using transportation (p. 2) is important in studies of food accessibility.

Although the authors are focusing mainly on lower socio-economic groups to highlight their mobility in relation to their places of residence, they also illustrate the significance of discussing the mode of travel adopted by individuals and the changing conditions associated with urban transportation networks. This transportation factor is explored in Paper I to show how restrictions on mobility caused by fuel scarcities influence food consumption for the research respondents in Islamabad. The contributions from this paper specifically add to the fledgling body of work on time and food environments by considering the effect of disrupting every day routines of individuals and the provision of resources such as fuel that affect urban food environments in a developing country.

Specific aspects of the food environment are discussed in each paper. Paper I explores the effect of external influences like fuel scarcities and violent events on how engagement with different food purchase sites is modified. Meanwhile, Paper II

discusses the role of trust in different actors, institutions, and aspects of the food system itself on food environments. Paper III discusses the factors that shape how individuals conceptualise ideal foods based on the information and discourses about global food production they are exposed to. Finally, Paper IV exemplifies the factors explored in the first three papers and shows how spatial metaphors are used in the understanding and exploration of specific problematic food commodities like the broiler chicken. Each paper contributes empirically and theoretically to debates on particular aspects of food environments. Firstly, it shows how external influences and their subsequent perceptions and adaptations differ in specific places. Secondly, it contributes to debates on trust and food anxiety by exploring trust relationships at the scale of food environments, a theme that has not been explored thus far in the literature examined for this dissertation. Finally, Paper IV illustrates how food commodities and their networks are conceptualised and explored within food environments. Therefore, these papers are not only providing an Islamabad-specific approach to food environments, but also contributing to broader debates on food environments. The next section discusses a typology of Food Value Chains (FVCs) which will be instrumental in exploring how perceptions of different production strategies influence consumer food fears.

Typologies of Food Value Chains (FVCs)

This section presents a discussion of the literature on global Food Value Chains (FVCs). For the purposes of this dissertation, FVCs are defined as including “all activities necessary to bring farm products to consumers, including agricultural production, processing, storage, marketing, distribution, and consumption” (Gomez et al. 2011, p. 1154). Therefore, FVCs encompass all stakeholders, products, and the linkages and relationship that bind them.

FVCs within developing countries and transition economies have seen a major change in recent decades as food production and processing has not only become more

intensified and industrialised, but has also led to the specialisation of geographic regions. This transformation has been associated with urbanization, increased population and average income, and a global span of food-related production processes. These changes have had significant impacts on diets, with authors like Pingali (2007), Hawkes and Ruel (2011), and Gomez and colleagues (2011; 2013) arguing that diets in developing countries (particularly for elite and upper middle classes) have diversified in recent times, with increased demands for food items like meat, milk, and processed foods. Further, urban populations with higher incomes are also suffering from health problems like obesity and diabetes (Popkin et al. 2012; Ellulu et al. 2014), while improving the status of micronutrient-based disorders. However, these nutritional improvements do not reach rural populations or the urban poor, even if they are employed within the food sector (Ivanic and Martin 2008). This dissertation draws on Gomez and Ricketts' (2013) FVC categorization because it accounts for the actors and mechanisms affecting food access, and it considers the interactions between modern and traditional processes. The FVC context specific to Pakistan is presented and discussed in Chapter 3.

Consumers in traditional FVCs purchase food mainly from traders interacting with smallholder farmers. These purchases are usually made in locations like wet markets, street vendors, or local family-owned shops (Reardon et al. 2010; Gorton 2011). Food products in these markets are seasonally sourced and often restricted to staple food items. In contrast, modern FVCs involve larger scale manufacturers and retailers, intensive commercial agribusiness, and well-documented and monitored agreements and process chains. Modern FVCs have access to domestic and international suppliers, and therefore, unlike traditional FVCs, are not restricted by seasons or perishability of food products. These chains are also associated more strongly with urban areas and may not supply rural areas or lower socio-economic areas within urban areas. Modern-to-traditional FVCs build on the economies of scale afforded by modern FVCs and the

traditional networks of distribution and retail to provide processed foods to lower income areas in urban areas and in some rural areas. On the other hand, traditional-to-modern FVCs consist of small-scale farmers selling produce to modern and large-scale retailers and manufacturers.

Therefore, Gomez and Ricketts' (2013) FVC categorization is based on traditional and modern methods of production, distribution and retail, and areas in which these methods overlap and complement each other. While the focus of Gomez and Ricketts' (2013) paper is to explore the impact of each FVC on the nutritional impact on the population, this dissertation is using these categories to indicate the different points of uncertainty for the middle class population in Islamabad. Chapter 3 discusses the Pakistan-specific context of FVCs, Paper III explores how risk is connected with the different types of FVCs, and finally, Paper IV uses the example of chicken production to show how a specific commodity in an FVC is explored.

Alternative Food Networks as a Response to Food Anxieties

The last few years have seen a substantial interest in different initiatives and changes that have arisen in the agro-food systems. These have been termed as 'alternative food initiatives' (Allen et al. 2003), 'alternative food supply chains' (Renting et al. 2003), 'alternative food networks' (Whatmore et al. 2003), and 'alternative food movements' (Guthman 2008). It is important to note that these are umbrella terms that are used to refer to a variety of transformations and developments, such as organic agriculture, local sourcing for food, and Fair Trade products. This dissertation uses the term 'alternative food networks' (AFNs), and specifically follows the definition provided by Renting and colleagues (2003) to include "newly emerging networks of producers, consumers and other actors that embody alternatives to the more standardised industrial mode of food supply" (p. 394). The emergence of these new networks should be contextualised with the fact that a number of critical changes have been taking place

within the food sector globally. Changing consumer perceptions and increasing distrust over conventional agriculture on issues of sustainability, animal welfare, human health, and ethics have been driven by food scandals and controversies involving the agro-food sector. This thesis will explore these changing perceptions in the context of Pakistan and will also discuss how consumers approach conventional and emergent alternative networks. This section explores the development of AFNs globally and examines their relationship with the so-called industrialised and conventional food networks.⁶ It presents an overview of research on the movements thus far, examines how concepts like 'embeddedness', 'locality', and 'quality' are defined and used, and follows with discussions of the prominent alternative networks and initiatives.

In recent years, there has been increased interest in the separation between consumers and the other aspects of modern food systems. There has also been an associated increase in interest in alternative modes of food production that are aimed at 'reconnecting' and 're-embedding' consumers with food systems (Renting et al. 2003; Sage 2003; Winter 2003a). These alternative networks and modes of production are attempting to create more transparent, sustainable, and trusting relationships between consumers and the different actors in food systems. These relationships are often specifically associated with addressing concerns linked with reduced knowledge of food origins and processes, the use of chemical inputs, and human and animal health and welfare (Ilbery and Maye 2005). The alternative food networks use these relationships with the goal of reconnecting the consumers with production realities, nature, and local traditions. This can be accomplished in a number of ways, such as providing information through marketing techniques and providing direct knowledge about the producers, place of production and processes, or by encouraging active participation in the food production process. All of these methods are linked with reducing the sense of

⁶ For the purposes of this thesis, industrialised and conventional food systems refer to specialised and standardised production processes that are sensitive to changes in economic efficiency and competition (Murdoch and Miele 1999)

uncertainty associated with food. However, these efforts at reconnection may be critiqued to be theoretically and geographically-limited (Freidberg and Goldstein 2011)

Alternative food networks (AFNs) have emerged in response to significant transformations in global food systems. These transformations have been driven by increasing production levels at a reduction of costs associated with input resources, distribution, and retail costs. This has resulted in environmental issues like soil and water pollution, and ethical issues such as transgressions against human and animal welfare. However, even with the increasing scales of production sites and the modernisation and intensification of production techniques, corresponding increases in production are no longer as profitable as they were a few decades ago. This reduction of production and economic profitability is also linked with market saturation of certain commodities (such as corn in the United States), a higher number of global sourcing sites, and the increased contention against flooding global markets with surplus materials. These changes have historically happened at the same time as increasing production costs, which came in the form of investments emerging from new environmental, hygiene, and animal welfare regulations, and tightening of product requirements from other industries and countries. In such scenarios, where conventional methods no longer provide economic benefits, farmers may experiment with alternative forms of production, and along with other stakeholders in the food system, focus on particular guiding principles in their food practices (Renting et al. 2003). These shifts result in the revival of regional and local production practices, local cuisines, and increase the consumers' awareness of different geographic locations and their culinary specialities.

Some scholars consider that the shift from industrialised food production to alternative production has the potential to 'revitalise' rural areas (Sonnino and Marsden 2006: p. 181). This can be shown in examples like the markets for Italian Parmigiano Regianno cheese, which has promoted local and regional development through job creation, and

the development of sustainable, ethical, and artisanal production methods (de Roest and Menghi 2000). The shift in food production is further exemplified by Knickel and Renting's (2000) study that shows how the creation of a new supply line of organic milk has attracted business and tourists to Rhon, Germany. The authors emphasise how creating and enhancing the linkages between high-quality products, leisure, and a pristine natural environment in creating alternative markets for the local farmers has benefited the region as a whole. However, attributing the development of a 'rural paradigm' through alternative food networks is contested by authors like Winter (2003) and Goodman (2004). Firstly, these authors do not consider the relationship between localism and AFNs to be a straightforward one, and secondly, they call for a pragmatic and objective assessment of AFNs' benefits toward rural areas, particularly in terms of inequality and social exclusion.

Although it may be difficult to quantify the contributions of AFNs to rural development and sustainable agriculture in empirical terms (Marsden 2004), much has been done since their creation in increasing consumer knowledge about food origins and in improving the sustainable and ethical dimensions of food production. These developments are associated with the motivations behind the emergence of AFNs: food safety concerns, health concerns such as the obesity epidemic, aesthetics of food consumption, sustainability concerns of the intensification of different production practices and the ethics of longer and impersonal food chains (Harvey et al 2004). In essence, the alternative food networks can be defined as short-cutting conventional food chains through the creation of new relationships between consumers and producers. Hence, the discourse associated with AFNs discusses the idea of a re-spatialisation and re-socialisation of food and the actors involved. It is through the idea of re-spatialisation that 'locality' becomes significant, as each food item starts to be defined by its location, the production practices, natural resources, landscape, and the people.

Embeddedness is another core concept grounding AFNs, a term that has been borrowed from economic sociology and refers to the level to which social influences impact on economic processes and activities (Granovetter 1985). The primary assumption of 'embeddedness' in economic sociology is that social relationships influence economic activities. Although first introduced by Polanyi (1944), it was further refined by Granovetter (1985), who also proposed that network analysis was critical in understanding the economy. However, the concept is still vague in that it does not account for the processes in which social relationships impact economic behaviour and activities. Research in the food sector has taken the concept and applied it to consider the embeddedness of a food product within a food system, production and distribution processes, and economic relationships (Sage 2003). This allows for the product to be traced and certified in ways that were not possible with conventional food systems. It is also important to note that while this provides spatial accountability of products and processes, it may lead to an over-emphasis of locality and distance of production sites, as compared to the properties of the food product itself (Murdoch et al. 2000). However, embeddedness within food sector research has also shown that social relationships and trust are critical to the economic activities within that system (Sage 2003). For example, the successes of local producers who may not have a corporate distribution system depend primarily on personal relationships with consumers and regional distributors.

Much of the literature on AFNs has focused on the binary between dis-embedded, conventional food systems (Sonnino 2007), and embedded, 'alternative' food systems (Winter 2003). In such studies, embeddedness is used to refer to market relations that depend on personal relationships (Hinrichs 2000). However, it is important to note that although the idea of the binary is useful in theorising the conceptual differences between food systems, the current reality of the food systems indicates that the boundaries between them are increasingly blurry. Unfortunately, the categorisation of embedded versus disembedded food systems has the disadvantage of labelling

particular places as “forever rooted in a particular time and space” (Sonnino 2007: 62). For example, food systems in the United States are judged as being dis-embedded, even if they adopt ‘alternative’ practices (Morgan et al. 2006).

Murdoch and Miele (2000) have argued that ‘Slow Food’ (explored further in the section below) emphasises engaging the consumer with local cuisine and highlights the simple pleasures obtained from doing so. Whatmore et al. (2003) demonstrates the value addition taking place at each step in an AFN, and the creation of trust between consumers and producers. However, it is important to note that although AFNs and conventional systems are considered as distinct; the borders between them are less clear in reality. This can be seen in Straete and Marsden’s (2003) case studies of dairy companies in Norway and Wales that emphasise their alternative, farm-based production methods, but also the fact that they are modernising particular aspects of their processes to conform to industrial standards. Murdoch and Miele (1999) also choose case studies that show Italian companies who have created a standardised organic food item in order to coherently collect small farmers under one commercial structure, but still guarantee products that have been created through alternative means. These examples show that despite the dynamic behind AFNs’ narrative, the clear distinctions made between ‘conventional’ and ‘alternative’ do not exist in the food sector right now. As Sonnino and Marsden (2004) note however, this observation can inspire the search and development of better concepts and tools that can improve analyses of AFNs.

The need for new tools and concepts can be seen in the example of food networks in California, where alternative food production processes have been chosen by the conventional sector in a way that drives organic farmers to constantly search for and adopt practices that increase yield. Guthman (2004) argues that this culture of production has allowed intensification to become a vital part of quality and land value, in a way that challenges the core principles of organic farming. Guthman (2004) refers to

this change as the 'conventionalisation' (p. 310) of organic production. In this case, better concepts will help scholars understand the drivers of the networks at work in California, the effects of these drivers on the core concepts governing AFNs, and to help develop regulations and policies that can more appropriately address alternative production practices. The following sections will explore the development and core concepts of particular AFNs and discuss how values of quality food, social justice, environmental sustainability, and animal welfare play a part in creating them.

Organic Agriculture

Organic food is made from production practices that do not involve the use of chemical fertilizers and pesticides, antibiotics, or drugs, which are common to intensive farming and livestock rearing (Seyfang 2006). Importantly, organic food refers only to production practices and does not consider factors of distribution and retail. The core concept at the heart of organic food is production practices that work with natural ecological systems and prevent environmental degradation in the form of soil pollution, land degradation, and water pollution (Reed 2001). Organic farming ensures that future agricultural production in the same area is protected by promoting better soil structure, fostering the growth of organisms that control pests and cycle nutrients naturally (Birkhofer et al. 2008; Underwood et al. 2011). Secondary concepts include protection of human health by avoiding the consumption of chemical residues that are common with intensively produced food (Lee et al. 2001; Hernandez et al. 2013). It is important to recognize that organic food production is not limited to principles of sustainability, particularly as recent debates have commented on the ethics of production practices. However, as organic production worldwide increases, producers in developed countries are faced with the fact that supermarket-supply chains source their produce from organic producers in other countries (Smith and Marsden 2004). Therefore, in order for organically-produced food to be accessible to local markets and to improve rural livelihoods, alternative distribution chains need to be established. In recent years, this

drive has led to the creation of schemes like 'veg-boxes'⁷ and local farmers' markets that offer organic and often locally-produced goods.

The organic concept and practices have been defined largely by countries in the global North. With the proliferation of initiatives and movements, the meanings and practices behind organic production have had to be institutionalised and consolidated in the form of the International Federation of Organic Agriculture Movements (IFOAM), which includes groups from Europe, the United Kingdom, and the United States (IFOAM 2016).⁸ This move has been critiqued as a return to the conventions of mainstreaming food production, which challenges the alternative principles of the organic movement (Guthman 1998). The IFOAM, the United Nations Codex Alimentarius Commission, and major Northern governments have further outlined organic standards that offer guidelines for the conversion period, certification and monitoring of farms by certifying organisations, planting material, fertilizers and disease control, livestock, transport, processing, and labelling (FAO 2001; Raynolds 2004; IFOAM 2016). These standards reveal that although the organic food movement is striving for an ecological approach to production, farmers are still permitted to add certain synthetic pesticides and additives (if they are on the IFOAM, Codex, or governmental approved lists). Therefore, organically produced items may not be entirely free of pesticides and chemicals, and in some cases, may present with a higher chemical load when compared with conventionally grown produce.

Organic food production has increased rapidly in recent years, particularly in countries in the global South. Countries in Latin America, and increasingly in Asia and Africa,

⁷ 'Veg-box' or vegetable box systems are designed around delivering organic vegetables within specific regions, to promote local producers. The systems may also contain items like milk, meat, or eggs, depending on local production (Clarke et al. 2008).

⁸ IFOAM defines organic agriculture as: "an agricultural system that promotes environmentally, socially and economically sound production of food, fibre, timber, etc. In this system soil fertility is seen as the key to successful production. Working with the natural properties of plants, animals and the landscape, organic farmers aim to optimise quality in all aspects of agriculture and the environment." (<http://ifoam.org>)

have become major exporters of organically produced coffee, tea, and fresh fruits and vegetables. Writing on the international trade of organic and fair-trade movements, Raynolds (2000) considers that organic production may prove to be a boon for smallholder farmers of lower socio-economic status because of practices like intercropping and better availability of farm labour. However, a significant number of barriers exist in promoting organic production to small holder farmers, such as availability of information on practices, certification, and export. Importantly, converting farms from conventional to organic agriculture may result in diminished yields in the years before organic production can take place. Finally, considering the costs and efforts involved in obtaining certification and gaining appropriate distribution channels to export, it is not surprising that most international trade in organic food is still dominated by larger corporations (Raynolds 2000). However, small holders in countries like India and Ghana do benefit in international trade when partnered with NGOs who assist the farmers in obtaining certification and offering consistent buyers for the produce (Djokoto et al. 2016; Parvathi and Waibel 2016). These farmers have the added advantage of not being subject to market price volatility, which conventional farmers are.

Local Food

An examination of the use of the term 'local' in local food systems demonstrates that the ideas of local are not necessarily against the concept of 'global' food systems (Jarosz and Qazi 2000, Hinrichs 2003). A food system that is considered 'local' may also not have organic production methods or ethical employment strategies: the idea of localisation means only that food should be consumed as close to the location of consumption as possible. Hinrichs (2003) demonstrates, however, that not only is the idea of local different for each product, but that it is also variable across cultures and changes with time and space. This factor is explored within the Pakistani context in Paper II. Therefore, on its own, local food systems must not be assumed to be 'good' because "they emerge from a complexity of contingent, place-based social, political and

ecological processes” (Jarosz 2008: 233). DuPuis and Goodman (2005) further contend that localisation must be evaluated and positioned within the context of globalisation.

The primary motivation for localisation in terms of sustainability is to reduce the influence of ‘food miles’⁹ on food production. A focus on reduction of food miles will then reduce the amount of energy expended, and the pollution produced in food transport. It has been found that environmental externalities such as pollution add at least 16.3% to the cost of conventionally-produced, globally sourced food, as compared to the 3% of locally-produced organic food (Pretty 2001). Accounting for environmental and social externalities is often left out of pricing for global food transportation (Jones 2001).

While sustainability and ethical concerns ground much of the local food movement, consumption of locally produced food and regional or national cuisines is also strongly associated with nostalgia. In their study on Japanese diets and ideas of food sovereignty, Takeda and colleagues (2016) demonstrate that for many respondents, Japanese food items were valued more because of memories of home-cooked meals consumed with families instead of worries of social justice or loyalty to Japanese culture. The respondents reveal that these food items not only invoke memories of childhood and time spent with their families and respect for traditional cooking methods, but also feelings of distress that much of the cuisine is now incompatible with the frenetic pace of urban living. The dissatisfaction then further enhances the feeling of nostalgia when the pace of urban life was not as pervasive and when they were with family. Other respondents from Takeda and colleagues (2016) study further this discussion on nostalgia by emphasising their preference for rural landscapes and lifestyle, and they reflect on the great differences between food systems between rural and urban areas, particularly in relation to the disengagement and distance with producers. These factors are explored in this dissertation particularly in Paper III, where

⁹ Food miles refer to the distance between the sites of food production and consumption (Seyfang 2006)

the respondents express their preferences for Pakistani food over others, and then in Paper IV, where the intrusion of rural spaces and practices into urban areas is commented on with nostalgic reminiscences of the place and taste of specific food items.

Slow Food

Slow Food as another distinct 'alternative' movement was started in 1986 in Bra, Italy, by a group of food writers and chefs under the leadership of Carlo Petrini (Parkins 2004) with a motivation to ameliorate the effects of fast food on local consumption cultures. Slow Food is aimed towards protecting food consumption from the intensification and standardisation of modern food production and contemporary living. It is concerned with the effect that homogenisation has on restaurants and local eateries that served local and regional cuisines and were affordable and available to all socio-economic classes. The organisation of Slow Food began from headquarters in Bra, which then spread out to smaller branches in Italy and eventually other European countries that organised events and activities designed to promote and sustain local cuisines (Miele and Murdoch 2002). The primary philosophy underlying the movement's activities is that local cuisines represent local cultures and heritage that involve the efforts and livelihoods of local farmers, tradesmen, and retailers. The movement helps these farmers and tradesmen in protecting and disseminating knowledge about the ingredients, recipes and processes they utilize. However, to be included in the official guides to local cuisines (e.g. Osterie d'Italia in Italy) restaurant owners must follow the philosophy of slowness in all respects, from the sourcing of ingredients, to the style of cooking, and the aesthetic of the restaurant (Miele and Murdoch 2002). The organisation and the philosophy of the movement can be seen in the creation of Terra Madre, the biannual gathering of Slow Food members in the city of Turin, where producers, chefs, and consumers exchange knowledge about food and develop relationships (Peace 2006). The rapid proliferation of the Slow Food ideology can also

be observed in the spread of the offshoot 'Slow Cities'¹⁰, where proponents consider that a 'better' life is in contrast to the current, fast-paced contemporary lifestyles, and focuses on the pleasures associated with sensory experiences (Pink 2007). However, critics of Slow Food contend that because the movement often produces expensive food items and promotes food-based tourism, it emphasises class differences and is only available to a certain segment of the population (Chrzan 2004; Labelle 2004).

It is necessary to acknowledge that Slow Food's defence of local food cultures, gastronomic pleasure, and the sustainability of certain varieties of food is taking place within the greater context of "politicization of consumer practices" (Sassatelli and Davolio 2010:205). This can be observed in the increasing types of 'critical' and 'political' consumption practices that involve boycotting products and services from large, multi-national corporations, and preferring products and services that are ethical and sustainable. While these practices take diverse forms, they share the view that consumers possess a significant amount of power through their purchasing choices. As discussed above, the creation of Slow Food has been associated with food consumption that is free from homogenisation and standardisation practices of contemporary food systems. Therefore, Slow Food can be considered a movement that is in resistance to the globalising and 'Americanising' effect of global food systems.

The concept of resistance goes hand in hand with the idea of nostalgia, which underlies much of Slow Food's initiatives: while on the surface Slow Food appears focused on the past, it is in effect interested in protecting the present and the future from the deleterious influences of global food systems. This can be observed in Leitch's (2000) analysis of

¹⁰ 'Cittaslow' or 'Slow City' was created in 1999 in Italy and in 2004 in the United Kingdom. To date it has over 50 member cities. The accreditation process involves factors like quality of urban fabric, environmental policies, and infrastructural regulations, encouraging local production and development, and the creation of a coherent community. Cittaslow focuses on "small realities in a more global and connected world" (Cittaslow Philosophy as presented on www.cittaslow.net)

the social underpinnings of 'lardo'¹¹ as a commodity within the context of Slow Food. In the community, lardo is not only a food item, but it is also a culinary reminder for the local people about the hardships they had endured during times of food scarcity and poverty. Further, the festival dedicated to the performance of lardo is not only a celebration of this past, but also the "corporeal memory" shared by the people. The relationship between memory and food has been well-documented through the literature as shown by Baker and colleagues (2005) who contextualise their research within the association of nostalgia and recipes, and demonstrate that particular foods trigger memories of childhood that can be linked to specific events or moments enjoyed with family members. This is further reinforced by Wagner and Hamilton (2011) using tea-drinking to show that nostalgia can be triggered not only by the food item itself, but also with various elements of the experience and practice of consuming it as part of a ritual. This growing body of research shows that despite the criticisms faced by movements like Slow Food, the nostalgic elements of these movements function to situate consumers within rural and local production, and empower rural populations in the exercise. This dissertation will explore some of these factors in the context of food consumption in Pakistan, by showing the nostalgic experiences of eating certain foods and the contradictions that may arise from it.

Fair Trade

While organic, local, and Slow Food has focused on food quality and sustainability, Fair Trade has focused on the ethical and economic dimensions of food systems. The Fair Trade movement was created with the Mennonite Central Committee trading with farming communities in Southern United States in the 1940s, which then expanded into a movement in the early 1970s (Moore 2004). One of the most comprehensive

¹¹ Lardo is cured pork fat, a local culinary delicacy is produced by the village of Colonnata in Italy. It has been nominated by the Slow Food Movement as one of Italy's ten most endangered foods (Leitch 2000).

definitions of Fair Trade has been proposed by FINE¹²: “Fair Trade is a trading partnership, based on dialogue, transparency and respect, which seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South. Fair trade organizations (backed by consumers) are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practices of conventional international trade” (FINE 2001). Therefore, Fair Trade is intended to facilitate international trade that is beneficial to all stakeholders who are involved in it and to challenge the dominant principles in play in current corporations and businesses, which often results in the exploitation of poorer producers (Raynolds 2003). In essence, like the local food movement, Fair Trade endeavours to reduce the distance and stakeholders between producers and consumers so that consumers become knowledgeable about the region, culture, and conditions of the producers. Therefore, while there is concern that establishing Fair Trade links with producers in developing countries may largely benefit larger corporations, or only be approachable for farmers aligned with NGOs (Raynolds 2000; Parvathi and Waibel 2016), it represents a shift away from un-ethical conventional production and trade practices.

The alternative food movements discussed here operate under a variety of considerations: organic food is focused on the environmental and health problems associated with conventional food production systems, local food with ideas of sustainability (but with an overarching view of empowering local food production stakeholders, Slow Food with the aesthetics of food linked with cultural and place connections, and finally Fair Trade with the intention of increasing the benefits to producers in a supply chain. In whole, the movements focus on increasing reflexivity for consumers, ensuring that information about the food supply chain is available and

¹² FINE is an informal network of the Fairtrade Labelling Organizations International (FLOI), the International Federation for Alternative Trade (IFAT), the Network of European Shops (NEWS) and the European Fair Trade Association (EFTA)

accessible, and that the environmental and social externalities of food production are accounted for and reduced wherever possible. The movements also emphasise that the idea of 'quality' is understood in different ways, which can be used to highlight different aspects of the production process. The properties of the food itself (for organic and Slow Food), the environmental features of its production (organic and local food), and the socio-economic and cultural factors of the location and production (Slow Food and Fair Trade) are all capitalised on for improving food systems and attracting customers.

In conclusion, the burgeoning field of research on alternative food networks, their underlying concepts, and their impacts reveals that although concerns exist, they are viable alternatives that are gradually increasing in depth and complexity to some of the harms associated with industrialised farming. The papers in this thesis further demonstrate that consumers in developing countries are striving to better understand the nature and functioning of food systems and how they can mitigate their effects. As Papers III and IV in particular demonstrate, consumers in Pakistan are using the concepts linked with alternative food networks to understand and adjust to the environmental health risks they face, while incorporating environmental and economic variables that may not be included in the wider AFN narrative. The papers suggest that using the ideas and experiences of AFNs in developed countries, consumers and producers in developing countries may be moving towards different conceptualisations of AFNs that function better in their particular regional and cultural contexts.

Vegetarianism and Transforming Food Systems

While largely ignored in the scholarship of AFNs, vegetarianism has similar stakes as AFNs, particularly in the debates of ethical food production. This section therefore follows from the preceding discussion of AFNs and presents its development through time, its treatment within literature, and finishes with vegetarianism in Islam and in countries like Pakistan.

Following the discussion on AFNs, it is necessary to discuss vegetarianism, its development through time, and how it functions in current society alongside the transformations in food systems. This section concludes with an exploration of attitudes towards vegetarianism and associated concepts Islam. Although the word 'vegetarianism' itself was only coined in the 1840s, the phenomenon can be traced back as early as 600 BC and had early proponents of the likes of Pythagoras, Leonardo da Vinci, Tolstoy, and George Bernard Shaw (Spencer 2016). Vegetarian diets premised on the concept of not needing to take a life in order to sustain human life emerged in India in 500 BC where it was also strongly linked to the concept of reincarnation. However, vegetarianism as a moral concept precedes this, with it being evident during the Egyptian civilizations and even during the evolutionary interval between hominids and modern humans (Spencer 2016).

The literature on vegetarianism includes histories of its development, as represented by Spencer (2016) and the much earlier work of Williams (1883), and analyses of ideologies and cultures that include vegetarianism. However, it is only recently that vegetarianism as a diet and lifestyle has been comprehensively researched as shown by Whorton (1994) on health benefits of vegetarianism, Weinsier (2000) on the problems presented by the poor definitions of 'vegetarian' in clinical nutrition, and Ruby and colleagues' (2013) exploration of cultural differences in vegetarianism. However, Morris and Kirwan's (2006) study represents the budding interest of academics on the relationship between the vegetarian movement and the alternative food economy. For the purposes of this dissertation, this section will focus on vegetarianism in the context of food system transformations and will discuss how concerns with food intensification are connected with a rapid increase in the adoption of vegetarianism as a lifestyle and dietary choice in current times.

Although vegetarians are commonly described as those who do not eat meat or animal-based products, there is wide variation in how people self-identify as vegetarians.

Therefore, there are vegetarians who make exceptions for poultry, fish, or dairy products, and might eat red meat occasionally (Kwan and Roth 2004). As such, scholars like Beardsworth and Keil (1992) propose that vegetarianism could potentially be considered a spectrum, with one end comprising of vegetarians who occasionally consume meat or meat products and the other end comprising of vegans who avoid all animal-derived foods. As with definitions, motivations for vegetarianism are also varied, with concern for animal welfare being the most common driver, followed by concerns for personal health, and then environmental concerns, purity of the soul, and disgust at the visceral properties of meat (Beardsworth and Keil 1992; Potts and White 2008; Preylo and Arikawa 2008, Hussar and Harris 2009). These motivations (and the types of food consumed) are also dynamic and can be added to, moved in priority, or dropped through a person's lifetime (Barr and Chapman 2002; Hamilton 2006).

Given the difference in motivations behind vegetarianism, ethics-based vegetarians differ from health-based ones in often making an abrupt change to their diet, avoiding a wider array of animal products, aligning their disgust with animal welfare issues and their diet, and citing stronger emotional and visceral reactions to meat (Rozin et al. 1997; Fessler et al. 2003). The two types of vegetarians also have differing ideological foci, with health-based vegetarians primarily concerned with personal health and safety, and ethics-based vegetarians being concerned with the fate of non-humans. Fox and Ward (2008) also note that these differences lead ethical vegetarians to consider health-based vegetarians as having selfish motivations, and therefore not being vegetarians for the 'appropriate' reasons. Non-vegetarians on the other hand, consider meat in positive terms, often linking it with luxury and good health, while vegetarians link it with disgust, cruelty, and bad health. However, attitudes towards meat are changing in contemporary times, with omnivores reporting a decreased consumption of meat, citing similar motivations as vegetarians (Ruby et al. 2013).

Barriers to adopting a vegetarian diet are also important in observing why individuals who express the desire to become vegetarian do not follow through in practice. The most common barrier is the pleasure of eating meat, followed by not wishing to change one's habits, believing that humans are meant to eat meat and that dropping it from diet is unhealthy, and that one's family eats meat (Worsley and Skrzypiec 1998; Lea and Worsley 2003). These barriers are discussed in Paper II where vegetarianism as a potential option is discussed in the context of consuming 'good food'. Crucially, social networks emerge as a major factor for vegetarians in maintaining their meat-free lifestyle. These networks can include involvement in advocacy groups, close friends who are vegetarians, and family support (Beardsworth and Keil 1991; Jabs, Devine and Sobal 1998).

Vegetarianism is an important phenomenon in the contemporary period, with an estimated 375 million vegetarians globally (Meat Atlas of the Friends of the Earth 2014). It is considered that at least within Europe, the number of vegetarians increased significantly after the BSE crises (see below). However, unlike Indian vegetarians who have been raised with Hindu or Jain ideals and live in a culture that supports vegetarianism, individuals in other predominantly western countries have made a conscious decision to lead a meat-free life. This decision is influenced by factors like animal welfare, sustainability, and personal health (Beardsworth and Keil 1991; Fox and Ward 2008). Vegetarianism in Pakistan thus presents an interesting case study (explored in Chapter 3), particularly since it was once part of India, where 40-45% of the population identifies as vegetarian (Meat Atlas of the Friends of the Earth 2014).

Vegetarianism in the context of food systems now presents an important case because it has historically had a strong association with the concept of purity and food. Pure food here was considered as food that had been untouched by death and that which did not contain additives. In particular, the Vegetarian Society further developed their ideas about pure food in the 1970s and extended them to include food without chemicals

added at any stage of its production and had to be produced in an “unadulterated context” (Spencer 2016: 308). This meant that production had to take place on soil that was outside with little chemical interference in the form of artificial inputs. Purity in vegetarian diets is, however, a more complex conceptualisation because it not only avoids the immorality of intensive animal rearing and killing (therefore also avoiding any toxins the animals may have been introduced to), but it also avoids chemical inputs in plants. Eating refined and ‘wholesome’ foods, as some vegetarians prefer, further reinforces the concepts of being closer and united with nature, as well as achieving wholeness in the mind, body, and spirit. These ideas have come to the fore in recent decades with the food anxieties associated with the intensifying food sector (Morris and Kirwan 2006; Ruby 2012). Controversies associated with food additives, health effects of consuming and being exposed to pesticide residues, and health events such as mass food poisonings reinforced the fears connected with processed foods. Earlier practices of recycling waste from animal farms and reprocessing them to animal feed pellets were eventually connected with diseases like Bovine-Spongiform Encephalopathy (BSE). Such examples proved to be effective material for vegetarian proponents in their quest to prove the problems of modern meat rearing and consumption.

Besides vegetarianism being a core concept in Hinduism, it is also significant in early Christianity. It can be inferred from the Old Testament that Adam and Eve were vegetarian and lived in harmony with all created beings, up till the point at which Cain and Abel make offerings to God. Cain offers produce grown from the Earth, while Abel brings a sheep (Genesis 4:4). God praises Abel on his offering, which is considered to be one of the events that led Cain to Abel’s murder. This story importantly indicates that God found the animal sacrifice to be acceptable and even pleasing. There are also reflections of this in Abraham’s sacrifice of his son, an event which is also at the basis of Islam’s second major religious festival of Eid-ul-Adha, marked with expressing gratitude to God with animal sacrifice (explored further in Chapter 3, and Paper II). The flood

story of Noah is also considered another sign that God sanctions humans to kill and consume animals; once Noah has rescued representatives of all animals on earth, he sacrifices and cooks some of them and dedicates them to God. An important distinction was then made in Christian dietary laws which stated that while meat was acceptable, blood of the animal must be avoided. This holds in line with Judaic and later Islamic dietary laws. The relationship between Islam and meat consumption and animal welfare is further explored in Chapter 3.

Health, food safety fears, animal welfare, and concern for the environment continue to play a major role in converting people to vegetarianism. Moving towards the future, these reasons, along with climate concerns of increasing livestock production, will also play a significant role in influencing individual's decisions about food and lifestyle. However, further research is needed to evaluate how cultures that are strongly dependent on meat will change as concerns with the meat production systems increase and vegetarianism spreads more widely into developing countries where meat consumption is still associated strongly with masculinity or luxury (Vartanian, Herman, and Polivy 2007).

Uncertainty, Risk, and Anxiety in Food Consumption

Beck referred to the uncertainty in food consumption as being a result of the processes underlying modern, scientific societies (1992). The discussion thus far has presented an overview of food geography literature and presented contemporary food risks and anxieties associated with the changing food systems. At this point, it is necessary to explore how the concepts of 'risk' and 'anxiety' have been treated in the literature. Beck's (1992) and Giddens' (1991) accounts of the 'risk society' concept have been influential in subsequent analyses of environmental risks associated with technological advancements in modern society in the past few decades. Beck considers environmental risks at the level of air pollution, food contamination, and radiation, which

affect consumers in all aspects of their everyday lives. Beck's (1992) evaluation of the risk society considers that modern society responds to these risks by invoking complex systems of risk management such as industry standards and safety regulations, which act as useful tools and shortcuts to describe the riskiness associated with products and processes.

Importantly, he also considers that tradition, which had once been the source of trust and certainty, has been sacrificed in the modern era to result in more uncertainty and risk. A wide range of studies have used the risk society hypothesis to analyse environmental risks. For example, Veeck (2010) uses the case of urban China to explore how consumers respond to changes in the food system associated with globalisation and liberalisation, and Smith (2007), coming from a history and philosophy background, explores how the corned beef typhoid outbreak of 1964 in Aberdeen compares with other food safety related episodes.

Although Beck's (1992) hypothesis of the risk society provides a foundational point for analyses of food anxieties in contemporary times, it is necessary to discuss three important critiques in the context of the focus of this dissertation. Firstly, Mythen (2004) considers that Beck utilised empirical evidence in shallow ways in some cases, particularly the influence of the media. The media can have different impacts in incidences like food scandals, such as informing the public about hazards, increasing trust in governmental institutions and other actors by providing information and arguments from all involved actors, and encouraging critical thinking, or even creating an atmosphere of resignation (Reilly 1998; Smith 2007). Secondly, Beck's (1992) hypothesis attributes great importance to the role of expert and skilled knowledge in the modern society, while discounting lay knowledge and the relationship and negotiation between lay and expert knowledge (Wynne 1996; Callon et al. 2009). It considers knowledge from a purely rational and cognitive perspective, therefore also not acknowledging the value of cultural mediation of knowledge and the fact that a

significant amount of everyday decision-making is biased, irrational, pragmatic, and driven by convenience, trade-offs, and cultural knowledge (Cottle 1998; Bava et al. 2008). These specific critiques are relevant for the scope of this dissertation because of the importance of the media for the consumers in Islamabad (see Papers I and III), and the major role of negotiation of knowledges (see Paper II and the section on geographical knowledges below). Finally, this dissertation engages primarily with the 'risk society' hypothesis in the consideration of individualised strategies in times of risk.

Klein (2013) has used the risk society hypothesis to discuss the everyday approaches to managing food safety in Kunming, China, showing how the problems associated with food consumption have changed over time. In this analysis, Klein (2013) attributes the food safety issues not only to the fragmentation of authority across the different provinces in China, but also to the increasingly lengthened production chains and intensified and industrialised production methods. In line with Beck's (1992) argument that these hazards cross boundaries like state and country borders, the precise source of these hazards is difficult to identify and contain. The results from this paper are useful in exemplifying Beck's concept of individualisation shown by how the consumers must accept the burden of responsibility for consuming safe food. However, although consumers are relying on their own knowledge about food safety and have little trust in state institutions, they do not conform completely to Beck's (1992) idea of individualisation because their knowledge about food is influenced by the cultural context and by their social networks. These findings are also reflected by authors like Wang (2008) and Yan (2012) who have analysed the responses of Chinese consumers to food safety issues. The findings of these papers on individualisation and food risk in China not only demonstrate the problems associated with transformations of food networks, but they are also relevant for this dissertation in foregrounding the various methods used to avoid and adapt to environmental food risks, as discussed in Papers II and IV.

For the purposes of this dissertation, the example of Kneafsey and colleagues (2004) and Jackson and colleagues (2015) is followed in using the concept of 'anxiety' that is related to, but not similar to risk. This focus is associated with the terms and frameworks used by consumers to describe their feelings associated with food (see Paper III). It is also more useful for studying specific fears such as food scares, along with more systemic feelings of uncertainty that is more relevant for the scope of this dissertation (Kneafsey et al. 2004). The anxiety framing also provides a useful framework for understanding the influence of external influences on food environments (see Research Question 1 in Introduction), and the general perceptions associated with risky foods in the context of Islamabad. For this purpose, Bauman's (2006) research on the pervasiveness of fear and anxiety in modern society shows how uncertainties stemming from terrorism and economic shocks such as unemployment cause the modern individual to live in a state of near-persistent anxiety. This factor is explored specifically in Paper 1 and ties in with the upcoming discussion of vulnerability of the middle classes. Additionally, Coveney (2006) and Levenstein (2013) discuss how anxiety is caused because of conflicting information on nutrition and healthy eating. This source of anxiety is discussed further in combination with geographical knowledges and supported by empirical evidence in Paper II.

Jackson and colleagues' (2013) work on anxieties have evaluated how food anxieties are connected to institutions, framed by different actors, and how they vary geographically and historically. They specifically address the differences between individual and collective anxieties, and they also suggest that anxiety also functions on the level of society, aided through routinisation and institutionalisation. This dissertation builds on these studies of anxiety in food consumption by emphasising that food-related anxieties operate at the level of urban interactions, where events like terrorist attacks cause anxiety, and at the level of understanding food consumption, where the information available also creates anxiety. However, this dissertation departs from

studies by Jackson and colleagues (2013) and limits the scope of analysis to individual and household level anxieties for food, but indicates implications about endemic food anxiety and collective anxiety in the Islamabad environment. It also extends the debate on food anxieties by illustrating critical differences between the Pakistani contexts and those of developed countries, associated with differing place-specific contexts and demonstrating the value of having more globally-useful theorisations of food consumption.

Therefore, while Beck's (1992) risk society hypothesis has contributed to the analysis of environmental risks, (particularly food hazards) aspects of it have been criticised for their shallow treatment, such as the individualisation of risk and the role of society in lay knowledge. Jackson's (2015) use of the social anxiety paradigm for food risk offers an interesting opportunity to analyse contemporary food concerns. This dissertation uses elements from the risk society hypothesis and theory of anxiety to study the food issues faced by middle class consumers in Islamabad, Pakistan, particularly in the context of trust in everyday food consumption.

Trust in Food

The notion of trust has had a rich tradition in the fields of philosophy, anthropology, geography, and politics, and it has recently ignited an interest in academics studying food (Kjaernes 2013). This increased interest has been attributed to the complexity of contemporary life, where significant aspects of life have become separated from the average consumer. Therefore, things like communication and information systems, the workings of institutional and bureaucratic systems, and global food systems have achieved the level of complexity, combined with disconnection, to make them incomprehensible for the lay person. Anthony Giddens (1990: 131) considers such complex, impersonal arrangements as 'abstract systems', where trust provides the individual with security and comfort. Therefore, trust in the contemporary world lies in

the conventions, principles and unknown actors that are part of these abstract systems. As noted by Niklas Luhmann (2000), individuals can then reduce some of the uncertainty and unfamiliarity in everyday life by using symbols and short-cuts to re-establish familiarity and to account for the complexity. Therefore, despite the unfamiliarity of the systems present in the modern world, routines and abstract systems created by individuals facilitate acceptance.

Trust therefore orders the world for individuals so they can reduce the complexity in everyday life and continuously and seamlessly interact with the systems that exist around them (Barber 1983). This reduction in complexity is especially useful in relation to the global food systems, as food issues like the BSE crisis, avian flu, and consumer contention against genetically modified (GM) food have emerged in recent years. In response to such scandals, public authorities respond with regulations, which are based on assessments by experts. Meyer and colleagues' (2012) research on evaluating the characteristics and dimensions of trust in the Australian food system discovers that changes in how food is produced impacts consumer trust, and consequently, the health and well-being of consumers. The respondents in the study discussed how regulations and expert knowledge had started to supersede how particular activities in food retailing were done, a factor which they attributed to a further reduction of trust for consumers. The excerpts presented in the paper reveal how trust was implicit in many ways in earlier food provisioning systems, and because of the dis-embeddedness of consumers and the food system in current times, trust and reciprocity were noticeably reduced. However, other respondents revealed that the presence of more regulations also instilled a feeling of trust in a food system where regulations were followed.

Meyer and colleagues' (2012) study stands out from other trust and food consumption studies because of the consideration of households across the socio-economic scale. This allowed the opportunity to analyse differences in trust across a range of incomes, and revealed that overall, consumers prefer face-to-face interactions and have a

generally high trust in the Australian food supply. These authors agree with Peter Jackson (2015) by challenging the knowledge deficit approach to consumption and trust showing that increased knowledge does not reduce uncertainty where food consumption is concerned. Jackson supports his argument on social anxiety using an 'assets-based' approach where consumers use their existing wealth of knowledge to interpret the world, instead of having insufficient knowledge or lacking the ability to process the information they are provided with (2015). This dissertation engages with these studies on trust and food consumption in the following way: firstly, Papers II and III show how consumers use different knowledge sets to negotiate trust relationships given the disconnection and dis-embeddedness with food systems they experience. Secondly, it shows how trust is often connected to specific aspects of food systems, such as the places and processes of production and specific products (see Papers III and IV).

The association with specific places, processes, and food products is observed in Gong and Jackson's (2012) analysis of the effect of the infant milk formula scandal in China. This paper explores the social context and the changes in parenting practices as a result of the scandal. This paper is also using the anxiety paradigm of food consumption and demonstrates that strategies used in combatting anxiety are depending on the different food-related rationalities and knowledge sets that consumers develop. Therefore, instead of choosing alternatives like breastfeeding, they are turning towards formula produced in foreign countries and acquiring food from trusted friends and family in the rural areas. Feeding strategies employed by the interviewed Chinese respondents are also strongly influenced by opinions and advice from older family members and contested by advice received in medical centres. Therefore, this paper highlights how trust is linked to specific places (infant formula imported from Western countries), particular technological processes (milk treatment and fortifying processes), and specific food items (infant formula).

Although the research on trust is vast, the papers discussed here represent important examples that discuss the three main factors that this dissertation engages with: (1) the relationship of trust and information with the changes in the food systems and regulations; (2) the dependence on social networks and personal knowledge and skills over input in regulatory systems, and (3) the association of trust with specific places and points of origin, and processes within the food system.

Reducing Anxiety through Food Knowledges

In connection with the idea of transforming food systems, Enticott (2003a, 2003b) discusses the ideas of 'natural' and 'local' foods in the context of risky food consumption in rural England. Enticott's (2003a, 2003b) work is relevant for this dissertation because it identifies gradations and nuances in ideas associated with food quality, and it suggests that these ideas are not only negotiable, but that consumers also draw upon multiple frameworks of food knowledge when making choices about food. Importantly, he contests the idea that consumers readily accept the safety of organic and local foods and turn towards them in times of food crises like the BSE scare. Instead, Enticott's (2003a, 2003b) studies reveal that consumers manage multiple bodies of knowledge, and that social relationships and trust are important in maintaining assurances about food system safety. Earlier studies by Cook and Crang (1996) and Morris and Kirwan (2010) use the idea of 'geographical knowledge' and festhisation to explore similar ideas on knowledges associated with foods. However, these studies differ mainly in focusing on spatial aspects of food knowledges. Morris and Kirwan (2010), building on Cook and Crang's (1996) and explore how producers and consumers create and mobilise geographical knowledges to reconnect and embed food commodities within alternative food networks. Using a commodity network approach, they highlight the geographic component of commodities to illustrate how global and local commodities circulate through their networks and have new fetishes (see: Castree 2001, Cook et al. 2007) created around them. Morris and Kirwan's study reveals that producers set up particular

geographical, historical and naturalistic knowledge sets to locate their products, and that consumers create “cognitive thresholds” (p. 142) of food information in order to have autonomy over their decision making, but not be alienated from information overload. Therefore, this study suggests that efforts of reconnection by some alternative food networks are only partially effective.

Paper II further explores how food knowledges¹³ are created with ideas associated with alternatively produced food. Paper III furthers this exploration and considers the role of trust relationships for the respondents in Islamabad, Pakistan, in the context of risky food systems. This dissertation builds on studies by Enticott’s (2003a, 2003b) and Morris and Kirwan’s (2010) by providing a Pakistani context and through showing that although information about alternative food networks emerging from western countries is a major source of knowledge, it is still implicated in creating anxiety for the consumers. This dissertation also connects the wider literature on food anxieties and alternative food networks to demonstrate how food knowledges function in environments of risky food where alternatives are not readily available. It also crucially shows the impact of certain bodies of knowledge on feelings of anxiety and how consumers negotiate tensions between sets of potentially conflicting information.

‘Reconnection’ in Alternative Food Networks

The above analysis of research has revealed that ideas of reconnection are critical to creating and maintaining consumer trust in an uncertain and risky food consumption context. The section started with the idea that much of consumer anxiety is associated with the increased distance and separation between consumers and different aspects of food systems. Food scares discussed above in this section highlight this separation and the degree of uncertainty and complexity that consumers have about certain food practices. In discussing the lengthening and complexity of food systems, Feagan (2007)

¹³ See Freidberg (2003a) and Hollander (2003) for further examples on the use of food stories and narratives in commodity network and alternative food network analyses.

argues that consumers “experience both the physical and psychological displacement of production from consumption, and all of the other disconnections and dis-embedding which follow in that stead” (p. 38). Here, dis-embeddedness can be described as how the relationship between objects like food and the places and social systems they emerge from is disassociated (Allen 1999; Dixon and Banwell 2004). Academics who endorse the re-connection and re-embedding of consumers with the food systems argue that the process is necessary not only to increase the level of awareness and trust in the production processes and regulatory institutions involved, but also to stimulate activism in order to change detrimental components of the food system (Levenstein 1993; Meyer et al. 2012).

This necessity for reconnection is observed in Kneafsey and colleagues’ (2008) argument that reconnection can not only help consumers recognise ‘good food’ in broader terms that include human and animal health and welfare, but also for justice and sustainability. Kneafsey and colleagues’ (2008) book stands out from the existing literature on reconnection and alternative systems because it draws on extensive qualitative data gathered across a period of three years. In addition, the book also shows how material properties of food, besides the collaborative relationships between producers and consumers, are important in food purchases. Pottinger (2013) adds to this body of work through a theorisation of spaces of ethical consumption of food. Pottinger’s (2013) article specifically explores the relationship between urban spaces and ethical consumption in relation to urban food initiatives. Within this context, she explores reconnection as one of the central themes of the alternative food system debate and demonstrates that through participation in food production practices and engaging with the re-spatialised foods in sites like farmers’ markets with tools like food labels, consumers are reintegrated with food systems.¹⁴

¹⁴ See Winter’s (2003b) publication reviewing geographical literature on reconnections in agri-food geographies. This paper is useful in identifying the move in food geography literature

Reconnection can be accomplished through effective labelling, advertising, providing food with a story (Freidberg 2003b), and participating in self-monitoring, participative programs and lifestyles (Carolan 2004; Evans and Abrahams 2009). Labelling techniques in particular have increased in prominence in recent years with the addition of nutritional information, branding, and the use of symbols that indicate environmental and social sustainability. They are important because, after packaging, they play a significant role in communicating information to the consumer. According to economists, labelling techniques allow consumers to make decisions that align with their own preferences and improve consumer sovereignty. In contemporary times, discrimination based on labelling information becomes crucial as consumers are increasingly favouring the purchase of sustainable and ethical products (Annunziata et al. 2011). Ecolabelling therefore has been the subject of much research, not only from food marketing, but also from the perspective of consumer motivation in order to analyse purchasing behaviour.

Several studies have suggested that education and socio-economic characteristics, ethical values, altruism, and concern for environmental issues contribute to the purchase of eco-products based on labelling information (Peattie 2001; 2010). Importantly, studies exemplified by Grankvist and Biel (2001) indicate that consumers associate eco-labelled food products as having other positive characteristics such as better taste and nutritional value in comparison to non-labelled products (Hughner et al. 2007). However, this has not been explored in the literature beyond how companies can help developing countries develop labelling systems and the impact of such systems on market competitiveness (Zarrilli et al. 1997; Gruère and Rao 2007). In addressing this gap in the literature, this dissertation illustrates how consumers handle food purchases in the absence of the packaging and labelling techniques discussed above, as well as how reconnection functions in combination with geographical food knowledges in the

towards analyses of food networks and consumption reviewing how agri-food literature can be categorised into themes of reconnecting farming and food, food and politics, food and nature, and farmers and agency.

context of countries where alternatively produced foods remain niche commodities (see Paper II).

However, labelling schemes and marketing techniques have two main faults: first, their effectiveness depends on how much the consumer reads, understands and trusts the institution and information behind the labelling, and whether or not the benefits proclaimed on them can be validated (Thøgersen 2000). Vague and misleading information used on eco-labels a few decades ago has negatively influenced the reliability of labels in current times. This is supported by studies that have shown high levels of consumer scepticism in labels by consumers who consider eco-labelling as a marketing tactic and an excuse to mark up costs (Eden 1994; Wong et al. 1996; Daugbjerg et al. 2014). This dissertation departs from this literature in that 'reconnection' is evaluated in terms of geographical knowledges (discussed in the section above) and how consumers relate to ideas of alternative and conventional food networks. Importantly, the dissertation demonstrates that ideas of 'reconnection' are used by consumers to locate themselves within their food environments instead of new alternative food networks.

Kneafsey and colleagues' (2004) paper on how consumer anxiety might be used to reduce anxiety presents a vital example in the anxiety and food system research in a number of ways: firstly, they examine the relationships between consumers and producers in conventional and AFNs, and secondly, they explore the role of anxiety in perceptions and behaviours associated with these networks. Crucially, for the purposes of this dissertation, they find that anxieties were an important response to conventional food systems and that they were the main drivers for the participants to become involved in AFNs. Therefore, Kneafsey and colleagues' (2004) work can be placed in the same category of scholarly studies as Jackson (2015) and Jackson and Evert's (2010) on anxiety and food consumption. However, Kneafsey and colleagues' (2010) work represents a critical exception and extension of the food anxiety debate in that

they illustrate the value of exploring the effects of anxiety on consumption, and show how framing concepts like 'reconnection' are used by consumers as well. This dissertation builds on these factors to show the manifestations and effects of anxiety connected to food consumption in each of the constituent papers, and it reveals how framing concepts like 'reconnection' (see Paper II) and 'distancing' (see Paper IV) are used to come to terms with changes in food systems. It also shows how these concepts function differently in a global South concept where consumers are exposed to the idea of alternative food networks, but do not have easy access to.

Middle Classes and Vulnerability

Scholarly interest in the middle classes spans the disciplines of economics (Banerjee and Duflo 2008), anthropology (Nisbett 2007), geography (Rowe 2015), and medicine (Backett-Milburn et al. 2010). With this widespread interest and a rich multidisciplinary literature, definitions and descriptions of the middle class have been contested. Economists in particular differ on how the middle class should be defined (Eisenhauer 2008). For example, Birdsall (2000) situates the middle class between the 75% and 125% of median per capita income, Easterly (2001) considers them based on consumption distribution to be between the 20th and 80th percentile, Banerjee and Duflo (2008) on daily per capita expenditure at purchasing power parity (PPP) between 2 and 10 USD, and Kharas (2010) defines them based on daily per capita income between 10 and 100 USD. However, despite the differences in opinion, there is an agreement among scholars that developing countries in particular are experiencing a population shift in which there are a growing number of individuals who have increased income and increased purchasing power. With the recognition that each country is unique in terms of factors like ease of business, corruption, openness to investment and property rights (Desta 1985), a number of authors have researched the potential drivers associated with the increase in the middle class in developing countries. Kandogan and Johnson (2015), considers that the economic and legal systems in place in such countries can be

attractive for multinational projects and corporations when they are linked with the global market.

The association with global markets and multinational investment is important because Harvey (2007) defines the middle class as the professional segment of the population that is created because of market liberalisation policies. While part of the ambiguity of defining the middle class can be associated with the concept of class itself, the middle class exists between the lower and upper socio-economic classes. This literature is also strongly influenced by the Marxian and Weberian schools of thought which base class structure primarily on economic factors and competition and the exploitation between classes. However, Marxian approaches fail to account for the social change in western societies in the latter half of the 20th century and the utilisation of education in the growth of the middle class. Other sociological approaches also consider the role of occupations, technological skills, and the level of agency possessed by classes (Tilkidjiev 1998; Fernandes 2000).

Early interest in the so-called 'global middle class' was concentrated on the new consumer classes in the BRIC countries (Brazil, Russia, India, China)¹⁵ and their potential for contributing towards economic development, particularly through their consumption practices (Kharas and Gertz 2010). For the purposes of this dissertation however, this section will focus primarily on studies connecting the middle classes with food consumption practices. This focus will contribute to the wider literature on food consumption and class, which has historically tended to focus on the relationship between social classes and barriers to healthy food consumption. According to Bourdieu (1984), not only is there a relationship between health-related behaviour, but members

¹⁵ There is a rich body of literature exploring the middle classes in BRIC (Brazil, Russia, India, and China) countries. For example, O'dougherty's (2002) examination of the politics of middle class life influenced by the economic crisis of 1981-1994 in Sao Paulo, Brazil; Dickey's (2012) study in Madurai, India on the meanings associated with middle classes; Barkhatova and colleagues' (2001) work on the emergence of a business oriented, entrepreneurial middle class in Russia; and Zhang's (2012) illustration of the Chinese middle class' search for social distinction in the context of privatisation of property and an increase of urban living.

of the same social class have similar practices. Bourdieu (1984) attributes this to variability in resource access across social classes. Building on Bourdieu's distinction between social capital (resources available as a result of association with particular social groups), cultural capital (knowledge and certifications that confirm data), and economic capital (monetary resources and assets), Abel and Frohlich (2012) argue that each type of capital interacts in various ways that creates and impacts different health-related practices (Bojorquez et al. 2015). Bojorquez and colleagues' (2015) research on the nutritional transition among women of different socio-economic classes in Tijuana, Mexico demonstrates that although economic capital is necessary for purchasing healthful foods that are expensive, cultural capital is needed to ensure that the nutritional shift favours a healthy turn. This finding is further backed up by Valero-Gil and Valero (2008), Rubin and colleagues (2010), and Ponce and colleagues (2014) which demonstrate in various contexts that while economic capital enables consumers to purchase expensive healthy foods, cultural capital enables them to make choices that "reinforce taste" (Bojorquez et al. 2015) in these new foods. Hawkes (2006) furthers this body of research by showing how convergence and divergence of dietary patterns as a result of globalisation of food systems has a differential impact on social classes. Broadly speaking, convergence results in diet homogenisation, in favour of modern and convenience-based consumption practices, while adaptation results in the emergence of niche practices. Both processes in tandem result in people in lower socio-economic classes consuming foods resulting from convergence, because they are cheaper and made for convenience (Warde 1999; Drewnowski and Specter 2004; Inglis et al. 2005). People in higher socio-economic classes however, benefit from divergence, and can afford a wider variety of foods, such as expensive health foods, or alternatively produced foods.¹⁶ Kaplan (2013) stands out from the myriad studies on class and

¹⁶ While a detailed analysis of the extensive food consumption and social class relationships is beyond the scope of this dissertation, see Warde (1997) and Bennett et al. (2009) on social and cultural changes in British food habits, Wills et al. (2011) for the influence of temporal frameworks on the relationship on everyday eating practices and social position for families with teenagers,

consumption and demonstrates culinary choices of middle class families, as performed in the context of weddings. This study reveals that events like weddings are crucial spaces where “class tastes are formed, manifested and reproduced” (Kaplan 2013: 258). Kaplan’s (2013) study is particularly important for the purposes of this dissertation, because it reveals the importance of sites of food purchase and consumption in signalling class difference. This is explored in Paper II, in the context of farmers markets in Islamabad.

Emerging literature from South Africa in particular is revealing an increasing interest in ethical consumption practices and the middle class, as represented by a study by McEwan and colleagues’ (2015), which explores the role of everyday ethics in shaping consumption practices in the Western Cape. This paper acknowledges firstly that negotiating everyday ethical consumption is affected by the diversity in the middle class and secondly, this paper adds to the body of work exploring and contesting the idea of ‘traditional’ (professional or petit-bourgeoisie) versus ‘new’ (recently increased income) middle classes and the assumptions made about them in the scholarly literature (Lange and Meier 2009; Kharas and Gertz 2010).

Vulnerability and Food Security

Food security can be defined using the Food and Agriculture Organisation’s (FAO) 2003 definition: “a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO 2003: 28). Following this definition, this section presents a critical review of some relevant studies investigating food insecurity and vulnerability in the context of middle classes in Asia. The link between the middle class and vulnerability follows the example of Lopez-Calva and

Aruda et al. (2014) for an exploration of social and demographic factors linked with food consumption habits in Brazil, and Plessz and Gojard (2015) for the interactions between social position, cooking, and vegetable consumption in lower and middle class households in France.

Ortiz-Juarez's (2014) study where they use household vulnerability to poverty in their definitions of middle class in Latin America. They argue that households' ability to cope with shocks (e.g., shocks to health and economic state) is associated with their education, income, wealth, and crucially for the purposes of this dissertation, and their ability to cope with risks. Although Lopez-Calva and Ortiz-Juarez (2014) limit their analysis to health and economic shocks, this dissertation extends the argument of risks and vulnerability to the idea of food anxieties and considers that within an environment of endemic food risk, vulnerability to risks in the physical environment (see Paper I) is just as important as vulnerability to environmental food safety issues (see Papers II and III).

This combination of concepts of vulnerability is also more relevant in current times as discussed by Cuesta (2014) in a study questioning the status of food insecurity in Asia and the contribution of the middle class in changing Asia's food demand. Through a review of nutrition trends, reduction in poverty, and contribution to global food price increases, Cuesta (2014) illustrates that not only is Asia a diverse area when considering nutrition and poverty, but it is also helping improve global agricultural productivity in a variety of ways. While Cuesta (2014) includes Pakistan in the list of Asian countries in which efforts for poverty and hunger reduction have failed, he acknowledges that a number of factors, such as the preferences of middle classes and the use of innovative agricultural technologies have contributed to improving long-term food security of a region. In this regard, this paper represents two major points of interest for the scope of this dissertation. Firstly, that middle class consumption preference has significant consequences in the context of food security, and secondly, that innovative agricultural techniques have great potential for food security of the Asian region. In the case of innovative food technologies, this dissertation has significant contributions; specifically about how middle class consumers in Islamabad perceive existing technologies (see Papers II and III).

These articles by Cuesta (2014) and Lopez-Calva and Ortiz-Juarez (2014) contribute two critical factors for the purposes of this dissertation. Firstly, they agree with Ravallion's (2010) claim that the middle classes are vulnerable to shocks affecting food security (Cuesta 2014: 611). Secondly, this dissertation illustrates the value of considering 'shocks' and disruptions in considering vulnerability for middle class analyses. These two factors are particularly considered in Paper I in the context of disruptions in Islamabad's urban environment. In comparison, Papers II and III consider these factors in the context of shocks from the perspective of food anxieties. Both papers also illustrate adaptation strategies adopted by middle class consumers.

This chapter has presented an expanded, overarching view of the literature that will be discussed in the constituent papers. It has presented an overview of the food geography literature, justified a focus on food anxieties and food environments, and closed with a discussion of the middle class in the context of vulnerability. Specific aspects of these themes will be explored in the upcoming papers, and the concluding chapter will relate the empirical and theoretical findings back to the literature presented here. The next section discusses literature relevant to the Pakistani context of food consumption and the middle class.

Chapter 3: The Pakistani Context

Pakistan is a country located in South Asia, bounded by Iran and Afghanistan to the west, China to the north, India to the east, and the Arabian Sea to the south and has a total area of 796,095 sq. km, with a population of about 200 million individuals.¹⁷ It came into existence on the 14th of August, 1947, following the Partition of India. Although a young country, Pakistan has a rich socio-cultural make-up, with at least five major ethnic and linguistic groups, divided roughly into Sindh, Balochistan, Punjab and Khyber Pakhtunkhwa, Gilgit-Baltistan and Kashmir. The diversity of Pakistan is reflected in its language, culture, and cuisine. The choice of Pakistan for research in food geography is justified by its role in the global food systems as an importer and exporter of foods (Akmal et al. 2014), national efforts towards developing organic production methods (Hammad et al. 2011), and a burgeoning urban middle class population that is aware of global consumption trends and shaping markets to suit their needs (Nayab 2011; Maqsood 2014). Considering the fact that food safety issues are increasing in a rapidly urbanising country where food insecurity is still a major problem, an examination of food anxieties and consumption strategies by urban consumers is necessary. This section presents an overview of the food-related and middle class research on Pakistan as a context for the papers presented in this dissertation.

¹⁷ The population estimate is taken from the CIA World Factbook 2016, <https://www.cia.gov/library/publications/the-world-factbook/geos/pk.html> as the most recent population data from the Pakistan census is from 1998, although efforts are underway to have a census carried out in 2017.

Food-related research in Pakistan

Food safety issues in Pakistan have received much media attention through newspaper articles and documentaries commenting on the presence of chemical contaminants in fresh produce, issues connected to lengthened and intensified food networks, and the popularity of alternate food networks like organic and local food in western countries (Khan 2013a; Ilyas 2012). However, food safety has not been addressed in scholarly research beyond quantitative analyses of contaminant content emerging from chemistry, exemplified by Viqar-un-Nisa and colleagues' (2005) work on toxic compounds in foodstuffs in Islamabad, Arora and colleagues' (2008) examination of heavy metals in vegetables irrigated with wastewater, and Anwar and colleagues' (2011) work on pesticide residues in fruits from Nawabshah.¹⁸ Saeed Akhtar's (2013) evaluation of Pakistan's food safety challenges stands out from these studies because of its detailed review of the food safety situation in relation to health and its exploration of microbial, pesticide, aflatoxins, adulterants, and heavy metal presence in commonly consumed foods. Importantly, Akhtar also discusses which places within the country are more likely to have particular contamination, possible sources, and how these challenges might be handled.

Other food-related studies in Pakistan have primarily focused on food security, agricultural and livestock issues, and the problems associated with imbalanced nutrition (Janjua et al. 2011; Balagamwala 2013). For example, from the perspective of development economics, Ahmad and Farooq (2010) present a discussion of the state of food security in Pakistan, the challenges that lie ahead, and an exploration of potential coping strategies that may be used in times of food insecurity. To accomplish this goal, they analyse agricultural production, availability and access, the role of historical food

¹⁸ These studies tend to have highly specific foci, such as Ahmad and colleagues' (1989) on aflatoxin B1 in shelled peanuts in Karachi, Ahsan and colleagues' (2010) on aflatoxins in maize in Punjab, Akhtar and colleagues' (2010) on heavy metals in mangoes, and Kazi and colleagues' (2010) on toxic compounds present in baby food.

deficits, the green revolution, and food security policies. They note that Pakistan's imports of staples like wheat and lentils have increased in recent years, and that the withdrawal of state involvement from the agricultural sector has resulted in reduced national and international investment in research programs. Ahmad and Farooq (2010) further maintain that this change can be linked with decrease in agricultural productivity overall, an increase in rural poverty followed by reduction in access to food. Although providing a comprehensive quantitative analysis on the different aspects of food security in Pakistan, the article does not account for the problems created because of fuel price inflations, contaminated and poor quality food, and the potential of urban areas in influencing food security. The approach of the authors is similar to Hussain and Akram's (2008) analysis of persistent food insecurity in Pakistan created and exacerbated through policy failures. Also writing from an economics perspective, these authors examine how policy attention directed at wheat, rice, and maize was intended to address food insecurity, how economic inequality and nutritional imbalances impact the population, and how environmental issues influence food security. They discuss the impact of increases in energy and input prices on economic access and how landless consumers are often the most affected because of sudden changes in food prices.

These two papers exemplify three important things about the state of food security research in Pakistan: firstly, that much of the food-related research is coming from fields like economics and development, conducted through quantitative analyses; secondly, urban areas are often neglected in discussions of food security in comparison to rural areas; and finally, the majority of urban consumers are vulnerable to food price changes and cannot cope well in food crises because of their distance from agricultural production. The dissertation engages with this literature to reveal how the case of the self-identifying middle class population from Islamabad might challenge current theoretical debates on food security and the influence of external triggers on food consumption habits. In particular, Paper I explores the seasonal disruptions and shocks

that affect middle class urban residents in Islamabad. The following sections in this chapter present an overview of the production, trade, and consumption statistics of select food commodities for the country. The statistics indicate the changes that have taken place in the national food situation of Pakistan and provide a context of the wider food geography for the respondents in this dissertation.

Pakistan's Food Statistics

The food production and consumption environment in Pakistan has changed significantly in the past few decades to reflect the increase in population, urbanisation, mechanisation, and the diversification of diets. This section presents an overview of how production, trade, expenditure, and consumption of food have changed in Pakistan in the past few decades. The data for this section has been obtained from publications produced by the Pakistan Bureau of Statistics (PBS). The statistics themselves are classified into two major categories: the first, provincial and national level data that includes production and trade statistics, and the second, household level data that includes consumption and expenditure statistics. Although the variables and time periods covered by PBS have improved since Pakistan's creation, gaps still remain. These gaps are acknowledged within the following discussion where necessary.

Food Production

Agriculture accounted for over 20.9% of the gross domestic product (GDP) and provided livelihood for 43.5% of the rural population in the year 2014-15. Although the agricultural sector is developing every year, its performance has not matched the government's expectations due to low uptake of technological innovations, limited investments in associated infrastructure, pest and disease problems, and problems with the quality and timeliness of agricultural inputs like water, fertilizer, and pesticides. During 2014-15, the agricultural sector experienced growth of 2.9%, the livestock sector by 4.1% and fisheries by 5.8%, in comparison with 2013-14 (Pakistan Economic Survey 2014-15).

Variability in production of different crops is caused by severity of seasons, events such as flooding, changes in areas brought under cultivation, availability and amount of irrigation water, and the use and success of hybrid varieties. For example, production of wheat decreased from 25,979,000 tonnes in 2013-14 to 25,478,000 tonnes in 2014-15 because of a prolonged winter and excessive rains during harvesting time (Pakistan Economic Survey 2014-15). Finally, the livestock sector is one of the fastest growing sectors in the country, superseded only by the textile industries. Tables 3.1 and 3.2 compile statistics obtained from the Ministry of National Food Security and Research (MNFSR) and the Marine Fisheries Department (MFD) in Karachi to show estimated production from livestock, fish, and products like milk and meat between the years 2003-04 and 2010-11.¹⁹

Table 3.1 Estimated livestock and fish production (in '000' Heads unless stated otherwise) (Source: Ministry of National Food Security and Research, and Marine Fisheries Department, Karachi)

Species ²⁰	2003-04	2010-11
Cattle (breeding, for work and dairy)	23757	35568
Buffaloes (breeding, for work and dairy)	25513	31726
Sheep	24744	28086
Goats	54679	61480
Camels	743	983
Poultry (million units)	353	663
Fish ('000' tonnes)	573.5	712.4

¹⁹ Statistics from 2013-14 were not available at the time of writing this dissertation for these commodity groups

²⁰ Table does not include estimated numbers of horses, asses, and mules

Table 3.2 Estimated production of selected food commodities (in '000' tonnes unless stated otherwise) -

Source: Ministry of National Food Security and Research

Source²¹	2004-05	2010-11
Wheat	21612.3	24032.9 ²²
Pulses	225.9	181.4
Beef (Cattle, buffaloes and camels)	1259	1882
Mutton (sheep and goat)	946	789
Poultry	384	767
Eggs (million units)	8529	12857
Milk (cattle, buffalo, sheep, goats and she camel) ²³	39,597	46,440

Table 3.1 reveals that each major species of livestock and fish have experienced growth in the seven year period, with poultry displaying the most radical increase. The growth and popularity of poultry is discussed further in Paper IV of this dissertation. Table 3.2 shows displays that while the production of expensive meats like beef and mutton has decreased; there is a comparative increase in poultry, milk, and eggs (which are cheaper and more accessible sources of protein). Furthermore, the national production of pulses has also decreased, which has partly been attributed to the preferential cropping of higher value cash crops such as cotton, tobacco, and sugarcane (Pakistan Economic Survey 2014-15). This decrease can also be associated with the changing dietary patterns in developing countries, as discussed in Paper 2, where consumption of staples like wheat and pulses decreases in favour of food items with higher protein, sugar, and oil content. This finding is further bolstered by the statistics for food imports for Pakistan, as shown in Table 3.3.

²¹ Amounts include edible offals

²² Numbers are for 2008-09 – amount not available for 2010-11

²³ Amount shown is estimated gross production, and excludes 5% milk suckled by young animals, 15% lost in transportation waste. Further, only 5% of female sheep, 15% female goats, and 50% of female camels are milked for human consumption

Table 3.3 Imports by Food Commodity Groups (Source: Pakistan Statistical Year Book 2014)

Food Commodity Group	2003-04		2012-13	
	Value (000 Rs.)	Quantity	Value (000 Rs.)	Quantity
Live animals ²⁴	99,005	32 units	3,029,279	7995 units
Live poultry ²⁵	161,660	1,073,534 units	not available	2,418,668 units
Meat (fresh, chilled, frozen, dried, smoked, offal, and preparations)	102,616	934,484 kg	714,909	1,815,264 kg
Fish (live, fresh, chilled, frozen, dried, smoked, and preparations) ²⁶	40,265	1,322,474 kg	907,854	2,551,289 kg
Milk and cream ²⁷	578,947	9,363,496 kg	8,511,004	26,921,096
Butter, cheese, and curd	111,782	1,714,654 kg	540,516	1,691,481 kg
Edible animal and vegetable oils and fats	45,518,506	not available	205,311,017	2,262,264,580 kg
Eggs (hatching and consumption)	47,837	245,618 kg	393,973	732,619 kg
Wheat flour	1,355,074	Not available	672,489	260, 671 kg
Rice	1,755	Not available	6,404,684	85,705 kg
Maize	644,883	40,105 kg	4,319,927	18,807 kg
Fruits (fresh, dried, preserved, and preparations)	3,063,048	179,793,567 kg	12,561,774	154,944,91 kg
Vegetables (fresh, frozen, preserved, and other products)	5,110,315	93,685,956 kg	50,850,662	651,248,721 kg
Sugar, honey, and preparations ²⁸	605,612	8,789,350 kg	2,829,700	13,342,838 kg
Chocolate, cocoa, and preparations	341,726	1,741,877 kg	2,169,809	6,937,474 kg
Tea	1,1079,756	115,966,965 kg	35,640,008	123,440,986 kg
Coffee	34,158	21,096 kg	119,676	184,556 kg

Table 3.3 reveals that there is a significant increase in the imports each major food commodity group, with the greatest increases being in animal proteins, milk, and oils. The results of this table when viewed with the household expenditure and consumption statistics below further indicate that the Pakistani population on the whole is undergoing a dietary transformation.

²⁴ Not including horses, marine mammals, primates, reptiles, and pets, but including breeding livestock animals

²⁵ Including chicken, ducks, geese, and others (classified by weight), excluding parrots, birds of prey, and pets.

²⁶ Not including crustaceans

²⁷ Not including yogurt, buttermilk, whey, and spreads,

²⁸ Not including sweets and confectionary

Household Level Food Expenditure and Consumption

The data for household level expenditure and consumption is collected through the Household Integrated Economic Survey (HIES), which has been in operation since 1963. The survey evaluates the amount spent by each household on food per year (for urban and rural areas) and the percentage of expenditure by each major food group. The following table compares the differences in consumption between 2013-14 (with data from 17,989 households with samples weighted by population across the provinces) and 2004-05 (with data from 14,776 households, and has improved data sensitivity because of the HIES' second and most recent major revision).²⁹ However, it is important to note that the results collected by the HIES do not include households in the Federally Administered Tribal Areas (FATA) and military restricted zones. Out of the total food expenditure, 17 food items contributed 82.32% in 2004-05. These items account for 84.41% in rural areas and 78.27% in urban areas. A comparison of the same 17 food items with the year 2013-14 reveals that the expenditure has decreased with time, for both rural (decreasing to 83.71%) and urban areas (decreasing to 64.36%). The major share of consumption expenditure on food is incurred on wheat, milk, vegetable ghee, vegetables, and sugar. Among the food items, the lower income class spent more on wheat, milk, ghee, vegetables, and sugar; whereas upper classes spent more on milk, wheat, vegetables, fruits, mutton, beef, sugar, and chicken.

²⁹ The HIES' most recent revision involved its integration with the Pakistan Integrated Household Survey (PIHS), and was then renamed as the Pakistan Social and Living Standards Measurement (PSLM) Survey. However, the HIES is still a prominent component under PSLM, and collects data for household and national levels. The questionnaires used have largely remained unchanged since 2000-01, but minor adjustments are made to reflect the wider changes for the years they are administered.

Table 3.4 Percentage of Monthly Consumption Expenditure by Food Commodities (in kilogram, gram, and litre) (Results collected from HIES 2004-05 and HIES 2013-14)

Commodity Group	2004-05			2013-14		
	Urban	Rural	Total	Urban	Rural	Total
Food, drinks and tobacco	40.01	54.53	48.33	37.76	48.30	43.63
Wheat and wheat flour	12.47	17.79	15.91	12.31	16.26	14.75
Rice and rice flour	3.05	3.43	3.29	4.16	4.45	4.33
Pulses, split and whole	2.19	2.45	2.36	1.92	1.95	1.94
Vegetable ghee (clarified oil)	5.05	7.14	6.40	4.48	7.17	6.13
Tea (black and green)	2.35	2.60	2.51	2.16	2.36	2.28
Milk, fresh and boiled	16.91	17.63	17.38	19.90	21.82	21.08
Butter	0.31	1.55	1.12	0.31	0.85	0.64
Mutton	3.40	1.38	2.09	2.03	2.23	2.15
Beef	5.47	4.29	4.70	3.55	3.41	3.46
Chicken	4.43	2.99	3.50	4.83	3.50	4.01
Fish	0.94	0.75	0.81	1.21	0.63	0.85
Fruits (fresh and dried)	5.06	3.24	3.95	4.32	3.22	3.65
Vegetables	9.02	9.71	9.47	8.39	9.35	8.98
Salt	0.23	0.21	0.22	0.15	0.16	0.16
Spices	3.27	3.07	3.15	2.29	1.84	2.01
Sugar mill/desi	3.93	5.36	4.86	3.13	4.23	3.81
Gur and shakker (jaggery)	0.19	0.82	0.60	0.08	0.28	0.20
Total	78.27	84.41	82.32	64.36	83.71	80.42

The data in Table 3.4 shows that on the whole, the urban population spends less on food as compared to rural areas, but that for both groups, expenditure on food commodities has decreased from 2003-04 to 2013-14. It also reveals trends of meat purchases, which are then reflected in Table 3.5 below, and in Paper IV. These trends show that spending on meat like beef and mutton has decreased for urban and rural populations, which is associated with the increasing cost of meat. However, the money spent on chicken and fish has increased within the decade, and this trend is not only associated with the affordable pricing, but also increasing availability of both meats. Finally, the expenditure of fresh fruits and vegetables has also decreased (although consumption of vegetables has increased in rural areas, as discussed below), along with staples like wheat and lentils.

Table 3.5 Per Capita Monthly Consumption of Major Food Commodities (in kg, g, and l) (Results collected from HIES 2004-05 and HIES 2013-14)

Commodity Group	Unit	2004-05			2013-14		
		Urban	Rural	Total	Urban	Rural	Total
Wheat and wheat flour	kg	6.88	8.81	8.20	6.23	7.72	7.20
Rice and rice flour	kg	0.93	1.08	1.03	1.00	1.07	1.04
Pulses, split and whole	kg	0.25	0.25	0.24	0.39	0.35	0.35
Vegetable ghee (clarified oil)	kg	0.58	0.71	0.67	0.55	0.77	0.69
Tea (black and green)	g	74.25	71.40	72.31	76.75	73.42	74.58
Milk, fresh and boiled	L	6.17	6.91	6.67	6.24	6.88	6.66
Butter	g	14.08	58.75	44.58	10.96	25.65	20.51
Mutton	kg	0.13	0.05	0.07	0.07	0.07	0.07
Beef	kg	0.39	0.30	0.33	0.23	0.22	0.23
Chicken	kg	0.32	0.18	0.23	0.42	0.26	0.32
Fish	kg	0.08	0.05	0.06	0.11	0.05	0.07
Fruits (fresh and dried)	kg	1.19	0.67	0.84	1.08	0.77	0.88
Vegetables	kg	4.33	4.12	4.19	4.17	4.24	4.22
Salt	kg	0.31	0.35	0.33	0.24	0.23	0.23
Sugar milled or desi	kg	1.21	1.36	1.31	1.18	1.35	1.29
Gur and shakker (jaggery)	kg	0.06	0.23	0.17	0.02	0.06	0.05

The trends demonstrated in Table 3.5 tie in with global research on diet change discussed in Chapter 2 and show that consumption of non-grain foods such as animal proteins increases and regional food value chains experience rapid transformations to adjust to the dietary demands of urban consumers (Reardon et al. 2014). Specifically, the table shows that the consumption of starchy staples like wheat and flour has reduced in the years between 2004-05 and 2013-14, but the consumption of oils and milk has increased, particularly in the urban areas. Comparatively, the consumption of fruits and vegetables in urban areas has decreased, while increasing in rural areas. The consumption of expensive meats like beef and mutton has decreased, in favour of fish and chicken.

The statistics presented in this section reveal that Pakistan has increased the import of food commodities like meat, milk, spices, fruits, and vegetables. The increase in imports is significant in that production of these commodities within the country has also increased, and accounting for export, consumers within the country are consuming a greater percentage of these food groups. The increased production, trade, and consumption of these food groups have significant implications for the environmental status of the country and the health and welfare of the population. Consumer concern with meat consumption in particular is explored in Paper IV, while Paper III considers how different food commodities may be considered based on their production methods and impacts on health. The following section then presents an overview of the food safety situation in Pakistan and discusses the laws and regulations in place that are associated with food and food safety.

Pakistan's Food Safety Regulatory Environment

The preceding sections reveal that although food safety and food security are important issues for Pakistan, food security has received more attention, particularly in academic research. However, food safety remains a critical problem for the country, with issues of biological and chemical contamination, adulteration, and poor distribution, handling, and storage practices. Food scares caused by problems such as avian flu, foot-and-mouth disease, and toxic levels of metals like lead in food are compounded by the proliferation of unhygienic food outlets and illegal blood rendering units (Abbas, Younus et al. 2014; Khan, Malik et al. 2014; Chaudhry, Rashid et al. 2015; Ilyas 2015, Junaidi 2015). Besides these events, systemic issues of inappropriate pesticide use, poor quality ingredients, and adulterants are a common worry for consumers. Frequent crackdowns by provincial and federal food authorities on unhygienic and illegal outlets are a primary strategy to prevent the sale of substandard and dangerous food commodities. For example, of the 4392 raids conducted in Bahawalpur district in 2016, 176 businesses were sealed and fines of PKR 3.8 million imposed on the violators. In 2015, over 60

outlets were raided in Islamabad, of which 27 were sealed and culminated in the arrest of individuals under the “Anti-Adulteration Campaign in the ICT”³⁰ conducted by the Punjab Food Authority (PFA) (Pakistan Food Authority 2016). The following discussion explores the regulatory environment in place to respond to these food safety challenges within Pakistan.

Food safety in Pakistan is governed primarily by the Pure Food Ordinance of 1960,³¹ The Cantonment Pure Food Act of 1966, Pakistan Hotels and Restaurants Act of 1967 and the Pakistan Standards and Quality Control Authority Act of 1996; infractions are punished under the Penal Code of Pakistan (Khan 2013). Food safety at eateries, restaurants, and cafes is further controlled by the Punjab Animal Slaughter Act 1963, sections 269, 278 and 290 of the Pakistan Penal Code, the Price Control and Prevention of Profiteering and Hoarding Ordinance, and the Food Adulteration and Spurious Drugs Act

The institutions involved in regulating food safety, which operate using these regulations, are primarily provincial health departments which administer food standards according to the Pure Food Laws outlined in the Pure Food Ordinance. In the event that the Food Laws are deemed insufficient, the Pakistan Standard Institute (PSI) is consulted. The PSI standards undergo a comprehensive revision every five years. For trade considerations, the Customs Department and Plant Protection Quarantine (PPQ) are involved in regulating food imports. They are primarily concerned with checking that shelf-life, labelling, and phytosanitary requirements are met before the products can be sent to markets, and they also ensure that the incoming food products are not on

³⁰ ICT is an acronym for Islamabad Capital Territory, the federal territory of Pakistan in which Islamabad is located.

³¹ An Act is issued by the Parliament or Legislative Assembly. In contrast, an Ordinance is issued when legislation is required urgently, but the Parliament is not in session. An Ordinance is promulgated by the president and has the same effect as that of an Act.

Pakistan's banned list of items.³² Finally, the Directorates of Municipal Services for each region is responsible for issuing licenses to outlets like restaurants, which are contingent on the basic hygiene and safety laws highlighted in the regulations above. However, there is a wider array of legislation and their associated institutions that also influences food safety but are not 'directly' considered as food laws, such as the ones in Table 3.6 below:

Table 3.6 Legislations and institutions associated with food safety (Raza 2013)

Legislation	Associated Institution
Pakistan Agricultural Policy 2013	Ministry of National Food Security and Research
Nutritional Sector Perspective Plan 2011	Ministry of Health, and Inter-Sectoral Nutrition Committees (provincial)
Pakistan Integrated Nutrition Strategy	Ministry of Health
National Health Policy 2001	Ministry of Health
Pakistan Animal Quarantine Act	Federal Animal Quarantine Department
Pakistan Quarantine Act	Department of Plant Protection
Pakistan Fish Inspection and Quality Control Act	Marine Fisheries Department
Federal Seed Certification	Federal Seed Certification and Regulation Department
Food Grain Testing	Grain Quality Testing Laboratories

Currently, the most up to date food safety regulation is the Punjab Food Authority Ordinance of 2015, which is an amendment on the Punjab Food Authority Act of 2011. This ordinance is limited to the province of Punjab and food business premises operating there. It is designed to punish the sale of unhygienic, adulterated and unsafe food, creates special courts for trials related to these offenses, and ensures that reports and complaints can be lodged with local police stations or directly at the courts of law (Punjab Food Authority (Amendment) Ordinance 2015). At this point, it is important to acknowledge that food laws have a national and regional dimension, where the Pure

³² The banned list of items contains items that are non-halal, contain pork or pork products, or alcohol. The PPQ also controls a 'restricted list' of items, such as products that can only be imported by parties like the government or the military or imported under specific arrangements like import against credits.

Food Ordinance of 1960 offers general coverage for the entire country, but provinces were encouraged to develop provincial level acts and ordinances. This has resulted in different legislations that exist for Punjab, Sind, and the Cantonment Areas. Although the provinces of Khyber Pakhtunkhwa and Balochistan do not have formalized food laws like Punjab and Sindh, they do have provincial level departments responsible for monitoring food laws that follow the national level regulations. Therefore, the regulatory environment for food safety in Pakistan is regionally uneven, with certain areas having more stringent guidelines in place and thus ensuring stronger enforcement.

A critical issue linked with food safety and regulation in Pakistan is the increasing and indiscriminate use of pesticides in crop production. Pesticide use ballooned particularly between 1954 and 1977, with consumption increasing from 254 metric tonnes per year to 16,226 metric tonnes per year (Baloch 1985). The Department of Plant Protection (DPP) was responsible for the import of pesticides before 1971, as pesticide-related rules and regulations were not in place. Responsibility was shifted from the DPP in 1971 when the Agricultural Pesticides Ordinance (APO) was created. While this ordinance regulates the standardisation, registration, formulation, production, import, sale, and distribution of pesticides, it does not deal with proper application techniques. Therefore, the APO and the Pure Food Laws are not equipped to handle pesticide residues in food samples (Tariq 2005). The absence of such regulations is particularly notable as pesticide use in agriculture increased five-fold when the sale and distribution was shifted to the private sector in the early 1980s. It is notable that the increased sale of pesticides did not coincide with an increase in agricultural yield (Economic Survey of Pakistan, 2005-2006). This may be associated with the fact that a significant number of farmers are not taught efficient and safe application techniques; for instance, some crops may then be sprayed more than ten times in a growing cycle, a practice that is not only detrimental for the crops, but also leaves residues in the plant and contaminates soil

and groundwater³³ (Tariq et al. 2007). Table 3.6 summarises the findings from six selected comprehensive papers that show the type of pesticide residues noted in foods from different areas in Pakistan:

Table 3.7: Table summarizing studies on pesticide residues detected in food commodities within Pakistan

Study	Area	Commodity	Pesticides Detected
Masud and Farhat (1985)	Karachi Wholesale Market	Fruits and vegetables (47 different varieties)	Aldrin/dieldrin, BHC, p,p'-DDT, p,p'-DDE, Endosulfan, Endrin, Heptachlor, Lindane
Parveen and Masud (1988)	Cattle colony, Karachi	Milk	Endrin, BHC isomers, p,p'-DDE, Heptachlor epoxide, Eldrin, Dieldrin
Masud and Hasan (1995)	Farms and wholesale markets in KP, Islamabad, Quetta and Pishin	Fruits and vegetables (300 samples)	Cybermaethrin, Lindane, p,p'-DDT, p,p'-DDE, o-p'-DDT, Malathio, parathion methyl, Methamidophos, Azinophos methyl, Fenvalerate, Cypemethrin, Methidathion, Monocrotophos, Cyfluthrin, Dieldrin
Parveen et al. (2004)	Street vendors in Karachi	Apples and citrus fruits	Bifenthrin, Cyfluthin, Cyhalothrin, Cypemethrin, Fenpropethrin, Fenvalerate, Chlorpyrifos, Methamidophos, Methyl parathion, Monocrotophos, Profenofos, Quinalphos, Endosulfan, Dicofol, Carbofuron, Carbosulfan, Eton, Propargite, Benomyl, Metalxyl
Munshi et al. (2004)	Karachi coast	Fish tissue (22 species, 155 samples)	DDT, DDE, DDD, HCH, Dieldrin, PCB
Viqar-un-Nisa et al. (2005)	Islamabad food markets	Spinach, coriander, lettuce, mint, cauliflower, cabbage, peas, bitter gourd, okra, turnip, tomato, aubergine, potato and marrom, milk, wheat flour, fish tissue, and citrus.	Zinc, Cadmium, Lead, Copper (analysis focused on heavy metals)

Although by no means an exhaustive list of studies evaluating the presence of pesticides and contaminants in foodstuffs in Pakistan, these papers illustrate the fact that food contamination is a critical problem to be addressed. Further, as research investigating the level of contamination in food increases, there is an associated increase in studies on the effects of pesticide contamination on the human body. There is a significant body of work on pesticides and human health from different regions of the world, as demonstrated by Pingali et al.'s (2007) study on the effects of pesticide exposure on farmers in the Philippines, Garcia's (2003) focus on women's health

³³ For comprehensive studies on groundwater contamination in Pakistan, see Ali and Jabbar (1992), Ahad et al. (2001) and Tariq et al. (2004).

effected by pesticides and Gupta's (2004) study on the effects of pesticide contamination in India.³⁴ The following section then explores the sources of health information in Pakistan and how different sections of the population access them, a factor that is crucial in a risky food environment, where improper consumption practices have serious ramifications for health.

Sources of Information for Health

As noted in the preceding sections, although there is a fledgling body of academic research on food contamination in Pakistan, alternative sources like articles in newspapers, blog posts, and documentaries are filling the research gap. Research on information and knowledge sources from Pakistan is quite scarce and currently limited primarily to health issues. This research is emerging from a gap in knowledge about the barriers to health care, medical facilities available, and the types of knowledge required at different stages of education within the country.

Ali et al. (2006) discovered a severe lack of accessible information on puberty and health issues for young women belonging to middle class families in their study on health problems associated with female adolescence in Pakistan. The best sources of information were found to be electronic media, family members, and friends. Although most respondents reported receiving information from their mothers or sisters, this information was inaccurate in most cases and a culture of hesitation about discussing sexual matters was prevalent. The authors suggested that sexual health should be included in the regular school curricula and channels such as peer groups, print, and electronic media should be utilised to deliver messages about health and well-being in a culturally sensitive manner.

³⁴ There is also a wealth of medical literature and academic studies evaluating the effects of specific groups of pesticides on different bodily functions, such as Dich et al. (1997) on the emerging relationship between pesticides and cancer, Solomon et al. (2000) on endocrine disruption and Rauh et al. (2015) on the neural developmental effects of prenatal exposure of chloropyrifos.

A study by Hennick et al. (2006) furthers the findings of Ali et al. (2006) by exploring knowledge of personal and sexual development among young men and women in Pakistan. The authors discovered that while information sources used by respondents were similar as with Ali et al.'s (2006) study, information provision and access were event-based (e.g. at times like marriage). However, even at times like this, information was rushed, delivered in an awkward and uncomfortable manner, and inaccurate, which created feelings of uncertainty and stress for the individuals. Hennick and colleagues (2006) also suggest modes of information communication that exist outside the arena of schools and colleges, and provided in a manner that is accessible and understandable, without stigma and cultural taboos.

The variations in information communications were also observed in a comparative study conducted by Agboatwalla et al. (2003) between a rural and urban area of Karachi. The study discovered that doctors are considered the primary and trusted mode of information in rural areas for diseases such as tuberculosis (TB). However, respondents in urban areas were more likely to use a combination of friends, television, and print media as sources of information before consulting a doctor. Overall, it was found that respondents in both rural and urban areas had poor knowledge of TB. Less than 2% of the 200 respondents reported knowledge learned in school as a potential source of knowledge. Finally, this study stood out in that current and past TB patients were also considered an important source of information. The study discovered a major difference between urban and rural respondents, particularly in terms of health-seeking behaviour: urban residents preferred visiting private medical practices, while rural residents went to government hospitals; females in both areas preferred to either discuss symptoms first with their husbands or friends before approaching a doctor, while males would refer to doctors in the first instance. It was found that among the respondents, the rural males were well-educated about TB because their primary sources of information were doctors in government hospitals who participate in public

health programmes such as directly observed treatment short course (DOTS).³⁵ Therefore, urban males are less aware of details like causal factors, transmission, and symptoms of TB. This study also correlates with Hennick and colleagues' (2006) findings in that discrete events such as disease onset drive the acquisition of information for many people, and that experts like doctors may be the first point of call for many people. However, it indicates the weakness of the Pakistani healthcare system, where certain health programs and health information may not be equally available in different places, and in some cases, urban residents may be worse off than rural ones.

The papers discussed in this section reveal that even for well-educated, middle income families, information related to health is not easily available. The studies suggest that informal sources (such as personal networks of family and friends and electronic media) are more important in comparison with doctors and other health experts, while social media is increasingly the main source of information, particularly for younger people. However, there is a lack of research on information needs, health and nutrition knowledge for the Pakistani population, which might be a contributor to risk and uncertainty in relation to multiple health issues that the population might have. This thesis contributes to this gap of knowledge by exploring the different sources of information that middle class consumers in Islamabad use in relation to food, as shown in Paper II and III.

Pakistan's Food Geography

Pakistan has a mix of regionally-diverse cuisines influenced strongly by the ethnic population groups and by local production. Food in the Punjab is similar to that of western and northern India, particularly from the time of the Mughals, food in Sind

³⁵ The DOTS program is a treatment program implemented through government hospitals in Pakistan which involves a supervised provision of the TB medication. This might either involve daily visits of the patient to the hospital, or administration of the drug at the patient's home with a health worker present.

resembles the cuisine in western and southern India, and the foods of the western provinces of Khyber Pakhtunkhwa and Balochistan are strongly influenced by Iran and Afghanistan. Further, the northern areas like Gilgit, Baltistan, and Kashmir not only have distinct cuisines of their own, but also have influences from Central Asia, particularly from the western China region. While most foods are prepared with oil (clarified butter from buffaloes or vegetable oil) and spices, similar to western Indian cuisine, meat is common and consumed often.

Bread in the form of 'roti' is a staple food, usually prepared with wheat, although maize is used in the northern areas.³⁶ The bread usually accompanies a curry-style dish, which can consist of meats, vegetables, lentils, and spices. Types of vegetables, lentils, and grain consumed are influenced by regional production and seasons, for example, maize and other non-wheat grains are consumed more in the north, where leafy green vegetables are also more common. Cheese consumption is also indicative of cuisine influenced by climate: central and southern Pakistan have not had historical indigenous cheese consumption, in comparison with the north and north-western parts of the country.

Meat consumption has increased drastically in recent years, with chicken consumed more frequently because of its affordability, as compared to goat, sheep, and cow meats. These other meats are consumed more frequently particularly around Eid-ul-Adha, the Islamic festival marked by the sacrifice, sharing, and consumption of meat. The influence of Islam in the country can also be noted in the absence of pork and alcohol from the diet and the fact that '*haraam*' (unlawful) food items are not allowed to be served to the public. This also applies to foods imported into the country. However,

³⁶ 'Roti' or 'chapati' refers to unleavened bread prepared on a griddle, and distinct from the 'naan' or 'pateeri' breads that are prepared in a 'tanoor', (wood-fired stove). Rotis are commonly prepared for meals at home, while naans are bought from the nearest tanoor. 'Parathas' are variants of a roti, and can either be flaky and prepared with clarified butter or stuffed with mashed and spiced potato, radishes, or mincemeat. Bread may be substituted for long-grained rice, and both are often not consumed together at the same meal.

unlike the experience of Muslims living in countries with Muslim minorities, foods produced and served are assumed to be '*halal*', even at international food franchises such as McDonald's and KFC (Wong 2007). However, recent scandals on the presence of imported foods containing haram ingredients have made consumers wary about the regulatory mechanisms governing food importation (Kakakhel 2015; Wasim 2015).

The type of food consumed is also strongly influenced by hospitality and status. Tea (black or with milk and often sweetened) is offered to all guests and visitors, and may be accompanied by snacks or meals. For many, it is considered improper to offer vegetarian or lentil-based dishes to guests, and at least one meat dish is present at such meals. Similarly, while families may not eat desserts with every meal, it is offered if a guest is present at meal time. Recently, with the influence of Western cuisine, foods like pasta and pizzas may also be present alongside more traditional Pakistani dishes. The western influence is also reflected in the popularity of eateries like McDonald's, KFC, Burger King, and other restaurants offering themed and 'exotic' cuisines. These are now in competition with restaurants offering foods from the different areas and peoples of Pakistan.

Meal Patterns and Descriptions

Residents in urban areas typically have three meals per day: breakfast in the morning, lunch in the afternoon, and dinner at night. Timings of these meals tend to vary with working hours of family members and personal preferences. Because of working hours and school timings, some families may divide certain meals into two, where some family members eat earlier or later depending on their schedules. Individuals are likely to have tea and snacks between each meal. Those who work in offices may have tea provided for them at various points throughout the day, and they either eat out with colleagues or at the place of work (if the facility is available). The diversity of food products consumed during meals reflects the value chain typologies discussed earlier in this section, where

households may alternate between traditional and modern food items, or include both.

The following section represents the main meals and their potential components:

Typical Meal Patterns

Breakfast (naashta) – mornings (5 am to noon): A typical or ‘traditional’ meal might include omelet with onions and chili peppers, accompanied with fried bread (paratha) and tea (see Figure 3.1). Fried bread can be substituted with plain bread (roti), crispy, baked breads like kulchay or rus or local bread variants using grains produced in the area. ‘Western’ breakfasts are popular as well, with cereals, white and whole wheat toasts, jams, porridge, croissants and pastries. For special occasions, weekends, or holidays, households consume special, richer breakfasts, such as deep fried bread with chickpea and potato curry and sweet halwas (halwa puri) (Figure 3.2), and slow-cooked meat dishes like siri pae (dish containing goat or cow brain and hooves) and nihari (usually with mutton or goat). Breakfast is normally consumed at home, although some restaurants and cafes offer breakfast and brunch options.



Figure 3.1 Paratha breakfast (tea not pictured) - Photograph by Saleha



Figure 3.2 Halwa puri, chickpeas and vegetables from halwa puri breakfast - Photograph by Laila

Chai or snack time (between meals): Chai or black tea with milk is a common beverage enjoyed at different intervals during the day. It is drunk by itself in breakfasts, after meals, or drunk with assorted snacks between meals. Accompanied snacks may be nimco (Figure 3.3), which are snacks like mixed dried lentils with peanuts, peas, vegetable crisps and bits of fried chickpea paste. These are highly spiced and are consumed only a few mouthfuls at a time. Alternatively, snack time may involve cakes, pastries, fruits, or left over portions from regular meals. Tea may be substituted for coffee, juice, lemonade, or squash. It is consumed at home with family or guests (Figure 3.4), in offices with colleagues, and at cafes and restaurants.



Figure 3.3 A bag of nimco mix with spicy fried chickpea paste - Photograph by Shamima



Figure 3.4 Local pastries and savouries for an evening tea with family - Photograph by Ali



Figure 3.5 Coffee and snacks with colleagues at a local restaurant - Photograph by Yasmin

Lunch (dopeher ka khana) Noon to early evening: Lunch usually includes a curry or two with either boiled rice or roti. The curry may be meat based, although vegetables and lentils are very common for lunches. A yoghurt and mint sauce, salad and varieties

of South Asian pickles may be accompaniments. Instead of curries, rice cooked with mince, peas or chickpeas, served with yoghurt sauces may also be eaten. Some may choose to have more Western additions or substitutions like pasta, pizza or steak. Lunch is also consumed in a variety of locations, such as the home, office (Figure 3.6), school, or at the houses of family and friends. Most families will typically eat lunch apart.



Figure 3.6 Chicken karahi (chicken with peppers and tomatoes) eaten at a restaurant with a work colleague

- Photograph by Baano

Dinner (*raat ka khana*) – late evening till midnight: Dinners are similar to lunches in composition, although some families may choose one or the other meal to be richer and feature a meat dish. Dinners are also a chance for families to eat together, particularly if some family members are away at lunch (Figure 3.7). It is also more common to have dinners instead of lunches with family in a restaurant, and to invite guests to (Figure 3.8).



Figure 3.7 Boiled rice with spiced lentils, mutton kebabs and fried peppers, at home- Photograph by Ali



Figure 3.8 Dinner party with friends - Roti, potato cutlets, chicken patties, curry, pizza and milky dessert with rice - Photograph by Mehak

Sehri (only in Ramadan – before sunrise): Sehri meals are very similar to breakfasts, although some individuals may emphasise richer foods (Figure 3.9), to provide the energy for the rest of the day, and consume yoghurt, ostensibly to stave off thirst. It is also usually eaten at home although some individuals may have a few sehri at restaurants and cafes that offer the option.



Figure 3.9 Paratha stuffed with kebab, followed by fruit salad - Photograph by Navid

Iftaar (only in Ramadan – at sunset): Iftaars may be divided into two, with some families breaking their fast with dates and water, before praying, and then having a typical dinner meal. Others may have one meal featuring an assortment of small dishes, such as dumplings soaked in yoghurt, deep fried snacks like samosas and pakoras and sweet accompaniments like fruit salads (Figure 3.10). Iftaars present a good opportunity to have family and friends over, or meet with friends at restaurants and cafes.



Figure 3.10 Iftar with chickpea and tomatoes, samosas, pakoras, chickpea dumplings in yoghurt, sour *imli* and mint sauce, and mangoes - Photograph by Noora

Food in Literature

Recent publications like Kalra and Pant's 'Classic Cooking of Punjab' (2004), Roy's 'Indo Pak Cuisine' (2008), and Shanaz Ramzi's 'Food Prints: An Epicurean Voyage through Pakistan, An Overview of Pakistani Cuisine' (2012) discuss Pakistani food consumption. With a scarcity of literature exploring food in Pakistan, the aforementioned books by Kalra and Pant (2004), Roy (2008) and Ramzi (2012), visual guides like 'Pakistan in Pictures' (Taus-Bolstad 2008) and guidebooks like 'Pakistan and the Karakoram Highway' (Singh 2008) are the only way besides immersing oneself in the culture, and referring to recipe books, television programs and publications with a scholarly focus that one can learn about the food landscape in Pakistan.

In scholarly literature, much of the exploration of diet and food consumption has emerged from the medical (Akhter et al. 2002; Hussain et al. 2004) and agricultural and livestock sciences (Khan 1990; Abedullah and Bukhsh 2007). However, critical exceptions are Qidwai and colleagues' (2003) study on evaluating health consciousness of hospital patients in Karachi, in which they also consider the consumption of food items like carbonated drinks, vegetables, and fats. This paper stands out from similar diet-related studies from Pakistan in that it focuses on the effect of lifestyle choices on the whole on health, considers food an important component of lifestyle, and suggests that Pakistanis need better information on how to improve their health. The second major exception on food studies research is a primarily quantitative exploration of consumption patterns in farming households in Punjab by Farooq and colleagues (1999). This study is of interest for this dissertation because the authors focus on how consumption of food commodities is linked with changes in market prices, income, and influences like agricultural policy and changes in household size. Although the study was limited because of its focus on items like wheat, meat, and dairy (because the respondents did not report prices of items like fruits and vegetables), it represents a rare trend of exploring consumer behaviour beyond quantitative measures. Paper I in this

dissertation draws on this theme of shocks and changes to study changes in food environments of urban residents. The dissertation on the whole contributes to the food studies debate in Pakistan by illustrating the value of qualitative research in food consumption, and using an urban context for analysis that goes beyond concepts like nutrition. The following section continues the discussion of Food Value Chains (FVCs) from Chapter 2 and presents the Pakistan specific context of food supply chains.

Pakistan's Food Value Chains (FVCs)

Following on the discussion of Gomez and Ricketts (2013) categorisation of Food Value Chains (FVC) in developing countries, this section presents Pakistan's FVCs. Like most developing countries, these FVCs and the agricultural food system on the whole are undergoing transformations because of factors like rapid urbanisation, changes in food consumption preferences, changes in food markets, and intensification of agricultural technologies (Reardon and Timmer 2014). As noted by Reardon and Timmer (2014) in their analyses of agri-food systems in Asia, Latin America, and Africa, these factors are mutually interlinked, resulting in complex and rapid changes in a region's agricultural system. An evaluation of these factors in current times is necessary not only because of the implications on food security, but for driving productivity in a sustainable and ethical way. Further, as the following discussion on Pakistan's FVCs reveals, the development and transformation of different supply chains is strongly dependent on changes in diet and the different food items that are available because of market transformations.

Ruben et al. (2007) note that most sites for food retail in FVCs tend to operate on a small scale in rural areas, large scale wet markets can also act as distribution centres in urban areas. In addition, traditional FVCs catering to urban centres involve greater distances between producers and consumers, and they involve a greater proportion of middle men, particularly for distribution. This can be noted in the example of 'Sabzi Mandi', the Fruit and Vegetable Wholesale Market in Islamabad, which attracts traders

from many parts of Pakistan, as well as consumers from Islamabad and Rawalpindi who purchase fresh produce in bulk quantities. This market is typical of most large-scale wholesale urban markets in the large spatial area it occupies (over 1 km²) and each trader occupies a small area. These markets are usually poorly organized and may suffer from poor water provision and unhygienic conditions (Qureshi 2016). However, prices in these markets are much lower than in supermarkets and smaller grocery stores. These markets are also less likely to sell processed and packaged goods, while focusing mainly on fresh produce like fruit, vegetables, dairy, grain, and meat.

Modern FVCs in Pakistan are a rapidly developing value chain and are gaining ground in larger urban areas. As agriculture is the largest employment sector in the country and one of the fastest growing economic sectors (Chandio et al. 2015), agribusiness and livestock production are quick to innovate and intensify their processes. For example, the K&N food company has its production and processing taking place within their own facilities. Therefore, unlike most food companies that take their inputs from other stakeholders, K&N owns and controls the sites and inputs at every stage of the poultry production from the egg-hatching stage.

Modern-to-traditional FVCs in urban areas function primarily in terms of providing food to smaller markets and shops, using small-scale distribution companies or personal networks. For example, privately-owned shops in sub-sectors³⁷ in Islamabad have their own preferred method and vendor for supplying their food products. While some may be large enough to have their delivery with major grocery stores and supermarkets, store-owners will typically have different supply methods. On the other hand, traditional-to-modern FVCs in urban areas are developed through personal relationships of small-scale producers and specific people in large scale manufacturers and retailers. This can be observed in how grocery stores may have produce or food products from local

³⁷ Islamabad is divided into 2km² sectors, with each sector having four sub-sectors. Each sub-sector has a small market with food-shops, barbers, tailors, etc. and each sector has a larger market. Islamabad's layout is discussed further in Chapter 4.

producers who otherwise produce for local sales or subsistence. For example, a local family owned grocery store in Islamabad occasionally stocks eggs from a small-scale local poultry farmer and pre-made snacks like vegetable rolls and samosas from a neighbourhood entrepreneur.

Finally, the proliferation of 'alternative' modes of production in recent years within Pakistan warrants special attention. The growth of small businesses offering organic and locally-grown produce has also been associated with the setting up of farmers markets in urban areas. Further, the total cultivated area in Pakistan with organic production has increased from 35,000 acres in 2005 to 150,000 acres in 2010. Pakistan Agricultural Research Council (PARC) estimates that as of 2010, 33% of farmers in Pakistan farm with organic principles in mind. Importantly, the PARC projects that this number will double within the next decade (PARC 2010). Besides PARC, the National Institute of Organic Agriculture (NIOC) has created a Network of Organic Agriculture in Pakistan (NEOAP) which has provided training in organic agriculture to over 5000 farmers across the country. The NIOC works alongside the National Agricultural Research Council (NARC), the largest research centre of PARC. The introduction of organic produce to consumers through the PARC has been accomplished in the past decade through the creation of PARC Technology Company (PATCO), which has sale points associated with PARC's research centres in the country. However, while PATCO is a useful medium for delivering the results of PARC's use of innovative agricultural methods, it does not have linkages with the broader market; therefore, consumers are largely unaware of its existence and efforts (Rani et al. 2013). Finally, while the appeal for organic production is increasing for farmers because of higher market prices for organic products and the reduction in application of irrigation water, an official certification does not exist (NIOC 2014).

Non-governmental organisations such as Kuch Khaas stand out in their recent efforts in promoting organic production and consumption in Islamabad, where with their work at

community development, they also organize seasonal farmers' markets that cater to local and regional producers. Similarly, but operating on a larger scale is Khalis Food, an event organized by Lahore-based entrepreneurs who gather food-based NGOs, entrepreneurs, and regional producers to showcase their produce at the market a few times a year. Although not a regularly-run event, Khalis Food farmers' markets have been held in Karachi and Lahore, with over thirty producers represented each time and attended by thousands of consumers (Saeed 2013).

In summary, Pakistani consumers in urban areas engage with a combination of traditional, modern, traditional-to-modern, and modern-to-traditional FVCs, in a manner that is consistent with other developing countries. In parallel, a fledgling supply chain of alternative food is developing that is creating its own retail locations and consumer bases. As will be noted in the upcoming chapters in this thesis, the middle class consumers in Islamabad are similar to their socioeconomic counterparts in African and Asian developing countries in that they purchase processed foods from grocery stores and supermarkets, but fresh produce, meats and dairy from traditional markets (Cadilhon et al. 2006; Guarin 2013). This is primarily because traditional sources offer these items at more attractive prices, tend to be fresher, and allow practices such as price-haggling and cherry picking (Cadilhon et al. 2006; Tschirley and Hichaambwa 2010). Preferences of traditional sources and modern stores are discussed in Papers II, III and IV.

The Middle Class in Pakistan

This section provides the context specific to Pakistan's middle classes. It extends the argument that post-colonial developing countries have a vastly different political, economic, and social context of the creation of the middle class than European and North American countries (Beteille 2007). Much of the debate on the problems of defining the middle class can be reflected in the case from Pakistan, where depending

on the definition applied, the size of the middle class can swell to over 80% or completely disappear. A working paper prepared by economist Durr-e-Nayab (2011) of the Pakistan Institute of Development Economics (PIDE) presents the problems of the definitions of the middle class when applied to Pakistan. It is important to note that classifications of class in Pakistan are based on household level data, using data from the Pakistan Social and Living Measurement Survey (PSLM), which was most recently carried out in 2007-8. In Table 3.8, the results from the PIDE paper are summarized to the degree of variation in the calculation of the middle class in Table 1:

Table 3.8 Application of middle class definitions to the Pakistan context

No.	Author	Definition	Pakistani Middle Class (in millions) ³⁸
1	Birdsall et al. 2000	75% to 125% of median income	55.2
2	Easterly 2001	Expenditure quintiles between 2 and 4	112.2
3	Milanovic and Yitzhaki 2002	Income of PPP 12-50 USD/person	3.4
4	Ravallion 2010	Expenditure between PPP 2-13 USD/person/day	80.2
5	Birdsall 2010	Income of PPP 10 USD/person/day, excluding the top 5%	0
6	Acs 2005	Twice the poverty line, defined as PPP 2 USD/person/day	23.7
7	Wheary 2005	Twice the national poverty line	36.1
8	Yuan et al. 2011	Income between PPP 2-10 USD/person/day	76.7
9	Banerjee and Duflo 2008	Expenditure between PPP 2-10 USD/person/day	78.9
10	Peichl et al. 2010	Twice the median income	30.9
11	Brzezinski 2010	Three times the median income	14.8
12	McKinsey 2010	Annual household income of PPP 13,500-113,000 USD	11.4
13	Bhandari 2010	Expenditure between 2-20 USD/person/day	81.3

Table 3.8 illustrates some important drawbacks of the economic definitions used for middle classes: definitions relying on income gradation (definition 8 from Table 3.8) and expenditure per person per day (definition 10) are limited because of their reliance on a

³⁸ Population estimation is based on the approximate population of 187 million in 2011 by Nayab (2011) and the Purchasing Power Parity (PPP) in 2008 was 1 USD = 24.47 PKR. The estimation for the middle class in this table combines lower-middle, middle, and upper-middle classes. For a detailed breakdown of the calculations, see Nayab (2011).

single measure (Chun 2010), and they do not take into account other significant characteristics for describing class such as education, health, skill sets, and knowledge (Eisenhauer 2008; Gilbert 2014). The use of median income to define the middle class in Pakistan and similar low-income countries cannot be used because it will include people living below the poverty line.³⁹ On the other hand, definitions 3 and 5 place the bar of middle class too high, which leads to an estimation of a very small to non-existent middle class in Pakistan.⁴⁰ Ravallion (2010) considers that middle class living begins where poverty ends; although a far earlier publication by Horrigan and Haugen (1988) argues that the middle class should begin at a point considerably above the poverty line of the country. Nayab (2011) furthers this argument and considers that while the middle class should not face the risk of poverty, they should also not be 'wealthy'. This is because there are important sociological and political differences between the middle class and the wealthy and elite classes (Tilkidjiev 1998).

Recognising these limitations, Nayab (2011) suggests the use of a weighted composite index, which includes education (with a minimum of one college-educated individual in the household), income based on doubling the national poverty line, ownership of a house, persons per room and provision of gas, water and electricity, the ownership of 23 consumables, and non-manual occupation of the head of the household. These composites result in seven classes within the middle class, categorised as vulnerable, aspirants, climbers, fledgling middle class, hard core middle class, elite middle class,

³⁹ Using the poverty line only as a basis of class measurement is also difficult because of differences in the measures used in methodology. For example, proposals from the Pakistan Planning Commission on changing the methodology by which percentage of people living below the poverty line in April 2016 incorporate considerations of costs of basic needs instead of the previous measure of food energy intake. However, this change would place the percentage of people below the poverty line at 29.5% instead of earlier estimates of 9%. This will further have ramifications for calculating middle classes and potentially categorise them as economically-poor as well. See <http://dunyanews.tv/en/Pakistan/331466-One-third-of-Pakistanis-live-below-poverty-line-r>.

⁴⁰ Importantly, Nayab (2011) notes that these definitions result in similar problems with estimating the Indian middle class, which reveals that relying on standard economic measures in developing, low-income countries for categorising class is problematic.

and privileged. Of these, the vulnerable middle class forms the largest proportion of 41.9% of the middle class, of which 23.6% reside in urban areas, and the privileged are the smallest group at 0.4%, with 0.9% in urban areas. Importantly, this categorisation places over 187 million of Pakistan's population in 2007-8 as middle class, which varies significantly from the definitions presented above in Table 3.8. The results of the study also indicate the middle class as being primarily an urban phenomenon, which coincides with prominent Pakistani political economist S. Akbar Zaidi's observation that as the urban areas of Pakistan have increased, the middle class has increased accordingly (2016). This dissertation uses Nayab's (2011) work as a foundation in order to explore how vulnerability functions on an everyday basis because of the provision of amenities like gas and electricity and because of their food consumption anxieties. However, the research from this dissertation departs from the economic studies on middle class by primarily considering those individuals who consider themselves as middle class based primarily on their perceptions of food security instead of income, expenditure, or ownership of consumables.

With this research focus, this dissertation contributes to the literature on the middle classes and their food anxieties and vulnerability. It presents a valuable extension to this literature because to my knowledge, there have been no studies emerging from Pakistan that consider food anxieties for urban middle classes. However, Ammara Maqsood (2014) and Sadaf Ahmad's (2008) explorations of religious consumption by women in urban areas present innovative engagements with the ideas of modernity and tradition for middle classes in urban areas. Maqsood's (2014) paper focuses on how middle class individuals in Lahore are connected to and aware of consumption trends in other countries, particularly on the consumption of religious objects. It argues that the middle class is creating an idea of modernity that is influenced by the established elite in their creation of class differences and by the global Muslim community living abroad. In this, the middle class Lahoris try to break away from the traditional understandings of

Islam within Pakistan and adopt a more universal and globalised version of Islam that is practiced by Muslims living in western countries. For this particular result, Maqsood's (2014) findings reflect Shryock's (2008) analysis that the characteristics of the universal version of Islam are aligned with those of an enlightened American middle class. Maqsood's (2014) study reveals that this particular construction of the middle class in Lahore would not have been possible if the market had not changed and grown in response to this demand of the so-called Islamic fashion, fashion accessories, Islamic videogames, Quranic storybooks, Islamic finance, and even Islamic ringtones for mobile devices. Middle class identity is also maintained through religious consumption by contrasting perceptions and practices between the elites and the lower or even rural population classes, and through a resistance of western values and lifestyle (Maqsood 2014).

Importantly, Maqsood (2014) strongly focuses on modern Muslim identity in Lahore, but does not engage with the concept of the middle class beyond describing how established elites in Lahore perceive them: as uneducated (although the middle class respondents in the study hold education in high regard and attempt to use it to improve their conditions), disposed to irrational and 'backward' thinking, and having acquired their wealth through immoral means. Besides this small description, the middle class is only described as discussing their identity through conceptualisations of modernity. Therefore, although Maqsood does not engage with definitions of the middle class, she illustrates how they situate themselves in society through their enactments of modernity, the pursuit of education and the consumption of religious commodities.

Ahmad (2008) follows a similar line of inquiry in her analysis of Al-Huda's (an Islamic school for women created in 1994) role in creating a specific identity and culture in Pakistan. She also notes an increase in middle and upper-class members of Pakistani society actively turning towards Islam, facilitated by the creation of Al-Huda in Islamabad. Ahmad notes that unlike other religious groups, Al-Huda has been

successful in accessing and affecting the urban and upper classes to such a significant degree that the students start transforming their lifestyle, behaviour, and ideology and participate in spreading their teachings. Although the study explores how the graduates from Al-Huda position themselves in Pakistani society through their Islamic identity and calls for a deeper analysis of 'Pakistani identity' or 'Muslim identity' in a pluralistic and multi-ethnic country, there is no exploration of the middle class per se. The urban middle class appears to be used only as a group for analysis, but their attraction for the mode of identity offered by Al-Huda is also not examined beyond Muslim identity. The lack of definitions is further problematised by fairly dated descriptions of the middle class, partly affected by the dominance of Indian case studies that use the ownership of consumables like television sets, scooters, and mobile phones as markers of middle class status (Saavala 2003; Watkins et al. 2012).

In the Pakistani and Islamabad-specific context, such consumables may no longer be seen as specific markers, but as a necessity for all members of society (Ahmed and Qazi 2011). The studies by Ahmad (2008) and Maqsood (2014) are relevant for this dissertation because of the following factors: (1) the conflict between the information sources and ideals from western countries and traditional values (discussed in the context of food in Papers II and III of this dissertation), (2) the exploration of how individuals locate themselves within Pakistani society (explored in the context of 'good food' consumption in Papers II and III), and (3) by using 'food security' as a self-identified marker of middle class identity to also show class diversity through the differences in perceptions and adaptations to food anxieties (see Paper IV).

As the afore-mentioned studies have shown, the Pakistani middle class has complex constructions of identity, which include modern devices and concepts, along with more traditional and religious ones. However, the ability to hire domestic servants by specific sections of the population can now be considered an important descriptor for being middle class. Middle class women who employ domestic workers find the workers to be

useful additions to the household in reducing their workload derived from cooking, washing, cleaning the house, and looking after children. This is particularly useful for professional women who may not have time to work and take care of household chores (Malik and Hussain 1994). This factor is important for this dissertation because domestic workers were assisting the respondents with food-related duties and all respondents had some form of domestic help (see Chapter 3). Despite the role of domestic work in Pakistan's economy (Nazir 2011; Schwenken and Heimeshoff 2011; Mohyuddin and Ambreen 2012; Shahid 2014), scholarly studies on domestic workers are rare. Iffat Hussain's book (2008) presents a useful exception in that she explores the problems faced by female domestic workers who migrate from rural areas to work in urban areas. These workers face major issues in acclimating to the urban environment and to the needs of the families they work for, which often involve familiarising themselves with equipment they may not have access to. While the maltreatment of domestic workers is a significant issue for the country (Hussain 2008), many families have had workers living with them for years, to the point that they are also considered valued members of the household. The establishment of the culture of having domestic workers in urban areas is also noted by the presence of rooms referred to as 'servants' quarters' in most urban dwellings. Therefore, although the dissertation does not directly engage with the role of domestic workers and food anxiety, it provides an opening for further research by suggesting that they are important members of the household because of their participation in food-related activities (see Paper I).

Besides the above-mentioned studies, it is interesting to note that there is a dearth of scholarly work that focuses on the middle classes in Pakistan. Much of the existing literature has tended to focus either on the role of the middle class in contributing to Pakistan's political and economic stability (Alavi 1990; Sayeed et al. 1996; Cheema 2003; Zaidi 2006; Dormandy 2012) or on the middle class in the Pakistani diaspora (Werbner 1996; Shah et al. 2010). This lack of interest is further revealed in the lack of

studies that investigate the Pakistani middle classes and their food consumption and food anxieties. The literature on food discussed above in this chapter (Farooq et al. 1999; Akhter et al. 2002; Qidwai et al. 2003; Abedullah and Bukhsh 2007) have no overlap with studies on the middle class discussed in this section. This dissertation bridges this gap by showing how the middle class deals with food anxiety issues. This bridging is justified for two reasons. Firstly, the research by Ahmad (2008) and Maqsood (2014) reveals that middle class consumption habits have the ability to significantly shape markets and commodity flows. Secondly, in the negotiation of contrasting information sources, middle classes create unique sets of information to adapt to changes in their environment (Maqsood 2014) and locate themselves with respect to Pakistani ideals and those imported from western countries. This is critical because Papers II and III show how middle class consumers negotiate differing bodies of knowledge and ideals in the context of food anxiety, and Papers I and IV show how these consumers interact with and potentially alter their urban environments and the commodity networks they engage with. As food anxieties continue to persist and potentially intensify, the middle class' habits will have a significant effect on Pakistan's food landscape and the parts of global food systems it participates in. Therefore, evaluating food anxieties for the middle class in Islamabad, Pakistan, offers critical contributions to food system and South Asian research. The final section in this chapter will close with an exploration of the concepts of vegetarianism, social justice, animal rights, and sustainability within the Pakistan context. This section will set the context of how these concepts influence food consumption decisions within a risky food environment in a developing, Muslim country.

Vegetarianism, Social Justice, and Animal Rights

The section above reveals that food risks and the changing food systems present a significant concern for urban Pakistanis. This section follows on this theme to explore vegetarianism, social justice, and animal rights within the context of Pakistan to see how these factors relate with the issues on food production and the potential of changing consumption practices. This presents an interesting case for exploring these areas because primarily because of the partition from India, which has the greatest proportion of vegetarians in the world, and because of the current religious make-up of Pakistan. Islam is the majority religion in Pakistan, with 96.28% of the population self-identifying as Muslim, followed by Hindus (1.60%), Christians (1.59%), Scheduled Castes (0.25%), Ahmadis (0.22%), and other religions (0.07%) (Pakistan Bureau of Statistics 2016).

Therefore, food consumption habits and religious festivals associated with Islam have a dominant presence in the country. This can be noted by the effects and influences of Eid-ul-Adha, one of the two major Islamic festivals, which is characterised by ritual animal sacrifice. While it may be fair to assume that the concepts of vegetarianism might not be supported in a religion that appears to encourage animal sacrifice and meat consumption, the number of vegetarians in Pakistan (and other Muslim majority countries) is on the rise (Foltz 2006). This is associated with the fact that Islamic teachings do not forbid a vegetarian lifestyle, and that numerous scholars have produced rulings in favour of vegetarianism. Scholars such as Hamza Yousef, Sayyid Fadhlullah, and Mufti Ebrahim Desai consider that vegetarianism is acceptable and that meat is not a compulsory part of diet. Further, they note that meat was a rare luxury at the time of the Prophet Muhammad (P.B.U.H.). Examples from the life of the Prophet, his companions, and caliphs further reveal that some considered meat too extravagant and even potentially addictive. Contemporary scholars such as Hamza Yousef also consider that in light of issues of animal cruelty in modern food production, a vegetarian lifestyle may be preferred for a Muslim. Importantly, a significant amount of argument for

Muslim vegetarianism is tied to discussions around the treatment of animals (Foltz 2006). Certain Islamic groups, such as the Sufis and the Lebanese Druze, have also historically preferred vegetarian diets. However, it is important to note that perspectives on vegetarianism by Muslim scholars exist on a spectrum, with others, such as the rulings provided on popular Islamic opinion site Islamweb, maintaining that vegetarianism is an innovation in Islam (therefore, not permissible) and that denying oneself of foods provided by God is to be ungrateful of His blessings (unless it is for valid medical reasons).

Therefore, Islam has had a tradition of debate and discussion on vegetarianism, with different populations and orders adopting it as a way of life. In recent years, the debates on animal cruelty and the prohibitive pricing of meat in the country have led to a heightened interest in vegetarianism. The Pakistan Vegetarian Society (PVS) was also founded in 2001 and has focused its activities on promoting vegetarianism and providing awareness and support to vegetarians. The number of articles discussing the experiences of Pakistani vegetarians has increased in the past decade as well. These articles are written by individuals who discuss how their decisions have affected their personal lives, the derision they face by society at their “rebellion” and “deviance” (Abid 2015), and the difficulty of having a social life where meat-dishes are a sign of higher status and hospitality for guests (Baweja 2015). These factors are explored in detail in Paper II in which the respondents for this study describe their perceptions about vegetarianism in light of their ideas of ‘good’ food.

Similarly, concern and debate with social justice and animal rights has been increasing, but it has not yet reached the level of interest as in most Western countries. As yet, there are no scholarly papers on animal rights in Pakistan, although newspaper and blog articles have been on the rise in the past decade. Most critically, there are no laws against animal cruelty in the Pakistan Constitution. However, certain laws such as the Prevention of Cruelty to Animals Act (passed in 1890 for united India under British

Rule),⁴¹ the North-West Frontier Province Wildlife Act of 1975 deals with the protection of wildlife, regulating hunting, trophy trading, and the maintenance of national parks. Section 377 of the Penal Code is the only other law relating to animals, and this one considers offenses such as sexual relationships with animals. In 1878, however, the Society for the Prevention of Cruelty to Animals (SPCA) was created in Karachi, which marked the beginning of a rich tradition of non-governmental individuals and communities involved in the protection of animal rights. The SPCA is currently most active in Punjab, where it is associated with the University of Veterinary and Animal Sciences, and in Karachi where it is supervised by the Edhi Foundation⁴² (Sahoutara 2014; Animal Rights Pakistan 2016).

The Brooke Hospital for Animals, an international welfare organization for donkeys, mules, and horses, established a base within Pakistan in the early 1990s and now has centres across the country. They have been instrumental in changing attitudes towards working animals and improving their conditions. More recently, the World Society for the Protection of Animals (WSPA) and the Bioresource Centre, Pakistan (BRC), have made great strides against bear-baiting practices within the country by involving local communities and mosques, as well as creating sanctuaries for rescued bears (Animal Rights Pakistan 2014).

The Pakistan Animal Welfare Society (PAWS) was created in 2004, and it began with the intention of protecting stray animals within Pakistan, which are often shot if deemed a nuisance. For example, 27,000 stray dogs were killed in Lahore in 2010 (Mirza 2012, Sahoutara 2014). The PAWS program stands out from the other initiatives in that it is currently managed in its entirety by volunteers. These organizations are built around the idea that animals deserve to have their rights protected, particularly in a country where there is a large proportion of animals used for labour, and because Islam dictates the

⁴¹ While the Act has been revised in India, there have been no changes made to the one within Pakistan.

⁴² The Edhi Foundation is a non-profit social welfare program working within Pakistan.

protection of all living things. Therefore, a Muslim must ensure that animals in their care, and animals they are consuming, are treated with respect, their needs are met, and if necessary, they are slaughtered in a humane way. This is an important point in relation to vegetarianism as well because scholars like Hamza Yousef (discussed above) consider that as animal rights within food production in particular have worsened in the past decades, vegetarianism and efforts to protect animal welfare must be taken by Muslims.

This chapter has presented an overview of the food context of Pakistan and a discussion of the middle class section of the population. It has presented evidence from the media and scholarly literature exploring food consumption related research emerging about the country, and it sets the stage for the empirical papers that continue in the dissertation. From the standpoint of the Pakistan Studies literature, the papers presented in this dissertation contribute to the food and environmental geography of Pakistan, to explorations of new urban areas like Islamabad, and to political economy and culture, with the food and mobility-focused analysis of the consequences of the fuel scarcities and violent events. The papers therefore not only challenge dominant definitions and discourses on middle class and alternative food consumption habits, but also add to theoretical discussions of how conceptualisations of food security and food vulnerability in current debates need to change to account for the problems faced by a rapidly increasing proportion of the global population.

Chapter 4: Methods

The study of food can take a number of different forms, which can range from investigations of the nutritional make-up of particular food items, contaminations, the processes and technologies involved in food production, and the role food plays in society. Because of this, food has been researched in a number of different fields, such as the medical sciences, chemistry, anthropology, and geography. However, some of the most referenced studies have emerged from the works of anthropologists, such as Margaret Mead's (1943) studies on dietary patterns and food habits, Sidney Mintz's (1986) exploration of the production and consumption of sugar and how it has been transformed historically from a luxury to an everyday commodity. Claude Lévi-Strauss' (1994) work on raw and cooked food, and Mary Douglas' (2002) study on understanding ideas of purity and impurity across different cultures.

One of the main problems in studying food, as observed by Mars and Mars (2004), is its transient nature in everyday life. However, even though food envisioned as a meal is a short-lived phenomenon, the effect left on the people consuming it is significant not only in relation to cultural association, but also because of the effect of the production, acquisition, preparation, consumption, and disposal processes. Even before the food is consumed, a large and complex array of decisions needs to be made that are related to the availability, accessibility, and perceptions of the food. The type and number of these decisions may be influenced by the degree of risk present and perceived in the food environments to which an individual and society is exposed. For this reason, questions of what constitutes 'good food', where it can be found, and which food-related information can be trusted to ensure personal safety from food consumption are of great importance, even if the actual eating of food occupies a fairly small amount of time in a day.

Following from an established scholarly tradition of food research, the methods in this dissertation are primarily qualitative and attempt to understand, assess and analyse the perceptions and practices related to food on an everyday basis, with a strong emphasis on the role of space in food consumption and food risk. The next sections present the details of the research respondents, followed by discussion of the value of using participant observation, semi-structured interviews, and walking in fieldwork related to food and the particular methods used.

Respondent Details

The respondents for this study were recruited in two stages. The first was a pilot study undertaken in August 2013. The basic details of the research topic were introduced to two of my neighbours and, after the first two interviews, I asked them if they could suggest and refer me to other families who would be interested in participating. Through this snowball technique in the pilot study, 20 families were recruited.

It was during this period that I experimented with research questions and explored which techniques were preferable for the respondents. I discovered that starting with broad questions about health concerns and concerns about urban living and then narrowing down to the specific concerns about food during tea and meal times was fruitful. It was during this time that I asked respondents about specific food items that were a cause of concern in everyday food consumption. This line of inquiry led to the research on following the chicken presented in Paper IV and the examples of milk as a problematic food commodity discussed in Papers II and III.

The second stage of the fieldwork was divided into two main phases, December 2013-March 2014 and May 2014-August 2014, with a recruitment of a further 46 households. 35 households were recruited by asking earlier respondents for referrals; the rest were requested to participate when encountered at the produce market and one of the major grocery stores in the city. This final recruitment was very slow and usually only one out

of five people asked would agree to participate and cited a lack of time as the primary reason for not participating. Out of these 46, four households dropped out after the first two weeks referring to busy schedules as their main reason and another two stopped responding after the first interview and could not be reached. The four families who dropped out were happy for me to use the material from their interviews in my research, but I did not include the ones from the two families who stopped responding because of unclear intentions. In the final selection of 60 families, eight were known to me before the start of my fieldwork, and the rest were unfamiliar.

Middle class consumers in Islamabad were selected because of their noted purchasing power and desire to consume high-quality goods, their ability in shaping the markets around them according to their consumption desires, and because they offer the greatest diversity in values, priorities, and cultural background in Pakistani socio-economic classes (Nayab 2011; Maqsood 2014). In terms of middle class food consumption, although over half of the female respondents were employed and had delegated most of the cooking activities to domestic workers,⁴³ they formed over 80% of the active respondents. In early interviews with the respondents, however, all members of the household were present and participating. Therefore, despite the presence of male members of households, women were more likely to participate actively in questions related to household food consumption.

Details of the respondents are presented below in Table 4.1, and the age and occupation breakdown is included in as Appendix A. Details of which sector they live in are not mentioned by their request, although all nineteen residential sectors were covered. In the following table and in the dissertation, 'respondents' are considered as the members of the family who would be engaged the most during interviews and

⁴³ This involved instructions on what to purchase, what to cook and how to cook. Most female respondents would ask them to prepare vegetables and meat and do the main cooking themselves for some meals. The domestic workers would only cook what they would be asked to by the respondents, but would also sometimes participate with suggestions with the respondents when they were unsure on what to cook for a particular meal.

shopping sessions, even when other members of the family were present. In all cases, these family members also took the most active role in the food acquisition and food preparation process in the family.

Table 4.1 Respondent Details

	Number	Percentage (of 60)
Average family size	5 (Range from 2-8)	8.3%
Male respondents	7	11.6%
Female respondents	53	88.3%
Average age of respondents	38 (Range from 23-65)	-
Families with household helpers (maids or cooks)	58	97%
Families with cars	60	100%
Employed with paying jobs ⁴⁴	39	65%
Educated beyond high-school level	49	81.6%
Born in Islamabad	10	16.6%

Interviews

Interviewing is one of the most commonly used methods in qualitative research, ranging on a gradient from structured, semi-structured, to unstructured (King 2010). With a wide range of styles and traditions, all qualitative and semi-structured interviews have the following features in common: firstly, a conversation or discussion between two or more people; secondly, a narrative, themed, and fluid approach, where a set of topics needs to be explored - potentially with a prepared interview guide - but lacks the structure and rigidity of structured interviews; thirdly, a recognition that situated knowledge is produced in the interview; and finally, that the interview experience is a social and learning event for all the interview participants (Mason 2002; Rubin and Rubin 2011; Edwards and Holland 2013). Therefore, qualitative interviewing can be a powerful tool in food studies research, particularly because of its ability to help explore complex concepts, multiple perspectives about an issue, and the social processes at work.

⁴⁴ This category is excluding housewives/househusbands, self-funded students and short term volunteers. Full occupational breakdown is presented in Appendix A

Hubert (2004) notes that in studies of food, conversations with the individuals responsible for cooking and shopping are essential for obtaining in-depth data about the role of food in everyday life.

530 interviews were conducted in total during the fieldwork for this dissertation. For a full breakdown of number of interviews for each respondent, see Appendix A. The interviews mainly took place in Urdu and Punjabi, although the younger participants would often use English phrases and words. Being fluent in Urdu, Punjabi and English, language was not a problem for me during the interviews. Reticence of some respondents, and the sites such as markets where most of the interviews were conducted meant that it was not possible to use audio recorders. Most of the interviews were conducted while walking in shopping areas, where ambient noise and the length of recordings made them difficult to comprehend. Therefore, after the first three attempts, recording was abandoned in favour of detailed research notes combined with records from participant observation sessions.

Participant Observation

The value of participant observation as a research approach has been recognized and extensively used in sociological, anthropological and geographical research (De Munck and Sobo 1998). Kawulich (2005) describes the process as “the process enabling researchers to learn about the activities of the people under study in the natural setting through observing and participating in those activities” (p. 1). Schensul and colleagues’ (1999) considers it as “the process of learning through exposure to or involvement in the day-to-day or routine activities of participants in the researcher setting” (p. 21). Participant observation for food has been conducted many times, notably by Jeremy MacClancy (2004) in his study of a Navarran village, where he credits his repeated and intensive visits to and participation in the community’s everyday tasks to the honesty of the villagers, their acceptance of him, and the amount of information he gained about

their food habits. The value of long term and repeated participant observation as opposed to the short-term observations by experts is also noted by Nancy Pollock (2004) in her work on diets after nuclear testing in the Marshall Islands, where only the ethnographer could observe the values associated with food and how particular food acquisition and preparation practices may be relevant in controlling the effects of ingested radiation. A larger ethnographic study focusing on the food system and food habits of the Otammari in Benin also utilized participant observation in combination with market visits and interviews to develop rich descriptions of the local food system and the consumption habits of the local population (van Liere et al. 1996). The advantages of participant observation in combination with interviewing in fieldwork related to food is similarly seen in the study on migrants and the use of allotments by Gerodetti and Foster (2015), where half of the interviews were carried out on the allotments to allow the interviewees to talk through their embodied experience of food production. This led to the interviewees' providing more detail about their experiences and emotions, which did not happen when the interviews took place away from their gardens when they were not engaged in the same activities.

Participant observation was an essential component of fieldwork for this dissertation for observing and describing food acquisition practices. In order to do this, it was necessary to develop good relations with the respondent families and to be allowed to spend time with them on shopping days (Hubert 2004). The participant observation sessions would often take place in produce markets, grocery stores, and in households during meal preparation, ingredient organisation and storage, and in clearing up meals. I would ask respondents to inform me when they would go on food shopping trips and when I could join them for extended periods of time which would include at least two meals in a row. Although in the first two or three instances the respondents would treat me as a guest and would not let me participate in meal preparation, familiarity had a major impact after some time and I would help out in the 'dirty' work for cooking with peeling and cutting

the food, setting the table, and helping clear up. I would also join them during the meals and in tea times with the family and sometimes their friends. The observations made during these excursions were noted down in a field notebook and personal observations were distinguished from respondents' quotations and their observations.

'Follow the Thing'

During the earlier stages of fieldwork, chicken was identified by the respondents as being a particularly problematic food item, followed by milk and fresh produce. Because of the level of interest shown by the respondents in exploring the food chain processes of the chicken, a significant portion of the second phase of fieldwork was devoted to how the consumers explored the geography of chicken. In this regard, this section of the fieldwork was very similar to the 'follow the thing' body of literature currently led by Ian Cook and colleagues whose research is concerned with unveiling commodity chains (Cook and Harrison 2007; Cook and Woodyer 2012; Cook 2014). While this literature and the anthropologies of single food items are discussed in Paper IV, here I will discuss how the research was carried out for this dissertation.

'Follow the thing' literatures are currently focused on tracing the spatial origins of food items. Considering that the organic food movement also uses spatial origins and commodity biographies as a primary marketing tool (Cook and Crang 1996), providing meaningful knowledge about different consumer items is useful in educating consumers about the realities of production chains and the people and places implicated in them. In this dissertation, I followed the geographies of the broiler chicken as investigated by the consumers themselves. In the case of the consumers in Islamabad, each step of the unveiling is initiated and performed by them, often driven by health concerns triggered by documentaries and articles discussing the chicken production industries in western countries. Participant observation was crucial in observing and documenting how the respondents engaged with retailers and by arranging visits to see how chickens were

raised and fed. My role in this process was to go along with them on three of these visits as the farm owners and veterinarians explained and showed the process to the consumers. Therefore, my participation in the follow-the-chicken portion of fieldwork was focused more on observing how the consumers explored these geographies of their own volition. The methods and results of this portion of the dissertation are discussed further in Paper IV.

Food Maps, Diaries and Photographs

In the initial interviews I asked the respondents to map out their food shopping locations and travel routes on printed-out copies of maps, write down the meals consumed during a day, and take photographs of their meals and food locations (some pictured in Chapter 3). However, with the exception of two individuals who drew on the maps, others did not want to draw and instead preferred to tell me their shopping locations and routes. They explained their reticence with their unfamiliarity with interacting with maps, and often were not sure how to identify locations. The respondents who did make the food maps were younger, and enjoyed using features like Google Maps and satellite navigation while driving. For the food diary however, none of the respondents participated and asked me whether they could instead tell me in person or on the phone. They considered diaries to be a very time-consuming activity, and said that they would forget because of the routines of meal times. Therefore, they found it easier for me to follow up with them either in person, phone calls, or text messages, so they could update me on their meals. A major proportion of the respondents sent me photos of their meals, and then discussed those photos during interviews. These 'food diary conversations' became more beneficial than the food diaries themselves might have been, as the respondents would discuss the motivations behind their choices and whether or not they had had any particular concerns or issues.

There was greater active involvement for photographs, with all the respondents taking photographs with their camera phones and sending them to me through mobile applications. For the most part, the photographs were of the meals they were about to eat, either of individual dishes or of the table set with food. Other photographs were of meals eaten at restaurants and cafes and sections of the produce market and some grocery stores. I organized these photographs in separate folders for each participant, labelled with their selected pseudonym and added the descriptive information provided by them in the meta-information.

Field Notes

As mentioned above, most of my field recordings were done in the form of field notes, either in breaks I would have during spending time with the respondents, or after each meeting. I kept a small notebook in my handbag, having found smaller sized notebooks more unobtrusive and convenient. I would always write down impressions in my car before leaving their house. Using the notebook clearly was much easier during meal preparation, when someone would want to share a recipe with me, in which case they were often quite pleased that I could write it down straight away. My field notes were usually written in English and ‘Urdish’ where I would write Urdu using the English script, which I found to be faster and more legible, particularly for later recall.

During shopping trips, I preferred to use my phone’s note-taking application as opposed to my notebook, to draw less attention to myself and because of the ease of writing while walking. As I would often be helping the respondents with carrying their shopping and picking up some items in the store, it was not possible to use my notebook in these situations. Further, it was more useful to focus completely on the dialogue while walking during these sessions.

Walking as Methodology

In the past few years, walking with participants for 'walk and talk' sessions, or conducting 'go-along' interviews have become more common among social scientists (Anderson 2004; Hein et al. 2008; Van Cauwenberg et al. 2012). This approach has been presented as a way of generating a richer description from the participants when they are triggered by particular locations or personal connections to these locations (Evans and Jones 2011). In their study investigating the effectiveness of walking in eliciting information, Evans and Jones (2011) distinguish between 'mobile methods' and 'sedentary methods in motion', where one may involve walking or cycling and the other may have the researcher and participant seated in a vehicle like a train. Both methods expose the participant and researcher to a different set of sensations and experiences. In a walking interview, the researcher may use prompts from the environment to elicit a response, and conduct the interview in a relevant route, a technique that can be considered similar to 'shadowing' (McDonald 2005). For these interviews, choice of route is also significant, with either the interviewee or the researcher deciding which locations are to be visited. Guided tours designed by the researcher and routes following a pre-set or routine path of the interviewee both offer advantages, however the latter may be more useful in gaining insights into the participant's everyday routine. Kusenbach (2003), in her study evaluating the use of go-along interviews in exploring urban neighbourhoods, also discovered that these methods allow the researchers to be placed in the everyday worlds of the interviewees, which enables and improves understanding of their lived experiences as they happen. The author preferred conducting these interviews along routes that the respondents would be using in their daily routine, and did not design new routes to ensure that she received data on their real, lived experiences.

Over 80% of the interviews conducted for this dissertation fall under the category of participatory walking interviews discussed by Carpiano (2009), and follow the routes of the participants during their shopping trips. For these interviews, the respondents would inform me when the trip would take place, and I would either accompany them in their car or drive myself, depending on their convenience and my help with carrying their shopping while asking my questions. These walking interviews were also useful in understanding the respondents' relationship with these spaces and emphasised the role of spatial context in the discussion of food and food related stresses. The content and quality of information received was also markedly different from that gleaned from sedentary interviews conducted in the respondents' homes or in restaurants. Of the three different kinds of interviews conducted, sedentary interviews without the presence of food, interviews while eating snacks, or a meal and interviews conducted while shopping for food, the latter provided the richest source of data.

Positionality

In this section I acknowledge and discuss my position as an 'academic homecomer' and the advantages and challenges presented by my insider/outsider status during fieldwork. In the study conducted by Oriola and Haggerty (2012) in the Niger Delta, the authors discuss the insider-outsider status of research students who go back to conduct research in their own countries, and the difficulties faced by them. As a Pakistani who has spent most of her life in Islamabad, I had insider privilege in a number of different ways: I sounded, dressed, and behaved like most other females of my age and could navigate public spaces in the city like a 'native'. However, like the research students in Oriola and Haggerty's (2012) study, I had chosen to go abroad to for higher education, and returned to my native country to conduct my research, experiencing the complications that arise from being considered native in some regards, but being foreign in others.

Consciously switching to researcher mode proved significant in taking notes and analysing them, and in differentiating between my personal interpretations and actual responses. This was particularly useful in ensuring that I was not letting my role as an ‘insider’ prevent me from observing and describing features and events that ‘outsider’ researchers would be more sensitive to. However, I found my position as an insider useful in locating myself as someone familiar with the city, as I could tell participants that I had a long-standing history with the city. It was also convenient for mobility, and I had no problems accessing public spaces and did not attract any more attention than is awarded to other people of my age and gender. For these respondents, I was like one of their family, where it was their duty to ensure that I was taken care for.

At the same time, however, looking and sounding like an insider was problematic at times when participants would assume a level of knowledge or familiarity on my part which I did not always have, particularly concerning recent changes in the city or location-specific cultural differences that I was not privy to. In these instances, it was useful to consider the idea of “sensitisation” discussed by Wegener (2014) to help me understand the emotional aspects of the fieldwork and how to guide my path when crossing the boundaries between insider and outsider.

My association with the University of Oxford and my previous affiliation with the University of Pennsylvania did mark me as an outsider. Phrases like “now you are one of them, in many ways”, or “you are a *farangi*⁴⁵ so your own food makes you ill!” became quite common if I displayed characteristics that the respondents would associate with western countries. However, this was not a drawback during the fieldwork and would often elicit responses of even greater detail than I had expected in case I had “forgotten what it is like”. While these moments were frustrating to encounter, like Oriola and Haggerty (2012) in their research in the Niger Delta, I also recognised that I was no longer as ‘Pakistani’ as my respondents and my time abroad during my education had

⁴⁵ Term used to indicate foreigners or those with European descent or affiliation

changed me in ways that extended beyond my physical intolerance of fried foods and tap water. Unlike other researchers (Feldman et al. 2004; Watts 2006), informing people of my affiliation with Oxford did not have a significant effect in providing access, as I discovered that respondents who would connect me with other families would often just introduce me as “a girl doing a PhD in London”. Instead, my affiliation with a western country and my path towards a doctoral degree meant that some respondents would see me as an expert on things like nutrition and health and would inquire at many points if their meal decisions were nutritionally acceptable. Having no background in nutrition, I would decline to comment and reiterate that this was not my area of study. This would also often lead to discussions on how I did not have to worry as much as them about food and health issues as I must have done when I had been living in Pakistan.

Analysis

Much of my field data was in the form of my personal field notes and photographs provided by the respondents. I chose not to use software for the analysis and kept a manual system of classification (Hubert 2004). Organising and reorganising by theme was a lengthy and iterative process, but useful because of my comprehensive understanding of the relationship of the different categories, and how to then relate it to the literature review.

Study Site

The site selected for study is the city of Islamabad, the capital of Pakistan. It is located in the north-east region of Pakistan. Located in the subtropical climate zone, Pakistan experiences five seasons, with Islamabad having very hot summers and bitterly cold winters.⁴⁶ The city houses the Parliament, main civic administration offices, and foreign

⁴⁶ With an average national temperature range of 13 °C (55 °F) in January to 38 °C (100 °F) in June (Bajwa 2015). The rainy monsoon season in the summer months of July and August and winter rains provide the greatest proportion of rainfall. The extremes in temperature faced by people in different parts of the country are compounded by a lack of electricity and gas-supply

embassies, and is home to a number of internationally recognized universities. Architecturally, Islamabad has a mix of modern architecture, represented by commercial and retail centres, and Islamic architecture, shown in the Faisal Mosque and the newly built Pakistan Monument. Islam is the dominant religion in Islamabad, represented by about 95% of the population (Bajwa 2015).

The city of Islamabad was founded in 1956 and planned by Greek architect C. A. Doxiadis to replace Karachi as the capital of the new state (Maria and Imran 2006). The site selected lay in close proximity to the city of Rawalpindi to provide infrastructural support to the developing city and to provide a supply of labor during the major construction period. The city plan, as envisioned by Doxiadis, underwent significant changes throughout the planning and development period, but major elements of the original design were retained. The original Master Plan of Metropolitan Islamabad was based on the principles of the dynametropolis –a dynamic metropolis comprised of Islamabad, Rawalpindi, and the National Park (Kreutzmann 2013).

It was developed with a grid-iron layout developed into 2 x 2 kilometer sectors segregated by 600 ft. wide principal roads (Daechsel 2013). However, because of political and organisational reasons, such as the administrative and human resource fragmentation between Islamabad and Rawalpindi, the original master plan was abandoned in the late 1970s. Subsequent revisions took place until the 1980s, which culminated in the most important change in the form of the 1992 Islamabad Capital Territory (ICT) Zoning Regulation. Under this regulation, urban areas of Islamabad were divided into five distinct zones: (1) residential, (2) educational, (3) commercial and administrative, (4) private housing developments, and, (5) Margallah Hills National Park, Islamabad Park and rural areas. The grid-iron arrangement, shown in Figure 5, the central nature of shopping activities and the removal of food production activities from the urban areas are of particular interest in this dissertation.

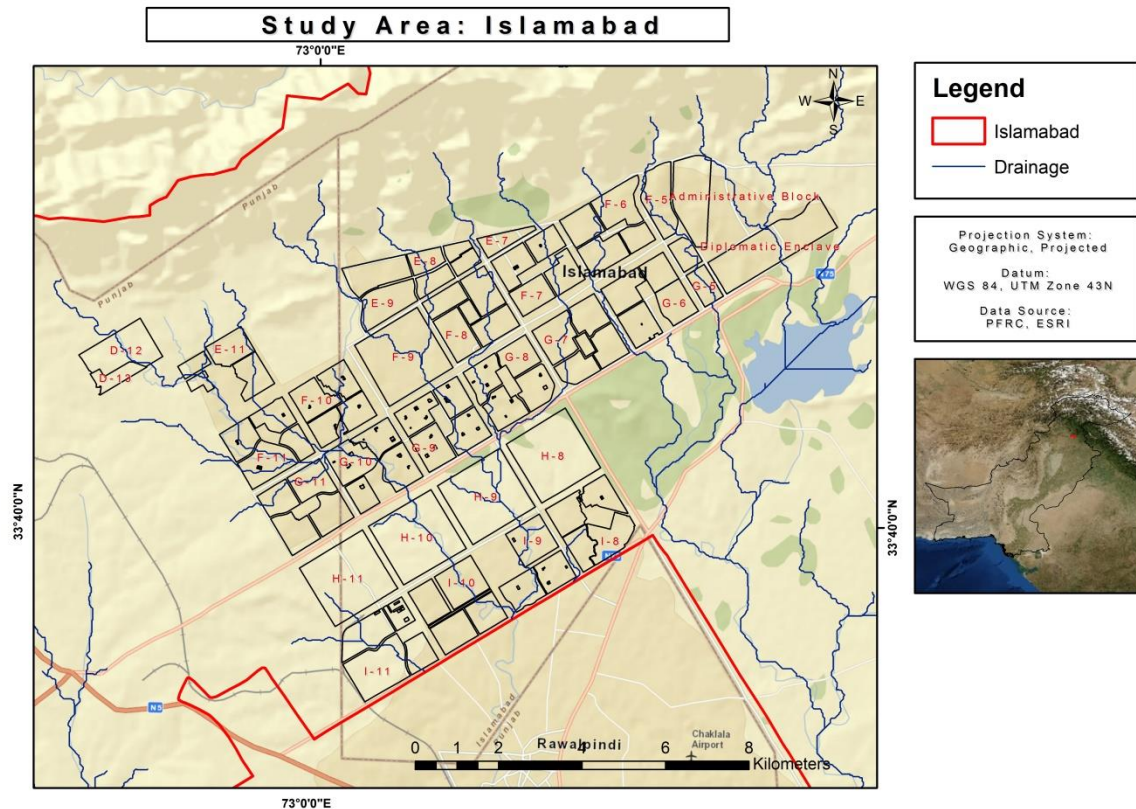


Figure 4.1 Study Area: Islamabad, Pakistan – by Aneeqa Abrar

Each sector contains at least five shopping areas: one major shopping area, and one each for the sub-sectors. For example, sector F-8 will have one large shopping area located in the center, and sub-sectors, F-8/1, F-8/2, F-8/3 and F-8/4 will each have a smaller market. Certain sectors have larger and more dedicated shopping areas, with more stores and parking as compared to others. So a resident of F-6 has access to at least 5 markets within the $2 \times 2 \text{ km}^2$ area. However, s/he will have to travel to gain access to the weekly produce markets or the wholesale produce markets if s/he chooses. The city has been designed to ensure that people have access to the basic necessities of life within walking distance. However, the residents are quite dependent on vehicles as a mode of transport, and although public transportation is present, it has been limited to privately owned vans that can be cramped and only frequent a few main roads. Therefore, all upper and middle class households own at least one car, and lower class households depend on public transportation, rental cars, or carpool with others.

The dependence on vehicular transportation exists despite the walkable nature of each sector (HIES 2013). In the case of women, this is partly associated with ideas of cultural ‘protection’ of women, and with creating feelings of safety, i.e. female respondents report feeling unsafe during travel unless they are driving, or being driven by family members or hired drivers (Naila, Personal Communication, August 12, 2014). The lack of safety is also connected with public transport, and the fact that Pakistani women are rarely seen driving mopeds or bicycles. Respondents do consider their sub-sector markets to be sufficient for every-day needs, but consider access by personal vehicles to further, larger markets essential. Car dependence in the essentially walkable context of Islamabad is discussed further in Paper I, in the context of every-day disruptions. After the completion of fieldwork, a new transportation system (the Islamabad Metrobus) was developed to connect the twin city of Rawalpindi with Islamabad. Undoubtedly, this project will have a significant effect on the transportation preferences of local residents.

Choosing Islamabad as my study site had the added advantage of using my parents’ house as a base. The house is located in one of the older central sectors of the city and, besides making physical access to other parts of the city more convenient, it also provided a degree of comfort for the respondents to know that my ‘roots’ were in the city. I also used my mother’s car as my primary mode of transport, as using taxis was expensive and other modes of public transportation were not convenient.

Limitations

Although I had no personal transportation limitations, there were periods of the fieldwork when there were logistical issues with arranging meetings with respondents, particularly during the month of Ramadan. During that time, if I was not meeting the participants for the evening fast-breaking meal (*iftaar*), I would contact them through phone calls if they preferred, because for the rest of the day most of the participants would either be working or devoting their time to prayer. Because of the security risks during my

fieldwork, I would also avoid going out after dark if I was not with other people. However, this was not major limitation because my respondents would also limit their trips to during the daytime or with the rest of the family.

Another limitation was imposed by seasonal effects, especially in the summer and winter months, when my respondents would also be unwilling to have me meet them when the electricity load shedding in the summer and gas shortages in the winter would make houses fairly uncomfortable, discussed in Paper I. In these instances, they would say that, since they could not make their homes a hospitable place, they would rather meet elsewhere or have a phone conversation. Despite my insistence, this remained a significant roadblock throughout the extreme weather events. Terrorism and sectarian events also limited mobility at some times, most significantly during the March 2014 firearm and bomb attack on a district court in a sector market close to my house. As this market had many stores that were popular with the respondents, the area was avoided for a few days and some respondents refused to meet me because they had been limiting their travel.

Another potential limitation was that I could not live with my respondents, which was partly associated with cultural expectations with me being a single female in the city, and partly with their convenience. Although I had been worried about this as a major limitation before beginning fieldwork, keeping my house as my primary base afforded me a degree of freedom. Not only could I meet with multiple participants during a day, but the respondents also did not think of me as a burden. Finally, living in the city with my parents also offered legitimacy and a certain degree of comfort to the respondents, because it indicated not only that I had personal interest in the research, but that even with the time spent living abroad, I was one of them.

Ethics Approval

Ethics approval was sought and approved by the Central University Research Ethics Committee (CUREC) at the University of Oxford. In the first meeting with respondents, oral consent was obtained for participation in the research, use of their responses and photographs taken by respondents in the research and an assurance that they could withdraw from the research at any point. Although sensitive issues were not addressed as part of the research, some respondents became upset while discussing the impacts of violent events and health issues that were linked to food consumption. A significant proportion also considered their income and expenditure a sensitive topic and preferred not to divulge that information. Pseudonyms were assigned at the beginning of fieldwork and have been used throughout the dissertation.

Chapter 5 (*Paper I*): Disruptions and Food Consumption in Islamabad: The Role of Anticipatory Logic and Preparedness

Abstract

This paper investigates the disruptions in everyday routine and the stresses of food sourcing in the urban food environment among middle class residents of Islamabad, Pakistan. As such, it explores the dynamism of urban food environments in developing countries under the influence of various stressors and highlights particular adaptations undertaken by middle class urban consumers. It thereby presents a middle class view of urban food security and explores the potential constraints on food acquisition for a section of the population that has normally considered itself food secure. The paper examines how seasonal scarcities of gas and water, artificial cost inflations during the month of fasting and regional and local disasters such as floods and militant violence influence food decisions within the self-identified, food secure middle class population of the city. The paper pays particular attention to the temporal nature of these disruptions, how disruptions impact perceptions and experiences of food sourcing and the subsequent temporal and spatial adaptations adopted. Specifically it contributes to the literatures on food environments and food security by demonstrating how such disruptions contribute to dynamism within food environments, how the middle class responds to these changes in their everyday lives, and how their perceptions on personal food security are threatened. It follows that the paper adds to literatures on the role of time, personal routines and anticipatory logic in the context of food consumption within a developing country using a grounded individual-based perspective of an urban food environment.

Target Journal - Geoforum

Introduction

The mornings are Farzana's domain: After morning prayers,⁴⁷ she and her maid Faiza chat over a cup of tea: "this is our time to relax, before the insanity starts! Before, I would just go back to sleep and properly wake up around nine." She and Faiza then begin preparing the meals for the day. Farzana is not alone in adapting her daily schedule to match the availability of gas or electricity. She refers to a number of her friends who have adopted similar strategies to manage their everyday food routines. "Gas crisis, petrol crisis, water crisis, security crisis, price crisis, we still have to eat, don't we?" (February 11, 2014)⁴⁸

For Farzana and respondents like her, "there is always something new and unforeseen that introduces itself into the repetitive" (Lefebvre 2004: 4). Regularity, routine and predictable cycles like those of the sun during the day, seasons, calendrical festivals, transportation schedules (Sandhu 2007), opening hours of shops (LaBelle 2008), and meal times give people a "temporal sense of place" (Edensor 2012: 4). The combination of natural and mechanistic rhythms characterises one's everyday existence (De Certeau 1998). Beginning with the importance of rhythms in everyday life in urban areas, this paper takes Lefebvre's concept of 'rhythmanalysis' as a starting point and brings it into dialogue with the notion of 'food environments' as discussed by scholars in urban design and health (Kelly et al. 2011, Minaker et al. 2013). These concepts enable us to acknowledge and emphasise the dynamic nature of urban areas and the significance of temporal rhythms on daily, weekly and seasonal experiences of urban food environments for individuals. Indeed food is a useful lens through which we can observe

⁴⁷ The morning 'fajr' prayers are performed before sunrise.

⁴⁸ This vignette is an extract from my field diary kept during my fieldwork in 2013-2014. The field diary was used mostly to note my own impressions and evaluations of situations and quotations from participants. All the names used in field diary extracts and participant quotations are pseudonyms.

the changes in a city throughout the year. The aforementioned urban rhythms can be observed through food, especially the seasonality of food production, consumption and meal times.

Acknowledging the significance of rhythms and urban areas, Lefebvre suggested rhythmanalysis as a tool for studying everyday life (2004). While he engages primarily with rhythms in the contexts of space, music, and the human body, urban rhythms have received considerable attention in recent scholarship. This includes Wunderlich's (2013) writing on the aesthetics of place-temporality and urban rhythms, O'Connor's (2014) work on exploring the rhythms connecting and limiting Muslim minorities in Hong Kong with the hajj pilgrimage to Mecca, and Temelova and Novak's (2011) study on the temporalities and transformation of spaces in Prague. Wunderlich (2013) explores the place-rhythms of urban spaces in London, and emphasises how regularity and routine characterise the public places in question, highlighting how the urban experience transforms over time.

Although conceptually strong in using of theory from music and urban design, Wunderlich (2013) does not include a discussion of disruptions and their role in shaping urban spaces. Temelova and Novak (2011) further illustrate the value of rhythms in cities in evaluating the regeneration dynamics in particular neighbourhoods in Prague, and point out the differences in public-space engagement in post-socialist countries with others. Yet, like Wunderlich (2013) there is no explicit discussion of disruptions in rhythm; Temelova and Novak (2011) discuss the influence of regeneration projects on shaping the locals' experience of space and time. In discussing the rhythms of retail spaces, Karrholm (2009: 423) details the "heterogeneous temporalities and rhythms set by clock time, working hours, seasons, timetables, bodily functions, etc., leaving places hectic and dense at some times and deserted others". In spite of the value of heterogeneity of rhythms in one's environment, studies like those of Highmore (2004) on social aesthetics and Marshall (2005) on ritual, routine, and convention in food

consumption, point to the importance of maintaining routine in everyday life. Any events that seek to disrupt these embedded routines and create uncertainty regarding the future are a cause for significant stress (2014). These disruptions can not only create disorder in everyday life, but also lend an element of unfamiliarity. Binnie and Edensor (2007), in writing about everyday mobilities, note that while this unfamiliarity can engender insecurity, it simultaneously carries the potential of developing solutions for dealing with the insecurity. These papers reveal that analyses of urban rhythms and the factors that affect them are crucial in understanding the development of urban areas and how disruptions and unfamiliarity impact every day activities. In the context of food access and everyday risks and uncertainties in urban areas, these solutions become essential for maintaining a preferred routine and potentially safeguarding and improving one's food security.

In the case of Islamabad, Pakistan, these solutions tend to take the form of temporal and spatial adjustments and the acquisition of particular technologies. While Islamabad is considered a modern city, planned with future population increase in mind, it is strongly affected by the country's economic problems. Among Pakistan's myriad problems, its energy and security crises are currently at the forefront (Masood and Shah 2012). Although policy decisions made in 1994 are considered to have played a significant role in creating the fuel crisis, most scholars point to policies established in 2007 as the key contributor (Aftab 2014). The fuel crisis resulted in the country wide shortage of petrol and natural gas and chronic power cuts, which has severely affected the economy, particularly in the transport and industrial sector. Rising rates of electricity tariffs in conjunction with increasing power cuts also significantly impacted Pakistani citizens across the country. However, the crisis was accelerated more recently, in part by former president Pervez Musharraf's choice to encourage the use of compressed

natural gas (CNG) in vehicles and public transportation between 1999 and 2001.⁴⁹ This was meant to increase reliance on the country's domestic gas supply instead of foreign oil, and reduce the environmental impact of petrol and diesel burning vehicles. However, with the increasing number of household consumers, combined with the number of people using the significantly cheaper CNG for their cars, as well as consumption by power plants and industries, the decision ultimately proved to be unsustainable. The country's demands are far outstripping the supply (Hussain 2012), which has led to rationing and plans to eventually phase out CNG for vehicles, causing consumers to turn to more expensive alternatives like petrol and diesel, or switch to walking for nearby locations. Although Islamabad had been designed to ensure that every day amenities are located within walking distance, residents are strongly car-dependent, with middle class families owning at least one personal vehicle.⁵⁰

Further, with the increased cost of wheat in global markets and the near-yearly flooding affecting agricultural output, food price inflation is also an everyday reality for citizens. Shopkeepers are forced to add the transportation costs to the product cost in efforts to stay afloat. For business owners and small-scale farmers who had been dependent on cheap transportation networks to bring their wares to the city, coming to the city is no longer a financially feasible option. Urban areas in Pakistan currently face an average of 8 hours of load shedding for electricity per day, with power generation at 7,500 MW as compared to a demand of 12,000 MW (Aftab 2014).

⁴⁹ This made Pakistan the largest user of clean, compressed gas for vehicles in 2011: <http://www.dawn.com/news/633775/pakistan-largest-cng-user-2>.

⁵⁰ The city is planned in a grid-iron pattern, with each 'sector' 2km² in area. Each sector has one large market, and four smaller ones, one each for the sub-sectors. These markets have grocery shops, vegetable and fruit stalls, and occasionally butchers. However, since the city is also zoned into residential, commercial, and retail areas, a significant proportion of the population depends on personal transportation instead of public transportation for travel. Walking is often not a feasible option for longer distances (because of the lack of pedestrian crossing, and concerns about safety), and cycling is rare – particularly for women, because of the ease and comfort of driving, and a cultural environment that dissuades female cyclists.

Fuel scarcity in urban areas is not a problem unique to Pakistan. Gebreegziabher and colleagues (2012) consider the dependence of urban Ethiopia on its rural areas for fuel needs, which have resulted in deforestation, fuel scarcity and high fuel wood prices. Adelekan and Jerome (2006) examine the effects of increasing prices of energy sources on household income for the low and middle-income in Ibadan, Nigeria and discuss the potential for shifting to more environmentally friendly fuel options. Further investigating the pressures associated with rapid and often unplanned urban development, Jaber and Probert (2001) explore Jordan's case with the energy mix used in urban areas and the associated environmental and health problems. These studies and others, such as household electricity use in urban Gauteng, South Africa (Musango 2014), use of cooking fuel in Hyderabad, India (Nayak et al. 2015), and use of fuel wood by urban residents in Africa (Johnsen 1999; Guta 2014), overwhelmingly focus on the lower-income class of people in urban areas (Leach 1987). While this focus is understandably important considering the high rates of rural-urban migration by poorer populations, it does not consider middle-higher income population groups that live in the same energy and fuel-poor locations, have their own adaptation strategies like cutting trees and burning wood that have consequences such as deforestation and air pollution.

In addition to energy scarcity, the potential for violent events like terrorist attacks and sectarian violence adds another layer of disruption and uncertainty to everyday life in Islamabad. The unique approach to warfare adopted by terrorists is strongly dependent on personalising fear in a manner that everyone in the target civilian population feels vulnerable (Tucker and Speirs 2003). Maguen and colleagues (2008) note that fear of a terrorist attack can "lead to maladaptive or unnecessary coping strategies and avoidant behaviour" (2008: 17) which can have major repercussions on societal functioning and the economy. Authors like Coward and Martin (2009) also argue that contemporary urbanisation leads to system and infrastructure weaknesses that can be affected by acts of targeted violence. Islamabad has been victim to a number of violent incidents in the

past few years, with attacks on a district court, the Marriott hotel, religious congregations, and a bulk food produce market, among others.⁵¹ Presence of security blockades on the roads, barricades around certain houses, and a heavy police and military presence in public spaces only reinforce the fear and sense of impending danger of future attacks. Following the September 2001 attacks on the Twin Towers in the United States, literature evaluating the effects of such events and associated coping strategies of effected people has been on the rise. A significant proportion of this literature examines estimations of risk by the civilian population (Small et al. 2006), psychological impacts of terror (Bleich et al. 2003), and resilience to fear (Bonanno 2004; Moore et al. 2014). For the most part, this literature has focused on the United States (Small et al. 2006) and Israel and Palestine (Bleich et al. 2003; Bonanno 2004; Braun-Lewensohn et al. 2009). A much smaller subset of the literature has evaluated the effect of terrorism on developing countries in Asia and Africa. An exception, Waheed and Ahmad (2012) discuss the socioeconomic dynamics of families affected by terrorism in Lahore, Pakistan and assert that with low state support, family breadwinners and educated working-class youth are affected the most. Much of this literature therefore emphasizes how ideas of safety shift because of the increased perception of risk. However, to my knowledge, there are no studies that investigate the combined impact of fear of violence with fuel and water crises on everyday food acquisition limitations in cities suffering from multiple violent events each year. An exploration along these lines is significant not only in the light of contemporary issues with resource

⁵¹ Islamabad's Marriott hotel is located close to government buildings, the Parliament and a number of popular markets. A bomb explosion in 2008 killed 52 people and damaged nearby buildings: <http://www.telegraph.co.uk/news/worldnews/asia/pakistan/3041148/Islamabad-Marriott-hotel-bomb-killed-52-says-Pakistan.html>. A twin-suicide attack in a local district court located in a popular and crowded sector-market killed 11 people and injured 25 others in 2014, and tightened security in the area for a few days: <http://tribune.com.pk/story/678286/firing-ensues-in-district-court-in-islamabad/>. A bomb explosion wounded over 50 people during religious celebration in a popular shrine: <http://www.thenews.com.pk/Todays-News-13-31082-52-people-wounded-in-Islamabad-shrine-blast>. A timed explosion in the city's main fruit market killed 23 and injured over a 100 people in 2014: <http://www.thenews.com.pk/article-143955-23-killed-in-Islamabad-fruit-market-blast>.

limitation and violent events, but also from an academic perspective, where food acquisition strategies can be approached from a context of everyday disruption. These findings illustrate the vulnerability of significant proportions of the population's food insecurity, and importantly, explore how their experience and strategies may have implications for how food consumption is studied in developing countries.

Combining issues of the uncertainty, destruction, and disruption of violent events, ensuring a steady supply of safe and sufficient food for this increasing population is also proving to be one of the world's foremost challenges (Teng et al. 2011). The United Nations' Food and Agriculture Organization (FAO) defines food security as "a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO 2003: 28). The definition has evolved significantly over time, particularly after it was recognized that food security was not simply an issue of food availability and must reflect changing political and economic contexts. Battersby, (2012) in writing about urban food security in an African context, notes that food security research in the global north has mainly focused on food politics and the structural features of the food system. However, the discourse in the global south has been primarily geared towards improving the conditions for the poor and has been tightly focused on the household level and on nutrition. Despite the fact that the FAO's definition allows for the consideration of urban food security, the dominant understanding of it in the global south is still tied to increasing production in rural areas (Battersby 2012). It can be argued that for most countries, policy-makers may focus on more visible problems such as improving nutrition profiles, reacting to episodes of famine, and providing programs like food stamps or ration cards. Food insecurity in urban areas, however, may be less visible in comparison and may come down to household levels problems of access to food in particular months. It also may be experienced by people who are not 'visibly' food insecure (Maxwell 1999). This paper

specifically responds to these gaps by illustrating the different forms and drivers of food insecurity in developing countries and highlighting the precarious position occupied by urban middle class residents. Therefore, it presents additional factors for consideration for the dominant narratives of food security, which are increasingly more relevant in contemporary times.

Despite the fact that agriculture has been the mainstay of Pakistan's economy since its inception, food security has been an ongoing problem for the country. In recent years, with natural disasters like earthquakes and floods, fuel and food price inflation have led to increased concerns about hunger, malnutrition, and food stress in rural and urban areas of the country (Ahmad and Farooq 2010, Gazdar and Mallah 2013). Gazdar and Mallah (2013) also note how food security analyses in Pakistan have either tended to focus on aggregate food availability at national or regional levels, or on individual and household level caloric consumption from a nutrition and health perspective. Ahmad and Farooq (2010) also point out how Pakistan must concentrate on increasing productivity on all foods and diversify the farming portfolios of rural households, instead of continuing with a primarily wheat-based food security mind-set, to address food security and nutrition concerns. But while Ahmad and Farooq (2010) recognize that poverty is one of the biggest hurdles in combatting food insecurity for developing countries like Pakistan, these scholars hold that besides increasing agricultural productivity, a systems approach to food production is the only solution to securing urban and rural food insecurity. However, authors like Gazdar and Mallah (2013) consider this approach to be very limited in scope and still focusing primarily on rural food insecurity. This narrow approach has considerable implications particularly in the context of countries like Pakistan, where the urban population is increasing rapidly, while responsible institutions and policies are still predominantly focused in rural areas.

There are considerable gaps in knowledge about the perceptions and behaviour of households in rural and urban areas in response to sudden and unexpected shocks in

their food environments. This paper follows Battersby's (2012) suggestion of focusing on household food geographies, coping strategies and food acquisition methods in times of stress, in order to gain a better understanding of urban food security in Pakistan. It also reinforces the complex and intertwined relationship between a city and the rest of the country by emphasizing the impact of regional scarcities, seasonal variations in resources, and national policy decisions (Teng et al. 2011).

In what follows, I draw upon research conducted for a larger ethnographic project which investigated the food environments and food consumption habits of middle class residents in Islamabad. This research was conducted over eight months during 2013-2014 and draws on participant observation and detailed interviews with a number of self-identified middle class families in Islamabad. Inspired by studies on temporalities, I discuss three different types of temporal and spatial disruptions and their associated methods of adaptation. In light of work done on anticipatory actions in response to disruptive events, I discuss the preservation of daily routines and rhythms, waiting as strategy and reacting to 'what if?' scenarios when faced with the everyday disruptions of electricity load shedding, fuel rationing, and the potential for violent attacks.

Space and Time in Islamabad's Food Environment

"When winter comes, why isn't there any gas?

When summer comes, why isn't there any electricity?

There is no gas or water, but still the heart is Pakistani

Pakistani boys just need a little petrol".⁵²

These are the oft-repeated lyrics from a short musical video developed by a Pakistani comedic group known as Lolz Studio. A popular internet-based group, Lolz Studio makes satirical and often scathing videos about the problems that befall everyday

⁵² <https://www.facebook.com/LolzStudios/video>

Pakistanis. Their videos are frequently shared by young Pakistanis, often attaining ‘viral’ status on Facebook. Although videos like this are often shared in a light-hearted manner, their proliferation shines an interesting spotlight on the current fuel and energy crisis in the country.

Pakistan’s energy crisis has been worsening in the past few years, with gas, coal and petrol demands outstripping supply (Masood and Shah 2012). Besides production losses from the fuel dependent industrial sector, there is significant stress on everyday life in cities where people’s mobility is often dependent on cars. This is a particularly important factor in the case of Islamabad, where the notable grid-iron layout of the city, and the provisions of food in the form of small markets ensures that food staples are available within walking distance. However, most of the city’s population is heavily car-dependent, and all interviewed middle class households have ready access to cars, which makes every-day transportation difficult in times of fuel stress. Home cooking as well comes increasingly under threat in the winter months as gas consumption increases for indoor heating, and household cooking and heating in urban areas is dependent entirely on gas. Combined with the higher fees for government supplied gas, monthly expenditures on food also rise because consumers turn to alternative fuels like kerosene and Liquid Petroleum Gas (LPG), eating out and purchasing prepared meals. In addition, the crisis has also resulted in long queues outside fuel stations because of gas rationing and recent petrol shortages.⁵³ As a result, news reports and social media features an abundance of ‘queue photographs’, such as the one in Figure 5.1, highlighting the hours spent waiting in line, and the disruptions to transport routes. Crucially, the rise in food costs is also associated with these fuel shortages, water shortages, regional conflict and global food prices. As such, food security is becoming a problem even for the middle class (IRIN 2012; WFP 2013).

⁵³ The 2015 petrol shortage is attributed to circular debt incurred by the national oil importer: <http://www.reuters.com/article/2015/01/19/pakistan-fuel-idUSL4N0UY3OD20150119>



Figure 5.1 Queue for fuel - photograph by Navid

In food security research, a number of studies have investigated physical access to food in urban areas, often in response to deteriorating health outcomes in urban areas in the United States (Walker et al. 2010) and the United Kingdom (Burgoine et al. 2014, Kraak et al. 2014). These factors are explored through the concept of food environments, a term which is used to refer to physical and social features of the environment that influence food consumption such as food outlets, grocery stores, supermarkets, and the kinds of foods (nutritious, unhealthy, convenience foods, etc.) available for purchase (Health Canada 2013). The term has come to the fore in recent years, in debates of physical access to food in cities and associated negative health outcomes such as obesity, diabetes and cardiovascular diseases (Kelly et al. 2011). This research has been driven mainly by the rising rates of obesity, diabetes and cardiovascular diseases in North America, and the increased availability and affordability of unhealthy, processed foods in comparison with fresh produce and healthier meals (Popkin et al. 2005; Day and Pearce 2011; Lebel et al. 2012). However, as most of these existing studies feature a cross-sectional analysis (Zenk et al. 2013; Cannuscio et al. 2014; LeDoux 2014), the temporal variations in food environments can provide significant information on food access and security over a period of time. For the purposes of this project, 'food environment' is interpreted as the physical features of the city the

individuals are exposed to and interact with and the factors that influence the individual's food-related behaviour and is used as a framing context, in order to understand food and health perceptions and choices. In this paper, the dynamic nature of food environments is highlighted, by exploring how individual food environments are disrupted and how these disruptions alter how consumers experience and adapt to them. In illustrating this dynamism, the results of this paper add to the literature on food environments by showing the value of time as a defining factor, and the agency of consumers in managing it despite major external disruptions.

Widener and Shannon (2014) point out that much of the food accessibility research does not take opening hours or changes in location into account (Chen and Clark 2013). While opening hours and issues of physical access associated with mobile food vendors and migrant sellers are of interest, the entire make-up of a food environment is also subject to change. Supermarkets and up-market retailers are still a fairly new phenomenon for most countries, discussed quite often in conjunction with suburbanisation and gentrification (Eisenhauer 2008). This change in food environment particularly rings true in developing countries, where markets in many cities occupy the often uncomfortable fringe of traditional and modern consumption spaces, with supermarkets selling imported, packaged and processed goods rub shoulders with vegetable carts laboriously brought in from bordering villages. The contents of these carts are strongly associated with seasons and agricultural temporalities. Similarly, the production and transportation of this produce is also linked with seasons, as shown in recent years, when flooding in various parts of Pakistan has hindered the harvest and distribution of produce from different parts of the country, strongly affecting food security and pricing of different food items (Ashraf et al. 2013).

Alina, a young early-career professional who tries to spend as much time at work as possible because of the persistent power outages in her residential sector, notes: "You don't need the temperature or calendar to tell you what season it is, you just see what is

not there out of electricity, gas and water” (December 29, 2013). Her place of work at least has a generator, and a food service, so she does not have to worry about cooking her meals. Similarly, Ayesha, a housewife who enjoys hosting her friends for meals a few times a month moves her entire schedule to fit in with the latest electricity load shedding schedule and the times of day when Compressed Natural Gas (CNG) is available for cars:

“I have asked the guests to come at three in the afternoon. It is a very odd time of course, but this gives me time to cook, and then I can be sure that they are here when we do have electricity. It cuts into everyone’s routines and is not as enjoyable as before...I wanted to do it earlier yesterday, but then there was no gas and my friends from Bahria Town⁵⁴ don’t like to come then”. (Ayesha, January 9, 2014)

In addition, Alina and Ayesha both commented on the geographical changes in their routines. Alina prefers to stay at work instead of returning home or going with her friends for lunch as she normally would, while Ayesha has changed where she goes for grocery shopping:

“On Wednesday when we get CNG for the car, I now go to the cash-and-carry down the road from the station. Before, I preferred to go to the city centre to the grocery store near the children’s school. But that is just not feasible any more now that it’s so hard to get CNG or petrol. The children now go by van and I try to save by going to the cash-and-carry. It’s a bit more expensive and it all racks up at the end of the year, but less expensive and time-

⁵⁴ A private development just outside the ‘official’ residential zones of the city from where it can take forty minutes to an hour to reach the central sectors of Islamabad. There has been increasing migration from Islamabad itself to Bahria Town and similar developments because of the comparatively lower property prices and a more stable supply of power, gas and water.

efficient than going to town every three days.” (Ayesha, January 9, 2014)

These incidents offer an insight into the effects on an individual's temporal and spatial adaptations in light of the energy crisis. While these changes may not appear to be as severe as those faced by the urban poor, who often have to resort to reduced or missed meals and having to consume nutrient-poor food (Kimani-Murage et al. 2014), they show the gradual increase in everyday stressors for families who have not had to face these troubles before. In the sections that follow, I discuss further examples of adaptations developed in response to the temporal disruptions caused by Pakistan's energy crises in light of extant literature on urban rhythms, anticipatory action and coping mechanisms.

Disruptions and Adaptations

While past studies on food access and mobility in urban areas have accounted for road and public transportation networks, distances to shops and locations of preferred shops (Burgoine et al. 2014; Widener and Shannon 2014), they do not take into account uncertainties in the transportation system themselves. Most of these studies also emerge from North America, particularly the United States, where, despite fluctuations in cost, the supply of fuel used in transportation remains relatively constant. This situation is very unlike developing countries such as Pakistan in the past few years. In contrast, attention here turns to how futures are anticipated and acted on in relation to events and processes that disrupt an individual's food environments.

Temporal disruptions and restructuring

Phillip Vannini (2012), in studying the temporalities of communities dependent on ferries in British Columbia, Canada, notes the differences in perceptions and experiences of time 'on the island' and in the neighbouring urban areas. He observes that moving between asynchronous temporalities can occasionally be frustrating. In this mode of

thinking, he evaluates ferry mobilities conceptualised as speed, rhythm, and durations of the patterns between locations. Inspired by Vannini's (2012) approach to temporalities, I focus here on the role of disruption. Like the participants in his study, the middle class Islamabadi residents' adaptations in their daily routines are designed towards these anticipated *disruptions* of expected rhythms. Interlinking this disruption of temporality with May and Thrift's (2003: 6) approach to TimeSpace, I argue that because of the interdependency of time and space, these disruptions significantly change the residents' experience with their food environments.

In Islamabad, temporal urban rhythms are now increasingly tied to the availability of electricity, water and gas, to the extent that people organise their routines around them. Saleha, a 30-year-old housewife with two children, manages her house on her own through most of the year. Her husband works in Canada for ten months of the year, and while he tries to 'stock up' the household essentials for the family whenever he is back, Saleha does most of the regular food shopping. Never having learnt to drive, she is dependent on neighbours or cabs for transportation:

"Usually I do not notice the trouble, but as soon as it starts to get colder, the cabs and all the food become more expensive! Luckily, even though it's painful to pay so much for something that normally costs less, I don't have to worry, since it's not a huge difference I think. But when the gas goes away, that's the worst. There is barely an hour in the morning to cook! Then I try to cook for the whole day. But last year he [her husband] finally bought a gas tank for cooking. It's nice, but then I have to worry about where I can get it filled."

For Saleha, this 'restructuring' takes the form of changing the times in which she prepares her meals, and then in identifying places from where she can get refills for her LPG tank.

Investigating the temporalities of off-grid Canadian households, Vannini and Taggart (2013) argue that by virtue of being off-grid and dependent on solar power, these households move *slower* in comparison to their grid-dependent counterparts. They discuss how the seasonal and daily rhythms become an essential part of their everyday lives and shape their relationship with time and place. In agreement with and extension of this research, I argue that the *forced* slowness and disruptions inflicted by external forces on the population of Islamabad results in the residents adopting very particular adaptations. In contrast to Vannini's (2012) Canadian off-gridders who have made the choice to fundamentally alter their daily rhythms and hence change their relationship with time, Islamabadis have their daily rhythms forcibly altered, and do not have the certainty of stability following this alteration. While this also results in a different relationship with time, for the Islamabadis this is an uncomfortable transition that they would not have chosen, and further, have to keep adjusting their routines because of the uncertainty of the disruptions.

Anticipatory action and adaptation are also strongly tied to temporality, because of the strong focus on pre-empting particular outcomes in the future. Anticipatory actions are taken to avoid or reduce the effects of an anticipated future event. They can be observed at numerous scales and across a wide range of contexts, from the level of threats in relation to the war on terror (Gregory 2004; Anderson 2010), to culling of animal populations (Braun 2007), to stocking up particular foods in times of scarcity (Melgar-Quinonez et al. 2006). In such situations, all actions are taken as a precaution for events that have not, and hopefully will not, happen. While discussing examples of human geography's engagement with the future, Anderson (2010) notes that, for the most part, researchers in this field have not only treated temporality as linear, but have also not properly engaged with the relationship of the future to the present and the past.

The futures anticipated in relation to food and fuel supply in Islamabad are strongly dictated by the past and the present, in ways that reduce the uncertainty of their

happening by quite a significant degree. Although writing in the context of the United Kingdom, Adey (2009) similarly notes that futures in this regard can also be observed through stories told by residents who have experienced such situations before and by the media and research institutions who provide material evidence like reports (Evans 2010). Adam and Groves (2007) point out that these 'present futures' and 'future presents' are quite common in everyday life, as they are experienced, told and planned for. These anticipated futures are also observed in 'affects', like fears and anxieties (Kraftl 2007). For Islamabad, this is directly observed in fears of violent events. In the case of Gull, a young, recently married accountant, these fears have resulted in strong avoidant behaviour of areas that have been targeted in the past by terrorists and which she perceives to be future targets.

"I used to love going to Kohsar⁵⁵, but you know it is now a high security area now? The meat shop there has excellent things but it is just not good to go there now. That politician was shot there a few months back⁵⁶! They said on the news that this area is very attractive for terrorist events now. I don't go to F-8⁵⁷ anymore either. Two reasons really, the lines at the CNG station makes it impossible to go to my favourite grocery store, and then the court shooting has made me very nervous. Now I go to a nearby store. It is stressful to get to know the store owners and you have to compensate, but that's what you have to do if you want to be safe and feed your family! I make sure my daughter doesn't go to these places either. It is very attractive for

⁵⁵ This is a sector market with shops selling imported food goods and 'Western' themed cafes and restaurants and frequented quite often by foreigners and young people.

⁵⁶ Referring to the murder of the Pakistani minister who had been very vocal on his stance on the blasphemy laws of the country: <http://edition.cnn.com/2011/WORLD/asiapcf/03/02/pakistan.minister.shot/>

⁵⁷ A residential sector well-known for the clothing shops in its sector market, where a suicide attack on the judicial section was carried out in March, 2014

young people with all the cafes, but I worry so much.” (Gull, January 5, 2014)

Gull’s adaptive behaviour results in her changing which places in the city she enjoyed frequenting. This behaviour is driven by her fear of events that might happen in the future, based on events that *have* happened. While she may admit that such events may not happen in these places again, or in fact that the *new* places she goes to may be subject to attacks in the future, she finds no other way of dealing with the anxiety, besides changing where she goes. In this, she represents over seventy percent of the respondents who resort to changing their usual routes to adjust to the disruptions. Anderson (2010) discusses three types of anticipatory logics that help in dealing with threats to liberal-democracies: precaution, pre-emption and preparedness. He argues that while these logics can be applied to other situations, they have been formalised in the contemporary world for terrorist threats (Amoore and De Goede 2008), biological pandemics (Hinchliffe and Bingham 2008) and ecological disasters like climate change (Hulme 2008). All three situations require anticipating the future to dictate present action. In response to these imagined futures, pre-emption and precaution are primarily linked to actions that *prevent* the future from happening, while preparedness seeks to prevent the effects of the imagined future from disrupting the patterns of the ideal life. For Islamabadis, besides protests and injunctions to their political leaders, there is little control over the supply of fuel or electricity or the price and availability of foods. Preparedness aims to limit or stop the effects of an event from disrupting the expected components of life (Collier and Lakoff 2008). While one can argue that these actions and logics are necessary for disciplining life and preventing severe disruptions to the functioning of life, the evidence from Islamabad shows how anticipatory logics themselves can be as (or more) disruptive than the disruptions they are meant to limit. In the following sections, I present some of the logics that attempt to reduce the effects of the disruptions in the residents’ everyday lives.

Preserving Routines and Rhythms

“There is no expected pattern now. Winters: no gas and electricity, summers: no electricity and water, Ramadan: food is too expensive, monsoon: floods, and then food is too expensive, someone blows something up: more police blocks and I’m too afraid to go anywhere”.

(Ayah, June 30, 2014)

I have accompanied Ayah, a middle-aged housewife, on her weekly shopping trip that took place a few months after a suicide-attack in the judicial offices on March 3, 2014, located quite close to her house. Ayah has recently learned to drive and is quite proud of her freedom. She does have a driver, and he usually accompanies her in case they are in a crowded area and she does not want to drive. It is the month of Ramadan, and this is the first of her major grocery trips. She points out the elevated prices of essentials like cooking oil, flour and sugar:

“The food cost is already up because of the petrol and the worldwide costs, but the shopkeepers know this is what we eat the most right now, so they will mark it up knowing we have no other choice...‘Look, the tomatoes are one fifty! It used to be forty or fifty. This is the food inflation, plus the floods, plus the wheat crisis... We think we are middle class, but this cost is painful and I don’t think we can make it if it continues” (Ayah, June 30, 2014)

She has timed the grocery trip early in the morning, in the hope of avoiding the rush hour:

“I want to keep you out of the heat as much as possible! We still have five hours of load shedding, and the house gets very hot. The fan on

the UPS⁵⁸ does nothing to fix the heat. It is better to be as slow as possible, otherwise you will faint". (Ayah, June 30, 2014)

In 2014, Ramadan fell during August, with scorching temperatures and very high humidity. The city experienced at least five hours of load shedding in the day, with the government promising that it would not happen during the morning-prayer and fast breaking. Consumers like Ayah therefore resorted to purchasing UPS units, an example shown in Figure 5.2, or diesel generators to provide electricity during load shedding hours.



Figure 5.2 UPS and battery – photograph by Ayah

Ayah purchases enough food to last at least half the month and expressed her exasperation over the fact that she spent twice the amount of money for almost the same food as compared to a few years ago:

⁵⁸ An Uninterruptible Power Supply is a rechargeable electrical apparatus that has grown in popularity in the last few years, with the increasing power load-shedding in the country. It is set up to power a number of lights and fans when the electricity goes for at least an hour. It is frequently used to provide some relief from the heat in summer months, and to power smaller devices like Wi-Fi routers and cell-phone chargers.

“Even twenty years ago, you could predict your routine through the year. Now? Impossible! There is a new thing to worry about with every change of season. For this country only God is the Guardian!⁵⁹ (Ayah, June 30, 2014)

This sentiment is soon repeated by Laila, a middle-aged housewife, whose daughter has recently returned from her studies abroad, and whose husband is employed at a local bank. She prepares the woodstove, shown in Figure 5.3, in their backyard for making the bread:



Figure 5.3 Tanoor (woodstove) - photograph by Laila

“I suppose in principle it is easier to get the bread from the market, but I got this stove a few years ago so we could make corn bread. And it just sat here since then, only being used once a year in the winters.” (Laila, January 9, 2014)

⁵⁹ ‘Allah he hafiz’, a term that roughly translates to God is the Guardian. It is used quite often in exasperation, and indicates that the only reason the country is functioning is because God is the only one doing anything about it.

Laila has started storing wood from the plant trimmings from her garden to use in the winter, shown in Figure 5.4. 'It is very sad that I am in the middle of the capital city of the country, used to the modern life and here I am burning wood for bread.' She laughs, and thinks of it as good practice for when there is no gas for cooking at all. The use of wood is not a new phenomenon and the city looks increasingly bare in the winter months with most of the trees being stripped clean by bread makers who use wood stoves. So far, none of Laila's friends are following suit in terms of wood-stove use, but she still prefers this in conjunction with her LPG tank, over the slightly more popular kerosene stoves. She is also very glad for the new well at her house, a feature that is increasingly common in the city, given the continuing water shortages.



Figure 5.4 Plant trimmings saved for the winter - photograph by Laila

"The CDA supply is just not enough. I think someone higher up in the street has a suction pump, so everyone else down the line gets nothing. This well cost a lot and will dry up soon considering everyone has a well now, but for now at least we get water on our own routine". (Laila, January 9, 2014)

Ayah and Laila have adjusted their daily rhythms around past discrete disturbances like terrorist attacks, and increasingly continuous, daily events like gas scarcity in an effort to

preserve the overall structure of their routines. There are elements of pre-emption with Ayah avoiding rush hour and the area with the suicide attack in case a similar event might take place again in the same place. For Laila, preparedness is at the forefront of her adaptation, with her acquisition of the wood stove and the LPG tank and stocking up on wood trimmings from her yard. For these respondents such acquisitions and changes in routines are meant to preserve the greater fabric of their everyday life and reduce the impact of the future, anticipated scarcities as much as they can.

Waiting as Strategy

A growing body of literature on subaltern populations attends to situations where they have no choice but to wait for certain events, or hopes to be fulfilled. For example, literature on mobilities (Bissell 2007) detainees (Griffiths 2014), immigrants and asylum seekers (Conlon 2011; Silverman 2014), slum dwellers (Antony 2012), and the unemployed (Mains 2007), all point to a temporal disconnect between their anticipated results or dreams and their realisation. Griffiths (2014) in particular explores waiting with three other experiential temporalities categorised as suspended time, frenzied time and temporal ruptures in the context of the immigration system. Jeffrey (2010) considers two different kinds of waiting: short-term 'timepass' strategies by educated but unemployed youth, and the longer term 'investment' waiting strategies adopted by rich farmers in India with the aim of examining the larger social implications of waiting.

The discussion of waiting in this paper is situated alongside the disruptions caused by scarcities and incidences of violence, and is an important part of the adaptation strategies adopted by certain households in Pakistan. In this context, waiting is often considered analogous to 'patience', and sometimes associated with a respite from the limitations inflicted by electricity and transportation. It differs from the existing literature on waiting not just because of the focus on food, but also in that it illustrates the ambiguities of waiting as experienced by individuals not displaced from their homes and waiting for specific results, but displaced in time and from their familiar routines because

of influences like scarcities and violent events. However, it reflects a number of themes from this literature, mainly in the fact that waiting can be a productive experience (Gasparini 1995; Griffiths 2014), an opportunity to socialise (Jeffrey 2010; Jeffrey and Young 2012), learn and develop particular skills and to prepare for future events that may result in more periods of waiting (Mountz 2011).

While Jeffrey (2010) discusses the relationship of unstructured time and timepass in relation to students in India, it is significant to note that for households in Islamabad most of the waiting periods usually take place in expected and anticipated periods. Unless there are electrical faults and unannounced maintenance sessions, the load shedding follows a defined schedule, and fuel is rationed out on particular days.⁶⁰ This particular rhythm is embedded in everyday life, to the point that most people know the electricity schedules of routinely visited shops and time their visits to match with them. Similarly, when the country's gas shortage becomes more pronounced, it is rationed for fuel stations and only available during particular hours of the day, two to three days a week. Following this, residents then adjust their weekly or monthly schedules according to the prescribed gas availability times at fuel stations. A section from the field diary presented below discusses an experience of waiting in a fuel queue with two participants, Sameena and Faiz, who are employed as journalists and of Misbah and her daughter, who have their own ways of waiting.

The line for the gas station is at least forty cars long. It almost circles the sector, and is populated mainly by taxi-drivers at this hour. I am in the car with Sameena and her colleague Faiz, who are trying to get either CNG or petrol. 'I was so happy when I had my car fitted with CNG five years ago. It made a huge difference with how much I was spending on fuel in a month. Now of course I

⁶⁰ Load shedding and CNG schedules vary by sector and schedules can be seen through the 'Load-shedding Schedule Portal' of the Ministry of Water and Power, they tend to be spaced at regular intervals and most residents know their sector's schedule by experience, or by calling and inquiring at the local Water and Power Development Authority (WAPDA) office. None of the participants interviewed used the online portal to find out their local schedules.

regret it all. This is the day it happens!’ says Faiz (June 2, 2014), who owns the car and occasionally carpools with Sameena. They estimate that we will be in the line for another hour at least:

“It just seems we spend our entire lives waiting, you know? Waiting for the day when the stations have gas, and then waiting for them to have electricity so they can actually pump it, waiting for petrol to be affordable, waiting, waiting, waiting! I will die of old age in a line in front of the stations!” (Sameena, June 2, 2014)

Sameena leaves to buy drinks from a bakery while we inch forward in line, Faiz switching off the engine with each move:

“See? It says here it should be twenty-five rupees, but I had to pay extra... He says the delivery man charges extra because of the gas thing. I went grocery shopping yesterday with my father, and instead of the usual almost five thousand we spend, we spent eight thousand!” (Sameena, June 2, 2014)

Sameena shows us the prices on the snacks and drinks she bought and then comments on how it is a good thing that it is winter, otherwise they would also charge for refrigeration. Although Faiz makes light of the fuel situation, he worries about how it affects his home and work life. He makes an effort to ensure that these ‘line waits’ draw more from his personal time than work. But this leads to problems at home: as the only person with a car, and with an elderly mother and two younger sisters at home, Faiz is responsible for doing all of the groceries and errands. Despite his best efforts, most of these errands have to be organised around gas availability. He has adapted to this by walking to the closest market with his sisters every week. Although this market is more expensive, he thinks it is a better choice than waiting in a fuel queue. For longer trips needing cars, he and his friends have started carpooling: Each month, one friend

volunteers his car and everyone goes together to the produce market. He notes that while he can get most of the items on his monthly grocery list from the market near his house, travelling to the main ones further is more sensible because of lower costs and wider variety. He explains that sub-sector markets often place higher price-points on their items because they have to pay more to their distributors, and have fewer customers. He also considers his grocery trips to the larger markets as an enjoyable experience, because his mother and sisters join him and like to window-shop. He adds that his mother prefers driving over walking to the nearby shop, because the boys' hostel in their street results in groups of teenage boys milling in their neighbourhood.

On the other end of the city, Misbah and her family wait for the electricity to return. For them, the most worrisome aspect of the load shedding is the delays in meal times. However, if electricity and gas shortages impinge on meal times, they consume snack foods, fruits and dried fruits until the time food can be prepared. "I just tell everyone to relax. After all, the fruit of patience is sweet, yes? I wonder though when we will get this fruit...." (Misbah, June 17, 2014)

Her daughter Manal is more impatient. She spends most of the time using her laptop and mobile phone. Her consumption of packaged and fast foods has gone up quite a bit in recent months and stocks up on crisps, cookies, chocolates and ramen noodles and mostly eats those whenever she is home.

"I associate them now with when there is no electricity. I used to fry chips and have tea all the time, but this is easier while you're waiting for electricity so you can get back to work. Besides, I'm usually not home for lunch, and by the time dinner is actually made, I'm not hungry any more". (Manal, June 17, 2014)

When not with her friends, Manal chooses to meet her friends for tea in a café, and her mother may mirror this activity by catching up with some of her neighbourhood friends.

As noted by Cowan (1991) and Nisbett (2007), passing time with friends over tea and snacks in a snack or tea bar is common among youth. This activity was also observed among some of the youth in Islamabad, even as they decried the limitations placed on them because of the gas and petrol crisis. Similarly, women of different households adopted practices like getting together for tea to see out power outages. This was particularly common in neighbourhoods and streets where families had lived together for years, and quick trips (*'kharay kharay a jao'*⁶¹) for tea and conversation were common. Besides inter-household socialising being galvanised and routinised over the mutual woes of electricity, tea and snack breaks during load shedding within the house were also very common. Sameena, Faiz, Misbah and Manal spend a significant amount of their time waiting. For them, waiting is performed in queues at gas stations and at home waiting for load shedding sessions to end. In the long term however, these waiting sessions point to the longer-term waiting sessions as alluded to by Jeffrey (2010) in discussions of timepass. However, unlike the 'investment' focused waiting experienced by those involved in higher education, these residents are waiting for the causes of these daily disruptions to end, so they can either return to the rhythm of life they have become accustomed to, or for alternative solutions that may lead to a better tomorrow.

'What If?'

One of the major effects of power-outages and limited gas and water supply is on the beginning and endpoints of everyday activities. The water supply system is also dependent on electricity, and some residential areas do not receive their allocated water supplies during load-shedding hours. For people who do not have personal wells, load-shedding has a significant impact on their water supply as well. At a very basic level, a family has to move cooking times, meal times, showers, and things like starting the water pump to fill the tanks. For Husna, these disruptions are the most irksome. Her husband Jamil has retained most of his military-instilled scheduling habits and prefers

⁶¹ Translates into: a short trip where the guest and host are primarily standing, sometimes at the main door or the gate of the house and the term is usually indicative of a quick visit

his routines to be ironclad. I arrive at their house at two in the afternoon, having been invited for lunch.

“They have changed the hours for the load shedding! I am very sorry for the heat, but we don’t have UPS.” Husna apologises and hands me a manual fan. I help her set the table as she rushes to heat food over the stove. This takes a long time because the gas pressure is very low and she cannot use the microwave because of a power-cut. By the time the food is ready, it is already an hour past their scheduled lunch time. Both Husna and Jamil are notably distressed because it has upset the course of the rest of the day:

“We have a few luxuries in life, and one of them knows the routine of the day. I know we should be used to the electricity at least, since they change the schedule so often, but starting things at particular times is a decades old habit that I just cannot change.” (Jamil, December 12, 2013)

Husna keeps bottles and pans of water filled in the kitchen for when water is available, to use for cooking and boiling for drinking water. Filling the water containers in the kitchen and bathrooms is their first activity once water supply starts. To deal with these disruptions to their daily life, Husna and Jamil try to prepare in advance as much as they can. Husna’s cook comes for two hours a day, four days a week, and in that time they both try to prepare and cook as many meals they can. His efforts are mainly focused on peeling and slicing the produce, preparing the meats and making packets of foods for freezing. All of these efforts are to ensure that when Husna does have to cook, she can do so as quickly as possible, in time for the family’s schedule.

“Before, he [the cook] would help me with the groceries and cook the food for the day. Then we didn’t have to worry about the time. But now we must account for things like, what if there is no electricity? What if Jamil couldn’t go and get the groceries because the line for the CNG

was too long? What if there was no gas? What if there's another explosion somewhere? I am just fed up with this." (Husna, December 12, 2013)

For Islamabadis, preparedness actions have largely been driven by the 'worst case scenario' options of 'what if?' questions. Elmer and Opel (2006) argue that while responding to 'what if?' questions with stable and reliable data is the optimal way of predicting the future, in light of the events following 9/11 and the war on terror, 'what if?' has been recast into 'when, then' i.e. *when* the event happens, *then* we will moderate the effects.

Residents in Islamabad reflect this when the actions they take are very much in line with 'when' and 'then', where the worst case 'when' scenario is naturally assumed will happen, instead of preparing for an event which might not happen. Husna prepares everything assuming that they will *not* be able to get groceries, because there no gas will be available. In these examples, the action taken results in a change of routine as a strategy for mitigating the effects of the predicted future.

This willingness to change routine to ensure that meal times are on time can be observed in families with children as well. Batul owns a small business, and is mother to three school-going children. For her, the electricity and gas crisis affects the times at which she wakes up. The gas pressure in her neighbourhood falls around seven in the morning during the winter. She has a live-in maid, who helps her with cooking and cleaning.

"Tasneem [the maid] and I wake up half an hour before the time of the morning prayer and then just stay awake. We cook for the entire day then. There is no choice. The gas is not there the rest of the day, and I don't want to use the money on buying readymade food from the shops all the time". (Batul, March, 4, 2014)

In Batul's words, this 'adjustment' helps her make sure that everything else in the day proceeds as planned. This way, everyone can have breakfast before they leave for work and school, have a homemade meal for lunch and then can reheat the dinner when they are back. As she notes, "Reheating is not that bad. You don't need a lot of gas pressure for it, and if there's electricity, we can heat in the microwave".

On the other hand, Nureen, a close friend of Batul, has a UPS system, LPG tank and a generator installed at her house. Unlike Batul, who still manages most of the house's functioning despite having a maid, Nureen has a cook and a maid to take care of grocery shopping, cooking and cleaning. Nureen and her husband mainly work from home. Her family's routine is more relaxed as compared to Batul's and Husna's. For them, the 'endpoint' disruption management is focused on their work: both of them have externally imposed deadlines to meet, and the rest of their priorities are organised around that.

"If Asif [Nureen's husband] has a conference call at three in the morning, he'll want to have his food just before that and have a constant supply of tea during it. It is the same with me if I'm working overnight to meet a project deadline. Then, I'd rather have food and tea as soon as I ask for it. I have no patience with 'Miss, there is no gas, so there can't be any tea at this time'. We work hard for the money and I want to be comfortable in my own house!" (Nureen, February 21, 2014)

When I visit her, the scheduled power outage is in effect for her sector, something I do not notice until I leave, as the UPS system and generator had been on the entire time. Her cook and maid, as compared to many other 'house help' individuals, have a lot of control over the house. Kareem, the cook, is in charge of grocery shopping. He gets a certain amount of money from Asif for the monthly groceries and makes one major trip a month by cab to the produce market for everyday cooking essentials. For fresh

vegetables and fruits, he goes to the local sector market, about a five minute walk from their house. Salma the maid agrees with Kareem and says that the household is designed around major events and deadlines, and that the focus is on ensuring that everything is ready for those times. A visit from their son during his holidays, or from their daughter when she visits with her husband, are two such events. Nureen's insistence on the UPS, the gas tank and generator were partly for her deadlines, and partly so that the children wouldn't feel any discomfort in visiting.

"They have their own routines you know? There is no reason why that should be interrupted just because they are here, and Asif and I have our own routines and crazy timings." (Nureen, February 21, 2014)

For residents like Husna and Nureen, preparedness actions are completely reactive to the electricity and gas situation in the city. Nureen ensures that the disruptions do not interrupt their everyday routine, and Husna confirms that she is not caught off guard in case of unexpected outages. Their efforts are in line with Elmer and Opel's (2006) point on how answering 'what if?' questions put's one in the 'driver's seat' of the situation. Therefore, by preparing for the worst case option of 'what if?' scenarios allows them the power, control and the ability to position themselves in a favourable manner against the foreseen future outcome.

Conclusion

This article began by noting how a city's rhythms were strongly tied to food environments. In the case of Islamabad these rhythms are strongly influenced by energy and security crises, and the different ways in which this city's residents adapt to the disruptions caused. While most of the existing literature on food environments is highly cross-sectional and focuses on particular elements of the built environment (LeDoux and Vojnovic 2014), it overlooks their dynamism during the year and the role of temporal changes in food decisions (Widener et al. 2011). This paper is thus a contribution to the

body of literature on food environments and urban food security, which has predominantly focused on health outcomes arising from inappropriate nutrition and the poor and food insecure proportion of the population (Rao et al. 2001; Webber et al. 2010; Akhtar 2013). It has argued for an alternative perspective on urban food security, from the point of view of the self-defined middle class, a section of the population that often experiences food stress because of regional and national scarcities of fuel and cost inflation and has to depend on particular anticipatory and adaptation strategies to stay ahead of the oncoming stressors.

The case of Islamabad therefore demonstrates how both food environments and vulnerability are dynamic concepts, cross-cut by temporalities and disruptions of rhythms. The paper has contributed to the broader areas of study on food environments by showing how factors creating change in food environments are place-specific and that these factors have consequences for everyday food security for middle class populations of urban areas. The disruptions of electricity, gas and water have a significant effect on most aspects of residents' lives, in particular food, work, social life and usual intra-city mobility. Throughout this paper, I have argued that these temporal disruptions are one of the main targets of everyday adaptations. While the levels of food security fluctuate throughout the year, in terms of food price and fuel availability, families face an increasing struggle to maintain some semblance of temporal balance to their life. There is a common narrative to life in Islamabad now, often prefaced by questions on how one is faring for the supply of gas, water and electricity. These are then followed by discussions on how one chooses to deal with these issues. Food is a constant variable in these conversations, with discussions on cost, where to source particular food items, convenience of access, and how to adjust to the different times of gas and water supply.

It is important to note that while temporal disruptions and the notions of 'waiting', 'patience', 'routine' and 'timepass' are interlinked with most aspects of everyday life,

food can provide a useful lens in studying these phenomena. As discussed by Jeffrey (2010) in the context of the culture of timepass among Indian youth, 'waiting' and associated temporally motivated activities have a short-term (killing, or passing of time) and long term (investment in the future) focus. In the short term, from the point of view of food, people use tea, snack foods or fruit, or negotiate meal times while waiting for electricity or gas to return and in the long term may depend on amenities like alternate stoves or generators to bypass future waiting periods completely, or socialising with friends and family to make waiting more pleasurable. The results of this research thus speak back to the literature on waiting by contributing perspectives on the use of waiting periods incited by scarcity episodes. The results emphasise the fact that timepass is far more than a passive, temporally driven activity, but is in fact a powerful component of everyday adaptation strategies.

Besides waiting, the middle class residents of Islamabad are forced to make many temporal adjustments that can range from seemingly minor inconveniences of waiting - either in queues for fuel, or at home for electricity or gas - to having to allow for greater amounts of time for performing particular activities, like cooking on a very low flame, or accommodating refuelling time in daily commutes. Increasingly, adaptations like carpooling with friends, walking to nearby stores instead of using a car and purchasing items like kerosene or wood-burning stoves are seen in households to cope with the changes. Viewed in light of Anderson's anticipatory logics (2010) these activities are examples of preparedness, either motivated by an effort to preserve routines, or as an answer to 'what if?' questions. These anticipatory logics are particularly stressful for the middle class portion of the population, as often they have not had to deal with these problems in Islamabad before the problems with electricity and fuel shortages started. For some, these disruptions signal a potentially dangerous shift of food security for them in the future.

The paper's focus on the middle class is not meant to detract from the problems of the lower socio-economic class of the country that face their own severe challenges with food security, but is meant to direct attention to a population class with significant purchasing power. This group is exceedingly worried about stable food access in an area of the country that for all appearances is doing better than other cities and villages. Their worries and experiences in the city in responding to these food/fuel stressors result in a particular set of adaptation logics that can be evaluated from a temporal perspective as well, to provide a richer narrative of their everyday experience (Harper 2010; Maqsood 2014). Few in developed countries have experienced the kind of urban stresses that the people in Islamabad are increasingly used to. However, their experience should not be classified as a 'developing world' issue, but can be used to investigate the possibilities of a global future where fuel is rationed, uncertain, expensive, and tightly interwoven with our food supply. Returning to Edensor's (2010) argument about the 'invisible' supply lines of urban areas, the case from Islamabad reveals how vital these supply chains are for maintaining everyday routines and rhythms and how much we depend on fuel for our daily food.

Chapter 6 (*Paper II*): Consuming ‘Good Food’ in Islamabad,

Pakistan

Abstract

In recent years, consumption of alternatively produced foods has increased in popularity in response to the deleterious effects of rapidly globalising and industrialised food systems. Concerns over food safety in relation to these changes may result from elevated levels of risk and changing perceptions associated with food production practices. This paper explores how the middle class residents of Islamabad, Pakistan, use the concept of ‘good food’ to reconnect themselves with nature, changing food systems, and traditional values. Furthermore, this paper demonstrates how these ideas relate to those of organic, local and traditional food consumption as currently used in more economically developed states in the Global North. Through research based on participant observation and semi-structured interviews, this paper illustrates that besides price and convenience, purity, freshness, association with specific places, and ‘Pakistani-ness’ were considered as the basis for making decisions about ‘good food’. The results show that while consumers are aware of and have some access to imported organic and local food, they prefer using holistic and culturally informed concepts of ‘good food’ instead that reconnect them with food systems. I argue that through conceptualisations of ‘good food’, the urban middle class consumers of Islamabad are reducing their disconnection and dis-embeddedness from nature, the food systems, and their social identities. The paper contributes to literatures on food anxieties, reconnections in food geography and ‘good food’ perceptions, with a focus in the developing country context of Pakistan, a country which is part of globalising food system.

Target Journal - Appetite

Introduction

“I would go back a few years ago to my family’s village farm when you could get fresh fruits and vegetables from your farm, where you didn’t have to worry about purity and pesticides, or where in the world the food was coming from...everyone ate together and it was good food that did everyone good.” (Baano, August 9, 2015)⁶²

This nostalgic reflection on food consumption comes from Baano, a recently married consultant who is reflecting on how food consumption has changed during her life. This paper examines the idea of ‘good food’ as used in everyday conversations about food consumption by middle class urban residents in Islamabad like Baano. It explores how changes in food systems are associated with ideas of eating well in developing countries where economic growth, urbanisation, and globalisation are also contributing to changes in dietary and consumption patterns (Hubacek et al. 2007). Changes in food consumption in favour of a globalised diet are part of a dynamic process, with different foods being integrated or removed over time. This has the added advantage of introducing populations to a diverse diet and improving their knowledge about different countries and cultures. In conjunction with rapid urbanisation and food system developments, it may also result in urban populations being less aware of production processes that take place in rural areas and in other countries (Cook and Crang 1996). This may potentially lead to urban populations consuming a smaller proportion of traditional cuisines because of better availability of non-traditional foods in urban areas compared to other parts of a country, further disconnecting consumers from the country’s own resources and culinary cultures (Reardon and Timmer et al. 2004), and being increasingly separated from food systems on the whole (Feagan and Morris 2009). As such, changes take place in how consumers perceive and respond to food systems. These changes may then include the development and popularity of

⁶² Pseudonyms for the participants are used throughout the paper

alternative food networks (AFNs) in many countries following debates of distance and intensification in the food networks in mass media and in scholarly articles.

Associated changes in the food system and evolution in diet have been observed in the diet of urban Pakistanis, which has recently been linked with health problems like obesity, diabetes, and cardiovascular problems (Jafar et al. 2004). Increasingly, these changes are also being connected with fears over food contamination during the production process with pesticides and preservatives, intentional contamination with inedible substances and dyes, poor hygiene of food outlets, and concerns about the origins and possible genetic alteration of food (Bokhari 2012; Ilyas 2012). These issues are discussed often in popular media, with debates focusing on the value of returning to a 'traditional' Pakistani diet and attempting to eat 'natural' and unprocessed food items (Khan 2013a; Majeed 2014). The desire for these changes is also recognized in the changes observed in the food supply networks within Pakistan, which are slowly accommodating a more 'alternative' mode of production, in the form of entrepreneurial farmers growing food with organic principles, and the Pakistan Agricultural Research Council (PARC) experimenting with organic production and training farmers over the country to reduce their dependence on chemical inputs. The emergence of farmers' markets and initiatives promoting organic and Pakistani produce in the cities of Karachi, Lahore, and Islamabad are also recent phenomena, driven by such food concerns, with an interest in promoting native producers and businesses (Saeed 2015), and returning to a more 'traditional' and 'natural' manner of eating (Khan 2013a; Majeed 2014). Therefore, the food landscape in Pakistan is transforming in a manner where alternatively produced food is more visible and available to those who can afford it.

A number of North American and European studies have associated the increasing popularity of organic and local foods with public anxiety related to food safety and the problems associated with modern food systems (Williams and Hammitt 2001; Bourn and Prescott 2002; Lockie et al. 2004). Media reports about food scandals may also lead to

consumers feeling overwhelmed by food risks, and the often conflicting nature of information available. In addition, consumers are also expected to be responsible for managing these risks, trusting the institutions in charge of ensuring food safety and following the food safety advice and guidelines provided by these institutions and experts (Fuentes and Fuentes 2015). In order to adjust to the risks associated with food, consumers develop different frameworks and strategies to make everyday food shopping and food consumption convenient and stress free. However, even with strategies in place, concerns about everyday food consumption remain, especially because of the recurrence of food scandals and food-related media reports. In such risky situations, conceptualisations and rationales that drive food choice become increasingly important and consumers must decide which foods are suitable for one's health, as well as economic, social, and cultural requirements (Murcott 1993). This paper explores the rationales underlying the discourse of 'good food' in Islamabad and it argues that personal perceptions of what makes food 'good' have not only changed significantly in the past few years, but are also strongly associated with the changes in global food systems.

Research on the rationalities, conceptualisations, and the mental landscapes associated with eating appropriate food is important in current times where food environments are dynamic and influenced by a wide range of environmental, cultural, and socio-economic factors such as food availability, access to transportation, and demographic make-up (Harris et al. 2009). Understanding how people conceptualise broad concepts like 'good' and 'safe' may have implications for health and food policies, and how consumers engage with food-related information in the media. The perceptions of consumers in countries like Pakistan are also increasingly important as they become more active participants in global food networks and influence how practices like food narratives and new ethical food movements are theorised and propagated beyond the countries of their origin. While there is a body of work evaluating the relationship between good food

rationalities and changing food systems, much of this work has emerged from the Global North. For example, Bildtgård's (2010, 2013) works on rationalities of food and place in Sweden, and Murcott's (1993) on women's conceptualisations of good food in Britain. However, because of regional differences, such narratives may not apply to the social and economic contexts of developing countries in the Global South (Birol et al. 2009).

This paper explores the rationalities of 'good' food for the Pakistani middle class living in Islamabad with environmental food fears and how they are used to understand and negotiate their everyday food environments. It also investigates how approaches towards food change and develop in response to forces linked with globalisation (Bildtgård 2010) as well as ideas of local and organic production and the preference for shorter food chains influenced by societies in developing countries. Before presenting the evidence from Pakistan, this article first outlines the methods used to obtain empirical evidence and then briefly reviews the literature on how ideas of eating good food and eating well operate within the everyday negotiations of the urban environment during times of food fears and scandals. The article then concludes by relating the empirical findings from Islamabad to the literature on food perceptions and food anxieties.

Methods

This paper is part of a larger research project investigating different aspects of the food environment in Islamabad, Pakistan, and data collection was conducted over a period of eight months between August 2013 and August 2014. The primary project was concerned with the food consumption habits and the everyday negotiations in the food environment. As a result, most of the sites of focus were food consumption and food purchase sites such as residents' homes, restaurants, and marketplaces. This paper emerges from an exploration of the ideas of Islamabad's residents on 'good food' or

what was referred to in Urdu as '*acha khaana*'. As the research was conducted through a combination of participant observation and semi-structured interviews, it was possible to observe how the concept of 'good food' functioned in everyday life. Members from 60 different middle class households were selected, representing every residential sector in Islamabad. Although every effort was made to obtain equal gender participation, 80% of the active and most frequent respondents were women. The primary respondents were between the ages of 18 and 65 years old. Depending on availability, each household was interviewed between three and twenty times, and each interview or observation session lasted between two to three hours.

'Reconnecting' with 'Good Food'

This section sets out the literature on the changes in diet and perceptions of food associated with globalisation and urbanisation, and the food fears associated with these changes. It first presents food anxieties associated with eating 'risky' food, particularly considering environmental health risks and the changes in the food systems in recent years. This is followed by an examination of how knowledges about food commodities, 'eating well' and ideas of 'good food' have been explored in the literature, particularly in the context of reconnection.

Food anxieties are far from being a contemporary issue, although in earlier societies they were linked more with issues of sourcing sufficient quantities of food, the health impacts of eating food of inferior quality, either by intentional poisoning and adulteration, or by problems of poor storage and transportation. In recent years, the world has faced a diverse array of food anxieties associated with disease in animals directly affecting humans, such as the Bovine Spongiform Encephalitis (BSE) scare and avian influenza which lead to the culling of millions of animals (de Krom and Mol 2010), contamination of fresh produce with pesticides and chemicals (Behrens et al. 2010), environmental contamination by poorly managed livestock animals, such as flooding and spilling of hog

farm waste lagoons (Peach 2014), and discussions about the contribution of urban design and food consumption, and food policy to obesity, diabetes and cardiovascular diseases (Mol and Bulkeley 2002; Parham 2015). While much of the research on food fears and scandals is focused on the Global North, the Global South remains a significant component in global food systems. Consumers in developing countries have mainly been discussed from a production perspective of food networks, but they may also be undergoing a major upheaval in their food consumption practices because of the influences of the evolving global food system (Kharas 2010; Chen 2011). As a result of increasing anxieties associated with food, 'alternative' approaches to production and consumption have developed with the aim of reconnecting and re-educating consumers about the realities of food production (Kneafsey et al. 2004, Cook et al. 2007). These alternative food networks include organic, local, and fair trade food production that favour smaller, local producers, food produced with less chemical intervention, and food produced to ensure greater transparency and equity in food trading relationships. Existing structures and networks of production, distribution and regulation have also adapted in response, to reduce consumer fears and to restore their confidence in food systems (Milne et al. 2011). The emergence of food certification projects, an emphasis on the traceability of food origins, and the development of different regulatory bodies further contribute to information on what may be considered as 'appropriate' and 'good' food.

The amount of information available also changes as food systems develop, which influences how consumers perceive food (Scholliers 2008). These changing perceptions are associated with issues of the lengthened and increasingly separated food chains (Cook and Harrison 2007), environmental imbalances from intensive production practices, variety and accessibility of prepared convenience meals (Shiu et al. 2004), popularity of restaurants promoting 'exotic' cuisines (Turgeon and Pastinelli 2002), and the loss of traditional cooking skills and recipes (Bell and Valentine 1997; Duruz 2002;

Cook and Harrison 2007). Therefore, in rapidly changing food environments, media attention on food fears may be a particularly effective driver for consumers to learn more about food system and potentially change their food perceptions and consumption practices. In developed countries, these food fears have been researched in the context of urban food environments and their influence on health, the development of food-related policies and programs for improving accessibility and affordability for disadvantaged communities, and the popularity of foods marketed as organic, local or fair trade (McWilliams 2010; Morgan 2010; Cannuscio et al. 2014). In developing countries, while the research focus is gradually shifting towards the food fears of the new food system (Klein 2009; Liu et al. 2014), research on food anxieties of everyday food consumption in the context of the evolving food system is still scarce. In the absence of alternative food movements and certification systems emerging from developing countries, examining the rationalities of what makes food acceptable is a useful way of evaluating how risky food environments are perceived and navigated.

The concepts of reconnection and embeddedness have been used within literatures on food geography and economic sociology⁶³ to contest the complexity and increasing distances between consumers and producers. These concepts have been used to illustrate the increasing separation between consumers and different aspects of food systems (Kneafsey et al. 2004), to highlight the social aspects of economic activities, and to theorise alternative food networks. For example, Hinrichs (2000) investigates the social embeddedness of farmers' markets and community-supported agriculture in conjunction with the concepts of marketness and instrumentalism, and also argues that this combination of concepts proves useful in understanding the viability and progress in local food systems. Feagan (2007: 38) in particular notes that this complexity has a

⁶³ Initially a concept developed within economic sociology with the primary assumption that social behaviour influences economic behaviour (see Granovetter (1985) for an explanation of the initial idea, and Sonnino (2007a) for a critical review on the treatment of embeddedness in the literature), it has been used within studies of alternative food networks, particularly farmers markets. See (Weatherell et al. 2003; Holloway and Kneafsey 2004; Kirwan 2004)

major impact on consumers as they “experience both the physical and psychological displacement of production from consumption, and all of the other disconnections and dis-embedding which follow in that stead”. Using the emergence of saffron as a distinct food network in Tuscany, Sonnino (2007a) further explores embeddedness as a process, by focusing primarily on the process of embedding a food economy by local actors. Food researchers have extended the scope of embeddedness to include ecological and embodied characteristics beyond the social, as seen in Sage’s (2003) research on alternative food networks in South West Ireland, which reveals how the idea of ‘good food’ as developed by the members of the networks encompasses the ecologically, socially and viscerally embedded characteristics of food. The holistic turn of embeddedness in relation to food is also seen in Murdoch and colleagues’ (2000) study on cheese production in Wales, where embeddedness includes natural and cultural dimensions.

Despite the range of topics addressed by much of the research using embeddedness, the theory has two main limitations. Firstly, by limiting itself to social factors, the theory does not include the influence of factors like agency, power, culture, and geography, which also have an influence on the economy. Secondly, the theory does not consider how consumers utilise it to make sense of the economies and systems around them. However, Feagan’s (2007) study on the use of embeddedness in the context of a farmers’ market in Ontario, Canada, stands out from much of the literature because of its focus on consumers. Following Feagan’s (2007) example, this paper combines the concept of embeddedness with consumer rationalities of ‘good food’, and it argues that food rationalities are used to embed consumers spatially and socially within food systems in a food environment where alternative and ethical food products are rare or difficult to access.

While reconnection has often been used in the same context as embeddedness, a number of studies use reconnection on its own to also indicate the types of

disconnection as experienced by consumers. For example, Winter (2003b) considers four themes of reconnection in reviewing the changes in agri-food research: (1) reconnecting farming and food, (2) food and politics, (3) food and nature, and (4) farmers and agency. These themes can be considered partially similar to those of embeddedness, where (1) and (3) reconnects consumers with the physical and natural dimensions of the food systems and their environments, and (2) and (4) focus on the social aspects. Kneafsey and colleagues' (2004) extend this argument to link the idea of reconnection with that of geographical knowledges, within the context of food anxiety. In this manner, their article stands out from the body of research on reconnections, by showing that reconnection serves two functions: firstly, to link consumers with the social, environmental and economic realities of their food production, and secondly, to locate their rationalisations of 'good food' within these reconnections. While Kneafsey and colleagues' (2004) focus on the context of geographical knowledge and reconnection with consumers, who have access to alternative food networks, this paper extends their argument and considers how reconnection in concert with food-related knowledge function when alternatives like 'organic' are not readily available.

The structure of the concept of reconnection used in this paper follows Kirwan's (2004), Kneafsey and colleagues' (2004) and Feagan's (2007) example of using the inter-related areas of spatial, natural and social reconnection and embeddedness. Here, it is important to note that embeddedness has been explored within each of these spheres, but few studies approach all three concepts within a single context. Spatial embeddedness considers the territoriality or re-localisation of food economies, as shown in Sonnino's (2007b) example of saffron growers attempting to localise saffron production in Tuscany, and when consumers use 'freshness' to indicate their desire to purchase locally produced food in farmers' markets in Canada (Connell et al. 2008). Natural or ecological embeddedness consider food values that contrast with those of conventional food systems, therefore considering qualities such as fewer chemical

inputs, industrial processing, and including food scares that are associated with fragmented and distanced food networks. Ecological or natural embeddedness can be seen in most articles that discuss alternative food systems as being environmentally-benign, as compared to conventional food systems (Blay-Palmer 2008). Finally, social embeddedness is associated with concerns of reconnection, improving community ties, tradition, and a sense of belonging. Social embeddedness is consistently discussed in debates on farmers' markets and strengthening local food economies (Griffin and Frongillo 2003; Sage 2003). These studies and conceptual spheres also indicate that conceptualisations of 'good food' and 'eating well' have significant implications for how consumers engage with food systems. However, this paper will make a distinction between reconnection and embedding given that Pakistani consumers would refer to feelings of reconnection as '*jorna*' (making a connection) or '*phir say bnana*' (making again). Given the evidence from the scholarly literature referenced thus far, this paper also considers that there is little discernible theoretical difference in how embeddedness and reconnection are currently used in food-related literature.

A significant amount of work from the fields of anthropology and sociology has gone into exploring what people consider to be healthy food, good food (Murcott 1993; Park et al. 2011; Johnston et al. 2011), environmentally and ethically acceptable food (Lockie et al. 2004) and what it means to eat well (Bildtgård 2010; Joosse and Hracs 2015). At a fundamental level, people commonly use the terms 'good' and 'bad' to refer to categories of food they prefer to eat (Lupton 1996; Bava et al. 2008). Other categories like 'pure', 'healthy', and 'safe', can also reveal the relationship between foods and bodily health and perceptions of safety. Scholars like Dixon (2009) and Park and colleagues' (2011) have been critical about the limited understanding of food and health in most scholarship on nutrition science and subsequent dietary advice. This limitation was observed in Hispanic immigrant women's conceptualisations in New York in Park and colleagues' (2011) study, which discussed ideas of purity or freshness instead of

nutritional content when describing what they considered as 'healthy' food. 'Pure' foods were considered to be produced without chemical aids and 'fresh' foods had short production chains (Park et al. 2011). These women displayed the same values for preferred foods as those from higher socio-economic classes in the United States, but did not use the same vocabulary used by the Slow Food, organic, or the local food movement. Therefore, it can be argued that with the changes in food production processes that have been seen, even when concepts like 'local' and 'organic' are not part of everyday use, the values that drive these women the same. An example of this can be seen in Connell et al.'s (2008) study on 'good food' as conceptualised by consumers who shop at farmers' markets in Canada. It was observed that this group of shoppers factored in more characteristics under 'good food' than those who shopped less frequently at farmers markets, and more importantly, considered 'bought at farmers markets' a significant characteristic for 'good food'. Additionally, this paper reveals that in general, the definitions of 'good food' coincide with the characteristics offered by a local food system, and that ideas of good food are under constant negotiation.

Studies from France and Sweden reflect a similar trend to Park and colleagues' (2011) study, where despite some regional differences, 'eating well' denotes eating a structured, traditional, home-cooked meal with fresh and natural ingredients in sufficient amounts. 'Eating well' also includes eating food which has limited quantities of sugar and fat, reflecting local and regional cuisine, in a familial and convivial environment (Bildtgård 2010). The Italian consumers from Bildtgård's (2010) study are similar to the Hispanic women in Park and colleagues' study (2011) where the primary concerns are with quality, authenticity, freshness, and naturalness. Using the concept of 'alimentary mentalities' to denote the rationalities related to food consumption, Bildtgård's (2010) research discovers that (with some variation) values of health and taste in France and Sweden emerge as contributing the most to ideas of eating well. Importantly, the values associated with eating well are stable over time, even with globalisation and the

introduction of new nutritional ideas and 'foreign' foods. In this context, the author argues that these mentalities are why the ideas of eating well have remained stable, as new ideas and habits must be in agreement to these mentalities to survive. These findings agree with Jackson's (2004) review which shows that despite scholarly claims about the influence of globalisation, consumption cultures in countries like India, China, and Russia remain resilient. The absence of an inclusion of 'organic' or 'local' foods by the consumers interviewed in these studies also reveals that while these concepts have gained traction in food marketing schemes, they are not mentioned by consumers when considering 'eating well' or eating 'good food', and concepts of 'freshness' and 'naturalness' have a higher priority.

Enticott's (2003a, 2003b) studies are critical in justifying the bridging of ideas of 'good food' with that of 'organic' and 'local'. Enticott (2003a, 2003b) explores how rural consumers in the United Kingdom approach and handle food risks in the context of milk. These studies are useful in highlighting the nuances in negotiating 'good food' qualities and by demonstrating that far from being uncritical, consumers have important reasons for making choices about food consumption that may appear irrational on the surface. Enticott (2003a, 2003b) reveals that if these consumers are seen choosing raw or unpasteurised milk, they are not only drawing on traditional ideas of nature, but also associating potential risks to production processes in conventional food systems. This study is particularly important for the purposes of this paper, because it demonstrates how consumer decisions and available knowledge sets are negotiated in times of food risks.

Studies exploring organic and local food consumption have multiplied in recent years (Bourn and Prescott 2002), focusing on production processes, health impacts, consumer perceptions, willingness to pay (Janssen and Hamm 2012), and strategies for coping with food risks in everyday life (Williams and Hammitt 2001). A number of studies have also explored the concept of 'local' (Autio et al. 2013; Young 2014;

Carmela Aprile et al. 2015) and discussed consumer preferences and practices in relation to it. However, the place of the consumer in such research is often cast as one without agency, and purely as recipients of an already established concept. Blake and colleagues' (2010), Sundbo (2013), and Sonnino (2013) contest this notion and consider that concepts like local are social constructions and negotiated by consumers, in the places they occupy and frequent, and through the cultural values they hold (Miller 1998; Blake et al. 2010). In exploring the concept of 'local' food, Sundbo (2013) explains that in a Danish context, 'local' food is conceptualised in different ways by producers and consumers, with both groups of actors prioritising different characteristics. This finding is supported by the fact that while there may be different elements comprising 'local food' in scholarly literature and for different actors in the food system, the common theme is that of food that has not been produced through an industrial mainstream system (Sundbo 2013). The concept of 'organic' food is also conceptualised in fairly vague terms, with authors like Chrzan (2010) noting that most American consumers who visit farmers markets do not understand what organic production and labels actually indicate. Further, in agreement with Chrzan and colleagues', Lockie and Halpin (2005), who examine consumer preferences and demand in an Australian context, observe that while consumers may not have the information on the processes and impacts of farming, the label of 'organic' provides a simpler and easier way to make the 'right' choice.

In Pakistan, consumers have had many reasons in the past few decades to be concerned about their food, with incidences of avian influenza (Chaudhry et al. 2015), foot and mouth disease in livestock (Abbas et al. 2014), and food campaigns conducted by the Punjab Food Authority (PFA) against unhygienic food practices and adulteration (Junaidi 2015). Further, there have been frequent articles in the popular media about illegal animal rendering units (Ilyas 2012) and pesticide contamination in produce (Ilyas 2015). Despite their datedness, food safety regulations in effect in Pakistan are intended

to provide the most basic level of food safety. However, their effectiveness depends on public involvement, and successful implementation is often delayed because of the restricted number of health officials. Therefore, in an environment where news articles discuss problems associated with vegetable contamination (Ilyas 2012; Ansari 2015), failure to follow food standards (DAWN 2005), and the popularity of companies like 'Isloo Fresh' whose tagline is "Healthy, fresh and locally grown organic produce", indicates a demand for healthier and safer food in an increasingly risky food environment.

While the literature on food risks and on conceptualisations of food quality and eating well is increasing, it is emerging mostly from the Global North, and has tended to view consumers as situated primarily in developed countries. However, this focus may overlook the fact that consumers in developing countries are also active participants in global food systems and their perceptions and decisions have a significant impact on the activities and flows within food networks. It also overlooks the fact that most successful alternative food movements have developed in a western context, which may not be readily transferable to consumers in developing countries (Abrahams 2006; Freidberg and Goldstein 2011). Therefore, this paper adds to these bodies of work by exploring how ideas of 'good food' and eating well function in an environment where globalisation and urbanisation have had a significant influence on the food systems and the population's everyday food consumption habits. An urban Pakistani focus also reveals how food-secure individuals experiencing a globalising food system perceive and react to such changes, especially in light of the aforementioned articles and the popularity of 'organic' food. In the following section, I present and discuss the empirical evidence from Islamabad and discuss how it relates to the existing literature. Finally, it will also show how the concept of embeddedness can enhance understandings of consumer motivations and preferences of food in times of anxiety associated with

transforming food systems, and further, help us show how degrees and scales of embeddedness differ within a specific socio-economic group.

What is Good Food now?

In Pakistan, the phrase *achha khaana* is used to indicate 'good food' or 'eating well', where 'achha' means good or excellent, and 'khaana' means food or eating. In interviewing the respondents for this study, the term was used initially in an encompassing way to indicate a number of things, such as pure and fresh food, healthy food and food that had healing or reinforcing properties (particularly during times of illness), and food considered to be culturally appropriate. In this section I explore the ideas and practices that form the conceptualisation of 'good food', how these ideas have changed over time, and how different ideas are contested and negotiated for different consumers.

'Pure' Food



Figure 6.1 Label in local store - '*Khaalis desi*⁶⁴ ghee' (Pure clarified butter) – Photograph by Saher Hasnain

⁶⁴ 'Desi' is a term used to refer to people, products and concepts associated with countries in South Asia (Steinberg et al. 2010: 87). It is explored further in relation to food in upcoming sections of this paper.

'Pure' food is one of the major components of 'good food'. It is considered to be food free of adulterants and contaminants, and food that has not been altered from its original state. It is often referred to using the words '*khaalis*' or '*paak*', where both indicate purity from contaminants and genuineness, but '*paak*' is also considered with religious connotations of sacred purity. 'Paak' food is associated not only with chemical contaminants, preservatives and flavour enhancers, but also with intentional adulteration of items like lentils, beans or milk, substitution of expensive items with cheaper and potentially harmful alternatives and using waste such as discarded eggs from hatcheries in bakeries (Haye, Personal Communication, August 8, 2014). A local store advertises the purity of items that are often the sources of contention for consumers. This is shown in Figure 6.1, where clarified butter, an item that is often highly adulterated, is advertised as being pure. Purity was a significant component of 'good food' for all of the respondents interviewed, and it was one of the factors that they were least likely to compromise on when purchasing food. It was also often discussed with nostalgia and a reflection of how agricultural practices in the past may have been better, at least because of a smaller amount of chemical aids used. As Tahseen states:

"We used to take purity for granted before when farmers didn't have to use too many chemicals... Now you have to think about it and go to the effort of washing things to death, washing paint from lentils, picking out coloured stones from it, knowing that milk either has detergent, cement or swamp water and deciding carefully where to buy things from." (July 28, 2015)

For consumers like Tahseen, purity is an integral part of what she considers to be 'good food', as compared to a few years ago. In her late sixties and with two married children, she recalls her experiences of living with her husband a few decades ago in an area of the country known for its wheat production. Most farmers in that area could not afford the luxury of using pesticides and chemical fertilizers, and believed that they were only

to be used once the soil quality had deteriorated. Besides the use of chemical aids, she is also concerned with different incidents of adulteration of foods, which she has read about and believes is a recent development. Tahseen's opinion that the purity of foods in terms of contamination has been detrimentally affected because of the changes in the food system is representative of over 80% of interviewed respondents, while the rest considered that in some respects, the contemporary food system had helped in ensuring the purity of many foods. Importantly for Tahseen, buying pure food from specific places not only helps her avoid the anxieties detailed in the quotation above, but also aids in "connecting with the right ways of growing food: the way it used to be done" (Tahseen, July 28, 2015). These quotations reveal two important themes of reconnection: firstly, a spatial reconnection with farms when Tahseen could purchase wheat and rice directly from growers, and secondly, a nostalgic reconnection with times in the past when food systems functioned differently (at least in terms of chemical aids). Through these reconnections, Tahseen and consumers in Islamabad like her mirror the respondents' in Kneafsey and colleagues' (2004, 2008) studies where besides reconnecting with farming (see Winter 2003), there is also an active component of reconnecting with less intensive food systems.

In contrast, Yasmin, a student in her early 30's who lives with her parents, thinks that for wheat and other grains, preservative chemicals, and contemporary food regulations safeguard consumers against mould growth, and against spoilage during storage and transportation. Yasmin has investigated the health effects of these additives as part of her studies as a medical student and considers that on the whole, some additives perform a positive role. For consumers such as Yasmin, pesticides, preservatives, additives, and even refrigeration are meant to counteract decomposition and are essential for preserving the natural purity of the foodstuffs. This group of consumers use nostalgia in a different way. While some features of earlier food production are looked upon with fondness, they are more aware about how earlier processes were potentially

harmful to human health. Therefore, in terms of consumers who associate purity with the presence and absence of chemicals, one group (as represented by Tahseen) uses nostalgia to reinforce the idea that the earlier versions of the food system produced purer foods, and that while the developing food system has its advantages, these come at the cost of purity and freshness. This is reflected in studies by Featherstone (2007) and Sierra and McQuitty (2007) that demonstrate how nostalgia about the rural idyll drives consumers towards favouring foods produced by techniques from times before conventional food systems. In contrast, the other group (represented by Yasmin), considers that current food is more likely to be pure, because the use of chemicals and systems like refrigeration ensure that naturally present contaminants and processes like decomposition are countered. Crucially, both groups of consumers believe that despite their differing opinions, they now think more about food purity than they have previously, driven partly because of food campaigns against adulteration and the increasing availability of information on alternative food networks in other countries. As with the difference in opinions over the use of chemicals in food, the respondents also had conflicting feelings towards foods advertised as being 'organic' or 'local':

“...what I know of organic and environmentally safe exceed what agencies will put their label on. I used to think food was good if it was pure, natural and did not go through a lot to get to me, but now I hear that organic and local is better because it has *some* percentage of pesticide and is grown nearby is not useful and just involves blindly trusting someone sitting far away who is doing what's necessary for *their* country. But these ideas do not apply here.” (Sanobar, June 12, 2014)

Sanobar, a recently married student in her late 30's, belongs to the same group of consumers as represented by Tahseen. Besides not believing in the ability of labels to truthfully display the purity of the food, she considers that current ideas of 'organic' do not match with her ideas of 'pure'. Sanobar has learnt through the few studies she can

access through her university and online articles on western newspapers what alternatively produced food in western countries normally entails and considers that while these efforts are necessary to counteract the problems of food systems, they are insufficient in scope for her satisfaction. She notes that these articles are also produced mainly for a consumer living in Western countries. Besides the clash between consumer and alternative networks' conceptions of 'good food', the uncertainty and distrust associated with labels in Islamabad may also be related to how Pakistan does not currently have its own national organic certification. This absence is despite research into organic production by the Pakistan Agriculture Research Council (PARC) and companies within Pakistan, who use it on foodstuffs⁶⁵ follow a number of different global certification schemes, like the International Organisation for Standardisation (ISO), Certified Organic Agriculture (COA), or GlobalGAP.⁶⁶ The use of 'organic' on labels is shown in Figure 6.2 below:



Figure 6.2 Organic label used by a Pakistani farm – Photograph by Sanobar

⁶⁵ Organic certification for foods sold within the country is still rare, although two domestic labels, N'eco and Daali Earthfoods have started selling processed organic foods in some supermarkets. However, these brands had not reached stores in Islamabad at the time of fieldwork, and the respondents were unaware of any national level organic certification schemes.

⁶⁶ A private global body that certifies sustainable and safe production of food.

Disconnect between locally articulated conceptions of 'good food' and those associated with "western alternative food" (Sanobar, July 9, 2014) can also be shown in the choice of words used. 'Organic' in Urdu is referred to as '*nameyaati*', '*bunyaadi*' or '*asaasi*', and 'local' can be called '*muqaami*'. However, none of these Urdu words were used for 'organic' and 'local' food in everyday conversation. Instead, the respondents exclusively used the English term 'organic food' when referring to it, as represented by the quotations above. Feelings about preferring their own understanding of 'pure' over 'organic' is reflected by the respondents in the study who believe that while 'pure' food is superior to organic food, organic food still represents one of the better food options in the market. However, the consumers do not purchase foods labelled as organic during their shopping trips. Although some supermarkets and markets that the respondents frequent have small selections of imported and domestic organic food, over 70% of consumers reported having tried a few items primarily for novelty purposes, and as using these places of purchase as a site for socialising and "to see and to be seen" (Sanobar, June 12, 2014). Prohibitive pricing and a perception that organic food is ordinarily only bought by "the elite" are pointed to as being some of the main reasons for not regularly purchasing organic food (Hoor, Personal Communication, August 11, 2014).⁶⁷

This perception of alternative food being available only for the elite is critical in observing that food consumption in a risky environment is tied in with class distinction. The middle class respondents in Islamabad would often compare themselves with other classes not just in matters of economic differences, but also in terms of cultural attitudes. Attitudes and expenditure on certain commodities and services were some of the main ways in which distinction was established. This finding is in line with Paddock's (2015) findings from research conducted in farmers markets and co-operatives in South Wales, where culturally defined identities were more significant and positioning classes

⁶⁷ Fruit stalls at the farmers' market in Islamabad would sell fruit at three to five times the cost of other local shops

than economics. In Islamabad for example, respondents would say that one obvious way of differentiating the middle classes with upper classes was their simple and unassuming lives, where money was never “displayed” (Jamila, July 4, 2014). In terms of food, distinctions were made in terms of how often they might eat outside, and what places they might frequent. A middle class family might only eat out a few times a month at the most, at mid-range restaurants, and usually go as a family, or with guests. Upper class families on the other hand would eat out a few times a week, with less emphasis on family time (children and young adults would spend more time eating out with friends, instead of their parents), and have no problems going to high-end establishments. This is represented by Mehak below, a student who was discussing her habits with eating at restaurants:

“I love going out with my friends, especially to cafes, but I have to be careful, because some of my friends are very rich, and for them it’s no problem to spend three thousand [rupees] every day, and go to the Marriott restaurants. Our family is middling, and it’s not just about money, it’s just not our lifestyle! In the winters I go to the Kuch Khaas [farmers] market and get a juice. Very expensive for me but nothing for my friends. Once in a while for me is okay and worth it.”

(December 2, 2013)

However, while the consumers in Paddock’s (2015) study use food experienced and consumed from farmers markets as a way to shape their ideas of ‘good food’, the consumers in Islamabad have not reached this point yet. This may change in the future if alternative food in the country becomes more widely available and affordable, which has the potential to not only open farmers markets to more social classes, but to separate the concept of alternative foods from the domain of the elite classes.

Further, for these respondents, the alternative food production concepts they are using to contribute to their ideas of 'good food', have been developed in western contexts. This is in line with critiques about alternative food systems made by Abrahams (2006) and Freidberg and Goldstein (2011) by using examples of food supply networks in Africa. These studies have shown that dominant ideas of alternatively produced food do not translate well to contexts in the Global South. Therefore, while not directly against their own food ideals, the concepts of 'organic' and 'local' food are arguably not as embedded and integrated in the personal food knowledges of consumers in Islamabad as they are in those of Western consumers. This is further reinforced by the fact that the respondents for this study report that most of their information about alternative food comes from reading online articles in western news websites, blog posts, and some scholarly articles. They say that there is not only a scarcity of material emerging from Pakistani sources, but there are also few sources that are written in lay-language. Finally, they consider that most available resources appear to have been produced for a western audience where it is easier to access alternative foods and further information on them.

This difference between Pakistani and alternative food conceptions is important when considering food qualities like purity, because Pakistani consumers consider that organic food does not offer the level of purity that they desire in food, and is limited in the value it offered. For example, 'purity' when considered using the word '*paak*', is also associated with religious connotations, where examples from the Quran and statements from the Prophet Muhammad's life are used to describe 'good food'. In discussing food concerns, respondents would sometimes link ideas of 'good food' with '*halaal*' (permissible or lawful) and 'haram' (impermissible and unlawful), as mentioned in the Quran. However, these words are also mentioned along with '*taiyib*' which means

‘good’.⁶⁸ Here, they would also usually discuss how issues of *halaal/haram* were less of a concern in a predominantly Muslim country and that they were therefore more focused on other factors of goodness of food. These descriptions are then further influenced by concepts of balance from Persian understandings on medicine. The concept of *halaal* however, is also associated with animal welfare and good practice in food production.⁶⁹ Thus, food that is *halaal* would ideally be made of permissible items, free of chemicals, raised with appropriate animal welfare principles, and be good in terms of health.⁷⁰ Islamic considerations for food also extend to the concept of responsibility in the way that a good Muslim must not cheat and endanger the life of another human being. Therefore, the respondents considered that in ideal world, they would have no problems trusting the people growing and selling their food, because they would be aware that God would hold them accountable. Additionally, Islam also guides that fairness and justice must be at the forefront of all business dealings, and no actor at any point should be slighted from what is rightfully his. Although the social justice, and personal responsibility aspect of Islam is strong, it was not discussed by the respondents themselves in this study in the context of religion. However, vendors that the respondents would buy food from would mention their Islamic responsibility (discussed below). Approximately 50% of the participants described using a combination of Persian medicine and Prophetic medicine in their everyday life to inform food and health decisions.⁷¹ This can be observed in the case of Karimah who lives with her parents, is

⁶⁸ For example, “O mankind, eat from whatever is on earth [that is] lawful and good...” (Quran, 2:168)

⁶⁹ Various verses in the Quran guide individuals to treat animals and all living things with care and respect, as they are created beings of God. While this does not mean that animals are not meant to be consumed, it does entail that an animal raised for consumption must not be denied basic freedoms such as light, proper shelter, and freedom of movement. Therefore, according to the guidelines from the Quran and the Prophet, the ‘good’ food would also mean that the animals have been raised with welfare in mind and are slaughtered without cruelty.

⁷⁰ For a comprehensive evaluation of animal welfare, vegetarianism, and the concept of *halaal*, see ‘Animal Welfare in Islam’ by Masri (2015).

⁷¹ These are referred to as Unani medicine and Tib-e-Nabvi, which are practices for treating illnesses, and advice on eating well from the Prophet Muhammad’s life time. Publications

employed part-time, and is responsible for most of the food shopping in the house. While she is similar to respondents represented by Tahseen and Sanobar, her preferences for purity are more strongly driven by Islamic and cultural understandings of purity. She exclusively uses the terms *paak/naapaak* (pure/impure) when talking about food, and believes that any effort taken to change the 'intended' nature of food will make it impure. Her views are representative of 10% of respondents, who actively discussed concerns against genetically modified foods but primarily from the perspective of "changing food's natural and God-given attributes" (Karimah, July 6, 2014; Aminah, May 11, 2014). Importantly, respondents like Karimah think that processes like genetic modification and selecting for preferred traits reduce the purity of foods and draw them away from nature. As she put it:

"I'd rather focus on purity and balance instead. God says to 'eat of the good things'⁷² and I don't think He meant things packed full of pesticides and genetically modified." (Karimah, July 6, 2014)

For Karimah and at least half of the respondents, food purity is the most basic attribute of food besides considerations of *halaal* and *haram*, and it is a religious obligation of food vendors to ensure that the food they are providing for their customers is as pure as possible. The connection between the purity of food and religion was observed frequently throughout fieldwork. During food shopping excursions with respondents, when questioned about the purity or freshness of food, vendors would often call on God as their witness to their honesty, and assert that as Muslims, their desire of selling the

compiling such practices and sayings are readily available in the market and even some doctors would recommend such 'alternative' practices alongside their usual medicinal prescriptions.

⁷² This refers to the following verse in the Quran: "O you who have believed, eat from the good things which We have provided for you and be grateful to Allah if it is [indeed] Him that you worship." (Quran, 2: 172). In other verses, 'good' refers to food in terms of 'lawful' and 'wholesome' (Quran, 5:87) and to avoid excess (Quran, 20:81). Verses like these are additional to those that prohibit swine flesh, and foods that have been dedicated to other gods. Evidence from the Prophet Muhammad's life also indicates that issues of food security, innovation in production practices and the ethics of consumption and food waste were of interest in early Muslim communities (Farouk et al. 2015).

best possible food could not be questioned. These statements would often also be combined with taking oaths on the Quran, their mothers, or their daughters, as a symbol of their truthfulness: “By God, I swear on the Quran and on my mother, that this flour is the purest in the world” (Pasha (shopkeeper), August 2, 2014). The connection between religion and food is also critical in illustrating that reconnections in terms of how food can also refer to abstract systems like religion. I argue that by referring to food attributes in terms of religion, the consumers in this study are also reaffirming their connections with their religion. This particular factor has not been explored in the existing literature in terms of ‘good food’, and this contribution is further supported in upcoming sections of this paper that explore how reconnections to ideas associated with ‘Pakistani-ness’ function for consumers in Islamabad.

In exploring the idea of ‘good food’, all of the interviewed respondents considered purity to be an essential attribute in food, a finding reflected in Park and colleagues’ (2011) study of Hispanic women’s perspectives of healthy food and retail food environments in New York. It was also associated with a distinct feeling of nostalgia for the times when food systems had not been as dependent on chemical aids for production. While only about half the participants reported personal accounts of experiencing farming methods in their past, the nostalgia for the “good times of agriculture” (Rafiq, December 3, 2013) was shared by all consumers. On average, respondents had a good understanding of the functioning of the food system and how changes in recent years had affected their perceptions about food. This awareness of food system functions and changes in perception is in line with research conducted on consumer perceptions in European and North American countries about their food supply; particularly in relation to biotechnology (Tucker et al. 2006), where issues of modified foods (Grunert et al. 2001; Lang and Hallman 2005), pesticide and microbial contamination (Saba and Messina 2003), hormonal and antibiotic use in animals, and disease have contributed to reduced consumer trust (Alfnes and Rickertsen 2004).

The importance of considering place in purchasing pure foods was also a consistent theme for all of the interviewed respondents in this study. For example, along with thoughts about food contamination, Tahseen's decision about where to purchase food items is increasingly a point of worry. While on some occasions shopping may be limited to shops known for selling pure milk, it is also linked with areas trusted for producing particular foods: for example, only preferring rice grown in specific parts of the country because of its taste and the practices of the farmers. For consumers like Tahseen, this is also linked with the nostalgia of food consumption in the past, which is strongly associated with rural areas and when inter-continental food networks were not an everyday reality. This can be further exemplified in respondents represented by Sanobar, where alternative food movements are associated so strongly with western countries that the local vernacular is not employed when referring to them. Sites of purchase for organic food in Islamabad are also linked more with an 'elite image' and as places "to see and be seen", instead of locations to buy organic food. Finally, respondents are also more aware of the addition of more places and processes within their personal food networks with the changes in the food system, than in the past, which has had an influence on how they think about the purity of food. In the next section, 'freshness' is explored as another important component of 'good food' in combination with the desire for shorter food.

'Fresh' Food



Figure 6.3 Label in local store - '*Khaalis aur taaza pissi surkh mirch*' (Pure and fresh ground red chillies) –

Photograph by Saleema

“For me, fresh means that it has spent very little time and distance in getting to me... and so it doesn't have preservatives and ripening chemicals. But even then I will soak them, scrub them and peel them.”

(Saleema, March 3, 2014)

For the respondents in this study, ideas of fresh or '*taaza*' are mainly associated with ideas of reduced distances in food systems. These ideas are strongly interlinked with those of 'pure' food discussed above and often cannot be discussed separately, as shown in Figure 6.3, where a popular local store advertises food items as fresh and pure. This factor is in agreement with Feagan's (2007) notion of the overlap of the spatial and natural spheres of reconnection and embeddedness, but in the context of this paper, further reveals how concerns with food are connected with food systems. Saleema, quoted above, has three school-going children and works during the day at a computing firm. Her husband Ali is employed at a bank, and since most of the family members are away for lunch, Saleema and her husband ensure that the family eat

breakfast and dinner together. She focuses on making sure that most of the food cooked at home is made from scratch. They do two 'major' food shopping trips a month, and stock up on essentials like flour, rice, meat, onions, tomatoes, and potatoes from the wholesale produce market, from vendors that have been selected over time based on personal experience and reputation, and from a store in their sector known among her social group for their clean rice and pure, freshly ground flour. For everyday vegetable and fruit consumption, Ali goes to the vegetable stall in their nearby market. Their food shopping trips are representative of 95% of the respondents, where food shops are often divided into primary shopping trips and top-ups. For them, the concept of distance not only applies to the origins of the food, but also to the distance in relation of their usual transportation routes. Such shopping habits resonate with Jackson's (1999a) findings where food shopping is a family-focused, mundane but highly skilled activity dependent on social learning. This can be observed in how Saleema selects food vendors at a produce market where prices are regulated and, every vendor ostensibly provides the same kind of food.

At this point, the socially constructed nature and the role of agents involved in creating the knowledge contributing to 'local foods' can be observed. The interviewed respondents were aware of the narratives surrounding 'local' food and the concerns about the conventional food production methods that had driven the creation of alternative food movements. They believed that like organic food, local food is a powerful alternative to some of the detrimental features of the industrialising food system. However, they also considered that most of the food used in their daily consumption is produced regionally or nationally and while they are now getting food that has been produced from further and further away, they do not have to think about inter-continental food movements to the same extent as western consumers. Here, it is important to note that food perceived to be regionally produced is referred to as '*muqaami*' (regional) or '*yahan ka*' (from here), which is distinguished from "local food,

as the western people think of it” (Khaalid, January 23, 2014). Therefore, while the wholesale produce markets and smaller produce stalls are significant for ‘*muqaami*’ or food produced in Pakistan, purchasing food from the market closest to one’s house or in close proximity to a regular transportation route is often the preferred option for the respondents and referred to as ‘*qareeb say*’ (near) or ‘*aas paas say*’ (from nearby areas).⁷³ For all of the respondents interviewed, geographical proximity of the food outlet is an important component of ‘local’, usually superseding the other meanings of local, in the same way as the New Zealander women in Bava and colleagues’ (2010) study on their food provisioning habits and trade-offs prefer purchasing food that is conveniently located. Therefore, while the respondents are aware of the local food movement, it is still thought of as a western concept, and for many, ‘local’ has different everyday connotations. The combination of origin and location of food purchase location is important in this conceptualisation of ‘local’ because as Azizah, a doctor employed in a local tertiary care hospital noted: “It doesn’t matter if it’s local to the area, especially if I have to go to the other end of the city where I never go” (Azizah, April 3, 2014). For Azizah and most of the respondents like her, the local food movement definition is important only if they are purchasing at a large supermarket or grocery store offering imported foodstuffs, with consumers then preferring Pakistani items over imported ones. In such situations, however, price also plays an important role, as Pakistani items are usually marked lower than imported ones. Distrust of some western foodstuffs also has a significant role in shopping in supermarkets, which is also partly associated with a reaction against the technologically-driven changes in the food system taking in other parts of the world:

“The cold storage transportation, refrigeration, and genetic ways of making things last longer have made things good and bad for us. I

⁷³ It is not intended here to conflate the ideas and debates of local in terms of proximity to food production sites and local in terms of proximity to food purchase sites. It is important to note that the two were usually considered under the same terms and were only elaborated upon further persuasion.

know it's for the good of humanity, but I think we are depending too much on technical and mechanical aids, not knowing enough about them or connecting with the processes properly...saying food is from 'nearby' means something different for us than people in America and Europe." (Anisa, August 11, 2014)

As seen in Anisa's quotation above, while the advantages of technological improvements in food systems are acknowledged, factors like the increased distance and the effects of some processes are considered suspicious. Anisa, a housewife with five children, divides the cooking between herself and her part-time cook⁷⁴. She has similar cooking ideals as Saleema's, and prefers to do her shopping at the wholesale market, buying only seasonal, fresh produce, which she knows is from the nearby regions. The value placed on fresh food by all of the respondents in the study coincides with the Swedish respondents in Bildtgård's (2010) study on the places Swedish and French consumers consider are good for food consumption, and is partly associated with the nutritional value of produce that has not been processed to a great degree and has not had to travel great distances. However, as can be seen from the quotations above, issues of locality, freshness, and purity are always discussed in conjunction with other concerns and with goals of reconnection with food systems. Additionally, the respondents were increasingly aware of the limitations of the dominant alternative food movements and considered that good food should have more qualities than are currently marketed through labels like 'local', 'organic', or 'fair-trade'.⁷⁵ This sentiment is presented by Nura, an engineer who does most of her family's food shopping with her daughter-in-law:

⁷⁴ 95% of the interviewed respondents had at least one full-time or part-time maid, cook, or driver.

⁷⁵ Discussions of fair-trade food were mentioned sparingly in this research project. Consumers indicated that farmers in Pakistan were never as distant from consumers in comparison with how they are portrayed in western depictions of conventional food systems. Additionally, while they did their part in improving welfare of the less fortunate in terms of charity, they did not have the luxury to devote attention and money specifically for food labelled as 'fair-trade' (which compared to 'organic' foods, have not reached Pakistani markets).

“The problem with thinking of organic and local food as they are now is that it’s one or the other. Good food is overarching, and all the ideals we look for are interlinked and connected. There is no point of eating organic food if it’s been frozen for weeks and is Australian. Make a Pakistani *good food* label that combines qualities of all the labels, tell me how they fit with food processes and places now and then I might be interested.” (Nura, July 6, 2014)

Nura believes that good food includes everything from the location of production sites and the conditions of production to the distribution and consumption of food. For Nura, and just over half of the respondents, ‘good food’ is a holistic concept with many interlinked factors. Discussions of freshness reveal that it is intricately linked with ideas of purity and the Pakistani nature of foods. This observation is commented on as being a crucial factor that reduces trust in the concepts of ‘organic’ and ‘local’ where local food may not necessarily be organic, and vice versa. This resonates with the findings of Blake and colleagues’ (2010) and Park and colleagues’ (2011) where despite having to compromise in the food bought, the respondents believe that opting for ‘pure’ and ‘fresh’ may still offer them better food as opposed to purchasing expensive, imported organic produce, which may not be fresh.

Freshness also highlights the importance of the personal and visceral interactions with food. Looking and touching the food will provide the buyer with more information about its physical state than a label is likely to do, as noted and discussed during food shopping excursions with respondents during fieldwork and by authors exploring the value of viscosity and embodiment in food (Valentine 2002; Hayes-Conroy and Martin 2010). This section has revealed the breadth of themes that can be discussed under the umbrella of ‘natural embeddedness’: respondents were most concerned with the distances associated with their food, the different technologies like refrigeration that had an influence on the foods they received and their general anxieties associated with food

safety (Winter 2003a; Feagan and Morris 2009). The next section moves on to look at how 'eating Pakistani' was a way of reconnecting with ideas of 'Pakistani-ness' , and could be as a reaction to the globalising nature of the food system. This highlights the final crucial component of 'good food' understandings that this research found.

'Pakistani' Food



Figure 6.4 Label on Nestle juice box - 'Chaunsa mango, Mangoes from Pakistan' – Photograph by Saher Hasnain

"Now we have fast food and restaurants from many countries, and all of the problems that western food production has made! But at the end of the day, even though we love foreign food, we keep Pakistani food as foundation so we don't lose the links to what makes us, us!" (Navid, July 12, 2014)

Navid is unmarried, lives with his parents, and has recently started working at a bank. He does most of the food shopping for his family, but has been eating out with college friends and work colleagues consistently for the past five years. Despite his frequent meals at restaurants, he still eats at least two meals a day with his parents, and prefers

ordering 'desi' food when eating out. 'Desi' has different meanings for many Pakistanis. The term is popularly defined as local or traditional, or it may refer to people, products and ideas associated with the Indian subcontinent. Recently, the local and traditional characteristic of the word has become more popular with the younger generations, for whom 'desi' food implies that the material has been sourced from the country and follows a local recipe. This section demonstrates that 'desi' is an important component of reconnection at the level of society and the community for the middle class urban residents in Islamabad, and is a way to respond to globalising forces, such as the presence of foreign brands and restaurants.

The preference for Pakistani foods over others ties in with Jackson's (2004) proposal that local culinary cultures are resilient even with the influence of factors attributed to globalisation. This is also shown in the awareness of large brands that advertise foods produced from items sourced from within the country. Juice produced from Pakistani chaunsa mangos is sold by Nestle during the summer months, as shown in Figure 6.4, and it is priced higher than other Nestle juices. This strategy is also discussed by Jackson (2004) in showing that globalisation does not necessarily result in a homogenisation of local foods, and brands often produce country-specific food items. Even when respondents considered Chinese or Italian foods as some of their favourite cuisines, they held Pakistani or 'desi' cuisine to be superior in terms of taste and more connected with the social fabric of life. Half of the respondents explained that eating Pakistani food ensures that they do not absorb foreign ideas and lifestyles to the degree that they turn away from their national and cultural roots. Maintaining 'Pakistani-ness' is then further associated with the conviviality and spaces that meals are associated with as observed by Parham (2015) at the micro-scale of sharing food within the house. Khaalid notes that the conviviality associated with Pakistani are paramount in creating and maintaining links with family and friends:

“Pakistani food is for eating with people: tea and food form the backbone of all our meetings. At meals with friends and family, even if sometimes you’ll get something western like pasta, the most loved things are pulao or biryani⁷⁶, maybe a karahi⁷⁷, or alu gosht⁷⁸. These things are not single-serve and they link us better with family and friends.” (Khaalid, August 1, 2014)

Khaalid, a consultant, and his wife Juwairya, an artist who works from home, have three children and host dinner parties at least twice a month with family and close friends. They have a few set meal ideas for such events and often invite their friends to bring dishes as well. He observes that even though meal-time discussions will involve the latest food concerns (such as “the milk man has been thinning the milk”, “they fined and closed another restaurant!”) the enthusiasm over the meal is not dampened, something that may happen if the family is eating by themselves. For Khaalid, and all of the respondents interviewed, the social aspect of Pakistani food is one of its defining attributes, and cuisines from different parts of the country are celebrated far more than those from other countries. The social aspect of Pakistani food is also a significant aspect of ‘good food’, emphasised by how respondents believe that even if the purest and freshest food is used in cooking, it’s ‘goodness’ is undermined if it is not consumed in a social environment or being prepared with a local recipe. This can be summarised in Ali’s photograph in Figure 6.5 below of his conceptualisation of ‘good food’:

⁷⁶ Spiced rice cooked with meat

⁷⁷ A stew prepared with meat and a tomato and chili base with spices and oil

⁷⁸ A stew with potatoes and meat



Figure 6.5 Dinner with family and friends - Photograph by Ali

For Ali, this is an ideal meal because it consists of rice with mincemeat, a meal typical of the north-western, rural regions of the country (where his family is from), the radishes in the salad are from their garden, and above all, that he is eating it with his parents and cousins. Therefore, this photo of ‘good food’ signals nostalgia for rural areas, value of home-grown produce, and the importance of eating with family and friends.

Over half the consumers believe that the taste and positive feelings imparted by eating in the company of friends and family are not only an important component of food consumption, but also has an impact on health. This is also noted by Mona, a middle-aged woman who runs a private business from her house and who associates her good health with how often she and her family eat with their extended family and their friends from the neighbourhood. She believes that eating by oneself may have a “cancelling effect on the other healthful things about food, so eating alone is just like eating a horribly processed block of food.” (June 16, 2014), The social role of food is noted in studies like those conducted by Pugliese and colleagues’ (2013), where social and convivial aspect of Lebanese food is an important component in consuming organic, local and traditional foods, and in Sage (2003), where it is a vital component of eating good food. Sociability, comfort, and familiarity associated with particular foods are also

significant components of 'good food' as noted by Husna, a housewife who restricts her diet to a few key ingredients, all sourced from the area around her home town:

"It's not always about where the ingredients came from or what horrible things are in it, but what you make of it and how it connects you meaningful experiences. You can of course make a karahi using Indian tomatoes, mutant chicken, and pesticide filled peppers...at the end of the day it's about eating what you can afford and are familiar with and the people you are with. " (Husna, February 9, 2014)

Considering locally produced or organic food to be less important than the other respondents, Husna considers familiarity, comfort, and company as the defining characteristics of 'good food', where the effect of the prepared product is more important than the attributes of its parts. In this preference, she represents about 20% of the respondents who would prefer familiarity and company over the other factors of 'good food', if given a choice. Even respondents who ate out at places specialising in western cuisines considered Pakistani food as an essential part of their everyday diet. The 'Pakistani-ness' of food was connected with feelings of familiarity, comfort, and as a stabilising response against the globalising influences around them, another factor that resonates with the resilience of local cuisines (Jackson 1999a). Even when Pakistani food was consumed outside the home, it was still considered by over half the respondents to be food they associated with the comforts and familiarity of the home. This argument is reflected by the works of Brown and colleagues' (2010) in their work with students studying abroad, and the meanings they attach to food when living in a foreign culture. This section highlights that the idea of 'desi' in terms of food can be considered an important concept in terms of social reconnection and embeddedness, and that these themes of reconnection are held in higher regard over those of 'organic' and 'local'.

Good Food and Health

Although all of the interviewed respondents did not consider health to be the main component of their definitions of 'good food', it was an underlying theme of their descriptions of ideal meals, as noted by Mona in the preceding section. Besides her emphasis on the positive impacts on health imparted by eating in a communal environment, eating food that embodied the concepts of purity, freshness and Pakistani-ness, but was also healthy was a recurring element. For example, Farah, a primary school teacher, visits an Afghan restaurant with her parents at least once a month and orders grilled kebab over rice, pictured in Figure 6.6 below. Although she acknowledges that eating a meal featuring meat is not the healthiest option, she considers it to be a safer choice instead of ordering a vegetable dish, and because she does not eat meat regularly, it is one of the only times she eats lamb or goat meat. For her and her family, ordering vegetable dishes in restaurants may be dangerous not just because of potential pesticide contamination, but because if they have not been properly washed, then it may be a health hazard. But as the meat has been grilled over hot coals, it is free from microbial hazards. Importantly, Farah also considers this to be her favourite meal, because it represents the cuisine of specific areas of Pakistan (the northern and northwest regions), and because she only goes to this restaurant when she visits her parents.



Figure 6.6 Grilled lamb kebab over rice - Photograph by Farah

Further, as power disruptions through electricity shortfalls in the country worsen, and a significant number of young people are turning towards eating out or eating quick, high caloric snacks in the place of regular meals. This has the potential of worsening the health profiles of the population, as noted by Manal, a college student who stocks up on ramen noodles, cookies, and crisps, and prefers to eat out with her friends at a nearby shawarma (thinly sliced grilled chicken or lamb) stand (shown in Figure 6.7) when a power cut takes place during lunch hours. She notes that she has gained weight as power cuts have increased in frequency and blames her poor eating habits as result:

“I would ideally like to eat a good meal at home with my mother. I really like her okra curries and lentils with meat, but then if the gas is at low pressure and there’s no power, then it’s just easier to go out with my neighbourhood friends to the café or the shawarma guy and eat something. It’s still good-ish because it’s cheap and I’m with friends, but not as healthy as what I would eat with my mother.”



Figure 6.7 Shawarma stand - Photograph by Manal

It is also only during discussions of good food in the context of health that the respondents consider vegetarianism. Although vegetarianism has been increasing in popularity in the past few years (Meat Atlas of the Friends of the Earth 2014), it was not a major consideration for the respondents of this study. Out of sixty households, ten mentioned it as having been a lifestyle they had considered, and only two had considered themselves as vegetarians at specific points in time. Aishah, one of the youngest respondents, who has recently joined the military, had spent six months as a vegetarian, in an attempt to improve her health and to make a “better effort to be sustainable” (August 3, 2015). However, she immediately faced considerable problems with her decision:

“...Eid-ul-Adha was starting the same month, and my mother said I was ungrateful by not eating food provided for me, and that God had intended us to eat a balanced diet with meat and vegetables. Then if I went to visit people, I wouldn’t eat nuggets, or patties or kebabs, because people serve something with meat when you visit, and then I was being a bad guest. The worst was explaining why I was vegetarian in a country where the best foods have meat, and where a

major religious holiday is around meat. I had to stop; it was getting hard to be social.” (August 3, 2015)

Of the ten respondents who had spoken of vegetarianism, only three had a positive outlook on the idea, and the rest also thought of it as a concept that was not compatible with life as a Muslim and as a Pakistani. However, it is necessary to note that there is no Islamic ruling against vegetarianism, and there are a large number of *fatwas* or scholarly rulings that allow for a vegetarian lifestyle. Historians also note that meat consumption would have been a rare luxury for early Muslims, even for the Prophet Muhammad. Further, scholars like Al-Banna and Hamza Yousef state that in times where animal cruelty in food production is the convention, then vegetarianism is the responsible choice that God and the Prophet (P.B.U.H.) would approve. Early Sufis as well led vegetarian lifestyles, such as Chishti Inayat Khan and Sufi Shaykh Bawa Muhaiyaddeen, who went a step ahead and forbid any animal products for his fellowship. In contrast, there are other jurists who take an extreme view of the religion and believe that as God has appointed humans as '*khalifa*' or leaders of the world and put all creation at his disposal, then abstaining from meat is a sign of ingratitude and potentially even a sin. This is countered by others who consider that being appointed *khalifa* instead means that they must safeguard the environment and all non-humans as well as humans. However, the proliferation of articles like 'Vegetarian Muslim' by Anila Muhammad (2013) in the Huffington Post, and a multitude of articles on the relevance of halaal food in non-Muslim countries reveals that the trend towards meat consumption for Muslim people may change in coming years. This change will potentially be associated with the problems of intensified meat production with animal cruelty, and damage to human health and environment is against all concepts of Islamic ethics and the idea that as God's chosen creations, we must protect and sustain the world and everything within it.

Conclusion

This paper has explored the relationship between food knowledges and desires of reconnection with spaces and ideas of food systems. This paper has argued that the conceptualisations about food that consumers developed over time are influenced by information about alternative food networks in western countries. These conceptualisations not only change with time, but are highly complex and negotiated in response to consumers' knowledge and experience of food systems. This paper showed that consumers have knowledge sets about food which have been influenced by local, traditional, and religious ideas of food which they are now attempting to integrate with ideas associated with alternative food networks in the west. In this way, this paper contributes to findings in the literatures on geographical food knowledges, ideas of reconnection, and adaptation to food system transformations. It shows that the middle class consumers interviewed in Islamabad have associated ideas of 'organic' and 'local' with those of 'pure' and 'fresh'. However, in this process, they experience some contention where their understanding and preference for 'pure' and 'local' food clashes with what they learn about 'organic' and 'local'. This paper has shown that in order to adapt to these contentions, the consumers instead focus on ideas of reconnection that 'organic' and 'local' represent. Framing preferences for food in terms of reconnection then not only helps in choosing the best possible versions of food available, but also helps consumers make reflexive choices about food consumption.

The findings from this paper further the theoretical debates on geographical food knowledges as represented by Cook and Crang (1996), Morris and Kirwan (2010), and on 'good food' by Sage (2003) and Connell and colleagues' (2008). The paper argues that the consumers in Islamabad are constructing their geographical knowledges about food through ideas of 'good food', when they do not have easy access to alternatively produced food. In this way, this paper has bridged the bodies of literature on reconnections and 'good food' as illustrated partly by Sage's study (2003). This paper

mirrors Sage's (2003) findings in that 'good food' is used by consumers to indicate a variety of food attributes, agrees with Connell and colleagues' in that 'good food' and ideas associated with alternative food systems have become increasingly entangled, but then departs from Sage (2003) and Connell and colleagues' (2008) findings by showing that local articulations of 'good food' clash with and 'win' over ideas associated with alternative food systems. The arguments in this paper show that this creation and negotiation of knowledges is carried out reflexively to create connections and reconnections for consumers in transforming food systems. These findings are reflected to some degree by Cook and Crang (1996) and Morris and Kirwan (2010). The results of this paper show that reconnections take place without the presence of alternative food networks. This factor is crucial particularly for considering the success of 'imported' alternatively produced food items and for creating a globally-useful version of alternative food networks (Abrahams 2006).

The paper additionally demonstrates how different aspects of reconnection compete with each other in the context of risky food consumption. This was demonstrated in how the major arenas of reconnection were with food systems, rural areas, and ideas of religiosity and 'being Pakistani'. Therefore, for the Pakistani consumers, reconnection functions at the level of the spatial in terms of spaces and distances associated with food consumption, and at a more abstract level where reconnections with community and traditional and religious identity are valued. In this way, this paper reveals how the consumers in Islamabad situate themselves through connections and reconnections within food systems, concepts learnt from western countries, and with their personal ideas of being Muslim and being Pakistani. This paper also revealed that while anxiety over food safety is a persistent concern for Islamabadi consumers, reconnecting with food systems and their personal articulations of 'good food' reduces some anxieties, but creates new ones, such as the realisation that their food environments might not provide the foods they desire. In addition, this paper also contributes to the literature on food

anxiety and food geography by revealing that while consumers in developing countries are facing similar food anxieties to consumers in western countries; their anxieties are further compounded by the scarcity of affordable and accessible alternatives in their food environments. In this way, the paper agrees with findings by Kneafsey and colleagues' (2004) on how reconnections are one way in which consumers deal with anxiety about food consumption and that efforts at reconnection may engender new anxieties.

This paper has significant implications for theorising globally-useful conceptions of alternative food networks, the development of organic certifications within Pakistan, and for evaluating how conceptualisations of food attributes are influenced by place-specific contexts. Firstly, it reveals that the transformations of food systems have increased tensions in everyday eating for the urban middle class cohort in Islamabad, Pakistan. Secondly, this paper demonstrates that although most food geography studies have tended to focus on consumers in developed countries and have limited analyses of developing countries as sites of production, the concerns of consumers in developing countries are strongly influenced by the narratives and debates that are discussed in the Western media.

Chapter 7 (*Paper III*): The Changing Nature of Food Risks and Consumer Trust in Islamabad, Pakistan

Abstract

This article examines how concerns about food safety and changing food systems affect how middle class consumers in Islamabad, Pakistan approach food consumption in their everyday life. It specifically explores how these individuals negotiate what food to buy, and where and from whom they buy it. Locating the study in the literature on trust and food consumption, this paper explores how the perceptions and practices associated with food consumption have changed over time within this context, and how particular values persist. Importantly, it explores the role of trust in a risky food environment where systemic food risks and the impacts from developments in the food system have a more significant impact on everyday life than discrete events like food scandals. The study suggests that increased knowledge and information about food production processes are not necessarily associated with a reduction in food anxiety, and individualised risk reduction strategies and knowledge and personal judgements associated with particular sellers, places, and food items have a stronger influence. This study contributes to research on food anxieties and consumer trust in developing countries and shows how trust functions in everyday food consumption for middle class proportions of the population.

Target journal – Health, Risk and Society

Introduction

“One can’t trust anyone in a country where people are willing to even adulterate milk” (Naila,⁷⁹ December 2, 2014)

Food safety is a major issue in Pakistan, with recent food scares including those associated with avian flu (Chaudhry, Rashid et al. 2015), foot-and-mouth disease (Abbas, Younus et al. 2014), and frequent government crackdowns on illegal meat and blood rendering units, and unhygienic outlets (Ilyas 2015, Junaidi 2015, Khan, Malik et al. 2014). Besides these discrete events, systemic risks such as excessive pesticide use in agricultural activities and use of low quality ingredients and harmful chemical adulterants in food are a constant worry for consumers (Ali et al. 2013; Khan 2013a; Ali 2015). This is indicated by Naila’s quote above, a middle-aged housewife with three children, residing in Islamabad. These worries are further linked to changes in the food system, with consumers expressing anxiety over the increased presence of imported food items in markets, genetically modified foods, and a potential threat to traditional, local cuisines (Ilyas 2012; Akhtar 2013; Majeed 2014). Even with the existence of food safety regulations,⁸⁰ interventions by the government have tended to be limited to infrequent food campaigns (Khan 2013b).

The persistent presence of food safety issues, further exacerbated by the changes in the food system in Pakistan, provides the context for this study. It aims to investigate how middle class consumers in Islamabad, who consider themselves as food-secure, confront these food issues in their everyday lives. It contributes to literature on how risk perceptions and consumer behaviour may differ for middle class populations in developing countries, where the food system is an integral part of the economy, and is

⁷⁹ Pseudonyms for the participants are used throughout the report, and the quotations are translated from Urdu and Punjabi by the author

⁸⁰ Food safety is governed primarily by the Pure Food Ordinance of 1960, The Cantonment Pure Food Act of 1966, Pakistan Hotels and Restaurants Act of 1967, and the Pakistan Standards and Quality Control Authority Act of 1996. They are often punished under the Penal Code of Pakistan (Khan 2013b).

rapidly modernising at a rate where existing regulations and institutions may not be well-equipped to handle the potential consequences.

This paper forms part of a larger ethnographic research project conducted over a period of 8 months between August 2013 and August 2014 in Islamabad, Pakistan. Because the main focus of the research project was investigating the food consumption habits and the food environments of the middle class residents of the city, the sites of focus were the homes, market places, and other sites of consumption like restaurants and cafes. The methodological advantage of extended participant observation and semi-structured interviews for this study was the chance to observe and participate with the consumers at every stage of the food consumption process, from decision making at home, to the shopping floor, and then consumption at home. Members from sixty middle-class households were selected from every residential sector of Islamabad. In this study, middle class participants were considered primarily on their self-identification as food-secure on an everyday basis. While every effort was made to achieve equal gender participation, over 80% of the active respondents were women, because of their central role in the food consumption process. The primary respondents were between the ages of 18 and 65 although other members of the family would contribute often to discussions, particularly during meal times and if food shopping was conducted as a family event. An average of eight interviews was conducted with each family and the data was recorded as field notes and photographs.

In the following sections the theoretical and conceptual grounding for this study is presented followed by a discussion of the context of Islamabad, Pakistan. This is followed by the data obtained from the fieldwork, categorised into trusted places, trusted people, and trusted foods. Finally, the paper concludes with an analysis of how food risks are perceived and managed on an everyday basis for the consumers in Islamabad.

Food Consumption and Trust

In the past few decades, trust in the context of food consumption has been given significant attention in disciplines like psychology (Fife-schaw and Rowe 1996; Frewer and Miles 2003), public health (Calnan et al. 2006), the social sciences (Luhmann 1979; Mollering 2001), and political sciences (Alexander 1996; Kaase 1999). This interest reveals the importance of trust in social well-being, and has been extended to evaluations of food risks and hazards in recent years because of food scares such as the Bovine-Spongiform Encephalitis (BSE) event in Britain, the infant formula scandal in China (Gong and Jackson 2012), and the horsemeat scandal in Europe (Jackson 2015). These events and longer-term issues such the social and environmental impacts of technological changes in the food industry have contributed to consumer anxieties about food in recent years (Berg 2004). These anxieties, however, have been associated with the proliferation of higher quality, local, sustainable, and fair-trade food that provides consumers with a higher level of traceability than before to increase consumer trust in most developed countries (Levenstein 1993; Kjaernes 2013).

The importance of trust in food purchasing decision therefore cannot be underestimated (Berg 2004). Trust also affects how consumers perceive and adapt to food technologies, origins of foods and communication methods utilised by different institutions (Hobbs and Goddard 2015). A highly nuanced concept, trust has been defined in multiple ways in the literature, for example, “a state of favourable expectation regarding other people’s actions and intentions” (Mollering 2001: 404) and to “accept the risks associated with the type and depth of the interdependence inherent in a given relationship” (Sheppard and Sherman 1998: 423): This is exemplified by Naila quoted above, who is far more concerned about how trust is affected by the nature of people who adulterate milk, rather than the adulterated milk itself. From Mollering’s (2001) definition, the one trusting the other has an expectation that other will not harm him or her and will act in his or her best interest. Further, from Shepard and Sherman’s definition, the truster will then

accept the risks that are associated with this social relationship between the truster and the trustee. Henderson and colleagues' (2012) note that the 'relationship' element in trust is a broad category that includes the 'systems of communication' (p. 258) that tie the individual to their social systems and all the processes involved in this space. Their observation is in line with Calnan and colleagues (2006) in that trusting relationships exist at the micro levels, between the consumers and other actors, and at the macro level, between consumers and the food systems they are connected to. On the other hand, Giddens' defines trust as "confidence in the reliability of a person or system, regarding a given set of outcomes or events, where that confidence expresses a faith in the probity or love of another, or in the correctness of abstract principles (technical knowledge)" (Giddens 1990: 34). The definitions mentioned here by Mollering (2001), Shepard and Sherman (1998) and Calnan and colleagues (2006) have some factors in common, such as the expectation and confidence that agents involved will not harm the other, and that this confidence extends from the scale of the individual to an institution or a system. Giddens' definition in particular also includes the importance of specific events in creating and maintaining the trust relationship.

The definitions of trust also display the significance of risk in trust and following on this, a number of studies have utilised the 'risk society' hypothesis developed by Ulrich Beck (1992) and Anthony Giddens (1991). This includes Veeck's (2010) analysis of consumer risk navigation in urban China and Smith's (2007) exploration of Aberdeen's corned beef typhoid outbreak. This idea suggests that modern society is plagued by anxieties emerging from technological development which are unpredictable and difficult to estimate or control. In addition, because of the structural changes taking place in modern society, responsibility for managing these risks increasingly falls to the individual, giving them the freedom to manage their everyday life, but also adding uncertainty because of conflicting information sources and different power relations. Despite its usefulness in evaluating some cases of contemporary food risk, Beck's

(1992) analysis places higher value on expert knowledge, which as scholars like Wynne (1996) and Callon, Lascoumes and Barthe (2009) note, discounts the value of lay knowledge, or the interplay between expert and lay knowledges. Finally, Beck's evaluation of the modern risk society also does not consider the cultural importance of knowledge and tends towards a highly rational and cognition based approach (Cottle 1998).

Besides risk, the concept of anxiety of food has been used in more recent times to indicate some of the contemporary concerns about food. This trend can be seen in Peter Jackson's 2015 book, 'Anxious Appetites' which explores how consumer anxieties in western societies function, particularly evaluated from a social level instead of an individual level. Jackson examines 'anxiety' as an issue to be explained within society in terms of food, instead of using it as a concept to examine food-related issues. This can be contrasted with Chad Lavin's (2013) political theory driven examination of food politics, where 'anxiety' is used as to evaluate issues of American society and how food itself can be a source of anxiety. On the other hand, John Coveney (2000) also uses anxiety and pleasure to explore the global fascination with healthy eating and making rational food choices. Harvey Levenstein (1993, 2013) also discusses how the various changes in nutritional advice have contributed towards making food anxieties a constant fixture of middle class living. However, of these four, only Peter Jackson engages with anxiety as a concept to be explored rather than a lens to be used to examine food issues in the contemporary world. In the context of food-related research, this focus allows the social aspects of trust to be examined as opposed to the purely individual and cognitive aspects. Once food anxiety is viewed as a socially embedded phenomenon, the effect of everyday practices, institutions, gender relations, and regional and cultural influences on associated, highly social issues like trust can be examined in the same framework (Jackson et al. 2013). This is also useful when considering that social anxiety about food forms an endemic condition that consumers

live with on an everyday basis, which is exacerbated by discrete food scares that disrupt daily life until the problem is fixed. However, even with the resolution of the food scare, the underlying anxiety persists (Jackson 2015).

Following from food risks and food anxiety, Lobb and colleagues (2007) have explored the significance between trust and risk perceptions in shopping for chicken for consumers in the United Kingdom, and the study on public trust and genetically modified foods in the United States by Lang (2013) is representative of similar studies that indicate that trust varies significantly across different institutions and actors. A study by Ding and colleagues (2013) investigating the role of trust in the context of recurring food threats in Canada found that trust is integral to societal management of risks and helps in reducing the detrimental effect of food scares once they are repeated. These results are further confirmed in a study by Berg and colleagues (2005), evaluating consumer trust in national food control authorities in Russia, Denmark and Norway. These studies reveal that besides trust, the knowledge and experience gained from the first food scare and experience with the performance of relevant national institutions play important roles in how the consumers react to future food scares and trust the overall food system of their region. Although much of the research on trust has emerged from developed countries in the global North, research from the global South and transitioning economies presents a vital addition and nuance to the trust literature. Chen and colleagues' (2013) investigation of different types of trust and consumer behaviour about food safety in Beijing, China, confirmed that while trust in manufacturers, retailers and industries is associated with trust in food generally; and Kumar's (2014) study focused at classifying Indian consumers in New Delhi based on a trust typology that discovered that the segmentation was based primarily on food quality, trust in various actors, and the perception of food safety.

One of the earlier solutions to reducing food-related anxiety in consumers was the provision of knowledge through institutional assurances and tools like labels (Watts et al. 2005). Research conducted by Eden and colleagues (2008) in England on consumer perceptions about foods however, reveals that such knowledge fixes can be problematic, building on works by Wynne (1995) and Irwin (2003). Recent research by Frewer and Scholderer (2003), Hansen and colleagues' (2003), and Kjaernes and colleagues' (2007) has also challenged the 'knowledge-deficit' model of trust that takes trust as a purely individual concept where an increase in knowledge will have a positive impact on consumer decision making. However, while the knowledge-deficit model has been useful in creating policy, evidence reveals that increased knowledge may also contribute to an increase in anxiety and stress. Not only can food-related information be interpreted in different and unexpected ways, or resisted, but a knowledge-fix model of trust building assumes that the consumer makes decisions in a rational manner (Cook and Crang 1996; Crang 1996). Eden and colleagues (2008), also argue for considering how consumers think and talk about food on an everyday basis and how reconnection to the food system using information functions for them.

Continuing on the theme of reconnection, Enticott (2003a, 2003b) in particular, using the context of milk consumption in rural England, reveals how consumers manage multiple sources of information in evaluating risky foods, and shows that social relationships within communities and trust relationships between different actors of food systems are vital towards creating and maintaining the idea of a safe food environment. Besides knowledge, trust is also established and continued through facework commitments defined as "trust relations which are sustained or expressed in social connections established in circumstances of co-presence" (Giddens 1990: 80), which are sustained through personal relationships, reputations, and the demeanour of the food vendor (Hedgecoe 2012). It is also linked to the ability of being able to judge the area or the shop from where food is being purchased according to the individual's requirements of

hygiene, safety, etc. The importance of facework commitments in managing risk and trust has been most recently explored by deKrom and Mol (2010) in their study of consumer shopping habits following the avian influenza threats in the United Kingdom.

This paper is concerned with how trust and certainty function in this changing environment. This paper explores the micro and macro levels of trust in food in Islamabad and investigates the different levels and spaces of trust in the context of this developing country. It draws on the arguments of reflexive modernity, on Berg's (2004) classification of consumers based on trust/distrust and reflexivity/non-reflexivity, but primarily focuses on how trust issues are tied to different aspects of the changing food system and the strategies employed in everyday living to cope with the perceived risks to food safety. The following sections contain the findings from the research, organised around the agents and institutions, food production processes, and the places implicated in the food system.

As the research discussed above indicates, much of the existing material on trust in the context of food consumption is emerging from Europe and North America, and increasingly from China (Berg et al. 2005; Kjærnes 2006; Klein 2013). This research also varies extensively in scale of concern with deKrom and Mol's (2005) study in shopping malls in United Kingdom, to Berg and colleagues' study at national levels in Russia, Norway and Denmark. However, there is comparatively little work from India, and practically none emerging from Pakistan, even with a strong media presence of food safety issues. Therefore, much of the existing work on trust and food is emerging from different national and cultural contexts with differing attitudes towards state institutions, regulating bodies and particular aspects of the food system. Finally, there is also a limited body of work that discusses how trust may change over time driven by changes in the food system and influenced by different sources of information. This paper seeks to address these gaps and contribute to the debates on trust and food systems by providing the context of Pakistan, and evaluating how trust differs across a

population group that self-identifies as middle class, and how it may change because of different triggers.

Pakistani Context

Pakistan's food safety problems have not received extensive scholarly attention beyond some analyses of the avian flu epidemic and sporadic outbreaks of livestock diseases like foot-and-mouth disease (Abbas et al. 2014; Chaudhry et al. 2015). However, few papers like Viqar-un-Nisa and colleagues (2005) evaluation of toxic compounds found in food in Islamabad and Akhtar's (2013) comprehensive review of Pakistan's general food safety issues stand out from the larger body of work on food security and nutrition in the country. But recent events such as the stringent food campaigns conducted in 2015 by the Punjab Food Authority (PFA) targeting Islamabad and Lahore, raiding and sealing popular eateries and arresting food adulterers are indicative of increasing interest in the country's food safety situation (Junaidi 2015). Campaigns like this however are more infrequent than documentary-style programs run by some news channels that report on eateries reported for unhygienic habits, or the discovery of illegal animal rendering locations (Ilyas 2015). While food safety news is not the norm in Pakistani media and usually the only instances of food-related news is during times of restaurant closures, blog and opinion posts on the internet on eating well are far more frequent (Khan 2013a) and represent an intense interest in food safety in the country. A number of scholars have pointed out the weakness of the current food regulations in the face of the globalising food system and they are insufficient in dealing with issues like environmental risks and animal ethics and have yet to be updated and revised (Khan 2013b). Despite their outdatedness, the Pure Food Ordinances of 1960 and other associated regulations⁸¹ are intended to provide the most basic level of food safety.

⁸¹ Food safety is primarily controlled through the implementation of the Pure Food Ordinances and, the Cantonment Pure Food Act of 1966, Pakistan Hotels and Restaurants Act of 1967 and the Pakistan Standards and Quality Control Authority Act of 1996; infractions are punished under the Penal Code of Pakistan (Khan 2013). Food safety at eateries, restaurants, and cafes is further controlled by the Punjab Animal Slaughter Act 1963, sections 269, 278 and 290 of the

These laws have provisions that are primarily driven by public involvement, so their successful implementation depends on the public reporting incidences of food related malpractice to the local health officials for inspection. This can be seen in action in the large scale food campaigns and closures and fining of some eateries; although it can be argued that the penalties are not sufficient to curtail poor food safety practices.

The response to such campaigns and closures is often couched in terms of trust and reliance on particular vendors, or the government and it is useful to note that the Urdu words used for indicating trust and certainty in relation to food are *aetemaad* (trust), *bharosa* (trust, faith or belief) and *yaqeen* (certainty), often used together with *pareshani* (worry, anxiety) and *dar* (fear) in relation to trusting food vendors and retailers. Newspapers occasionally publish articles and editorials discussing food issues like the different types of contamination in food, such as high levels of pesticides in produce (Tariq et al. 2007; Ilyas 2012), the problems in meeting basic food safety standards in restaurants and in importing and exporting foods items (DAWN 2005; Hasnain 2015), the prospects of genetically modified foods within the country (Bokhari 2012) and an increasing variety of processed and imported foods in supermarkets and a burgeoning café culture in the urban areas (Mussadaq 2012). The spatial focus of these food campaigns, articles, and the fact that research by authors like Viqar-un-Nisa and colleagues (2005) has provided an overview of the food safety condition in Islamabad frame it is a useful site of analysis for this study.

Food Safety in Everyday Life

This section offers a detailed description and analysis of the sources of distrust in the food system for middle class consumers in Islamabad, followed by the strategies used in managing and reducing this distrust. This section is organised around the decisions

Pakistan Penal Code, the Price Control and Prevention of Profiteering and Hoarding Ordinance, and the Food Adulteration and Spurious Drugs Act. It is important to note that seemingly unrelated acts, such as the Pakistan Quarantine Act also have significant bearing on regulating food safety within the country.

made the consumers in managing food safety, the places chosen from where food is purchased and produced, the people involved in the trust relationships, and the food items selected.

Trusted Places

Trust related to specific places and increasing distances within food systems was one of the three major areas of concern for the respondents. Trust in places was further divided into trust in the place of origin for the food stuffs, for example if it was imported from other countries, and trust in the places the food was purchased from. In these distinctions, the consumers were reflecting concerns on the dis-embeddedness and disconnection from the food systems, which has been noted in the contexts of developed countries, where this is strongly associated with feelings of distrust (Meyer et al. 2012), and how specific places within one's food shopping route are associated with particular connotations, such as representing traditional food, or being more strongly regulated (Gong and Jackson 2012). Safa, a teacher at a local college who lives with her parents and does the food shopping for her family is particularly concerned with the point of origin of the food she purchases:

"I have to ask 'where is it from?' now because that makes a big difference on whether or not I can trust if it's safe or not. For processed things, I'd trust imported things from the US or Europe because they have better standards I think, but I want Pakistani produce, because then hopefully it will have less pesticide." (Safa, January 4, 2014)

She represents about sixty percent of the respondents who consider that the origins of the food have a significant impact on whether or not it can be safely consumed. However, while Safa and others like her consider that processed food from western countries is safer because of the layers of regulation in place, others like Samiyah, a middle-aged housewife employed as a banker, believe that despite stronger regulatory

bodies, imported food has unacceptable levels of chemical additives, which are not found in Pakistani foods. Importantly, trust in the origin of food is also tied to discussions about production processes and agents in the food chain, because respondents associate western countries with food production processes that are more technologically advanced than those in their own countries (Gong and Jackson 2012). At this point, the opinion of the respondents is divided, as represented by Safa and Samiyah, where Safa and at least forty percent of the respondents consider the advanced processes in these countries an added safety measure. The rest, exemplified below by Ayah, a retired designer with two adult children, consider that these processes represent deterioration in food safety in other countries, driven by intensification and an increased reliance on technology and chemical aids:

“One might think that all these technologies make things safer, but then we are eating things grown thousands of miles away, and then they have to cover them with chemicals to make sure it's a bit safer. And then you know they send us all the food that's implicated in scandals or is too dangerous for their supermarkets so they don't have to lose money!” (December 9, 2013)

While much of Ayah's sentiment is strongly associated with distrust for western countries, she considers the changes in the food system as an expected outcome of the increased global population. She believes that as the distances within food networks increase, process intensification, and chemical use becomes necessary, but in combination with the perception that countries like Pakistan become the “dumping ground of their waste” (Ayah, December 9, 2013), food imported from them is unsafe and cannot be trusted. While such blanket distrust was not common among the respondents, it does represent the more prevalent ‘us versus them’ and a defensive mode of thinking for over eighty percent of the respondents. In this mode of thinking, Western countries are considered to have reached a level of development where they

not only personally benefit from much technological advancement, but are also likely to send things not suited for their own consumption to countries like Pakistan.⁸²

On a local scale, the place from where the food is bought is also a concern, with respondents strongly evaluating shops based on location, popularity, and reputation of the shop and the owners. Because of this, at least thirty percent of the respondents report a stronger allegiance to larger department stores and domestic chains as opposed to smaller shops, a trend also followed by the Chinese consumers in Gong and Jackson's (2012) study on consumption practices following the infant milk formula, and the consumers in Klein's study on food safety in Kunming, where supermarkets were trusted over smaller vendors because of the perception that they were associated with stronger regulations (2013). However, a major difference in the interviewed respondents was that despite favouring supermarkets for some items and shopping trips, the wholesale produce market is a preferred shopping site, because of the perceived freshness and 'localness' of the food, despite a lack of more stringent regulations. For this reason, Aminah, a retired doctor who shops mainly at the produce market and a nearby department store, prefers these locations in comparison to the sub-sector market across the road from her:

"It is very convenient for freshly made bread and quick vegetable shops if I can't go to the Tuesday market, but it's a smaller market and not many people visit, so the product turnover is very slow, so things might be old and possibly from smaller suppliers with no scruples. Generally, you want to go to a crowded, popular place with larger shops which always have customers in them." (Aminah, August 19, 2014)

⁸² Respondents would often refer to the cases of obsolete electronic devices being shipped to Pakistan, India, Bangladesh and China, and point out that pesticides and medicines that had been banned in Western countries had been sent to developing countries once they could no longer be sold in their home markets, as evidence of the West's lack of concern over the welfare of less developed countries.

Importantly, while it may be considered that these respondents are preferring larger locations as opposed to smaller ones, three convenience stores that were frequented by most of the interviewed respondents were in small and cramped locations, but popular because of their reputation for supplying good food. In addition, many sub-sector markets are less frequented for major grocery trips because of their higher prices and particularly, their proximity to larger retail areas that are often near other facilities like bakeries, tailors and banks, which are visited in the same trip.

Finally, the fact that areas where food is produced are located at a distance to the consumer also provides a degree of distrust for the respondents, who associate it not only with the complexity of processes, but also because of a perceived lack of accountability and a suspicion for the countries of origin. This is noted by Saleema, who has three children and is employed at a computing firm:

“You see more imported things in the markets these days, and people say that if it’s produced in the West, then it must be good, because they have better technologies and food laws. But then I think they also know that we can’t go and see what’s happening to the food there, like we can here, so they can do whatever they want. Why else would we get their food rejects?” (Saleema, December 2, 2013)

In this case, Saleema refers to a few instances where a local grocery store near her house had been stocking expired imported food items with altered expiry date labels. When she had questioned the shop keeper, he reported it as another incidence where foods shipped to Pakistan are of a quality lower than can be offered to Western consumers, and had expired either at the point of export, or during inspection at customs offices.⁸³ This event is similar to other accounts narrated by at least half of the

⁸³ Saleema considers that these situations may also be a matter of the shopkeepers’ themselves altering labels to sell stock that is no longer viable. She notes however, that such tampering

respondents, who would cite these as examples to show how foods originating from developed countries could not be trusted. Faiza, a family doctor with four children, explains why she prefers to buy Pakistani food:

“Did you know that in the US they have an accepted level of insect parts in some of their canned or packaged foods? And in organic foods sometimes they have more pesticide use than conventional plants! Pakistani food has many issues, but at least here we can go scream at the vendors and make sure our friends and families don’t go to them.”

(Faiza, August, 11, 2015)

Therefore, the choice of where to buy food from forms an important component of everyday considerations of food safety, as reflected also in a study of Vietnamese consumers and their preferences for purchasing vegetables (Wertheim-Heck et al. 2014). Not only are the places of concern linked to sites of purchase within the city, but also with the origins of the food, and the perceptions and judgements associated with them. However, it is also important to note that for many consumers, places from where to buy food are also strongly linked with who they buy the food from, as discussed in the following section.

Trusted People

For the respondents in this study, distrust associated with specific actors within the food chain was an overarching theme. Respondents considered that as food presents an easy medium to cheat in, and as Pakistanis are “inherently cheaters” (Aminah, April 11, 2015), individual actors like food vendors are likely to defraud consumers through food. When this was questioned, examples of cheating related ingenuity would be offered. Hussain, a thirty-seven year old engineer, who shares food shopping duties with his wife

seems to only happen with imported goods, therefore, something must be going wrong at stages before goods arrive in stores.

and represents the opinions of over eighty percent of the interviewed respondents, recounted the different types of food fraud he is aware of:

“They can inject air in meat to make it look bigger, color fish gills to make it look fresh, decorate stalls with the nicest fruit facing outwards and lean on their weights to give you less. They’ll color lentils, add pebbles in it, color wood with goat’s blood to make it look like betel nut, substitute crows and dead chickens for proper halaal⁸⁴ chicken, donkey or dog meat for goat, rejected broken eggs from hatcheries in high-end cakes and pastries, and fat boiled from road runoff combined with machine oil for frying.” (Hussain, April 5, 2014)

Examples like these were mentioned frequently in discussions of food safety alongside concerns over pesticide contamination however as noted by Kjaernes (2006), the distrustful attitude is aimed predominantly towards people and processes involved instead of the food item itself. These examples reflect Wynne’s (2001) findings from his analysis of risk and ethics associated with GMOs, that increased knowledge does not reduce mistrust and uncertainty, as Hussain’s knowledge about the myriad ways in which cheating takes place does not contribute to his peace of mind. His strategy of reducing the uncertainty he faces during food acquisition is to monitor the activities of his food vendors: for example when purchasing goat meat, he visits a vendor who lets him select the goat and he then oversees the slaughtering and meat preparation process. This vigilance also translates to purchasing produce, where he prefers to select and carefully examine each item himself, and return to the vendor if he finds any problems later. This attitude is further reflected in opinions about relevant institutions, as discussed by Saleema, a middle-aged housewife who makes all the food provision and

⁸⁴ Food considered being permissible or lawful, according to Islamic rules. All of the interviewed respondents were Muslim and followed the Islamic dietary laws in their daily lives, although in comparison with Muslim families living in western, non-Muslims countries (Bonne and Verbeke 2008), they considered that they had to think less about Islamic laws on a daily basis, as compared to other food anxieties.

consumption decisions for her family of three. Like Hussain, she is very aware of the dangers associated with food fraud but thinks that the government's usual inaction is associated with preoccupation with other activities:

“Too many things could go wrong if I don't take all possible precautions. It wasn't this way before I think all of us assume that nothing we eat here is safe; everyone involved is cheating and defrauding us. The government is usually too busy with other things unless they do a series of publicised crackdowns on restaurants, and then nothing again for a while.” (Saleema, February 18, 2015)

Saleema represents a cohort of participants who express reflexive distrust, and are highly vigilant about their food consumption. Her perception that one must assume that all food is unsafe also reveals a constant state of uncertainty and anxiety over the safety of food which aligns with Peter Jackson's (2015) proposition of food anxiety as a constant presence in life that may be aggravated by food scares. She also represents over fifty-five percent of the participants who have become more distrusting over time and attribute their changing risk perceptions to the changes in the food system. This sentiment is shared by Mona, a housewife who also runs a small private business. She does most of her shopping at a small grocery store in her sector-market because it gives her the opportunity to chat with the staff members who know her quite well. She is especially grateful when they advise her against buying particular items in case they know that the quality is not as it should be, and offer her better alternatives. Small gestures like helping her carry her groceries to her car further makes this shop her preferred place for shopping.

“...as things are changing with how food is grown and made, there are more things to consider when buying food and there is no help from our government or even sometimes the media! If it's not a restaurant

closure or a splashy news item on a feed mill scandal,⁸⁵ it's not visible.”

(Mona, June 3, 2015)

These quotations exemplify different aspects of trust in actors within the food system. Hussain, Saleema, and Mona are critical about individual actors and the government, but have different trust attitudes. Mona relies on personal familiarity and past experiences on adjusting to the changes in the food supply system and the lack of food safety information, while Saleema and Hussain are more sceptical and use more precautions. They represent about thirty percent of the respondents who consider that a relaxed and familiar attitude used with vendors and suppliers provides them with the opportunity to defraud with greater ease. So while Mona and about forty percent of respondents like her use facework commitments and personal relationships to establish and maintain trust and reduce the complexity of decision making created with the food system changes (de Krom and Mol 2010; Hedgecoe 2012), others like Saleema believe that constant vigilance is the only viable option.

The choice over who to trust is exemplified through the case of milk, as first reflected through Naila's quote in the Introduction section of this paper, which not only reveals a distrust of particular agents, but also expresses the trust/distrust dichotomy of some technological processes involved in the changing food system. For example, Emaan, a housewife with three small children, talks about her confidence in powdered milk purchased in some grocery stores as compared to the milk provided by small, private, mobile vendors. As she explained:

“On TV, they were talking about milk adulteration, where the sellers were adding things like detergent and even cement to the milk! ...they did laboratory analysis on it and were showing the places where the

⁸⁵ This is a reference to recent rumours on unregulated meat and blood rendering units in some areas of the country where the remains of dead animals are used in producing feed for small livestock owners (Ilyas 2008).

sellers would add the things to the milk... I switched to powdered milk for my babies the same day. With such processes it makes it difficult to adulterate, and even then I try to buy well-known brands.” (Emaan, February 15, 2014)

Emaan’s trust for packaged milk was echoed by all but three respondents, who differed in that they are supplied by a nearby buffalo milk seller who provides milk for a select number of consumers. Laila, a housewife who keeps herself knowledgeable about food-related issues through health magazines and blogs, also prefers homogenised and pasteurised milk, admitting that while it does not have the same taste as original buffalo milk; it is the healthier and safer choice and has a longer shelf life. The preference for processes that ensure healthiness and an improved shelf life is also shown in Dunn’s (2008) research in the former Soviet Republic of Georgia where consumers displayed a preference for industrially canned foods as opposed to home-canned, because of the reduced risk of botulism, and the perception that the industrially produced food was safer. Despite the general mistrust in the food system, the respondents are aware of the benefits of the technological innovations associated with the changes. Majeed, a banker with a family of three was critical about many changes in the food system, has started rearing his own chickens and avoiding foods with preservatives whenever possible. Despite these precautions, Majeed acknowledged the benefits of the contemporary food system in that it allows him to regularly consume items that had been considered luxuries in his childhood, to have fewer concerns about certain food-borne illnesses and to be able to eat foods from different parts of the world:

“We can afford to eat meat a few times a week, try things from different parts of the world, and least we don’t have to worry about some of the older animal diseases or problems with storing and transporting [food]. This also means that you don’t have to tie your trust to the shop keeper

to many things. Of course there are problems when things change, but that is to be expected to some level.” (Majeed, August 1, 2014)⁸⁶

The results from this research also reinforce Wynne’s (2001) work on challenging the assumption that trust is only needed when technical knowledge is absent. Those respondents like Majeed, who investigate many aspects of the food system and are intimately aware of production details of certain food commodities, do not consider that their knowledge has reduced their uncertainty. This is further reflected in Holm and Kildevang’s (1996) study on families in Copenhagen, where despite increased knowledge and personal practices on reducing food worries, feelings of uncertainty persist. The respondents in Islamabad also reveal how, in some context, the trust in particular people can be replaced by trust in particular technological processes, as can be seen in the case of milk and some processed products such as prepared meals, canned foods, candies and boxed desserts. This difference is important in observing that while the respondents express concern over the changes of the food system associated with the use of chemical aids and the distance between the consumers and producers, other aspects are looked upon favorably. This sentiment is further reflected in the choice of food that is purchased within a context of risky food consumption. However consumers like Majeed, who appear on first glance to be militant in terms of regulating their consumption and limiting it to what they consume, also display inconsistencies in their behavior. For example, Majeed and his wife frequently eat chicken when they are eating out at restaurants, and when prompted, admit that although this does not reflect his ideals on avoiding farm-raised poultry, it is not always possible to be stringent about food when one is with family and has a social life. Majeed and consumers like him consider that while they may be inconsistent with consumption

⁸⁶ Although there is significant research on meat consumption being higher for men than women in developing countries (MacDonald et al. (2004) for an analysis of differential meat consumption between men and women in Ecuador; Sudo et al. (2004) for gender differences in diet in Bangladesh; and Devi et al. (2014) for gender and class differences in meat consumption in India) this was not the case among the respondents for this research project.

in some instances, these are usually in the context of social settings, where they are trying to not upset a host by refusing to eat food presented to them, or it is not financially feasible to constantly maintain a dietary regiment. Aishah, an employee with the military notes that while she would always prefer to consume meat that was sacrificed at Eid-ul-Adha, because in that way she knows the circumstances of its production, it is not acceptable to refuse to eat meat when visiting someone's house. Additionally, she says that if one is eating out, then eating a vegetarian meal is not an economically sensible choice to make, and eating vegetables that may not be properly cooked is more harmful to health because of pesticides and microbes than undercooked meat (January 17 2014).

Trusted Food

“You can’t just go and buy things anymore; you have to see how the fruit looks, how it smells, if it is in season, and if it feels right. It used to be easier a few years ago when you didn’t have to worry about freshness or purity.” (Sana, February 9, 2014)

Sana is employed in the creative industries and lives with her parents and her brother’s family. She does most of the food shopping for the family, and is sometimes accompanied by her sister-in-law, Fatimah. The following excerpt from my field notes about their shopping practices is representative of how almost all of the interviewed respondents behave when at the produce market and is indicative of how certain knowledges and judgements are at work during everyday shopping:

“They choose a produce stall with seven different varieties of mangoes, and greet the shopkeeper by name. He lets them pick out the mangoes individually and holds out a bag for them to put them in. Sana and Fatimah select mangoes randomly, squeezing, and smelling each one. They explain they prefer medium sized ones that feel just firm and

don't have white powder on them. They say they do the same thing when buying other fruit and vegetables. This way, they can select for those that are not too beautiful and don't have ripening chemicals. This vendor usually has fruit crates from orchards that don't use it. They say that they come early enough to make sure that the owner has not had time to wash everything before displaying it. Despite these precautions, they still think he is a good man, who does not lie to them, or swear on God at every instance (a sign of dishonesty), and does not display the fruit like the others and lets people pick what they want." (Field notes, August 21, 2014)

During this shopping excursion, Sana and Fatimah purchase enough fruit to last the family for a month. They arrived early enough that stall keepers can be seen setting up their stalls and washing dirt and chemicals off their produce in large barrels of dirty water. They purchase vegetables in the same way, preferring to choose only seasonal ones and getting those that they perceive are 'clean', despite having not been washed.

These practices are reminiscent of those studied by Klein (2013) in Kunming, where the consumers use markers like the look of the produce in shopping, and specifically choose produce that appears damaged and eaten by insects, and in the Vietnamese consumers in Wertheim-Heck and colleagues' (2014) study, who use the produce's appearance to judge acceptability. The consumers in Islamabad similarly use food's external appearance as indicators of acceptability and are aware that their concerns about this have changed in the past few decades when they did not have to look out for indications of chemical aids. The uncertainty remaining after the consumers have responded to the food anxieties is also reflected in Holm and Kildevang's (1996) work on families in Copenhagen. This can also be seen in Basit's example below. Basit is a businessman with two grown children. He does his food shopping with his wife Sheher, and displays a strong preference for the local, traditional cuisine:

“... I’d rather eat a good, simple, wholesome Pakistani meal. The cook is excellent, and I buy the best things I can. I watch the goats get slaughtered, and as the meat is prepared. They can’t cheat me. Sheher has a good eye for vegetables and somehow always gets fresh regional stuff. You can’t trust packaged, labelled things. It doesn’t tell me anything I need to know.” (Basit, February, 13, 2014)

Munirah, a doctor with two school-going children explains how she is more focused on buying ‘natural’ food items. While her food shopping locations have not changed significantly in the past few years, she has attempted to reduce the family’s intake of foods she considers less natural. On an everyday basis, this applies to processed snack food and fast food for the children and produce that has been imported from other countries, and broiler chicken.

“Natural is the best. I can’t believe we have to think about it now, but what with genetically modified cereals, tomatoes, and chickens, you can’t be too sure. Same with processed milk and those ready meals. I like some food processes, but it is too much now, I think. I’m glad I live here, because I still have the choice of eating simple, natural things that aren’t wrapped in plastic.” (Munirah, January 9, 2014)

Munirah is representative of over half the respondents, who are concerned about the level of processing and the distances that some foods are coming from, and are striving to consume foods from Pakistan. Munirah also notes it is easier to eat natural and simple foods if they eat traditional, Pakistani cuisines, a sentiment that is reflected by Hadiyah, a technical analyst who lives with her husband and his brother’s family:

“I try to give them [the family] healthy foods, and that’s easy with eating Pakistani dishes if you control the amount of oil you use! But this way, you use basic, unprocessed ingredients, eat together at all meals, and

you don't have to worry about losing who you are by eating other people's foods." (Hadiyah, April 29, 2014)

Hadiyah's food shopping is performed at two small, local grocery stores, a butcher, and a produce stall in the same market. She notes that trusting the vendor and the places she purchases food from has reduced much of the worry in everyday shopping which is displayed by Hussain and Safa in the preceding sections. While she has stopped checking each item she buys, she still focuses on buying unprocessed food items that can be used in traditional recipes. However, this trust is contested by the consumers represented by Hussain and Safa, who have adopted an attitude of constant vigilance and prefer to inspect items even if they have been purchased from trusted vendors and places. Therefore, while the consumers trust is not directly linked to the food item itself, (Kjærnes 2006; 2007) the attributes of the food, such as its external appearance and its location have a strong influence on the trust relationship and the food anxiety. In addition, although the 'naturalness' and 'genetic modification' of food was referred to by at least a third of the interviewed respondents, it was not considered a major concern and food items perceived to have been modified were not avoided outright or considered riskier than other food risks like pesticide contamination, as compared to evidence from other countries (Wynne 2001; Costa-Font et al. 2008). Finally, the relationship between the places of origin, places of purchase, and the agents and institutions associated with food and the food items is strongly interlinked, with each facet affected by the other.

Conclusion

This paper has revealed that while the distrust of Islamabadi middle class consumers to the changes in the food system is similar in many ways to other countries, a number of differences stand out, particularly in terms of relationships to different places and the amount of effort put in by different families in ensuring safe food for their families. It has been argued that the distance and disconnection in the changing food system has

reduced consumer trust in food providers, the complex technological processes involved in its production and the places involved in food networks. Further, it has revealed that even through their own efforts of educating themselves about the food production realities, 'reconnection' or the 'knowledge-fix' does not have a positive influence on reducing consumer anxiety. However, at the same time this study has documented a high level of individualisation on the part of the consumers in the strategies adopted to reduce risk: the strategies have been created by consumers who are aware of some of the risks they face through their food, and perceive that they are not only responsible for managing them (Klein 2013), but that only a select few can be considered trustworthy to do so (Wertheim-Heck et al. 2014). The study also confirms Calnan and colleagues (2006) findings that trusting relationships exist at micro and macro levels, between the consumers and specific actors like food vendors, and between the consumers and food system in general.

Anxiety associated with changes in the food system has been a running theme throughout this study, with respondents commenting frequently on how changes have not only impacted food quality and safety, but their approaches to buying food. These changes are mostly associated with the inappropriate use of pesticides and other chemicals like artificial ripening agents and technological processes such as genetic modification of food in food production (Miles and Frewer 2001; Saba and Messina 2003). This study further shows that anxiety, as opposed to risk society hypothesis is useful to study food, especially since food and trust was used in conjunction with words of anxiety and worry, instead of risk. In addition, it was observed that despite anxiety associated with the changing food system, consumers still maintained local traditional cuisines, which reveals the resilience of local culinary cultures even among fears of globalising, such as the introduction of foreign foods and cuisines (Jackson 2004). This was further fortified by the fact that despite the presence and proliferation of western-style supermarkets offering a wide array of imported goods, all of the interviewed

consumers use a mix of shopping locations, and do not consider that the overall makeup of their diets has changed significantly in the past few decades, despite the availability of new products. It also shows that while the consumers are aware of initiatives like the organic and local food movements in other countries they prefer to adhere to their own conceptualisations and practices of managing food safety on an everyday basis. This also reveals that even if such goods are affordable, labels and packaged goods are not trusted, and only in some cases, particularly milk, are packaged foods that have undergone processing are preferred, a finding reflected from a number of post-socialist countries (Dunn 2008; Klein et al. 2014). This can be attributed to the fact that the Pakistani consumers have experience of how the unprocessed and unpackaged items can be adulterated, contaminated, and spoil quickly. In addition, the brands associated with processed goods like milk are fewer and most of the ones purchased by the respondents are multinational brands, which are further trusted because of their stringent regulations. In comparison, milk that may be preferred by Western consumers because of the 'organic' connotations has no similar regulatory backing in Pakistan. This finding has implications for the future of food certification programs in Pakistan and the success of imported goods that carry labels like 'organic', 'local' or 'Fairtrade'.

Finally, the middle class consumers in Islamabad considered personal knowledge and experience as some of the most important influencers of their trust relationships, and would usually only keep going back to a vendor if they had had no negative experiences with them. This resonates with Henderson and colleagues' (2012) findings from Australian consumers' trust relationship with the food system, who adopt an 'innocent until proven guilty' response. However, the main difference with the respondents in Islamabad is the higher emphasis placed on individual vendors, as opposed to the Pakistani food system as a whole. It is also important to point out that having a Pakistani context for this research further highlights Enticott's (2003a, 2003b) findings that social

relationships in terms of family life and hospitality can be more important than trust even in the context of risky food systems.

The results of this paper have significant contributions for studies on food safety in terms of food consumption in countries like Pakistan. Firstly, the findings indicate that the consumers have an active interest in how the food system functions and how it has changed particularly in terms of the intensification, chemical use, and delocalisation of production practices. Secondly, it may also have implications for alternative food movements like the organic and local food movements, as certain processing practices like milk homogenisation and pasteurisation are preferred over milk sold by buffalo owners and some imported processed foodstuffs are preferred over local ones. This preference also suggests that stronger policing of food regulations within the country will be well-received by the consumers, who express a desire to consume Pakistani products and produce but consider that the food regulations and their implementation are not currently at the same level as that in more developed countries. Finally, it also contributes to discourses in food networks that suggest that many of the production processes, regulatory frameworks and systems of standardisation of the developing food system are unsafe, unethical, and environmentally unsound, by showing that certain processes and products are preferred over more 'natural' options, and by demonstrating that consumers organise their anxieties according to specific aspects of food networks.

Chapter 8 (*Paper IV*): Fowl Problems: Distancing Chicken Consumption in Pakistan

Abstract

The global and cross-continental nature of the modern food system has facilitated the achievement of food security for a significant proportion of the world's population. However, this system has recently come under scrutiny because of its socio-economic and environmental failings. The increasing spatial and social disconnect in many food production and consumption chains has prompted the emergence of alternative food systems that seek to reconnect consumers with the different stages, spaces and stakeholders of production. This has prompted research into commodity networks in fields like geography and food studies. Building on concerns of the industrialisation of food production, such analyses have the potential of informing consumers about the lifecycle of their food, and helping them make healthier, ethical, and more sustainable decisions. This paper contributes to the literature on commodity and food geographies by presenting an urban, South Asian context of regional food systems and food consumption practices; this diverges from currently dominant debates focused on Western countries. The chicken, has transformed from being a rare, special meal, to one of the most popular and affordable meat options. However, since it is also plagued with issues of health and animal ethics, it provides a useful lens for illustrating the transformations in contemporary food systems. This paper explores urban Pakistanis' concerns about the lifecycle of the broiler chicken and investigates how consumers' exploration and perception of the chicken's production spaces plays a role in managing their anxieties about it. The paper uses the concept of 'distancing' as a device employed by consumers whilst in the process of adjusting and adapting to the chicken's production spaces and potentially moving towards organic poultry production.

Introduction

“Food may pose very mundane concerns - availability, acceptability and safety - but the table chicken reminds us of the profound underpinnings of modern food systems.” (Dixon 2002: xi)

Presenting the history of the table chicken or ‘chook’, Jane Dixon (2002) shows how the consolidation and commodification of food systems worldwide are a cause for concern for consumers. In her book, ‘The Changing Chicken: Chooks, Cooks and Culinary Culture’ (2002), she uses the chicken as a lens to explore Australia’s changing cuisines and food systems. This paper agrees with Dixon (2002) in that the chicken is a particularly illustrative lens to study food anxieties associated with changes in food systems and extends the argument to focus on chicken production systems in Pakistan, where consumers have also experienced a major change from chickens being an infrequent and expensive treat, to being consumed at least once a day (Memon 2012). Increasing apprehension over food safety, sustainability, and animal ethics of food production is in turn, promoting the popularity of alternative food networks (AFNs) such as organic agriculture and the ‘Slow Food’ Movement (Smith-Spangler et al. 2012). Anxieties about the globalised and industrialised food system are also apparent in developing countries, where rapid urbanisation is distancing urban residents from food production systems in rural areas. Further, the public outcry over food scares such as the Bovine Spongiform Encephalitis (BSE) scare in the UK in the 1990s (Wilcock et al. 2004) or the melamine-tainted milk scare in China in 2008 (Kuever 2013) revealed that food safety is a major issue for the modern world. The food scandal debate is becoming relevant in rapidly urbanising countries, such as Pakistan; where (1) a significant proportion of the population has access to information sources like the Internet, (2) is mobile, and (3) is crafting a unique identity incorporating ideas of modernity with local and national culture and religion (Ahmad 2009).

This paper investigates the experiences of middle class, relatively food secure consumers in Islamabad, Pakistan, as they explore the production spaces of the broiler chicken: a food commodity that is increasingly plagued by issues of health, safety, and animal ethics. It discusses the factors that motivate people to seek out information and personally explore the production spaces and commodity biographies of the chicken, distance themselves from Western countries and rural areas, and change their consumption habits to favour foods they consider to be organic, local, or home-reared. The current debates around commodity biographies and lifecycles, local and organic food production methods, and the spatial metaphor of 'distancing' as used in production systems are discussed. Specifically, the paper considers these concerns in an urban Pakistani context, investigating how consumers view and investigate the production spaces of commodities in order to manage their consumption preferences, and how these may differ from and add to dominant debates about commodity production and consumer preference in developed countries.

Data for this paper was obtained during fieldwork conducted in Islamabad, Pakistan exploring the food environments of middle class residents over a period of eight months between 2013 and 2014. Members of 60 self-identifying middle class households were interviewed for the project of which 88.3% of the respondents were women, primarily because of the central role they play in the food acquisition and preparation process.⁸⁷ The remainder of the paper is organised as follows: First, the study is located with reference to broader literature on commodity biographies, local and organic food production, the relationship between nostalgia and food and spatial distancing methods in production. Second, changes in meat consumption in Pakistan are outlined followed by a discussion of the Pakistani context for chicken consumption, how 'broiler' and 'desi' chickens are differentiated by retailers and consumers, and the factors that drive some Islamabad residents to explore the chicken's production spaces. Third, the paper presents an

⁸⁷ Pseudonyms for the participants are used throughout the report, and the quotations used are translated from interviews and discussions conducted in Urdu and Punjabi.

exploration of the spaces of the commodity chain as experienced by the consumers and illustrates how they spatially and temporally distance themselves from the current and idealised production spaces, Western countries and Pakistan's rural areas. Crucially, this spatial and temporal distancing is discussed in terms of how consumers conceptualise ideas of 'desi' in reference to locality and tradition.

Geographies of Food

The globalisation of many production processes has increased the social and spatial distance between consumers and producers. Recognising the ethical and environmental implications of this, AFNs, such as 'Slow Food' seek to reduce the distance in production chains. For alternative food consumers, the spatial proximity and direct knowledge of the production situation have significant influence on purchasing decisions (Franz and Hassler 2010). Tracing the spatial origins of foodstuffs is an important marketing tool for the organic food markets, and as Cook and Crang (1996) note, commodity biographies used in this way play a major role in organic food culture. Following Cook and Crang (1996) on the construction of meaningful knowledge of food, Franz and Hassler (2010) investigate the role of commodity biographies and spatial distance in organic food networks using a case study of pepper production in India. They reveal how the value created by the territorial embeddedness of pepper production is an important component of the marketing strategy used to sell the final product to German consumers. Recent works like these reveal the major geographic and socio-economic changes to food systems, social conditions in far-flung production contexts and notably, the importance of following single commodities over their lifecycle to inform and potentially change consumption decisions. Indeed, commodity biographies and the anthropologies of single commodities have held an important place in academia for many decades. One of the earliest works on tracing a single commodity through its lifecycle and evaluating its social influence is R. N. Salaman's (1949) book on the influence of the potato in Europe. Most of these earlier works have a significant

historical component and use the commodity to illustrate broader societal processes, such as Mintz's (1986) work on the importance of sugar in global history, and Ohnuki-Tierney's (1993) analysis of the relationship between rice and Japanese identities. Other examples include the animal-commodity analyses of the guinea pig and its role in social change (Morales 1995; Archetti 1997), and Gade's (1994) consideration of broad beans in through a case study in Quebec to discuss broader questions on how foods gain prominence in society.

More recently, the works of Ian Cook and colleagues (2007) have taken commodity lifecycles a step further by pushing for a 'defetishisation' of the commodity system, as prompted by David Harvey (1990). The intention of these papers is to connect largely unaware Western consumers with the lives of the invisible and unacknowledged producers residing in other countries. Ian Cook et al. (2007), accomplish this by providing the narratives of people occupying radically different geographical spaces which are connected to each other through the supply chains of particular products (Cook et al. 2007; Cook and Harrison 2007). These works differ from earlier commodity research by having the explicit political goal of 'unveiling' the unjust realities of the modern production system, in the hopes of changing people's purchasing decisions. These studies are also primarily researcher-driven, in that Ian Cook and his colleagues are the ones unveiling the production spaces. While these efforts are necessary, particularly in supply chains spanning several countries and perpetuating social injustice, much of the information on commodity biographies and geographies is coming from researchers, and is focused on consumers based in developed countries who are experiencing food items emerging from developing countries.

However, it is important to note that websites such as followthethings.com and storyofstuff.com are replete with investigations around specific commodities conducted by consumers, and that historically, food movements (specifically the Slow Food movement) and changes in food systems have been associated by consumer activism

(Levenstein 1993; Kjaernes 2013). This paper adds to this body of work by presenting a case study from a developing country, where consumers are exploring the production spaces of a particular animal commodity, in the absence of country-specific information provided by retailers, production companies, academics, or consumer groups. This difference is particularly important in a global environment where local and organic food production is gaining popularity, and urban consumers in developing countries are increasingly concerned about the globalising and mechanised nature of the food system and expressing a preference for locally grown produce (Parvathi and Waibel 2013). This popularity is partly associated with concerns of food safety and the awareness of their increasing distance from areas of food production (Birol et al. 2009).

The notion of spatial distance in modern food systems has been discussed intensively in recent scholarship, with significant effort focused on reconnecting the producers and consumers (Whatmore and Thorne 1997; Holloway and Kneafsey 2004). A growing body of work has revealed how the social and environmental consequences of production are increasingly separate from consumers as spaces of production become highly specialised and linked to particular regions, and urban areas become sites for service provision and consumption (Luna 2008). This effort of reconnection has led to many alternative food movements similar in theme to 'Slow Food' and 'Fair Trade' that aim to increase transparency for the consumers for all levels and spaces of the food system and attempt to ensure the avoidance of unethical trading practices. This move results in different food labels and advertisements which emphasise food origins and production processes, a change representing the need to reduce the spatial and social distance between the consumers and the producers. Critics of the modern food system (e.g. Schlosser 2001), and proponents (McWilliams 2010; Sonnino 2013) of alternative food systems argue that educating the average consumers about the realities of their food origins may lead to making more ethical, sustainable, and healthy choices. However, most of these efforts at educating and informing, are focused on marketing

campaigns and product labelling, and do not consider the dearth of unpackaged and unlabelled food products at sale in developing countries.

Besides visual and textual displays of production information, spatial metaphors can also be seen as a way of highlighting the complex networks and geography of consumer goods. Geographers argue that metaphors like distancing and displacement, connection and reconnection, and visibility and invisibility can facilitate the analysis of the links and connections between the sites of production, distribution, and consumption of commodity chains (Crang 1996; Castree 2004; Jackson and Everts 2010). Meanwhile, anthropologists like Arjun Appadurai (1986) use the metaphor of 'distancing' and the creation of different commodity chain knowledges to identify the cultural and economic conditions that create commodities. Appadurai (1986: 48) also considers that this distancing or 'institutionalised divorce' between the agents of a commodity chain and its various aspects creates mythologies or narratives produced by traders, producers and consumers to fill in the gaps in their knowledge about the distanced features of the commodity chain. Inspired by Appadurai, Becky Mansfield (2003) uses distancing to discuss the techniques and practices used by producers and retailers of the imitation crab⁸⁸ industry its particular set of cultural meanings. She evaluates how producers and retailers actively distance imitation crab from its production realities, so it can be sold as a familiar and affordable luxury product (Mansfield, 2003).

Thomas Princen and colleagues (2002), writing from an ecological economics perspective, uses distancing in a similar manner as 'unmasking', where 'distance' is the separation between the final consumption decisions and the initial resource extraction decision, along the dimensions of geography, culture, agency, and bargaining power. He uses the example of local farmers' markets and international food trade to explore

⁸⁸ 'Surimi' is a form of fish paste developed in Japan by mixing fish proteins and starches. As a mass-produced, low-cost, and flexible protein source, it is designed to imitate luxury seafood, such as 'imitation crab' or 'krab'. Manufacturers start with basic surimi paste and use dyes and flavouring to imitate different kinds of seafood (Mansfield 2003).

these separations and highlights how consumers are distanced from the social and environmental ethics connected to production decisions in the contemporary global food trade system. In a similar vein, Michael Carolan (2004: 194) refers to distancing as “the severing of ecological and social feedback along the commodity chain as points are increasingly separated along dimensions of geography, culture, agency and power”. Using examples such as the wood furniture industry and deforestation, and clothing and child labour, Carolan (2004) argues that distancing allows one to ignore and sometimes ‘deny’ the ‘evils’ associated with commodity chains. While claiming that distancing has a significant effect on how citizens conduct everyday life, he presents devices for visualising household energy use, and food labels, which intend to reduce the distancing effect between commodity chains, alter one’s everyday behaviour, relationship, and attitude towards commodities.

Considering the role of distancing in the long-term changes in a community’s attitudes and relationships to natural commodities, Alessa and colleagues’ (2010) evaluate changing values of freshwater use in resource dependent communities in the Arctic, and introduce the concept of Technology Induced Environmental Distancing (TIED), in the context of resilience theory, to present the unexpected and subtle effects of municipal water supply systems on social values. Their study presents empirical evidence that reveals that infrastructure associated with modernisation reduces the intimate awareness certain communities have with resources, and desensitises them to changes taking place in that resource. They define distancing as physical or cognitive barriers existing between consumers and resources that lead to a ‘diminished awareness’ of the resource (Alessa et al. 2007). Importantly, these authors suggest that with increasing distance from a resource, a community is not only desensitised to further change, but their resilience in responding to this change is reduced. This finding has important implications for communities that are increasingly distanced from resources and may be

less attuned to changes in their environments and food systems, and therefore, are more vulnerable to change when drastic events happen in the future.

In an urban context, considering livestock as a natural resource, Blecha and colleagues (2014) discuss the recently popular trend of urban backyard slaughter in the United States, using concepts of distance and proximity. To a large extent, this practice reflects Princen's (1997) idea of 'zero distance' where production and consumption takes place at the same household or individual. Blecha's (2014) study is significant as it brings the geography of slaughter back to the level of households and communities, where it had previously been largely confined to politico-economic analyses of large-scale meat systems. This study also provides an individualistic look at the use of distancing devices employed in relation to livestock animals, a phenomenon that has been studied before in sociology (Smith 2002; Arluke and Sanders 2010), psychology (Plous 1993), feminist theory (Gaard 2011), theology (Adams 1995; Adams 2015), and geography (Elder et al. 1998; Philo and Wilbert 2000). James Serpell (1986) provides an ethicist's view of distancing in the animal industry and argues that from the producers' perspective, psychological distancing and detachment is vital in order to slaughter animals.

For the sensibilities of consumers, concealment can include material concealment like disguising the purpose of livestock buildings from the consumers, and historical linguistic developments that use terms like 'beef' or 'venison' instead of 'cow' and 'deer' that also facilitate the increase in imagined distance between the consumers from the animal to make consumption easier (Serpell 1986). While Blecha's work (2014) is helpful in categorising people into those who value and maintain the distance between their consumption the production realities, those who prefer the 'Do It Yourself' approach, and those who value others rights to do what they want in terms of food, it also hints towards a potential generational shift in terms of who one trusts for the intensely physical and emotional aspects of our lives (Renting et al. 2003), i.e. the shift in popularity of home births, home deaths, and home production of food (Blecha 2014).

In addition to food's intense physical and emotional link to life, it is also strongly associated with ideas of (re)constructions of 'home', and the romanticisation of tradition and the past (Boym 2001; Mannur 2002). Nostalgia about food is linked particularly to the ideas that production processes were better in the past, in the rural areas, which drives people to romanticism and the search for old-fashioned and authentic food experiences (Featherstone 2007; Sierra and McQuitty 2007). Amy Hubbell (2013) and Susan Holak (2014) explore food related nostalgia and reconnection in diaspora populations and presents its spatial and temporal dimensions in different physical and virtual locations occupied by individuals. These studies are significant in highlighting how individuals share information on procuring and preparing food items they remember from their homes, levels of personal details shared with strangers and a demand for brands claiming to represent the 'authentic' foods consumers remember from their home countries and how these foods help reconnect them to their ideas of home. Further, nostalgia and romanticism are important tools used in the promotion of the Slow Food movement, where the imagery in the material produced by proponents of the movement use rural communities and farmers as upholders of moral values and guardians of the land (Miele and Murdoch 2002).

The movement has been criticised for creating false ideals of nostalgia, presenting an idyllic past where nature and people worked in harmony, with no problems (Gaytán 2004; Laudan 2004; Panagia 2007). Despite its criticisms, the Slow Food movement has been instrumental in bringing together producers and consumers and represents an important trend in countering homogenising aspects of the 'conventional' food systems. It further creates a stronger connection between consumers and rural areas and is associated with revitalising rural producers and food industries (Chrzan 2004; Labelle 2004). From a more specific focus on localities and food values, in studying the cultural meanings associated with food for Finnish consumers, Autio and colleagues (2013) discovered that 'agrarian nostalgia' was a very strong component for urban consumers

who preferred local food. For these consumers, local food helped them recall their links with summers spent in the countryside, and was a step away from industrial food production towards niche and artisanal markets. While historicising the past, they not only felt closer to their own agrarian beginnings, but were also more aware of the production realities of their food. The most significant aspect of local food for the Finns in this regard was conceptualised as regional and national food, in a manner where the geographical distance between the producers and consumers was as valuable as the origin of the food (Autio et al. 2013). These studies point to a particular relationship with the rural areas often connected with positive memories of personal experiences in the past.

In sum, the literature on distancing in commodity chains refers to the increasing spatial and cultural distances in the modern networks of production and consumption. While Ian Cook and colleagues (2007) would argue that most of the existing work on commodity geographies is politically weak and aimed at the already converted, the diversity of work ranging from electricity production (Luna 2008), to the cut flower trade (Hughes 2000), and hot pepper sauce (Cook and Harrison 2007) reveals the value of a holistic view of the commodity chains. This paper adds to the literature on commodity biographies, and organic and local food production by evaluating how middle class consumers in a developing country view and investigate the commodity biographies of food items they are concerned about and how they are increasingly aware of the spatial origins of their food. It also discusses 'distancing' as a spatial metaphor utilised to visualise and spatialise the different production spaces and connect it with ideas of 'temporal distancing' and nostalgia. The paper also adds a middle class, urban South Asian perspective to literature that is heavily focused on Western consumers, and looks at an animal commodity that has a relatively small global travel footprint. In doing so, what follows presents and explores certain food perspectives and behaviours that have not been anticipated in the existing literature.

The Chicken in Pakistan

Broiler chickens are produced in the intensive chicken industry at the 'grower' stage, which is the third stage in the modern chicken supply chain, after breeder farms and hatcheries. The modern chicken supply chain has been focused on reducing the growing stage of the chicken, to the point where current broiler chickens reach full maturity in forty days and have a very high efficiency rate at converting feed to flesh (Jackson et al. 2010). This is different to 'organic' and 'free-range' chickens, which are often produced in comparatively smaller farm holdings, with some differences in access to the outside environment and may emerge from a different genetic stock than the commercial broiler chicken. In Pakistan, the term 'desi' is often used to refer to chickens that have not been raised on a broiler farm. Conflating desi with organic however is problematic in the Pakistani context, as no organic certification for poultry currently exists. Further, although 'desi' chickens may not be considered organic in terms of European and American food standards, consumers in Pakistan understand the difference mainly based on the diet they are fed and the environment in which they are grown. This distinction between 'broiler' and 'desi' is particularly important considering that the commercial chicken industry has been expanding in the country at a steady rate of 12% per year and contributes 1.5% to Pakistan's gross domestic product. Chicken meat now makes up 40% of the total meat consumed for the average Pakistani, an increase that is associated with affordability, increased urbanisation, and consumers having access to more commercially produced chicken as compared to the traditional, rural and backyard reared chicken.⁸⁹

Jane Dixon (2002), in exploring the place of the chicken in Australian culture presents a situation that is very similar to Pakistan: until the mid-1970s, cooking the chicken was a rare act and considered a luxury, and chicken rearing was done primarily for the production of eggs. Likewise, for many Pakistanis up till the 1970s, a meal of chicken

⁸⁹ The Poultry Site NewsDesk: <http://www.thepoultrysite.com/poultrynews/32813/pakistan-poultry-sector-spreading-its-wings/>

signified either the arrival of a guest, an important familial celebration, or the planned slaughter of an aging house-reared chicken. Chicken consumption increased from 14% of total meat consumed in 1986, to over 45% in 2008, while mutton consumption decreased from 45% in 1986 to 14% of total meat consumed in 2008 (Jalil et al. 2013). Despite a drop in poultry consumption associated with the 2006-2008 bird flu scare in Pakistan, the persistent increase in chicken consumption is associated with the high nutritional value of chicken to the cost and the prohibitively increasing costs of goat and mutton. As non-poultry meat becomes more expensive because of increasing exports, smuggling to Afghanistan and higher transportation charges because of fuel price inflation, the popularity of chicken also increases with the cost-effectiveness of transportation, ease of preparation and cooking (Jalil et al. 2013). However, partly because of the ease of availability and affordability, many consumers now perceive the chicken as fraught with danger. Some of the concerns associated with the industrialisation of the chicken production system were magnified after the avian influenza crisis of 2006. Further, because of the increased use of the Internet among middle and upper-class populations, consumers are quickly aware of food safety issues and environmental ethics concerns surrounding mass produced livestock and poultry.

Despite some concerns over the social and environmental consequences of intensive industrial chicken production, most consumers interviewed for this study cited personal health concerns as the primary motivation behind investigating the production chains and changing their consumption habits. Notably, most women considered issues such as persistent acne, increased facial hair growth, and irregular menstruation to be related to diet fed to broiler chickens (Saleha, August 9, 2013; Alia, May 1, 2014). They believed that since one of the major differences between their diet now and the diet of their parents and grandparents is the increased consumption of broiler chicken, it must be a major factor for their health issues. In addition, with concerns over rising childhood diabetes and obesity, and higher rates of cardiovascular problems in adults, some

respondents also considered that the genetic modification and the contents of chicken feed may have a major role in deteriorating health conditions (Parveen, February 17, 2014; Ambreen, August 9, 2014).

Exploring the Chicken's Spaces

“Once she [his wife] said that they give hormones and antibiotics to the chickens, I had to go and see for myself. I have two daughters, and I don't want them to have to go through the same thing.” (Majeed, August 11, 2013).

This is Majeed, a banker with a family of three. He has been slowly shifting from broiler to desi chickens, following his wife's doctor recommendation. His wife, Alia, has been suffering from a number of skin and hormonal disorders, some of which her doctor attributes to broiler chicken consumption. Majeed is one of many consumers using health concerns associated with the chicken to investigate its production process. He represents about 60% of the respondents who have invested a significant amount of effort in investigating the commodity biographies of food items they are concerned about. Here, unlike the unveiling performed by Ian Cook and colleagues' (2004) consumers themselves, driven mostly by personal health concerns, seek to 'unveil' the commodity chain. Inspired by the works of Ian Cook and colleagues, this section presents a discussion of how these spaces are explored by the consumers and discuss how they distance themselves from countries abroad, other urban areas in Pakistan and rural areas.

'Desi' as 'organic' and 'local'

“Organic' means nothing to me. We have no system to make sure it's organic or not, but really what's more important is that it's desi...It means it's from around here and we can trust that!” (Saleha, May 14, 2014).

For Saleha, a young mother of two children, the *local* nature of ‘desi’ chicken is far more important than any organic label she sees in a supermarket. Although some of her friends have been purchasing ‘organic’ chicken from one of the new superstores, Saleha is wary about them, since they are coming from companies in European countries:

“People say that Pakistani food industries aren’t good, but it’s still better than having something from thousands of miles away! At least if it’s from here, I can yell at the butcher, who will then complain to the farm he got it from. There is no guarantee with the ones from that store.” (Saleha, May 14, 2014)

It is also important to note here that the interviewed respondents did not use the Urdu words for ‘organic’ foods when referring to them, and all products purchased with the organic label were similarly labelled only in English. Further, the Urdu/Hindi word ‘desi’, has a number of connotations for many Pakistanis. While popularly defined as local, indigenous, or traditional, it also refers to any people or products associated with the Indian subcontinent, in a manner colloquially understood as less desirable than Western or American. More recently however, the local and traditional aspects of the word are gaining traction among the younger generations, where a ‘desi dish’ will be implied to contain material sourced from within the country and following a traditional recipe:

“It’s very strange that those who come back from other countries suddenly ask for ‘local’ things. We’ve always had local food! You could immediately tell if it was from another country by the cost, the store, and its bland taste. Of course now it’s a bit different, with tomatoes from India and some things from China, Iran, or even the USA. All this local fuss is a new thing.” (Ambreen, June 1, 2014)

Ambreen, a housewife, is very critical of her children, all of whom have studied in American universities and have now started asking for local, organically grown, and pesticide free food. They also refuse to eat the chicken she buys until they asked the butcher their origins and diet. While she acquiesces that chickens taste different now than when she was younger and in a village, she still believes that it is sourced from around the city and produced by Pakistanis: “I know it’s a Pakistani chicken, grown by Pakistanis, and hasn’t had to travel over borders to get to me. That’s all that matters.” (June 1, 2014)

However, this sentiment of ‘Pakistani is better’ is not shared by all of the interviewed participants. This difference can be attributed to members of the household who have lived abroad in Western countries for periods of their lives, allowing them the opportunity to compare food experiences across borders. This is represented by Salman, a school-teacher and Ambreen’s son-in-law considers, “they [Europeans] have more stringent food laws than we do. I’m sure that the farmers here choose every chance to cheat!” Salman has spent over five years living in North America, and shifts to a primarily vegetarian diet whenever he is back in Pakistan. His favouring of non-Pakistani foods represents the opinions of about forty percent of the respondents who are concerned about their food’s provenance. Occasionally, he and his wife will purchase a ‘desi’ chicken from a butcher he trusts, shown in Figure 8.1⁹⁰ below, and has now started raising chickens at home, shown in Figure 8.2 (photographed by his wife, Parveen). As Salman explained, “this way I look after them and know what goes into them. I need to see where they live and eat to be comfortable!” Crucially, Salman and his family do eat chicken if they are eating out. Recognising this contradiction, he considers that his inconsistency lies in convenience and the “value for money” by purchasing a meat dish at a restaurant.

⁹⁰ Throughout my fieldwork, the respondents were encouraged to photograph aspects of their food environments they considered significant. These photographs are captioned with descriptors they assigned. The photos are presented in their original, unaltered form, used with the participants’ consent and identified using the assigned pseudonyms.



Figure 8.1 Desi chickens at a local seller - photograph by Salman



Figure 8.2 Chickens reared at home - photograph by Parveen

While Salman and some of his colleagues are either purchasing desi chickens, or raising their own, they represent about thirty percent of the respondents, as compared to about forty percent of other respondents, who have taken to investigating and following the broiler chicken through its production spaces to ensure that they understand process, before they decide to make major consumption changes: “It’s good

to know where your food comes from. Not in the posh 'I want my food with a story', but just in terms of common sense." Fareeda, (June 19, 2014) an employee at a local industry says who has been researching food systems since the bird flu scare. Besides studying articles on the internet and talking to friends and colleagues living abroad, she also speaks to butchers, retailers, transporters, experts in the research departments, and even visits farms. Consumers that have the same opinions as Majeed, Salman, and Fareeda acknowledge that their efforts at exploring these locations personally are a fairly recent development, driven mainly by their lack of knowledge over the new food supply chains and their personal health and safety concerns. It is also important to note that their behaviours are shared by only forty percent of the consumers interviewed. In their scepticism and drive to obtain the necessary information, they can be considered as 'sensible' consumers displaying a reflexive distrust of the food system in general (Berg 2004).

The sensible consumers were firstly characterised by a strong interest in global and national news about food, and almost all of them had personal health issues that they associated with food, for example, Majeed's wife. These consumers also believed that the health and well-being of their family was their responsibility, and that acting on information about food was the least that could be done to safeguard their health. While these other respondents may not be similar in tracing out their food environments to the same extent, over ninety percent of them express the desire to be more reflexive and active in terms of their food consumption. These factors reveal firstly, that the anxieties linked with chicken and the efforts expended at investigating it are recent development associated with changes in how chicken is produced, and secondly, that 'sensible' consumers are driven primarily by the feeling of responsibility for their families instead of broader concerns like animal welfare. This particular approach to the food risks potentially presented by the broiler chicken is discussed further and exemplified in the following sections.

The Unseen – Distanced from the West

Consumer suspicion and uncertainty regarding the chicken's lifestyle starts at the genetic level, and most importantly for the consumers interviewed, in Europe. The genetic stock for most of the commercially farmed chicken in the world is bred by a few major organisations in Europe and North America (Jackson, Ward et al. 2010, Haye, August 4, 2014). Dixon (2002: 164), in writing about the Australian chicken, discusses the cross-continental travel of poultry and associated products: "there is an extensive north-to-south trade in genetic avian stock and the requisite protein meal and medicines". Dr. Haye, an expert associated with the Pakistan Agriculture Research Council (PARC) and Poultry Research Institute (PRI) notes that particularly since the avian flu crisis, Pakistan has attempted to reduce its dependence on European countries, at least in terms of the medicinal aspect of poultry health, and for the most part, are only dependent on Europe for the provision of the genetic stock. Once within the country, these chicks are raised to be the 'parent' stock, which then produce the broiler chickens intended for consumption (Jackson, Ward et al. 2010). Essentially, once the chicken arrives in Pakistan, its direct, material dependence on European countries is over. However, for consumers like Majeed, this is still a critical journey:

"The main problem with visiting farms is that you do not get to see what happens to the chicken in the labs. I found out that some companies in Europe and America are responsible for making the chicken by genetic engineering. Making sure that the farms are taking care of them here is all well and good, but it doesn't do much because of what's been changed on the genetic level." (August 11, 2013)

Here Majeed refers to the European corporations that provide the genetic stocks for commercial broiler chickens raised globally. It is important to note that for Majeed; 'genetic engineering' is a broad term that includes any process used to select desired attributes. This is one of the only interactions with other countries that the chicken

experiences in its commodity biography. However, for consumers like Shafiq, a housewife with four children, this distance becomes highly magnified in their imagination:

“I saw on the news that they are changed to make sure that it is cheap and so they can make them fat as quickly as possible. There is no check and you can’t even go and see what happens in the labs since it’s all happening in America and Europe. The chicken isn’t even alive to them you see, it’s all tubes and chemicals.” (February 4, 2014)

For Shafiq, the physical distance is a barrier in understanding the manipulation the birds undergo and combined with the risks she associates with laboratories and food instils a deep distrust. She and some of her friends have put significant effort into finding out what happens in the cross-continental operations of the commodity chain:

“It would be fine if we Pakistanis did this. If I want to, I can go look at a chicken farm and know that there are people like me working there. What is the chance that these specialists will let me see what they do in the West? I know how it works yes, but I think they take advantage of being in these countries, because they know people like me can’t question the things they do.” (Shafiq, February 4, 2014)

Shafiq’s account represents the opinion of at least half of the participants interviewed, although only about thirty percent actually attempted to explore the reality of these spaces for themselves. In contrast, Shamima, a doctor with two children, has a different view about the ‘distant’ farms which are strongly influenced by current Western views on the unethical practices of intensive farming:

“We know that the US and Europe have many issues with intensive farming. They say it is unethical and terrible for the animals, and they must give them all the chemicals so they won’t die. If it’s so bad in the

good countries, it must be a hundred times worse here!” (Shamima, February 26, 2014)

The impetus behind much of the literature on commodity circuits and production chains has been to reveal and ‘unveil’ the processes at work (Jackson 1999b; Cook 2004; Franz and Hassler 2010), so consumers have the requisite information to make different decisions and potentially influence the nature of the food system. For consumers like Shafiqa and Shamima, this unveiling process has been of limited use for their everyday decision-making and consideration of social processes besides imparting a distrust of the production chains that exist beyond the country:

“My daughter say: if you are so worried, why don’t you just buy desi chicken?’ She thinks this is a good idea, but desi chicken is almost twice the cost, takes forever to cook, and is still probably the same kind of genetic stock unless I buy the large brown ones. It’s good that they are raised nearby, but the genes were still changed by the labs.”
(Shafiqa, February 4, 2014)

For experts in the research councils like Dr. Haye, however, this particular distance is associated with the safety of the product. He believes that standardising the chicken consumed across the world is a potentially important step in reducing costs of meat and in handling poultry diseases.

“The chicken you find at the butchers here [in Islamabad], is in all likelihood, the same chicken you will find at a Tesco or an ASDA. They all have the same genetic grandparents. All those people who love the food in the US or UK but hate it here? I bet they don’t know this, but isn’t it a good thing that we are eating the same thing thousands of miles away?” (Haye, July 12, 2014)

While Dr. Haye has specialist knowledge and is deeply familiar with the chicken's lifecycle and its quality control in the country, he identifies himself mainly as a consumer. He not only views the increased distances as value-adding, but also does not perceive them as a danger for human health. For consumers represented by Shafiq and Shamima, on the other hand, the distance between European countries and Pakistan adds an element of distrust as to the quality of the chicken. However, for Shafiq, the distance between the farms within the country appear to have a cancelling effect on the overall distance and improves her perception of it:

"I know the farmers here can't do much if the animals have already been changed at the basic level, but it's easier to trust them since they know that they are closer and Pakistanis will check on them! Especially with ARY or Geo⁹¹ always doing a dramatic program whenever restaurants do something wrong. You are more accountable if you are close to your customers." (Shafiq, August 1, 2014)

Besides the physical distance separating western countries and Pakistan, an idealised and imagined distance between rural, 'good old times', and the unclean and distant 'modern, urban living' also plays a significant part in creating meaning and anxiety for some middle class consumers. Most of the middle-aged and older generations living in Islamabad moved to the city from other parts of the country and to some extent, identify and relate more to these areas than Islamabad, even after many years. However, others have firmly left this aspect of their past behind and strongly favour modern aspects of urban living, a factor that will be discussed further on in this section. For others, who came from villages and smaller towns, the way of life there takes on an idyllic cast when they think back to it, and for younger generations, experiences with spending holidays with their grandparents in villages have a major impact on how they perceive food quality and social relationships when back in the city. Majeed and his family's reduction

⁹¹ ARY and Geo News are private sector news channels in Pakistan

of chicken consumption are also linked to how they perceive the chicken *should* be, particularly in terms of taste, feeling, and context:

“I remember when we used to eat at my grandmother’s house in the village; it [chicken] was always very firm and tough. That was chicken with personality! The city ones are light and full of air. I think we also take it for granted: There we’d only have it for special occasions. My grandmother would cook a chicken the day we arrived and only if we had special guests. So having the chicken was an occasion in itself! Here, it is becoming fast food.” (Majeed, August 11, 2014)

At this stage of the commodity biography, the primary distancing device is between Europe and Pakistan, then between rural areas (either directly experienced or idealised from others experiences) and the currently experienced urban environment. For about forty percent of consumers whose opinions are represented by Dr. Haye’s, this distancing is a matter of comfort when connected with an imaginary of the ‘expert Europeans’, but for a significant number, it is a matter of uncertainty connected with the distrust of cross-continental processes and the inability of ‘going and checking’.

Climate-controlled Farms

Despite intermediate stages like hatcheries in Pakistan’s chicken supply chain, the consumers interested in investigating the lifecycle devote very little attention to them:

“They are only there for a day or two! They [farmers] only focus on hatching them and getting them out as soon as possible. I hear they have a lot of waste at this stage with eggs that have to go to waste and I think are sold to second-rate bakeries. I used to think that the chickens that lay eggs are also then eaten, but they aren’t! Apparently they are made to lay as many eggs as possible in their life and then the

meat cannot be eaten. I saw one in the south once, and that chicken was so lean!" (Salman, December 23, 2013)

Salman says that the difference between the layer and broiler chicken and emphasises the short-term holding of the chicks at the hatcheries. The day-old chicks are then transported to climate-controlled farms, located near Attock, a city an hour's drive away from Islamabad. Each farm can hold over 40,000 birds.

These farms are quickly becoming another source of contention for consumers who fear that this trend is treading dangerously close to the intensive farming territory of western countries:

"I realise that we need places like this to provide for everyone, but if nobody is careful, it will all go out of hand and we will be no better than the Americans. The farms are all in the deserts and we have no idea what they are doing back there!" (Jamila, August 19, 2013)

Jamila is a recently retired school teacher who is increasingly worried about the chicken farming system because of British and American documentaries she has seen on television. Her perception of the Pakistani farms is of larger versions of the chicken coops she has seen during her childhood in the villages. She describes them as having large dirt floors, fencing, and platters of pellets and water. She has not seen any of the industrial scale farms that provide for Islamabad. Unlike Jamila, Nafeesa, a middle-aged doctor, has visited a farm with her brother-in-law and his friend, who had managed a number of farms. Nafeesa considers that her motivation for visiting was also driven by comments made by her friends that consuming these chickens was associated with some of their health problems, a view shared by Majeed and his wife. Health-driven motivations for visiting farms were shared by all of the thirty percent of the respondents who have travelled outside the city to investigate different production spaces.

“I was really very surprised. I hadn’t imagined such a scale of operations! I knew they were going to be big, but it is quite something to see them in person. We saw it just after the chickens had been removed and it was being cleared for the next batch. Each shed is so large! I was even more surprised that you couldn’t tell what the building was from the outside. There is no indication that thousands of chickens live there!” (Nafeesa, April 1, 2014)

Nafeesa is referring to the material concealment and distancing employed by the livestock industry similar to the devices indicated by Serpell’s study (1986), where farms are usually not only located at a significant distance from the city, in fairly unpopulated areas, but the buildings also reveal no sign of the activities that take place within. She photographed the farm from the outside, shown in Figure 8.3 below and emphasised the anonymity and the industrial façade. While the poultry farmers are not obviously secretive about their activities, much of the care taken in allowing entry of consumers to the farms is driven by the safety of the stock.



Figure 8.3 Chicken sheds - photograph by Nafeesa

Majeed, the banker, had arranged for a farm visit (a different one from the one visited by Nafeesa and her brother-in-law) through a family friend associated with the poultry industry. After expressing an interest in the lifecycle and ethics of poultry raising, he was put in touch with a number of farm owners in the region. Majeed explains:

“He was quite forthcoming and explained that he and some other farm owners had had people asking about the process, especially after the bird flu situation. He said I could visit the farm whenever I liked, but I had to follow their instructions. You know what really struck me? He said: ‘I have a few million rupees of investment walking there and the last thing I need is an infection damaging the stock!’ I had never thought about it that way!” (Majeed, August 11, 2013)

Majeed and Nafeesa had both been influenced by the protective nature of the farm owners and workers during their visits. Jibran, one of the veterinarians of the farm I visited (arranging the visit through the PARC) notes:

“The best thing about my job is to ensure their health. We check the dead ones every day for disease, and the automation ensures that all the environmental settings are optimal. I am glad that I don’t have to see them sacrificed. Even if I buy chicken for my own family, I know there is some chance that they came from our farm, so I’m happy.”
(Jibran, July 11, 2014)

Majeed and Nafeesa were given a tour of the farms by similar veterinarians who explain the entire process to them. On the visits that Majeed and I made separately, we had had to shower and change into uniforms before we were allowed access to the ‘clean’ part of the farm where the chickens are kept. As Nafeesa’s visit took place while the sheds were empty and had yet to be cleaned, she was allowed to bypass the showering and changing procedure. The separation of the ‘clean’ part of the farm is another deliberate

distancing technique employed as a safety mechanism for the chickens. Workers are often also divided across the two zones and do not cross over once the chickens are in the farm. This measure is taken to ensure that the chickens are not exposed to any external contaminants. In case of diseases, farmers do give antibiotics to the chickens, but refrain from doing so in the days before the chickens are fully matured and ready for the market, as the antibiotics might not fully leave the chicken's systems. More importantly, diseases have the potential of ravaging an entire harvest, either killing the birds or forcing a major cull, causing the loss of many millions of rupees. When thought of in terms of investment and number of rupees lost, the chicken is very much considered as a commodity and its physical health is a means of ensuring the integrity of the investment. Importantly, Jibran and his farm manager, Ali, find that consumer interest in the management of the farms has increased in recent years:

“There are more people now who want to see what's happening with their own eyes. I understand the change, so we let some people see, since we're not doing anything wrong, but we have to be careful of journalists and for people visiting just before harvest.” (Ali, August 11, 2014)

While the consumers interviewed are going to surprising lengths to investigate these farms and often view them suspicion, most farm managers consider it in their best interests to let them observe and learn about the process to alleviate their concerns. In many ways, the acquiescence of these managers plays a major role in reducing the perceptual distance for consumers who visit the farms. The farm manager I had spoken to said that allowing and inviting people to visit farms was the only way to increase their trust in the chicken rearing process, and would help in curbing rumours that they were raising ‘monster chickens’⁹². He indicated that the poultry industry was also encouraging

⁹² He referred to the fact that people claimed that the poultry industry's practices were similar to those detailed in emails that sporadically circulated claiming that industrially reared chickens;

farm owners to be transparent about their activities and to ensure that the Pakistani public had faith and trust in the burgeoning industry.

Feed Mills

Unexpectedly, some consumers interviewed also considered feed mills as integral part of the chicken's production chain. An important part of the industry as a whole, poultry feed is under a lot of scrutiny because of allegations of using dead animals, blood and bone meal, and garbage.⁹³ However, this practice is often limited to the smaller feed producers who provide almost exclusively to small holders of poultry. Large scale industrial feed mills are managed and advised by the Poultry Association and the Research Council, have their own laboratories for quality control and follow strict regulations for raw materials and finished product (Khawaja, Khan et al. 2012). Unlike the farms, feed mills were not *sites* of concern for most of the participants. While suspicions over the contents of the feed were expressed quite often, this was directed to the farmers and not the feed mill owners. However, other respondents like Imran and Gia had managed to arrange visits to one of the large feed mills in the region, "to see the situation with their own eyes" (Imran, June 1, 2014). A newly married couple, and both trained as doctors, they are also aware of food controversies that arise in their area. They believe that first-hand knowledge about these places is very important, particularly since Pakistan-specific information about farms and feed mills is not readily available through the media:

"We know how important one's diet is to health, but most of us usually don't think of what our food eats! We can't really do much about our

particularly those reared by Kentucky Fried Chicken (KFC) were mutated birds lacking beaks, feathers and feet and were fed through a series of tubes. Details of such emails can be seen on <http://www.snopes.com/food/tainted/kfc.asp>.

⁹³ See: DAWN 2008, for a discussion on the potentially harmful contents of unregulated poultry feed: <http://www.dawn.com/news/939027/nauseating-contents-of-poultry-feed-threat-to-public-health>

diet, if *it's* eating unhealthy food. The chicken here [Pakistan] gets a really bad reputation about what it eats." (Imran, April 5, 2014)

Imran located an old classmate who had interned at one of the feed mills and requested a visit: "It was quite easy once I referenced some news articles about donkey meat and blood in chicken feed!" Once he and Gia reached the mill, they were taken aback by the size of the establishment and the long line of trucks apparently awaiting approval for entry.

"The manager was very nice, but very defensive! He said that we [consumers] have no idea of the amount of effort taken into making sure the feed is healthy. He showed us around himself. It was very surprising. I am suspicious they only showed us what they wanted us to, but this was still very informative. The laboratories and the facilities are very high-end!" (Gia, April 5, 2014)

Gia also references one of the technician's, who emphasised the local nature of the food:

"They said it has to meet a standard at all times. They put very expensive vitamins and nutrients, but the main base of the material is the maize or grain we have here. I know people say that these are all 'foreign' birds, but they eat desi food! What could be better than that?" (Gia, April 5, 2014)

Later meeting friends who had visited one of the smaller farms and a local family that supplies desi chickens, Imran and Gia cancel their own plans of rearing chickens at home: "There is no way we can feed them the kind of food they get in those industrial farms. Our leftovers are not good enough for what they need." (Imran, April 14, 2014). For Gia, the local nature of the chicken feed influences her idea of 'desi' as the chickens are not only raised locally, but are also eating local feed. Although they had been

enthusiastic in raising organic chickens at home, they considered that the control over feed and environment over industrial chickens could not be replicated in a home environment and therefore, might not result in a healthy chicken. In this, they differ from consumers like Majeed, who have opted to take control of their consumption by raising their chickens at home and considering that the food provided to them is good enough. Therefore, for Gia and Imran, 'zero-distance' production is still less important than the health implications of locally raised, but industrially scaled food production.

The Van and the Butcher Shop

"They are the connectors ... moving the chickens from all the farms to the shops. They see both places, which is more than what we can say for the average city person!" (Majeed, May 2, 2013)



Figure 8.4 Poultry Van - Photograph by Majeed

Majeed comments on one of the poultry vans shown in Figure 8.4 above, idling besides his car as we arrive at the wholesale produce market. The meshed layers in the vans are tightly packed with chickens that are completely open to the elements. This is in stark contrast to the conditions seen and described before, where the chickens have been deliberately distanced from the consumer. This distancing and concealment is

almost completely removed in the distributor vans, where the anonymous building walls are replaced with mesh, the sterile environment replaced with a distinctly pungent 'poultry' odour and instead of being non-descript, the vans can often be heard and smelled long before they are actually seen. A common site on most city roads, their presence appears to be particularly irksome to some Islamabadi residents, like Samina and Zakir, who spend at least half an hour every day commuting between work and home:

"To think you are in the most modern cities of the country, sitting in a nice car, and then you come up behind *these*. There is no worse reminder of the rural areas and the dirty realities of the food we eat!"

(Samina, February 3, 2014)

Samina and Zakir moved to the city a few months ago from a small town near several villages, and are currently employed at a local school. Here, the 'clean' modernity of Islamabad is a welcome change from what they were used to and prefer to have all reminders of rural life as far away as possible. For them, chicken vans, donkey-driven produce carts and temporary food stalls set up at street corners are elements of rural and 'backward' life that have no place in a city like Islamabad. They prefer to do their shopping in grocery stores and choose to send their cook to the wholesale markets for food shopping instead of going themselves. They also represent about twenty percent of the interviewed respondents who are less concerned about the origins and reality of their food production, unless it impinges on their impression of 'appropriate' urban living. In comparison with consumers like Majeed and Shafiq, they are less reflexive about food consumption and tend to be indifferent about food safety concerns that motivate their other counterparts into investigation and consumption change (Berg 2004).

Butcher Shops and Stalls

One of the most commonly visited chicken stalls on Saleha's monthly grocery trips is in the Friday Weekly Bazaar, pictured in Figure 8.5 below. A smiling man stands in the middle of about 30 clucking chickens and beckons: "Lady, you haven't been here in over a month! Look, there's a good CDA⁹⁴ price today!"



Figure 8.5 Chicken stall - photograph by Saleha

"It is very dirty, and smells very bad, but it's convenient. They keep them in terrible conditions you see, and they just think of their own profit and not the animals' well-being. They could be carting the chickens in from Sind and we wouldn't know!⁹⁵" (Saleha, August 24, 2014)

Saleha asks for four chickens and pays while the stall-owner grabs the chickens by the legs and hands them to a waiting butcher. Considering that the stall has no defining features besides a number, Saleha says that she had chosen it a few months ago at

⁹⁴ The Capital Development Authority (CDA) sets the price for the produce sold at the market. All stalls display the regulated costs and the shop keepers are expected to abide by them.

⁹⁵ This is not true for the weekly produce market, because the suppliers are located within Islamabad's surrounding areas. Bulk produce markets like this source from the nearby region as much as possible, to keep the fuel costs low.

random kept coming back because of the man's pleasant manner, and no obviously ill or lethargic chickens:

“He doesn't swear by God at everything like some of these other ones.

I can't stand this 'Sister, by God, this one is the best! I wouldn't lie to you!' because then naturally that means they're lying to you”! (Saleha, August 24, 2014)

We have been walking beside raised platforms of the butcher's area. The butcher with the chickens prepares his knives and buckets for the slaughter and loudly proclaims 'In the Name of God' when he sacrifices⁹⁶ them. The butcher asks us periodically whether we want to keep the feet, head, or particular organs. The feathers are tossed in a box. Saleha whispers that everything that she rejects will be bought by smaller feed mixers at the end and fed to livestock by small farmers. She finds this a better alternative than tossing them in the trash and attracting insects and vermin.

“It is very filthy, and this is one of the examples of the rural and production areas hiding out in the cities. You know most of the posh people don't know that places like this exist? It is unpleasant to come here, but the city-people need a reminder what the rest of the country is like.” (Saleha, August 6, 2014)

Saleha is from a small town, but has visited her husband's village a few times. For her, the optimal distance between rural and urban requires a significant level of overlap, with the rural intruding into the urban, if only to remind people about the realities of the rest

⁹⁶ The choice of 'sacrifice' instead of 'slaughter' requires explanation, particularly when the choice of words about these practices in discourses in animal rights indicates the writer's political leanings. Here, the word 'sacrifice' is used because it is the one used by the respondents, and indicates the ritual killing of the animal, without which it cannot be lawfully consumed by Muslims. For further discussion on the use of language and animal ethics, see Stibbe (2001), Deen (1996) for Islamic environmental ethics and Adams (1995, 2015) for a feminist treatment of animal studies.

of the country. Besides the chicken vans, these butcher stalls; very different from sterile, Western inspired markets are some of the signs of the rural in urban areas.

At Home

Laila, a housewife and mother to two daughters, brings the chicken home in the plastic bags the butcher wrapped them in. She chops it to her own liking once in her kitchen. Remembering that the cleanliness at the butcher's stall left much to be desired, she washes the chicken well before preparing it for the evening meal.

“We’d visit one of our aunts in the village when I was very young. I remember that the best thing for us [children] would be to take the leftovers to the chicken coop after every meal... they’d move about the yard and eat seeds and insects. Isn’t that the essence of organic and free-moving in the West? Our low-maintenance desi chicken is better at being organic than American certified organic!” (May 29, 2014)

Laila has sporadically reared chickens in her own yard in the city over the years, but is hampered by the effort it now takes her to clean the coop and protect them from the neighbourhood cats. She reflects that “it is comforting to know that they’ve eaten what I’ve eaten and I’ve been watchful over them.” For Laila, the ‘agrarian nostalgia’ referenced by Autio and colleagues (2013), combined with the direct knowledge and trust in her own rearing skills, plays a stronger part in raising chickens at home than anything else. She has attempted to bring her daughters into the same practice by occasionally making them feed the chickens, and asking them to buy bird seed when they go grocery shopping.

Similarly, Kareem, an early career accountant who has just purchased his own house, also rears chickens. Unlike Laila, he is more concerned about the sufficiency of his poultry keeping knowledge:

“It’s great that this is as local as it gets for me, and they are not very expensive. If I was buying this in the market, it would be at least 400 rupees. I am still worried whether or not they get the right diet. If they were in the farm, they’d get everything precisely according to their needs. I can’t do that!” (Kareem, January 4, 2014)

He has an agreement with the local butcher who helps him with sacrificing and preparing his chickens in exchange of a small fee. Although he has not visited a feed mill like Gia and Imran, he has read about the stringency of poultry feed and realises that he will not be able to provide for them in a similar way. He keeps the chickens as a nostalgic reminder of his grand-parents’ home in a village in the north: “She’d [grandmother] be very pleased that I was doing this. City food can’t be fully trusted after all.” (January 17, 2014)

In stark contrast with Kareem and Laila, who are driven mainly by the nostalgia of the ‘good old times’, Yasmin, a postgraduate student prefers to have all the reminders of the rural and her own experiential knowledge of the village as separate from herself as possible, in a way similar to Samina and Zakir. Having moved to the city from a village when she was a teenager, she, like Samina and Zakir, would rather not see any reminder of the “dirt, backwardness and the combination of animal-rearing with home-life” within the city. She only purchases chicken from one of the larger supermarkets in the city, where the butcher washes and chops up the meat to her specifications so she can handle it as little as possible.

“I absolutely cannot even look at a chicken with feathers, much less handle its flesh. I’m out of the village now, and I have no intention of seeing reminders of rural things in the city. This is a modern place and the villages should be separate.” (Yasmin, December 2, 2013)

Before Yasmin cooks the chicken, she empties it out on a plate, shown in Figure 8.6, and mixes the batter in with a spoon, avoiding touching the meat with her own hands. She makes battered fried chicken, a recipe she claims is from an American website. She admits that she prefers making American and Italian meals over traditional Pakistani ones, after having “spent a lifetime eating only desi meals”.



Figure 8.6 Chopped chicken - photograph by Yasmin

The home is significant in that it is the point of consumption, and in some cases, also production, highlighting Princen’s zero-distance production (1997), or one of the final spaces occupied by the chicken before its trimmings and bones are thrown away. It is here that the rural/urban distance is felt most deeply for people. For some, this is where the rural nostalgia collapses the distance between the rural life they have experienced to where they combine the memory of home-reared chickens with rearing them in the city, feeding them leftovers and preparing them with traditional recipes. For others, however, the rural and the urban is distanced even more at home, where they tailor their purchasing practices to match what their preparation preferences and move away from Pakistani or ‘desi’ cuisine as much as they can. These differences have particular implications for the success of various alternative food movements in the country, and

will potentially give rise to varied trends in the future. For example, the Slow Food Movement will be attractive to the cohorts who hold the rural production systems and the conviviality associated with food to be ideal, while an increasingly sterile, standardisation focused movement that highlights laboratories instead of rural imageries (Klein et al. 2014) would be more approachable for the ones who prefer the clean, modernity of cities.

Conclusion

This paper has analysed the commodity biography of the broiler chicken in Islamabad, Pakistan, through the eyes of middle class consumers. It has discussed how consumers explore the production spaces of the chicken, and distance themselves in very particular ways from 'the West', rural areas, and views of the past. It emphasises the multiple narratives that influence how consumers conceptualise the idea of 'desi' and think about their relationship to rural areas and other countries. Building on the literature on 'follow the things' and anthropological studies on single commodities (Mintz 1986; Archetti 1997; Cook et al. 2004; Cook and Harrison 2007), it shows how consumers inform themselves about the production processes of food commodities, and then change their consumption processes accordingly. It demonstrates how consumers use the spatial metaphor of 'distancing' to visualise and spatialise their understanding of the chicken's production spaces and 'desi' as a concept almost analogous to organic and local to drive changes in their consumption habits.

Participants in this study revealed that in the absence of labels and packaging, information about the origins of chickens purchased from butchers must be sought from other places. While butchers are aware of the region from which they are supplied, but not the exact farms, and there are no advertising and marketing programs associated with these chickens, concerned consumers adopt a variety of approaches to learn more about the production process. These strategies involve internet research, questioning people associated with the industry, and visiting production spaces like farms. Most of

the participants identified visiting production spaces as one of the most important factors in determining their decisions on whether or not to continue with consuming broiler chickens as opposed to 'desi' chickens. Their spatial distancing in reference to the West and rural areas, in context of the chicken's production spaces is also a major determinant of their consumption choices. However, it is important to note that there are multiple narratives at work even with spatial distancing. For some, the distance between Pakistani farming spaces and the laboratory spaces in the West is a source of comfort, and for others it is an increased source of concern, leading their conception of 'desi' to be purely Pakistani. At a more regional level, some consider food emerging from rural areas as truly locally Pakistani, influenced with nostalgia for an idyllic rural past, and desiring a shorter distance to urban areas, while others actively shun reminders and signs of the rural encroaching into the urban. Still others consider 'desi' as analogous to Princen's concept of 'zero-distance production' and prefer to raise them under their watchful eyes, at home. These multiple narratives reveal different perceptions of local and organic in relation to the chicken and show the influence of consumers seeking out knowledge about their food items in the absence of typical information signposts. At this point, it is also important to note that while the consumers are researching their food environment, their conceptualisation of the realities of production may not always be accurate and they use blanket terms to indicate processes they may not understand fully. This can be noted in how the consumers presume that the European laboratories use genetic engineering as opposed to intensive selection of traits. Further, their conceptualisations are strongly influenced by debates on organic and local production in western countries and the food concerns that gave rise to such alternative modes of production. These findings have important implications for the development of and success of alternative food movements in the country, where a clear difference in preference can be seen between people who prefer the rural idyll of Slow Food, the standardised and intensified production of the conventional food systems, and the do-it-yourself cohort who prefer maximum control over their food production. This research

therefore contributes to existing literature on commodity biographies and 'follow the thing' by showing how 'unveiling' the realities of modern food systems may have an impact on consumers everyday decision making, particularly in an environment where specific food items may be perceived as unsafe.

Analysing the notion of distance employed by the consumers highlights the importance of the material realities of production of the chicken. The story of the chicken in Islamabad reveals a contradictory mix of celebration of the industrial process, nostalgia of the 'good old times' and luxury and convenience, a factor reflected in studies of food consumption in post-socialist societies (Klein, Jung et al. 2014). As noted by Serpell (1986), Blecha (2014) and other animal geographers, modern, industrial scale animal production involves very specific distancing devices such as the material distancing by locating the farms a few hours from the city in non-descript buildings set far back from the roads. These levels change quite quickly, causing certain levels of suffering for the consumers attempting to trace the biographies. For some, the fairly mysterious beginnings in the West are a cause of comfort, knowing that the expertise and mystery is separated over continents and is standardised and highly regulated, but for others is a cause of dismay and distrust because of the perceived lack of accountability. Once in the country, the farms are located close enough to know that they can be investigated, but far enough to have the perceived 'rural' reality of food origins far away from the urban areas. However, this distance is quickly transgressed on when the vans bring the chickens to the city itself, displaying the live birds in cramped, fairly unclean cages and distributing them to the shops and stalls. Once there, the consumers again have to experience the uncomfortably close distances in the butcher shops to inspect the slaughtering and cleaning process. It is not even in the homes that the chicken's distance is viewed with comfort, as here one is likely to lament on the visceral changes in the flesh when compared with 'desi' chickens, or the value in cooking it for special

occasions or comparing the differences in biography between the broiler chicken and the happy, village reared one.

Consumer anxieties related to food are linked to both global concerns of food insecurity as well as the household level of purchasing and preparation practices (Jackson et al. 2012). Food anxieties can also be differentiated between the individual and the collective, ranging from personal behaviours to governments issuing bans on certain food products (Jackson 2010; Jackson et al. 2012). In a time when food networks across the world are characterised by great spatial distances and one does not know as much as before about the origins of food, the narratives and explanations developed by people and society in order to come to terms with the uncertainties related to food become vital in dealing with food fears and anxieties. For countries like Pakistan, where the food systems are a combination of traditional, modern, and Western-inspired, the consumers have a particular mix of anxiety and uncertainty. Their methods of charting the biographies of their food commodities and moves towards eating healthier and more sustainable foods and dealing with these anxieties must be better understood so that policies and regulations can better target issues with the food systems and improve security and safety for all stakeholders.

Chapter 9: Conclusion

The papers in this dissertation demonstrated the ways in which middle class consumers in Islamabad perceive and conceptualise food in a context where 'old' food risks are increasingly compounded by 'contemporary' food risks. This exploration has revealed how consumers rationalise and experience food fears and uncertainties associated with transformations in food systems and everyday disruptions arising from resource scarcities and violent events. The results of this dissertation have argued for an increased emphasis on the dynamism of food environments, an alternative perspective on urban food security, and a globally useful conceptualisation of alternative food networks. This chapter presents the central themes of the dissertation as discussed through the four papers and argues how they relate back to the overarching debates in the literature discussed in Chapters 2 and 3.

This dissertation opened with an exploration of food geography and risky food consumption in contemporary times. It presented an overview of the food safety context of Pakistan and discussed how analyses of the 'anxious' food geography of Islamabad were necessary for contributing to dominant debates about food safety and food security in developing countries. The guiding research aims of the project were firstly, to investigate how middle class respondents in Islamabad cope with external disruptions to their food environments; secondly, to explore how the middle class residents in Islamabad conceptualise ideas of 'good food'; thirdly, to investigate the role of trust in the context of endemic food risk; and finally, to evaluate how the broiler chicken as a food commodity is perceived and explored through its commodity network. This dissertation is located within the broad context of food geography. It has considered food environments on the household level, emphasised its spatial and temporal dynamism and explored external influences like everyday disruptions that drive consumers to alter it. Within this scholarly context, this dissertation has also explored how middle class residents develop ideas of 'good food', influenced by discourses on

alternative food networks (AFNs) emerging from other countries, their local and traditional knowledge base, and how these ideas affect their engagement with the urban food environment. The papers in the dissertation have illustrated how the urban middle-class food experience is characterised by the complex dynamics between food knowledge developed in conjunction with experiences of food environments. It shows how the middle class' tangible experiences with physical features of their food environment in combination with their rationalisations about food are primary ways of reducing food vulnerability. This is accomplished by first summarising how food environments were conceptualised for this dissertation and then discussing how vulnerability, adaptation, and the relationship with space and time have emerged as the primary defining factors of the knowledges and the tangible realities of everyday food consumption for the urban middle class in Islamabad, Pakistan. This is then followed by a demonstration of how the empirical and theoretical contributions of this dissertation extend the broader global discussions of alternative food networks.

Urban Food Environments

The concept of food environments was introduced as a framework within the fields of food and urban geography as having the potential to explore the local, cultural, and place relationships implicated in studies of food (Mars and Mars 2004; Desjardins 2011; Cannuscio et al. 2013). For the purposes of this dissertation, food environments were described in Chapter 2 in the following way: firstly, focused on the individual and household scale; secondly, consisting of the built environment in terms of sites of food purchase and consumption; thirdly, including routes and modes of transportation; fourthly, types of food and food information available; and finally, the socio-cultural, economic, political, and environmental factors that influence an individual's or household's engagement with food (Glanz et al. 2005; Townshend and Lake 2009). Specific aspects of the food environments in Islamabad have been systematically explored in each of the papers within this dissertation.

This dissertation has focused on the dynamic nature of food environments and evaluated how consumers' interactions with it have changed alongside with the transformations in global food systems and with their increasing knowledge about alternative food movements in other countries. The discussion presented in this chapter builds on the dynamism of food environments and emphasises the vulnerability of middle class individuals in terms of food security and their resilience through different adaptation strategies. It reveals how consumers experience vulnerability and uncertainty, both through disruptions in their urban environments and on a conceptual and discursive level with the different sources of food knowledge available to them. Furthermore, the dissertation presents how these uncertainties and vulnerabilities are then challenged and adapted to at both of these levels, and how the combination is essential for negotiating food security and food safety on an everyday basis. This is a running theme throughout the dissertation, but is particularly explored in Paper I, which demonstrates the dynamic nature of food environments and the critical role of temporalities and rhythms.

These findings present a critical contribution to the literatures on food geography and food environments in the following ways: First and foremost, in Paper I, they highlight the importance of the everyday (de Certeau 1998), and routine and rhythm, as first introduced by Lefebvre (2004), in food environments; food, after all, is a matter of the everyday. Secondly, the dominant debates in food environments have been centred on studies that have explored the urban environment in a particular cross-section of time, as shown in studies by scholars like Kelly and colleagues' (2011) and Minaker and colleagues' (2013), and discussed in Chapter 2 and in Paper I in this dissertation. Although the concept of time has been explored in recent papers on modelling and geovisualisation by Chen and Clark (2013), and Horner and Wood (2014), the inclusion of time in considerations of healthy food environments is still rare. An important exception in this has been the study by Widener and Shannon (2014), which has shown

the importance of considering time in exploring accessibility of food. Widener and Shannon (2014) highlight how the makeup of food systems change with time in the context of movement of mobile food vendors, the arrival or closure of supermarkets, and activities like retail restructuring. However, while limiting their analysis to temporal access for lower socio-economic classes in food deserts, these authors acknowledge the value of adding the temporal dimension to research on food geography and food access. Finally, this dissertation has contributed to the debates on Food Value Chains (FVCs) presented in Chapters 2 and 3, by showing how the supply chains in Pakistan are changing in response to transforming consumption preferences. Through the findings of Paper III, the thesis has demonstrated that besides accommodating 'alternative' food chains, a factor that is common with FVCs in developed countries, the Pakistani FVCs are making room for 'desi' FVCs – which have the potential of becoming a purely Pakistani iteration of 'alternative' FVCs. This factor is particularly important with the greater contribution of this thesis: one that argues for a conceptualisation of alternative food systems that can be more readily applied in the context of different developing countries.

This dissertation, particularly Paper I, has addressed this gap by showing how disruptions like scarcities and violent events are significant factors that affect the temporal aspect of food environments. Paper I has also shown how such disruptions differ across countries. Therefore, issues of resource scarcity in terms of fuel, water, and power manifest differently for the Pakistani middle class consumers who participated in this research, in comparison to the American population group discussed by Widener and Shannon (2014). Therefore, specifically in terms of urban food environments, this dissertation has addressed the gap on temporal disruptions and dynamism of food environments, and extended the dominant discourse by demonstrating how place-specific realities like fuel scarcities are a critical influence on individuals' engagement with food environments. This finding is further supported by

evidence from Papers II and III, which have shown how the Islamabadi consumers' perception and engagement with the food environments has transformed over time, influenced by the changes in global food systems. This emphasis on transformation and dynamism of food environments speaks back to the literature set out in Chapter 2 on the changing contemporary food geographies and food environments, which is exemplified by Feagan's (2007) research on the complexity of the food systems and how transformations within it creates psychological distance from food realities and anxiety for consumers.

The results of this dissertation are relevant to studies on food geography because they have shown that fears of transformation and complexity of food systems can be observed on the scale of food environments, which are specific to different areas (a factor that has not been discussed in the extant food environment literature). The dissertation also illustrates that temporality and transformation are vital aspects of food environment analyses (which to my knowledge only been explored by a few authors like Horner and Wood (2014), Chen and Clark (2013), and Widener and Shannon (2014), albeit in limited terms). This relative lack of attention from food geographers is particularly striking considering the consequences of uncertainty and anxiety for consumers in risky food environments, and the influence of space on food consumption practices.

Changing Aspects of Middle Class Food Vulnerability

Uncertainty over food security for the middle class in Islamabad was a significant recurring theme throughout the dissertation. Part of this uncertainty was associated with how strongly the respondents considered 'food security' a defining of their middle class identity. However, this dissertation has shown that circumstances within Islamabad and Pakistan, changes in global food systems, and the development and spread of Euro/America-centric AFNs are threatening this idea of food security and creating increased feelings of uncertainty and vulnerability. Considering the FAO's definition of

food security — “a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (2003: 28) — this cohort of the population believes that their access to ‘safe’ food and food that meets their specific food preferences is in jeopardy because of the various transformations in food systems. Paper I, in particular, has argued that food insecurity in urban areas in developing countries may be less visible because of the current focus of governments in these areas, and because the middle class is experiencing increasing food insecurity as a result of the changes in the availability and affordability of resources such as fuel. Papers II and III have further expanded on this theme by exploring how issues of good food and formulations of trust relationships are primarily dependent on how consumers perceive threats from the changes in food systems and how they incorporate ideas of alternative and ethically produced food when they do not readily have access to them in the markets. Paper IV has exemplified this by presenting how certain modern commodity chains are a cause for food anxiety, and how consumers explore such problematic food networks themselves and then establish their own practices in response to the information they collect.

The results of this dissertation also respond to the literature on middle class vulnerability in terms of food and how concepts associated with food change with time. In particular, Ravallion’s (2010) study on middle class vulnerability, Lopez-Calva and Ortiz-Juarez’s (2014) study on defining the middle class based on vulnerability, and Cuesta’s (2014) study on food insecurity in Asia are examined (explored in further detail in Chapter 2), in combination with the findings of this dissertation, to highlight the situation of the middle class in Pakistan. While this dissertation contests Ravallion’s (2010) argument that much of Asian middle classes live close to the poverty line, at least in the case of Pakistan (see Chapter 3), it agrees with the primary theses by Ravallion (2010), Cuesta (2014), and Lopez-Calva and Ortiz-Juarez (2014), who argue that, while the definition of

'middle class' may differ across countries, a significant proportion face vulnerability due to economic and health shocks. Notably, neither these papers nor the broader literature on vulnerability and middle class set out in Chapter 2 consider the shocks and disruptions that have been described in Paper I.

This dissertation has contributed to the arguments of these three papers by firstly agreeing with the precarious and vulnerable position of the middle class, particularly in Asia; and secondly, by illustrating how shocks and disruptions can be country-specific: examples include Pakistan's resource scarcities, food price inflations linked with fuel scarcity, and violent events further constitute factors that can increase vulnerability. Therefore, in exploring vulnerability through food, this dissertation has contributed to wider debates on vulnerability and the middle class in a context where this class is viewed as a foundation of political and economic progress. The dissertation has provided information on how vulnerability is experienced and negotiated in the everyday lived experience of middle class residents in Islamabad, and furthered the debate by going beyond the current scholarly focus on economic and health considerations and showing how resource scarcities and violent events are also important 'shocks' to stability and security.

This finding speaks back to the literature on fuel dependency particularly through how households in developing countries have to spend increasing amounts of money on everyday fuel purchases (Adelekan and Jerome 2006; Nayak et al. 2015), and how violent events in urban areas impact well-being and resilience (Bonanno 2004; Waheed and Ahmad 2012). Paper I contributes to this literature and fills a gap by addressing the impact of fuel scarcity and power load-shedding on middle class populations, who may not be able to handle price-fluctuations as well as upper-class members of the population, and consider uncertainties in fuel and threats to their mobility as a danger to their food security. Furthermore, Paper I considers how the uncertainty of terrorist events impact everyday activities and shape transportation routes and preferences for

different food purchase sites, which demonstrates that personal food environments can be altered because of discrete events. This finding extends Waheed and Ahmad's (2012) article on the socio-economic effects of families affected by terrorism in Lahore to show the everyday influence of such events and emphasise their influence on activities like food acquisition and mobility. Finally, the findings from Paper I shows how urban populations are often forced to resort to activities such as drilling illegal wells to combat the lack of water by official supplies and cutting trees and burning wood to complete everyday activities and to cope with seasonal temperature changes because of a lack of natural gas for heating. The acknowledgement of potentially problematic activities like these has also been bypassed in the studies on urban fuel scarcity by Adelekan and Jerome (2006) and Nayak and colleagues' (2015). Critically, these strategies have implications for the long term environmental well-being of urban areas globally, particularly in cities like Islamabad which already suffer from rapidly decreasing ground water levels and extensive deforestation, especially during the winter months. In terms of theory, the adoption of such strategies contributes to literatures on resilience and coping strategies for stress, exemplified in Ahmad and Farooq's (2010) study showing the lengths to which consumers are willing to go and how they are constrained by their environments. For example, drilling wells is not affordable for all residents, and some wells may not be viable because of the underlying geology.

Whereas Paper I focuses on issues of food security and the necessary mobility needed to access food, Papers II and III evaluate vulnerability in the context of the uncertainty and transformation of food systems and the changing relationships of trust. Papers II and III consider the risk and adaptation aspects of vulnerability, and explore how consumers perceive the anxieties associated with food and the different mechanisms they adopt to deal with them. These papers extend the debates on food insecurity and vulnerability from issues of malnourishment and food access (Webb 2010; Wang and Shi 2012) by considering how anxieties associated with broader food system concerns

affect food perceptions and habits. These anxieties are mobilising concerns about food safety and food preferences, as consumers in Pakistan are experiencing environmental risks from conventional and intensified food systems, but do not have easy access to alternatively-produced food. In order to combat these uncertainties, consumers develop frameworks for 'good food' built on traditional values and ideas of alternative foods learned from other countries (see Papers II and IV), adopt individualised risk reduction strategies based on the aspects of food systems they distrust (see Paper III), and, whenever possible, reinforce their knowledge by exploring particular food commodity networks themselves (see Paper IV). However, these food anxieties are taking place in the context of Islamabad, where middle class consumers must also adapt to the seasonal rhythms of scarcities and disruptions to their mobility and routines. This dissertation has argued that the combination of anxiety and insecurity at these two levels is not only associated with specific places (for example, anxieties associated with foods originating from certain parts of the world), but also that framing and creating adaptation strategies is associated with specific places and the creation of particular temporal rhythms. The dissertation has also illustrated how current debates on vulnerability are insufficient in scope to address the disruptions and anxieties currently experienced by consumers in Islamabad, especially considering that a significant proportion of the population may become food insecure in the future if the current situation – particularly in terms of food scarcity – continues.

The next sections, illustrating how the respondents constructed and negotiated their food-related knowledge base to counter these feelings of anxiety and vulnerability, discuss specifically how resource scarcities affect everyday food consumption, and then show how evidence from this dissertation points towards a globally-useful conception of alternative food systems.

Construction and Negotiation of Food Knowledge

This dissertation has explored how middle class consumers create and use food knowledge to locate themselves with respect to their food environments and food systems in general. This knowledge is created using information about food products and their production processes (obtained directly or developed through discursive association), and the way people understand the setting for the purchase and use of food products (Cook and Crang 1996; Morris, Kirwan 2010). This dissertation has shown that these knowledges are constantly being reworked and negotiated as individuals are exposed to multiple sources of information that may conflict with existing narratives (Freidberg 2003b). In this way, the dissertation has responded to scholarship by Cook and Crang (1996), Freidberg (2003), and Morris and Kirwan (2010) to show that these food knowledges are resources for consumers not only to incorporate meaning into food consumption, but also to locate the consumer within food systems with which they interact. Additionally, the research in this dissertation responds to Cook and Crang (1996) by illustrating that the foods that we consume occupy and influence certain geographies, and that consumers are not only increasingly aware of these geographies, but also construct knowledge sets of their own about them. This is again linked with Freidberg's (2003) paper that notes that consumers are exposed to different conflicting narratives and food stories. Finally, Morris and Kirwan (2010) show how these knowledges are mobilised by producers and consumers to embed certain food commodities produced in alternative food networks.

An important difference between discussions of good food between consumers in Western countries and those in Pakistan was the lack of debate on social justice, animal welfare, and sustainability issues. This is not to say that these factors were not discussed at all, but as the consumers in Paper I demonstrated, the consumers are currently more focused on issues of environmental health. The respondents for this study primarily use the principles from Islam to guide their perceptions about these

issues, and most consider that as a good Muslim, they must safeguard the rights and well-beings of all created things. Although it was surprising that animal welfare was not a major factor of consideration even in the investigation of the geographies and lifecycle of the broiler chicken, the consumers pointed out that the conditions for the chickens in the farm were not as they are reported to be in similar farms in developed countries. This comparison is important particularly since the consumers who had investigated the farms in person in Islamabad, had been driven by the issues that had been highlighted by documentaries (such as the ones produced by Hugh Fearnly-Whittingstall) and articles produced in the West. The difference in chicken welfare was considered to be one of the main points of difference between food production systems between the West and Pakistan. At this point, it is important to acknowledge that while this set of consumers may have been less focused on issues of social, animal, and environmental justice, the trend indicates increased concern in the future. The fact that non-profit organizations such as the Pakistan Animal Welfare Society (PAWS) exist, and are increasing the range of their activities indicates that these issues are being brought to the attention of the average consumer. The changing food systems, increased and more diverse scholarship in subjects like Environmental Sciences, Ethics, and Islamic Studies will have a strong influence on broadening the scope of factors included under 'good food'.

This dissertation adds to the bodies of work of food geography and alternative food networks to show how the construction and negotiation of knowledge is in constant flux because of conflicting information, but takes this a step further from the studies mentioned above: from the evidence gathered, it appears that information emerging from western countries creates a major source of contention for the residents in Islamabad. The residents would prefer to eat 'good' food, but this construction has become complicated in recent years with the emergence and popularity of Euro/America-centric alternative food systems that produce food that is no longer just

'good' or 'safe', but is also 'organic', 'ethical', or 'local'. Paper II explores this negotiation, where the respondents have integrated the newer knowledge within their existing frameworks to some degree. The paper has shown that through conceptualisations driven by different information sources and personal efforts in charting commodity networks, using framing devices like ideas of 'distancing', local words like 'desi', and integrating ideas of 'organic' and 'local' from other countries, the middle class residents in Islamabad are not only attempting to reduce their anxiety associated with food consumption, but also to locate themselves, with respect to food systems globally, in Pakistan and in their local regions. In this way, the dissertation has responded to Cook and Crang's (1996) paper by showing that consumers not only place themselves socially and culturally in relation to food, but also spatially by their interactions with food systems: as shown in Papers II, III and IV, consumers use concepts like 'desi' and framing devices of 'distancing' to place themselves in relation to western countries and Pakistan, and to reconnect with food systems.

Importantly, the dissertation on the whole has expressed the idea that food anxieties are increasingly considered as components of food insecurity by these residents, and that the development of 'good food' knowledges and rationalisations are a way of creating frameworks to reduce this anxiety and to shape adaptation strategies. Various factors associated with these constructions of food knowledge have been explored in the constituent papers: Paper II explored how ideas of 'good food' are developed through knowledge and a desire for reconnection with food systems, nature, rural, and traditional ideals, noting how specific foods are connected with concepts associated with those from alternative food trends emerging from developed countries. This paper in particular contributes to debates on alternative food consumption and ideas of 'good food', because it bridges the concepts of geographical knowledges, as explored by Cook and Crang (1996) and Morris and Kirwan (2010), with 'good food' in the context of alternative food production, as shown by Sage (2003) and Connell and colleagues

(2008) with reconnection and spatial embeddedness. Bridging these concepts illustrates the value of exploring 'good food' in urban contexts, where ideas of alternative production are still developing, and shows that the aspirations for increasing knowledge about food systems has functioned differently for the respondents in Pakistan in comparison with populations in developed countries.

I argue that this difference in conceptualisation and practice arises partly because of the context of Pakistan, where people are aware of the environmental risks and alternatives, but do not have access to these alternatives as their counterparts in western countries do. Importantly, concepts of defetishising commodities as explored by Cook and colleagues (2014) have little meaning for many of the consumers interviewed in Pakistan, because their connections to food systems on the whole, or to the food experience in western countries, was more important than uncovering potentially unethical links to Pakistani producers. I attribute this major disconnect from the literature on food geographies and politics of reconnection, as explored in Chapter 2, to the fact that these Pakistani consumers have, one, never been as disconnected from food systems as their western counterparts, and so do not have the same visualisation of a distant 'other' producer; and two, do not have the same level of exposure to foreign, 'exotic' items. I also argue that the efforts at reconnection do not remove the anxieties faced by the middle class consumers, but instead create new anxieties stemming from the new knowledges and new transformations. Building on this, Paper III explored how experiential and discursive knowledge about specific aspects of the food system is associated with feelings and relationships of trust. This advances debates in food and trust as represented by Meyer and colleagues' (2012) evaluation of trust in the Australian food system, which showed that the dis-embeddedness in food systems was associated with decreased trust. While the findings in Paper III support the relationship between dis-embeddedness and trust, they also show that consumers in Islamabad were more likely to depend on personal experience and relationships with individual

vendors, and, unlike the Australian consumers, had very little trust in the Pakistani food system and transformations associated with global food systems, particularly in terms of regulations. The results of Paper III also agree with findings by Gong and Jackson (2012) in that certain production processes are preferred over others. However, the results from Paper III stand out from these publications and the literature set out in Chapter 2 in that it shows that consumers not only link trust relationships to particular aspects of food system, but also depend strongly on visceral reactions to food, a factor that to my knowledge has not been explored in the literature on trust in food.

As a whole, this dissertation has contributed to theoretical debates on food geographies and geographical knowledge in the following three ways:

(1) It has shown that geographical knowledge obtained through personal experiential involvement in combination and often in contestation with existing narratives and knowledges manufactured by producers and retailers is used by consumers to locate themselves with respect to food systems, to Pakistan, and to other countries. This is explored in detail in Paper IV, which presents a discussion on how consumers personally explore the commodity network of the chicken in order to check the knowledge base about industrial chicken production based on information emerging from western countries.

(2) The dissertation has demonstrated that geographical food knowledge is a critical way for consumers to manage anxieties associated with transformations of food systems and the development of alternative food systems in other countries, particularly when such options are not readily available in their own food environments. To my knowledge, this particular factor has not been explored in the existing food geography literature, although there is significant literature on how consumers define and conceptualise food concepts like 'local' and 'organic' (Blake et al. 2010; Lagerkvist et al. 2015). This dissertation has revealed that as the consumers in Islamabad have to

contend with environmental food risks in combination with urban disruptions in the form of resource scarcities and violent events, geographical knowledge provides a critical way of understanding and adapting to these risks and disruptions at a conceptual and everyday level. Therefore, middle class consumers are not only adjusting everyday travel routes and schedules for food shopping in response to fuel scarcity, but they are also modifying their relationship to food consumption driven by what foods they can readily access, *and* which foods during these times of disruption fit their current construction of 'good food'.

(3) The results of this dissertation suggest that, despite personal identification as 'food secure', these middle class residents experience food insecurity and vulnerability at two distinct levels: the uncertainties created by the multitude of disruptions in the urban environment they occupy, and the uncertainties they face because of the effects of transformations in global food systems. The dissertation challenges and extends existing debates on vulnerability and the middle class by firstly, illustrating how shocks and disruptions take different forms in different countries; secondly, that temporality is a crucial part of food environments; thirdly, by revealing the role of food knowledges as being crucial to managing food anxieties; and finally, that efforts at reconnection with food systems not only do not result in decreased anxiety and trust, but also generate new anxieties and uncertainties.

Looking Outwards – Towards the Development of Globally Useful

Alternative Food Networks

Abrahams (2006), Goss (2004), and Freidberg and Goldstein (2011), in their explorations of AFNs and geographies of consumption, have argued that alternative food networks in the global North have catered their services to consumers of the type described above (further explored in Chapter 2). This factor excludes over two thirds of the world's population, and conceptualises AFNs as exclusive and elitist. While

recognizing the limitations of this view and the complexity of AFNs in terms of class and status (further discussed in Chapter 2), it is important to note that the shallow analysis of AFNs is often the only one that reaches other countries. Therefore, while Chapter 2 has shown that there is significant nuance within AFNs and that it has moved beyond debates of elitism in some ways, the consumers in Islamabad are accessing and exposed to the very basic information of these networks, and not engaging with the wider debates. This may be attributed to the fact that the more complex discussions are taking place in forums, sites, and ways that an average consumer from a developing country does not have access to. As shown in the discussion on common sources of information in Chapter 3, and by the respondents in Papers III and IV, the majority of the interviewed Pakistani consumers are learning about AFNs from more informal sources such as blog articles and newspaper articles, instead of scholarly papers. Those who do access articles, recognize that the information is not only not readily available (e.g. restricted by paywalls), but is also not easily comprehensible, or applicable to everyday life. The Pakistani consumers in this study are therefore attempting to integrate and respond to selected perspectives of these imported concepts in a spatial and cultural context that is very different from the one in which these concepts originated. Evidence of this can be seen when considering Pakistani consumers' efforts to define and conceptualise foods beyond ideas of purity and freshness by using the terms 'organic' and 'local', in English. I argue that even this linguistic factor shows that the ideas of 'organic' and 'local' as borrowed from literature in the global North have not been accepted and integrated into familiar thinking and the local vernacular. This is connected with the fact (as demonstrated in Chapter 3) that food environments in Islamabad differ significantly from those in developed countries, where a majority of consumers attend wholesale produce markets, shops and informal stalls in different marketplaces, where food is often sourced from within the country if not the nearby regions. Malls are emerging as a new but fairly unfamiliar feature of the urban landscape, and packaged and labelled food is still rare, particularly when purchasing

produce, meat, and bulk items like flour and rice. While concerns about chemical contamination and adulteration abound, locally produced or packaged food not always a trustworthy alternative.

Utilising Abrahams' (2006) description, I argue that the middle class populations in Islamabad do not fit in with the *dominant* narratives on alternative food networks for a number of reasons. Firstly, Paper I shows that access to transportation has become an uncertain factor in recent years, to the point that it is no longer taken for granted. Secondly, the paper demonstrates that, although perceptions on the safety of foods in some produce markets is disputed, a majority of respondents shop in produce markets or local markets where they do not easily come across foods labelled 'organic' or 'local', and purchases of such foods are considered to be a practice reserved for 'elites', or a way to satisfy curiosity about alternative foods. Thirdly, the respondents in Islamabad displayed almost no interest in ethically-produced goods that link consumption with a distant 'Other'. This dissertation proposes that the idea of defetishisation and revealing the realities of production is limited mainly to consumers in the Global North, because the information about ethically-produced foods places producers in the Global South. Fourthly, it is argued in the dissertation that, for the consumers in Islamabad, their sphere of personal responsibility is associated more strongly with their families and social circle as well as areas of food consumption over which they have more tangible control, i.e. their personal food environments. Finally, the evidence from this dissertation demonstrates the differences in the definitions of 'middle class' globally, coinciding with Birdsall (2010) and Nayab's (2011) arguments in Chapter 2 and 3 for considering country-specific economic and social contexts in class definitions. This is exemplified by the fact that all of the respondents in Islamabad had domestic help at their household who would share in cooking and home care duties, and that food shopping was often a social activity with other family members, which contrasts significantly with Abrahams'

(2006) quote above, where the middle class female is portrayed as the one responsible for all cooking in the household.

This section has illustrated that in the presence of environmental risks, a fledgling and niche market for alternative foods and increasing knowledge about food trends in other countries for consumers in Islamabad have problematised the forms alternative food consumption may take in Pakistan. This running theme throughout the dissertation has contributed to existing debates on creating globally-useful alternative food networks as advanced by Abrahams (2006) and Freidberg and Goldstein (2011) by showing the problems faced by Pakistani consumers in Islamabad at integrating Euro/America centred ideas of alternative food with their own rationalisations, and how regional conceptualisations of food are preferred over those influenced by alternative food networks. However, while Freidberg and Goldstein (2011) use the case of South Africa to argue for considering how the development of particular countries functions (in terms of institutions, policies, and development practices) for creating successful alternative food networks, this dissertation has emphasised that existing food rationalisations (see Paper II and III), and regional social and urban contexts (see Paper I and IV) also make a vital contribution. The results of this dissertation therefore also theoretically advance the dominant narratives of existing food networks to account for on-the-ground realities in the Global South.

However, advocating for a globally useful conceptualisation of AFNs will not be a blanket solution to the current problems, and will create new ones. Ransom (2011) observes in the case of the meat industry in Botswana, that the possibility of upgrading local commodity chains to compete at global levels has the distinct danger of marginalizing small producers (often ethnic minorities), and having to implement regulations and measures at the behest of developed countries. Further, Gibbon and Ponte (2005), and Daviron (2008) argue that modern trade negotiations place

developing countries at a disadvantage by not allowing for differences in technological development, and by creating problematic power relationships.

Therefore, while countries like Pakistan have the potential of benefitting in the long-term by globally useful ideas of AFNs, it is important to acknowledge the limitations of regulations and trade agreements that only benefit particular countries, institutional structures, and ethnic groups.

Limitations and Recommendations for Future Research

This dissertation was limited primarily in how the respondents were selected. As discussed in Chapter 4, after an initial period of snowball sampling, a smaller group of respondents were obtained by approaching people in Islamabad's main wholesale produce market. Although for the purposes of this research this approach was used to identify households who would identify themselves primarily as 'food secure', future research would benefit from randomised sampling using statistical information to ensure that the required subset of socio-economic class is interviewed. Secondly, an inclusion of food maps would have been a valuable component to the analysis but, as discussed in Chapter 4, a significant proportion of the respondents did not want participate in drawing on maps to indicate food environments. This presents an opportunity for further research, especially in evaluating how spatial changes in food environments are dependent upon different anxieties and urban disruptions. Factors arising from map data have been explored in the papers, but due to the small sample size individual maps have been omitted to protect respondent anonymity. This is also a timely opportunity to study how the rapidly developing domestic alternative food initiatives in Pakistan are functioning and if the drivers of this change have accounted for country-specific changes in their implementation. Finally, even though the respondents would reflect on changes in the past decades for the research on this dissertation, a longitudinal study spanning a number of years would be useful in obtaining a richer data

set on the resilience of urban populations to different kinds of changes affecting their food environments.

Further research is needed to understand better how markets and businesses in Pakistan are responding to consumer anxieties about food. This is important considering that while farmers' markets and some domestic brands for organic foods have emerged in recent years, they have been producing on limited scales and localised to cities like Lahore and Karachi, and were therefore not well-known to the respondents in Islamabad. In terms of the respondents, although Chapters 2 and 3 have shown the difficulty in classifying the middle class, the perceptions and adaption practices in the four papers reveal a diversity in responses, which may be associated with specific class characteristics such as educational attainment, source of income, etc. Given the aim and scope of this dissertation, class differences were not explored in detail. Nevertheless, evaluating differences in food consumption anxieties according to different classes within Pakistani society could be a potentially fruitful endeavour to explore socio-economic drivers of food consumption in times of anxiety. It could also reinforce the precarious everyday management of food risks for certain sections of the middle class. It would also be of further interest to investigate the role of the media in influencing changes in food perceptions and management of food risks in the modern age in Pakistan, especially as respondents would cite food-related documentaries as sources of information. Finally, health issues like cardio-vascular diseases, diabetes, and obesity in which are increasing in Pakistani urban areas (as discussed in Chapter 3) could be explored within the context of food geography and food environments to evaluate how perceptions and practices of food consumption linked with health outcomes function in developing countries within the context of endemic environmental health risks.

References

- ABBAS, T., YOUNUS, M., MUHAMMAD, S.A., IJAZ, M. and SHAKOOR, A., 2014. Some Challenges to Progressive Control of Foot and Mouth Disease in Pakistan – Findings of a Pilot Survey. *Transboundary and Emerging Diseases*, **61**(1), pp. 81-85.
- ABEDULLAH, M. and BUKHSH, K., 2007. Issues and economics of poultry production: a case study of Faisalabad, Pakistan. *Pakistan Veterinary Journal*, **27**(1), pp. 25-28.
- ABEL, T., and FROHLICH, K. L., 2012. Capitals and capabilities. Linking structure and agency to reduce health inequalities. *Social Science and Medicine*, **74**(2), 236–244.
- ABID, A. M., 2015. Vegetarians and Bakra Eid. *The Nation*. [online] Available at <http://nation.com.pk/columns/28-Sep-2015/vegetarians-and-bakra-eid>. [Accessed on August 3, 2016]
- ABRAHAMS, C.N., 2006. Globally useful conceptions of Alternative Food Networks in the developing south: the case of Johannesburg's urban food supply system. <https://www.era.lib.ed.ac.uk/bitstream/handle/1842/1465/cabrahams001.pdf?sequence=1&isAllowed=y>
- ACS, G. and LOPREST, P., 2005. Who Are Low-Income Working Families? *Urban Institute*. Washington DC.
- ADAM, B. and GROVES, C., 2007. *Future Matters: Action, Knowledge, Ethics*. Leiden: Brill.
- ADAMS, C.J., 1995. *Neither Man nor Beast: Feminism and the Defence of Animals*. London: A&C Black.
- ADAMS, C.J., 2015. *The Sexual Politics of Meat: A Feminist-vegetarian Critical Theory*. New York: Bloomsbury Publishing.
- ADAMS, W.M. and MORTIMORE, M., 1997. Agricultural intensification and flexibility in the Nigerian Sahel. *Geographical Journal*, pp. 150-160.
- ADELEKAN, I.O. and JEROME, A.T., 2006. Dynamics of household energy consumption in a traditional African city, Ibadan. *Environmentalist*, **26**(2), pp. 99-110.
- ADEY, P., 2009. Facing airport security: affect, biopolitics, and the pre-emptive securitisation of the mobile body. *Environment and Planning D: Society and Space*, **27**(2), pp. 274-295.
- AFTAB, S., 2014. Pakistan's energy crisis: causes, consequences and possible remedies. NOREF Expert Analysis – January 2014. *Norwegian Peace Building Resource Centre*.
- AHMAD, M. and FAROOQ, U., 2010. The state of food security in Pakistan: Future challenges and coping strategies. *The Pakistan Development Review*, pp. 903-923.

- AHMAD, M.A., KHAN, B.A., SHAMSUDDIN, Z.A. and ANWARULLAH, M., 1989. Presence of Aflatoxin B1 in the shelled peanuts in Karachi. *Pakistan Journal of Scientific and Industrial Research*, **32**, pp. 526.
- AHMAD, S., 2008. Identity matters, culture wars: An account of Al-Huda (re)defining identity and reconfiguring culture in Pakistan. *Culture and Religion*, **9**(1), pp. 63-80.
- AHMAD, T., 2009. *Jagged trajectories: Mobility and distinction in Karachi, Pakistan*. Ph.D. Stanford University.
- AHMED, I. and QAZI, T.F., 2011. Mobile phone adoption & consumption patterns of university students in Pakistan. *International Journal of Business and Social Science*, **2**(9).
- AHSAN, S., BHATTI, I.A., ASI, M.R., BHATTI, H.N. and SHEIKH, M.A., 2010. Occurrence of Aflatoxins in Maize Grains from Central Areas of Punjab, Pakistan. *International Journal of Agriculture and Biology*, **12**(4), pp. 571-575.
- AKHTAR, S., 2013. Food Safety Challenges — A Pakistan's Perspective. *Critical Reviews in Food Science and Nutrition*, **55**(2):219-26.
- AKHTAR, S., NAZ, S., SULTAN, M.T., MAHMOOD, S., NASIR, M. and AHMAD, A., 2010. Physico-Chemical Attributes and Heavy Metal Content of Mangoes (*Mangifera Indica* L.) Cultivated in Different Regions of Pakistan. *Pakistan Journal of Botany*, **42**(4), pp. 2691-2702.
- AKHTER, P., AKRAM, M., ORFI, S. and AHMAD, N., 2002. Assessment of dietary zinc ingestion in Pakistan. *Nutrition*, **18**(3), pp. 274-278.
- AKMAL, N., AKHTAR, W., SHAH, H., NIAZI, M.A. and SALEEM, T., 2014. The Structure and Competitiveness of Pakistan's Basmati Rice Exports. *Asian Journal of Agriculture and Rural Development*, **04**(04).
- ALAVI, H., 1990. Authoritarianism and legitimation of state power in Pakistan. In: MITRA, S.K. *The post-colonial state in Asia: Dialectics of politics and culture*. Sang-e-Meel Publications: Lahore, pp. 19-71.
- ALESSA, L., KLISKEY, A. and WILLIAMS, P., 2007. The distancing effect of modernization on the perception of water resources in Arctic communities. *Polar Geography*, **30**(3-4), pp. 175-191.
- ALESSA, L., KLISKEY, A. and WILLIAMS, P., 2010. Forgetting Freshwater: Technology, Values, and Distancing in Remote Arctic Communities. *Society & Natural Resources*, **23**(3), pp. 254-268.
- ARRUDA, S. P., DA SILVA, A. A., KAC, G., GOLDANI, M. Z., BETTIOL, H., and BARBIERI, M. A., 2014. Socioeconomic and demographic factors are associated with dietary patterns in a cohort of young Brazilian adults. *BMC Public Health*, **14**(654), pp. 1-13.

- BECK, U., 1996. Reflexive modernization: Politics, tradition, and aesthetics in the modern social order. *Theory Culture & Society*, **13**(4), pp. 133-138.
- ALFNES, F. and RICKERTSEN, K., 2004. European Consumers Acceptance of US Hormone-Treated Beef. *EuroChoices*, **3**(3), pp. 18-23.
- ALI, I., 2015. 4,000 kg of unhygienic meat seized in Karachi. *DAWN News*. [online] Available at: <http://www.dawn.com/news/1206328> [Accessed 20 May, 2015]
- ALI, N., EQANI, S. A., MALIK, R.N., NEELS, H. and COVACI, A., 2013. Organohalogenated contaminants (OHCs) in human serum of mothers and children from Pakistan with urban and rural residential settings. *Science of the Total Environment*, **461–462**(0), pp. 655-662.
- ALLEN, P., 1999. Reweaving the food security safety net: Mediating entitlement and entrepreneurship. *Agriculture and Human Values*, **16**(2), pp. 117-129.
- ALLEN, P., FITZSIMMONS, M., GOODMAN, M. and WARNER, K., 2003. Shifting plates in the agrifood landscape: the tectonics of alternative agrifood initiatives in California. *Journal of rural studies*, **19**(1), pp.61-75
- AMOORE, L. and DE GOEDE, M., 2008. Transactions after 9/11: the banal face of the preemptive strike. *Transactions of the Institute of British Geographers*, **33**(2), pp. 173-185.
- ANDERSON, B., 2010. Security and the future: Anticipating the event of terror. *Geoforum*, **41**(2), pp. 227-235.
- ANDERSON, J., 2004. Talking whilst walking: a geographical archaeology of knowledge. *Area*, **36**(3), pp. 254-261.
- ANIMAL RIGHTS PAKISTAN, 2016. History of Animal Rights in Pakistan. Animal Rights in Pakistan [online] Available at <https://aminals.org/2014/03/18/history-of-animal-rights-in-pakistan/>. [Accessed on August 19 2016]
- ANNUNZIATA, A., IANUARIO, S. and PASCALE, P., 2011. Consumers' Attitudes Toward Labelling of Ethical Products: The Case of Organic and Fair Trade Products. *Journal of Food Products Marketing*, **17**(5), pp. 518-535.
- ANSARI, I., 2015, December 14, 2015. Commercial produce stay away, home grown vegetables come my way. *The Express Tribune*, Sindh.
- ANTONY, M.G., 2012. "Slum-Pups No More": Rescuing India's Slum Children. *Journal of Intercultural Communication Research*, **41**(1), pp. 17-36.
- ANWAR, T., AHMAD, I. and TAHIR, S., 2011. Determination of Pesticide Residues in Fruits of Nawabshah District, Sindh, Pakistan. *Pakistan Journal of Botany*, **43**(2), pp. 1133-1139.

APPADURAI, A., 1986. *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.

ARCHETTI, E.P., 1997. *Guinea Pigs: Food, Symbol and Conflict of Knowledge in Ecuador*. Oxford: Berg Oxford.

ARLUKE, A. and SANDERS, C., 2010. *Regarding Animals*. 2nd ed. Philadelphia: Temple University Press.

ARORA, M., KIRAN, B., RANI, S., RANI, A., KAUR, B. and MITTAL, N., 2008. Heavy metal accumulation in vegetables irrigated with water from different sources. *Food Chemistry*, **111**(4), pp. 811-815.

ASHBOLT, N.J., 2004. Microbial contamination of drinking water and disease outcomes in developing regions. *Toxicology*, **198**(1), pp. 229-238.

ASHRAF, S., IFTIKHAR, M., SHAHBAZ, B., KHAN, G.A. and LUQMAN, M., 2013. Impacts of flood on livelihoods and food security of rural communities: A case study of southern Punjab, Pakistan. *Pakistan Journal of Agricultural Sciences*, **50**(4), pp. 751-758.

AUTIO, M., COLLINS, R., WAHLEN, S. and ANTTILA, M., 2013. Consuming nostalgia? The appreciation of authenticity in local food production. *International Journal of Consumer Studies*, **37**(5), pp. 564-568.

BACKETT-MILBURN, K.C., WILLS, W.J., ROBERTS, M. and LAWTON, J., 2010. Food, eating and taste: Parents' perspectives on the making of the middle class teenager. *Social Science & Medicine*, **71**(7), pp. 1316-1323.

BAJWA, A., 2015. *Monthly Bulletin of Statistics, June 2015*. Pakistan: Pakistan Bureau of Statistics.

BAKER, S., MENZEL, H, KARRER, C., and VEECK, A., 2005. My Favorite Recipes: Recreating Emotions and Memories Through Cooking. In *Advances in Consumer Research*, Eds. by Geeta Menon and Akshay R. Rao, Vol. 32, 402–403. Duluth, MN: Association for Consumer Research.

BALAGAMWALA, M., 2013. Agriculture and Nutrition in Pakistan: Pathways and Disconnect1. *IDS Bulletin*, **44**(3), pp. 66.

BANERJEE, A.V. and DUFLO, E., 2008. What Is Middle Class about the Middle Classes around the World? *Journal of Economic Perspectives*, **22**(2), pp. 3-28.

BARBER, B., 1983. *The Logic and Limits of Trust*. New Brunswick: Rutgers University Press.

BARKHATOVA, N., MCMYLOR, P. and MELLOR, R., 2001. Family business in Russia: the path to middle class? *The British Journal of Sociology*, **52**(2), pp. 249-269.

- BARR, S.I., and CHAPMAN, G.E., 2002. Perceptions and practices of self-defined current vegetarian, former vegetarian, and non-vegetarian women. *Journal of the American Dietetic Association*, **102**(3), pp. 354-360
- BATTERSBY, J., 2012. Beyond the Food Desert: Finding Ways to Speak about Urban Food Security in South Africa. *Geografiska Annaler: Series B, Human Geography*, **94**(2), pp. 141-159.
- BAUMAN, Z., 2006. *Liquid Fear*. Cambridge: Polity Press.
- BAVA, C.M., JAEGER, S.R. and PARK, J., 2008. Constraints upon food provisioning practices in 'busy' women's lives: Trade-offs which demand convenience. *Appetite*, **50**(2-3), pp. 486-498.
- BAWEJA, T., 2015. Being a vegetarian in Pakistan. *The Nation* [online] Available at <http://images.dawn.com/news/1173981>. [Accessed on August 3, 2016]
- BEARDSWORTH, A.D., and KEIL, E.T., 1991. Vegetarianism, veganism, and meat avoidance: recent trends and findings. *British Food Journal*, **93**(4), pp. 19-24
- BEARDSWORTH, A. and KEIL, T., 1992. The vegetarian option: varieties, conversions, motives and careers. *The Sociological Review*, **40**, pp. 253-293
- BECK, U., 1992. *Risk Society: Towards a New Modernity*. London: SAGE.
- BEHRENS, J.H., BARCELLOS, M.N., FREWER, L.J., NUNES, T.P., FRANCO, B.D.G.M., DESTRO, M.T. and LANDGRAF, M., 2010. Consumer purchase habits and views on food safety: A Brazilian study. *Food Control*, **21**(7), pp. 963-969.
- BELL, D. and VALENTINE, G., 1997. *Consuming Geographies: We Are Where We Eat*. London: Routledge.
- BENNETT, T., SAVAGE, M., SILVA, E.B., WARDE, A., GAYO-CAL, M. and WRIGHT, D., 2009. *Culture, class, distinction*. Routledge.
- BERG, L., 2004. Trust in food in the age of mad cow disease: a comparative study of consumers' evaluation of food safety in Belgium, Britain and Norway. *Appetite*, **42**(1), pp. 21-32.
- BERG, L., KJAERNES, U., GANSKAU, E., MININA, V., VOLTCHKOVA, L., HALKIER, B. and HOLM, L., 2005. Trust in food safety in Russia, Denmark and Norway. *European Societies*, **7**(1), pp. 103-129.
- BETEILLE, A., 2007. Classes and communities. *Economic and Political Weekly*, pp. 945-952.
- BHUTTA, Z. A., 2011. *National Nutrition Survey Report*. Aga Khan University and Pakistan Medical Research Council (PMRC) – Cabinet Division, Government of Pakistan.

- BILDTGÅRD, T., 2010. What It Means to "Eat Well" in France and Sweden. *Food and Foodways*, **18**(4), pp. 209-232.
- BILDTGÅRD, T., 2013. Where is food 'good to think'? Rationalities of food and place in Sweden and France. *Social Science Information*, **52**(1), pp. 159-178.
- BINNIE, J., EDENSOR, T., HOLLOWAY, J., MILLINGTON, S. and YOUNG, C., 2007. Mundane mobilities, banal travels. *Social & Cultural Geography*, **8**(2), pp. 165-174.
- BIRDSALL, N., GRAHAM, N. and PETTINATO, S., 2000. *Stuck in the Tunnel: Is Globalization Muddling The Middle Class?* WP no. 14. Brookings Institution, Centre of Social and Economic Dynamics.
- BIRDSALL, N., 2010. The (indispensable) middle class in developing countries; or, the rich and the rest, not the poor and the rest. *Equity in a Globalizing World*, Ravi Kanbur and Michael Spence, eds., World Bank.
- BIROL, E., ROY, D., DEFFNER, K. and KARANDIKAR, B., 2009. *Developing country consumers' demand for food safety and quality: Is Mumbai ready for certified and organic fruits?* In. 2009 Conference, August 12-33, 2009, Beijing, China. (No. 51689). International Association of Agricultural Economists.
- BIRKHOFER, K., BEZEER, T.M., and BLOEM, J., 2008. Long-term organic farming fosters below and aboveground biota: Implications for soil quality, biological control and productivity. *Soil Biology and Biochemistry*, **40**, pp. 2297-2308.
- BISSELL, D., 2007. Animating Suspension: Waiting for Mobilities. *Mobilities*, **2**(2), pp. 277-298.
- BLAKE, M.K., MELLOR, J. and CRANE, L., 2010. Buying Local Food: Shopping Practices, Place, and Consumption Networks in Defining Food as "Local". *Annals of the Association of American Geographers*, **100**(2), pp. 409-426.
- BLAY-PALMER, A., 2008. *Food Fears: From Industrial to Sustainable Food Systems*. Aldershot: Ashgate.
- BLECHA, J. and DAVIS, A., 2014. Distance, proximity, and freedom: Identifying conflicting priorities regarding urban backyard livestock slaughter. *Geoforum*, **57**(0), pp. 67-77.
- BLEICH, A., GELKOPF, M. and SOLOMON, Z., 2003. Exposure to terrorism, stress-related mental health symptoms, and coping behaviors among a nationally representative sample in Israel. *The Journal of the American Medical Association*, **290**(5), pp. 612-620.
- BOJORQUEZ, I., UNIKEL, C., CORTEZ, I. and CERECERO, D., 2015. The social distribution of dietary patterns. Traditional, modern and healthy eating among women in a Latin American city. *Appetite*, **92**, pp.43-50.

BOKHARI, A., 2012, GM foods: fears and prospects. *DAWN News*. [online] Available at: <http://www.dawn.com/news/749874/gm-food-fears-and-prospects>. [Accessed 1 June 2015]

BONANNO, G.A., 2004. Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, **59**(1), p. 20.

BONNE, K. and VERBEKE, W., 2008. Muslim consumer trust in halal meat status and control in Belgium. *Meat Science*, **79**(1), pp. 113-123.

BOURDIEU, P., 1984. *Distinction. A social critique of the judgment of taste*. Cambridge: Harvard University Press.

BOURN, D. and PRESCOTT, J., 2002. A Comparison of the Nutritional Value, Sensory Qualities, and Food Safety of Organically and Conventionally Produced Foods. *Critical Reviews in Food Science and Nutrition*, **42**(1), pp. 1-34.

BOYM, S., 2001. *The Future of Nostalgia*. New York: Basic Books.

BRAUN, B., 2007. Biopolitics and the molecularization of life. *Cultural Geographies*, **14**(1), pp. 6-28.

BRAUN-LEWENSOHN, O., CELESTIN-WESTREICH, S., CELESTIN, L., VERLEYE, G., VERTÉ D. and PONJAERT-KRISTOFFERSEN, I., 2009. Coping styles as moderating the relationships between terrorist attacks and well-being outcomes. *Journal of Adolescence*, **32**(3), pp. 585-599.

BROWN, L., EDWARDS, J. and HARTWELL, H., 2010. A taste of the unfamiliar. Understanding the meanings attached to food by international postgraduate students in England. *Appetite*, **54**(1), pp. 202-207.

BROWN, M., WORTH, R. and SHAH, N., 1968. Food habits and food intake in Nepal. *Tropical and Geographical Medicine*, **20**(3), pp. 217-224.

BRZEZINSKI, M., 2010. Income affluence in Poland. *Social Indicators Research*, **99**(2), pp. 285-299.

BURGOINE, T., LAKE, A.A., STAMP, E., ALVANIDES, S., MATHERS, J.C. and ADAMSON, A.J., 2009. Changing foodscapes 1980–2000, using the ASH30 Study. *Appetite*, **53**(2), pp. 157-165.

BURGOINE, T., FOROUHI, N.G., GRIFFIN, S.J., WAREHAM, N.J. and MONSIVAIS, P., 2014. Associations between exposure to takeaway food outlets, takeaway food consumption, and body weight in Cambridgeshire, UK: Population based, cross sectional study. *BMJ (Online)*, **348**.

CADILHON, J., MOUSTIER, P., POOLE, N., TAM, P.T.G., FEARNE, A., 2006. Traditional vs. modern food systems? Insights from vegetable supply chains to Ho Chi Minh City (Vietnam). *Development Policy review* **24** (10) pp. 31-49

- CALLON, M., LASCOUMES, P. and BARTHE, Y., 2009. *Acting in an Uncertain World: An Essay on Technical Democracy*. Cambridge: MIT Press.
- CALNAN, M., ROWE, R. and ENTWISTLE, V., 2006. Trust relations in health care: an agenda for future research. *Journal of Health Organization and Management*, **20**(5), pp. 477.
- CANNUSCIO, C.C., TAPPE, K., HILLIER, A., BUTTENHEIM, A., KARPYN, A. and GLANZ, K., 2013. Urban Food Environments and Residents' Shopping Behaviors. *American Journal of Preventive Medicine*, **45**(5), pp. 606-614.
- CANNUSCIO, C.C., HILLIER, A., KARPYN, A. and GLANZ, K., 2014. The social dynamics of healthy food shopping and store choice in an urban environment. *Social Science & Medicine*, **122**(0), pp. 13-20.
- CARMELA APRILE, M., CAPUTO, V. and NAYGA, Rodolfo M., 2015. Consumers' Preferences and Attitudes Toward Local Food Products. *Journal of Food Products Marketing*, pp. 1-26.
- CAROLAN, M.S., 2004. Unmasking the commodity chain. *Peace Review*, **16**(2), pp. 193-198.
- CARPIANO, R.M., 2009. Come take a walk with me: The "Go-Along" interview as a novel method for studying the implications of place for health and well-being. *Health & Place*, **15**(1), pp. 263-272.
- CARVALHO, F.P., 2006. Agriculture, pesticides, food security and food safety. *Environmental Science & Policy*, **9**(7), pp. 685-692.
- CASTREE, N., 2001. Commodity fetishism, geographical imaginations and imaginative geographies. *Environment and Planning A*, **33**(9), pp. 1519-1525.
- CASTREE, N., 2004. The geographical lives of commodities: problems of analysis and critique. *Social & Cultural Geography*, **5**(1), pp. 21-35.
- CHAKRAVARTI, A., 1974. Regional preference for food: some aspects of food habit patterns in India. *The Canadian Geographer/Le Géographe canadien*, **18**(4), pp. 395-410.
- CLARKE, N., CLOKE, P., BARNETT, C., and MALPASS, A., 2008. The spaces and ethics of organic food. *Journal of Rural Studies*, **24**(3), pp. 219-230.
- CHANDIO, A.A., YUANSHENG, J., RAHMAN, T., KHAN, M.N., GUANGSHUN, X. and ZHI, Z., 2015. Analysis of agricultural subsectors contribution growth rate in the agriculture GDP growth rate of Pakistan. *International Journal of Humanities and Social Science Invention*, **4**(8), pp.101-105.
- CHANG, H. and ZEPEDA, L., 2005. Consumer perceptions and demand for organic food in Australia: Focus group discussions. *Renewable Agriculture and Food Systems*, **20**(3), pp. 155-167.

- CHAUDHRY, M., RASHID, H.B., THRUSFIELD, M., WELBURN, S. and BRONSVOORT, B.M., 2015. A case-control study to identify risk factors associated with avian influenza subtype H9N2 on commercial poultry farms in Pakistan. *PLoS ONE*, **10**(3), pp. e0119019.
- CHEEMA, A., 2003. State and Capital in Pakistan: The Changing Politics of Accumulation. *Corporate Capitalism in Contemporary South Asia: Conventional Wisdoms and South Asian Realities*, pp. 134-170.
- CHEN, M., 2011. Consumer's trust-in-food-safety typology in Taiwan: Food-related lifestyle matters. *Health, Risk & Society*, **13**(6), pp. 503-526.
- CHEN, M. and GOODMAN, D.S.G., 2013. *Middle Class China: Identity and Behaviour*. Cheltenham: Edward Elgar.
- CHEN, W., 2013. The effects of different types of trust on consumer perceptions of food safety. *China Agricultural Economic Review*, **5**(1), pp. 43-65.
- CHEN, X. and CLARK, J., 2013a. Interactive three-dimensional geovisualization of space-time access to food. *Applied Geography*, **43**, pp. 81-86.
- CHEN, X. and CLARK, J., 2013b. Interactive three-dimensional geovisualization of space-time access to food. *Applied Geography*, **43**, pp. 81-86.
- CHYZAN, J., 2010. The American Omnivore's Dilemma: Who Constructs "Organic" Food? *Food and Foodways*, **18**(1-2), pp. 81-95.
- CHUN, N., 2010. Middle class size in the past, present, and future: A description of trends in Asia. *Asian Development Bank Economics Working Paper Series*, (217).
- COHEN, S., 2004. *Searching for a Different Future: The Rise of a Global Middle Class in Morocco*. Durham: Duke University Press.
- COLLIER, S.J. and LAKOFF, A., 2008. Distributed preparedness: the spatial logic of domestic security in the United States. *Environment and Planning D: Society and Space*, **26**(1), pp. 7-28.
- CONLON, D., 2011. Waiting: feminist perspectives on the spacings/timings of migrant (im)mobility. *Gender, Place & Culture*, **18**(3), pp. 353-360.
- CONNELL, D.J., SMITHERS, J. and JOSEPH, A., 2008. Farmers' markets and the "good food" value chain: a preliminary study. *Local Environment*, **13**(3), pp. 169-185.
- COOK, I. and CRANG, P., 1996. The world on a plate: Culinary culture, displacement and geographical knowledges. *Journal of Material Culture*, **1**(2), pp. 131-153.
- COOK, I., 2004. Follow the Thing: Papaya. *Antipode*, **36**(4), pp. 642-664.

- COOK, I., EVANS, J., GRIFFITHS, H., MORRIS, R. and WRATHMELL, S., 2007. 'It's more than just what it is': Defetishising commodities, expanding fields, mobilising change. *Geoforum*, **38**(6), pp. 1113-1126.
- COOK, I. and HARRISON, M., 2007. Follow the Thing: "West Indian Hot Pepper Sauce". *Space and Culture*, **10**(1), pp. 40-63.
- COOK, I. and WOODYER, T., 2012. *Lives of things*. The Wiley-Blackwell companion to economic geography, pp. 226-241
- COOK, I., 2014. Follow the Things. Available: <http://www.followthethings.com/> [Accessed July 16, 2014].
- COSTA-FONT, M., GIL, J.M. and TRAILL, W.B., 2008. Consumer acceptance, valuation of and attitudes towards genetically modified food: Review and implications for food policy. *Food Policy*, **33**(2), pp. 99-111.
- COTTLE, S., 1998. Ulrich Beck, 'Risk Society' and the Media - A Catastrophic view? *European Journal of Communication*, **13**(1), pp. 5-32.
- COVENEY, J., 2000. *Food, Morals and Meaning: The Pleasure and Anxiety of Eating*. London: Routledge.
- COWAN, J.K., 1991. Going Out For Coffee? Contesting The Grounds Of Gendered Pleasures In Everyday Sociability. *Contested identities: Gender and kinship in modern Greece*, pp. 180-202.
- COWARD and MARTIN, 2009. Network-Centric Violence, Critical Infrastructure and the Urbanization of Security. *Security Dialogue*, **40**(4-5), pp. 399-418.
- CRANG, P., 1996. Displacement, consumption, and identity. *Environment and Planning A*, **28**(1), pp. 47-67.
- CREPET, A., ALBERT, I., DERVIN, C. and CARLIN, F., 2007. Estimation of microbial contamination of food from prevalence and concentration data: application to *Listeria monocytogenes* in fresh vegetables. *Applied and Environmental Microbiology*, **73**(1), pp. 250-258.
- CREWE, L., 2000. Geographies of retailing and consumption. *Progress in Human Geography*, **24**(2), pp. 275-290.
- CUESTA, J., 2014. Is long-term food insecurity inevitable in Asia? *The Pacific Review*, **27**(5), pp. 611-627.
- CUMMINS, S. and MACINTYRE, S., 1999. The location of food stores in urban areas: a case study in Glasgow. *British Food Journal*, **101**(7), pp. 545-553.
- DAECHSEL, M., 2013. Misplaced Ekistics: Islamabad and the politics of urban development in Pakistan. *South Asian History and Culture*, **4**(1), pp. 87-106.

- DANI, A.H., 1995. *Peshawar: Historic City of the Frontier*. 2nd ed. Lahore: Sang-e-Meel Publications.
- DAUGBJERG, C., SMED, S., ANDERSEN, L.M. and SCHVARTZMAN, Y., 2014. Improving Eco-labelling as an Environmental Policy Instrument: Knowledge, Trust and Organic Consumption. *Journal of Environmental Policy & Planning*, **16**(4), pp. 559-575.
- DAVIRON, B., 2008. The historical integration of Africa in the international food trade: a food regime perspective. In: Fold, N., Larsen, M.N. (Eds.), *Globalization and Restructuring of African Commodity Flows*. Nordic Africa Institute, Uppsala.
- DAWN, 2005. Pakistan yet to meet food safety standards. *DAWN News*. [online] Available at: <http://www.dawn.com/news/387105/pakistan-yet-to-meet-food-safety-standards> [Accessed on: 17 November 2015]
- DAY, P.L. and PEARCE, J., 2011. Obesity-promoting food environments and the spatial clustering of food outlets around schools. *American Journal of Preventive Medicine*, **40**(2), pp. 113-121.
- DJOKOTO, J. G., OWUSU, V., and AWUNYO-VITOR, D., 2016. Adoption of organic agriculture: Evidence from cocoa farming in Ghana. *Cogent Food and Agriculture*, **2**(1), pp. 1-15
- DE CERTEAU, M., 1998. *The Practice of Everyday Life: Living and Cooking, Volume 2*. Minneapolis, University of Minnesota Press.
- DE KROM, M.P.M.M. and MOL, A.P.J., 2010. Food risks and consumer trust. Avian influenza and the knowing and non-knowing on UK shopping floors. *Appetite*, **55**(3), pp. 671-678.
- DE MUNCK, V.C. and SOBO, E.J., 1998. *Using Methods in the Field: A Practical Introduction and Casebook*. Lanham: Rowman Altamira.
- DE ROEST, K., and MENGHI, A., 2000. Reconsidering 'traditional' food: The case of Parmigiano Reggiano Cheese. *Sociologia Ruralis*, **40**, pp. 439–451
- DEEN, M.Y.I., 1996. Islamic environmental ethics, law, and society. In: GOTTLEIB, R. S. *This Sacred Earth: Religion, Nature, Environment*. Routledge, London. pp. 164-173.
- DESJARDINS, E., 2011. *Place and Food: A Relational Analysis of Personal Food Environments, Meanings of Place and Diet Quality*, Ph.D. Wilfrid Laurier University.
- DESTA, A., 1985. Assessing Political Risk in Less Developed Countries. *Journal of Business Strategy*, **5**(4), pp. 40-53.
- DEVI, S.M., BALACHANDAR, V., LEE, S.I., and KIM, I.H. 2014. An outline of meat consumption in the Indian population-A pilot review. *Korean Journal for Food Science of Animal Resources*. **34**(4), pp. 507-515

- DICH, J., ZAHM, S.H., HANBERG, A. AND ADAMI, H.O., 1997. Pesticides and cancer. *Cancer Causes & Control*, **8**(3), pp.420-443.
- DICKEY, S., 2012. The Pleasures and Anxieties of Being in the Middle: Emerging Middle-Class Identities in Urban South India. *Modern Asian Studies*, **46**(3), pp. 559-599.
- DING, Y., VEEMAN, M.M. and ADAMOWICZ, W.L., 2013. The influence of trust on consumer behavior: An application to recurring food risks in Canada. *Journal of Economic Behavior & Organization*, **92**, pp. 214-223.
- DIXON, J., 2002. *The Changing Chicken: Chooks, Cooks and Culinary Culture*. Sydney: UNSW Press.
- DIXON, J. and BANWELL, C., 2004. Re- embedding trust: unravelling the construction of modern diets. *Critical Public Health*, **14**(2), pp. 117-131.
- DIXON, J., 2009. From the imperial to the empty calorie: how nutrition relations underpin food regime transitions. *Agriculture and Human Values*, **26**(4), pp. 321-333.
- DORMANDY, X., 2012. Reversing Pakistan's Descent: Empowering its Middle Class. *The Washington Quarterly*, **35**(2), pp. 157.
- DOROSH, P., KRAUSOVA, M. and MALIK, S.J., 2010. Rehabilitating agriculture and promoting food security after the 2010 Pakistan floods: Insights from the south Asian experience. *Pakistan Development Review*, **49**(3), pp. 167-192.
- DOUGLAS, M., 2002. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. London: Routledge.
- DREWNOWSKI, A., and SPECTER, S. E., 2004. Poverty and obesity. The role of energy density and energy cost. *Journal of Clinical Nutrition*, **74**(1), pp. 6–16.
- DUNN, E., 2008. Postsocialist spores: Disease, bodies, and the state in the Republic of Georgia. *American Ethnologist*, **35**(2), pp. 243-258.
- DURUZ, J., 2002. Rewriting the village: geographies of food and belonging in Clovelly, Australia. *Cultural Geographies*, **9**(4), pp. 373-388.
- EASTERLY, W., 2001. The Middle Class Consensus and Economic Development. *Journal of Economic Growth*, **6**(4), pp. 317-335
- EDEN, S., 1994. Business, trust and environmental information: Perceptions from consumers and retailers. *Business Strategy and the Environment*, **3**(4), pp. 1-8.
- EDEN, S., BEAR, C. and WALKER, G., 2008. Mucky carrots and other proxies: Problematising the knowledge-fix for sustainable and ethical consumption. *Geoforum*, **39**(2), pp. 1044-1057.
- EDENSOR, T., 2010. *Geographies of Rhythm: Nature, Place, Mobilities and Bodies*. Farnham: Ashgate Publishing, Ltd.

EDWARDS, R. and HOLLAND, J., 2013. *What is Qualitative Interviewing?* London: A&C Black.

EISENHAUER, J., 2008. An Economic Definition of the Middle Class. *Forum for Social Economics*, **37**(2), pp. 103-113.

ELDER, G., WOLCH, J. and EMEL, J., 1998. Race, Place, and the Bounds of Humanity. *Society & Animals*, **6**(2), pp. 183-202.

ELLULU, M., ABED, Y., RAHMAT, A., RANNEH, Y. and ALI, F., 2014. Epidemiology of obesity in developing countries: challenges and prevention. *Global Epidemic Obesity*, **2**(1), p.2.

ELMER, G. and OPEL, A., 2006. Surviving the Inevitable Future. *Cultural Studies*, **20**(4-5), pp. 477-492.

ENTICOTT, G., 2003a. Lay Immunology, Local Foods and Rural Identity: Defending Unpasteurised Milk in England. *Sociologia Ruralis*, **43**(3), pp. 257-270.

ENTICOTT, G., 2003b. Risking the rural: nature, morality and the consumption of unpasteurised milk. *Journal of Rural Studies*, **19**(4), pp. 411-424.

EVANS, B., 2010. Anticipating fatness: childhood, affect and the pre-emptive 'war on obesity'. *Transactions of the Institute of British Geographers*, **35**(1), pp. 21-38.

EVANS, D. and ABRAHAMSE, W., 2009. Beyond rhetoric: the possibilities of and for 'sustainable lifestyles'. *Environmental Politics*, **18**(4), pp. 486-502.

EVANS, J. and JONES, P., 2011. The walking interview: Methodology, mobility and place. *Applied Geography*, **31**(2), pp. 849-858.

EYLES, J. and WOODS, K.J., 2014. *The Social Geography of Medicine and Health (RLE Social & Cultural Geography)*. London: Routledge.

FAO, 2003. *Trade reforms and food security: Conceptualizing the linkages*.

FAO/AGN, 2011. Final Report: Evaluation of FAO's Role and Work in Nutrition. FAO Office of Evaluation, MB663. 108th Programme Committee and UN Scaling UP Nutrition (SUN).

FARBER, J., SANDERS, G. and JOHNSTON, M., 1989. A survey of various foods for the presence of Listeria species. *Journal of Food Protection*, **52**(7), pp. 456-458.

FAROOQ, U., YOUNG, T. and IQBAL, M., 1999. An investigation into the farm households consumption patterns in Punjab, Pakistan. *The Pakistan Development Review*, pp. 293-305.

FAROUK, M.M., REGENSTEIN, J.M., PIRIE, M.R., NAJM, R., BEKHIT, A.E.D. and KNOWLES, S.O., 2015. Spiritual aspects of meat and nutritional security: Perspectives

and responsibilities of the Abrahamic faiths. *Food Research International*, 76, Part 4, pp. 882-895.

FAZAL, S., VALDETTARO, P.M., FRIEDMAN, J., BASQUIN, C. and PIETZSCH, S., 2013. Towards Improved Food and Nutrition Security in Sindh Province, Pakistan. *IDS Bulletin*, **44**(3), pp. 21-30.

FEAGAN, R., 2007. The place of food: mapping out the 'local' in local food systems. *Progress in Human Geography*, **31**(1), pp. 23-42.

FEAGAN, R.B. and MORRIS, D., 2009. Consumer quest for embeddedness: a case study of the Brantford Farmers' Market. *International Journal of Consumer Studies*, **33**(3), pp. 235-243.

FEATHERSTONE, M., 2007. *Consumer Culture and Postmodernism*. London: SAGE.

FELDMAN, M.S., BELL, J. and BERGER, M.T., 2004. *Gaining Access: A Practical and Theoretical Guide for Qualitative Researchers*. Lanham: Rowman Altamira.

FELDMANN, C. and HAMM, U., 2015. Consumers' perceptions and preferences for local food: A review. *Food Quality and Preference*, **40**, Part A, pp. 152-164.

FERNANDES, L., 2000. Restructuring the New Middle Class in Liberalizing India. *Comparative Studies of South Asia, Africa and the Middle East*, **20**(1-2), pp. 88-112.

FESSLER, D.M.T., ARGUELLO, A.P., MEKDARA, J.M., MACIAS, R., 2003. Disgust sensitivity and meat consumption: a test of an emotivist account of moral vegetarianism. *Appetite*, **41**, pp. 31-41.

FIFE-SCHAW, C. and ROWE, G., 1996. Public Perceptions of Everyday Food Hazards: A Psychometric Study. *Risk Analysis*, **16**(4), pp. 487-500.

FISCHLER, C., 1988. Food, self and identity. *Social Science Information*, **27**(2), pp. 275-292.

FOLTZ, R., 2006. *Animals in Islamic traditions and Muslim cultures*. Oxford: Oneworld.

FRONTE, M., 2002. Food systems, consumption models and risk perception in late modernity. *International Journal of Sociology of Agriculture and Food*, **10**(1), pp. 13-21.

FOTHERINGHAM, A.S., KELLY, M.H. and CHARLTON, M., 2012. The demographic impacts of the Irish famine: towards a greater geographical understanding. *Transactions of the Institute of British Geographers*, **38**(2), pp. 221-237.

FOX, R. and SMITH, G., 2011. Sinner Ladies and the gospel of good taste: Geographies of food, class and care. *Health & Place*, **17**(2), pp. 403-412.

FOX, N., and WARD, K.J., 2008. You are what you eat? Vegetarianism, health and identity. *Social Science Medicine*, **66**(12), pp. 2585-2595

- FRANZ, M. and HASSLER, M., 2010. The value of commodity biographies: integrating tribal farmers in India into a global organic agro- food network. *Area*, **42**(1), pp. 25-34.
- FRASER, L.K. and EDWARDS, K.L., 2010. The association between the geography of fast food outlets and childhood obesity rates in Leeds, UK. *Health & Place*, **16**(6), pp. 1124-1128.
- FREIDBERG, S., 2003a. Cleaning up down South: supermarkets, ethical trade and African horticulture. *Social & Cultural Geography*, **4**(1), pp. 27-43.
- FREIDBERG, S., 2003b. Not all sweetness and light: New cultural geographies of food. *Social & Cultural Geography*, **4**(1), pp. 3-6.
- FREIDBERG, S. and GOLDSTEIN, L., 2011. Alternative food in the global south: Reflections on a direct marketing initiative in Kenya. *Journal of Rural Studies*, **27**(1), pp. 24-34.
- FREWER, L.J. and MILES, S., 2003. Temporal stability of the psychological determinants of trust: Implications for communication about food risks. *Health, Risk & Society*, **5**(3), pp. 259-271.
- FREWER, L.J., SCHOLDERER, J. and BREDAHL, L., 2003. Communicating about the Risks and Benefits of Genetically Modified Foods: The Mediating Role of Trust. *Risk Analysis*, **23**(6), pp. 1117-1133.
- FUENTES, M. and FUENTES, C., 2015. Risk stories in the media: Food consumption, risk and anxiety. *Food, Culture & Society*, **18**(1), pp. 71-87.
- GAARD, G., 2011. Ecofeminism revisited: Rejecting essentialism and re-placing species in a material feminist environmentalism. *Feminist Formations*, **23**(2), pp. 26-53.
- GADE, D.W. and HULBERT, F., 1994. Environment, Culture and Diffusion: The Broad Bean in Québec. *Cahiers de géographie du Québec*, **38**(104), pp. 137-150.
- GARCIA, A.M., 2003. Pesticide exposure and women's health. *American journal of industrial medicine*, **44**(6), pp.584-594.
- GARNAUT, A., 2014. The Geography of the Great Leap Famine. *Modern China*, **40**(3), pp. 315-348.
- GARNETT, T. and WILKES, A., 2014. *Appetite for Change: social, economic and environmental transformations in China's food system*. Food Climate Research Network (FCRN).
- GASPARINI, G., 1995. On Waiting. *Time & Society*, **4**(1), pp. 29-45.
- GAYTÁN, M.S., 2004. Globalizing resistance: Slow food and new local imaginaries. *Food, Culture & Society*, **7**(2), pp. 97-116.

- GAZDAR, H. and MALLAH, H.B., 2013. Inflation and Food Security in Pakistan: Impact and Coping Strategies*. *IDS Bulletin*, **44**(3), pp. 31-37.
- GEBREEGZIABHER, Z., MEKONNEN, A., KASSIE, M. and KÖHLIN, G., 2012. Urban energy transition and technology adoption: The case of Tigray, northern Ethiopia. *Energy Economics*, **34**(2), pp. 410-418.
- GERODETTI, N. and FOSTER, S., 2015. "Growing foods from home": food production, migrants and the changing cultural landscapes of gardens and allotments. *Landscape Research*, pp. 1-12.
- GIBBON, P., and PONTE, S., 2005. *Trading Down? Africa, Value Chains and the Global Economy*. Temple University Press, Philadelphia.
- GIDDENS, A., 1990. *The Consequences of Modernity*. Cambridge: Polity.
- GIDDENS, A., 1991. *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Palo Alto: Stanford University Press.
- GILBERT, D., 2014. *The American Class Structure in an Age of Growing Inequality*. London, SAGE.
- GLANZ, K., SALLIS, J.F., SAELENS, B.E. and FRANK, L.D., 2005. Healthy nutrition environments: concepts and measures. *American Journal of Health Promotion*, **19**(5), pp. 330-3, ii.
- GÓMEZ, M., BARRETT, C., BUCK, L., DE GROOTE, H., FERRIS, S., GAO, O., MCCULLOUGH, E., MILLER, D.D. OUTHRED, H., PELL, A.N., REARDON, T., RETNANESTRI, M., RUBEN, R., STRUEBI, P., SWINNEN, J. TOUESNARD, M.A., WEINBERGER, K., KEATINGE, J.D.H., MILSTEIN, M.B., YANG R. Y., 2011. Food value chains, sustainability indicators and poverty alleviation. *Science* **332** (6034), 1154-1155.
- GÓMEZ, M. I. and RICKKETS, K. D. 2013. Food value chain transformations in developing countries: Selected hypotheses on nutritional implications. ESA Working Paper No. 13-05, FAO
- GONG, Q. and JACKSON, P., 2012. Consuming anxiety? Parenting practices in china after the infant formula scandal. *Food, Culture and Society*, **15**(4), pp. 557-578.
- GOODMAN, M. and SAGE, C., 2014. Food Transgressions: Ethics, Governance and Geographies. In: M. GOODMAN and C. SAGE, eds., *Food Transgressions: Making sense of contemporary food politics*. Ashgate, Aldershot.
- GORTON, M., 2011. Wet markets, supermarkets and the "big middle" for food retailing in developing countries: Evidence from Thailand. *World Development* **39** (9), 1624-1637.
- GOSS, J., 2004. Geography of consumption I. *Progress in Human Geography*, **28**(3), pp. 369-380.

- GRANKVIST, G. and BIEL, A., 2001. The Importance of Beliefs and Purchase Criteria in the choice of eco-labeled food products. *Journal of Environmental Psychology*, **21**(4), pp. 405-410.
- GRANOVETTER, M., 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, pp. 481-510.
- GREGORY, D., 2004. *The colonial present*. Oxford: Blackwell Publishers.
- GREGORY, P.J., INGRAM, J.S. and BRKLACICH, M., 2005. Climate change and food security. *Philosophical transactions of the Royal Society of London. Series B, Biological Sciences*, **360**(1463), pp. 2139-2148.
- GRIFFIN, M.R. and FRONGILLO, E.A., 2003. Experiences and perspectives of farmers from Upstate New York farmers' markets. *Agriculture and Human Values*, **20**(2), pp. 189-203.
- GRIFFITHS, M.B.E., 2014. Out of Time: The Temporal Uncertainties of Refused Asylum Seekers and Immigration Detainees. *Journal of Ethnic and Migration Studies*, **40**(12), pp. 1991-2009.
- GRUÈRE, G.P. and RAO, S., 2007. A Review of International Labeling Policies of Genetically Modified Food to Evaluate India's Proposed Rule. *AgBioForum*, **10**(1), pp. 51-64.
- GRUNERT, K.G., LÄHTEENMÄKI, L., ASGER NIELSEN, N., POULSEN, J.B., UELAND, O. and ÅSTRÖM, A., 2001. Consumer perceptions of food products involving genetic modification - Results from a qualitative study in four Nordic countries. *Food Quality and Preference*, **12**(8), pp. 527-542.
- GUARIN, A., 2013. The Value of Domestic Supply Chains: Producers, Wholesalers, and Urban Consumers in Colombia. *Development Policy Review*, 31: 511–530. doi:10.1111/dpr.12023
- GUPTA, P., 2004. Pesticide exposure—Indian scene. *Toxicology*, **198**(1-3), pp.83-90.
- GURIRO, A., 2013. 48.6 percent Pakistanis suffer food insecurity. *The DailyTimes*. [online] Available at: <http://archives.dailytimes.com.pk/national/07-Jun-2013/48-6-percent-pakistanis-suffer-food-insecurity> . [Accessed July 9, 2015]
- GUTA, D.D., 2014. Effect of fuelwood scarcity and socio-economic factors on household bio-based energy use and energy substitution in rural Ethiopia. *Energy Policy*, **75**, pp. 217-227.
- GUTHMAN, J., 2008. Bringing good food to others: Investigating the subjects of alternative food practice. *Cultural geographies*, **15**(4), pp.431-447.
- HAMILTON, M., 2006. Eating death. Vegetarians, meat, and violence. *Culture and Society*, **9**(2), pp. 155-177

- HAMMAD, H.M., AHMAD, A., LAGHARI, K.Q., ABBAS, F., NASIM, W., FARHAD, W. and MALIK, A.H., 2011. Organic farming in wheat crop under arid condition of Pakistan. *Pakistan Journal of Agricultural Sciences*, **48**(2), pp. 97-102.
- HANSEN, J., HOLM, L., FREWER, L., ROBINSON, P. and SANDØE, P., 2003. Beyond the knowledge deficit: recent research into lay and expert attitudes to food risks. *Appetite*, **41**(2), pp. 111-121.
- HARPER, A., 2010. *The idea of Islamabad: Unity, purity and civility in Pakistan's capital city*. Ph.D. Yale University.
- HARRIS, J.L., POMERANZ, J.L., LOBSTEIN, T. and BROWNELL, K.D., 2009. A Crisis in the Marketplace: How Food Marketing Contributes to Childhood Obesity and What Can Be Done. *Annual Review of Public Health*, **30**, pp. 211-225.
- HARVEY, D., 1990. Between Space and Time: Reflections on the Geographical Imagination¹. *Annals of the Association of American Geographers*, **80**(3), pp. 418-434.
- HARVEY, D., 2007. *A Brief History of Neoliberalism*. Oxford: Oxford University Press.
- HASNAIN, K., 2015. Food laws to be amended to 'save businesses'. *DAWN News*. [online] Available at <http://www.dawn.com/news/1194563> . [Accessed on January 20, 2016]
- HAWKES, C., 2006. Uneven dietary development. Linking the policies and processes of globalization with the nutrition transition, obesity and diet-related chronic diseases. *Globalization and Health*, **2**(4), pp. 1-18
- HAWKES, C., RUEL, M., 2011. Value chains for nutrition. IFPRI 2020 international conference on Leveraging Agriculture for Improving Nutrition. New Delhi, India.
- HAYES-CONROY, A. and MARTIN, D.G., 2010. Mobilising bodies: Visceral identification in the Slow Food movement. *Transactions of the Institute of British Geographers*, **35**(2), pp. 269-281.
- HAYES-CONROY, A., 2009. *Bodily geographies of 'Slow' Food: Food activism and visceral politics*. Ph.D. Clark University.
- HEALTH CANADA, 2013. *Measuring the food environment in Canada*. Ottawa: Office of Nutrition Policy and Promotion. Health Canada.
- HEDGECOE, A.M., 2012. Trust and regulatory organisations: The role of local knowledge and facework in research ethics review. *Social Studies of Science*, **42**(5), pp. 662-683.
- HEIN, J.R., EVANS, J. and JONES, P., 2008. Mobile methodologies: Theory, technology and practice. *Geography Compass*, **2**(5), pp. 1266-1285.

- HENDERSON, J., WARD, P., COVENEY, J. and MEYER, S., 2012. Trust in the Australian food supply: Innocent until proven guilty. *Health, Risk & Society*, **14**(3), pp. 257-272.
- HERNÁNDEZ, A.F., PARRÓN, T., TSATSAKIS, A.M., REQUENA, M., ALARCÓN, R. and LÓPEZ-GUARNIDO, O., 2013. Toxic effects of pesticide mixtures at a molecular level: their relevance to human health. *Toxicology*, **307**, pp.136-145.
- HIGHMORE, B., 2004. Homework: Routine, social aesthetics and the ambiguity of everyday life. *Cultural Studies*, **18**(2-3), pp. 306-327.
- HINCHLIFFE, S. and BINGHAM, N., 2008. Securing life: the emerging practices of biosecurity. *Environment and Planning A*, **40**(7), pp. 1534-1551.
- HINRICHS, C.C., 2000. Embeddedness and local food systems: notes on two types of direct agricultural market. *Journal of Rural Studies*, **16**(3), pp. 295-303.
- HINRICHS, C.C., 2003. The practice and politics of food system localization. *Journal of Rural Studies*. **19**, pp. 33-45
- HOBBS, J.E. and GODDARD, E., 2015. Consumers and trust. *Food Policy*, **52**, pp. 71-74.
- HOLAK, S.L., 2014. From Brighton beach to blogs: exploring food-related nostalgia in the Russian diaspora. *Consumption Markets & Culture*, **17**(2), pp. 185-207.
- HOLLANDER, G.M., 2003. Re-naturalizing sugar: narratives of place, production and consumption. *Social & Cultural Geography*, **4**(1), pp. 59-74.
- HOLLOWAY, L. and KNEAFSEY, M., 2004. *Geographies of Rural Cultures and Societies*. Aldershot: Ashgate.
- HOLM, L. and KILDEVANG, H., 1996. Consumers' Views on Food Quality. A Qualitative Interview Study. *Appetite*, **27**(1), pp. 1-14.
- HOPMA, J., 2014. Political Geographies of 'Food Security' and 'Food Sovereignty'. *Geography Compass*, **8**(11), pp. 773.
- HORNER, M.W. and WOOD, B.S., 2014. Capturing individuals' food environments using flexible space-time accessibility measures. *Applied Geography*, **51**(0), pp. 99-107.
- HORRIGAN, M.W. and HAUGEN, S.E., 1988. The declining middle-class thesis: a sensitivity analysis. *Monthly Labor Review*, **111**, pp. 3.
- HUBACEK, K., GUAN, D. and BARUA, A., 2007. Changing lifestyles and consumption patterns in developing countries: A scenario analysis for China and India. *Futures*, **39**(9), pp. 1084-1096.
- HUBBELL, A., 2013. (In) edible Algeria: transmitting Pied-Noir nostalgia through food. *Portal: Journal of Multidisciplinary International Studies*, **10**(2), pp. 1-18.

- HUBERT, A., 2004. Qualitative Research in the Anthropology of Food: A Comprehensive Qualitative/Quantitative Approach. In: H. MACBETH and J. MACCLANCY, eds, *Researching Food Habits: Methods and Problems*. Berghahn, pp. 41.
- HUGHES, A., 2000. Retailers, knowledges and changing commodity networks: the case of the cut flower trade. *Geoforum*, **31**(2), pp. 175-190.
- HUGHNER, R.S., MCDONAGH, P., PROTHERO, A., SHULTZ, C.J. and STANTON, J., 2007. Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour*, **6**(2-3), pp. 94-110.
- HULME, M., 2008. Geographical work at the boundaries of climate change. *Transactions of the Institute of British Geographers*, **33**(1), pp. 5-11.
- HUSSAIN, I., 2008. *Problems of Working Women in Karachi, Pakistan*, 1st ed. Cambridge: Cambridge Scholars Publishing.
- HUSSAIN, S.A., 2012, March 7, 2012. Energy Shortage: an unfortunate menace for Pakistan. *The NEWS (print edition)* Section: Pakistan.
- HUSSAIN, T., ABBAS, S., KHAN, M.A. and SCRIMSHAW, N.S., 2004. Lysine fortification of wheat flour improves selected indices of the nutritional status of predominantly cereal-eating families in Pakistan. *Food and Nutrition Bulletin*, **25**(2), pp. 114-122.
- HUSSAIN, Z. and AKRAM, W., 2008. Persistent food insecurity from policy failures in Pakistan. *Pakistan Development Review*, **47**(4), pp. 817-834.
- HUSSAR, K.M., and HARRIS, P. L., 2009. Children who choose not to eat meat. A study of early moral decision-making. *Social Development*. **19**(3) pp. 627-641
- IFOAM. International Federation of Organic Agriculture Movements, 2016. About IFOAM. Available: <http://www.ifoam.org>.
- ILBERY, B. and MAYE, D., 2005. Alternative (Shorter) Food Supply Chains and Specialist Livestock Products in the Scottish–English Borders. *Environment and Planning A*, **37**(5), pp. 823-844.
- ILYAS, F., 2008. Karachi: Nauseating Contents of poultry feed threat to public health. *DAWN News*. [online] Available at: <http://www.dawn.com/news/939027/nauseating-contents-of-poultry-feed-threat-to-public-health> [Accessed on January 11, 2013]
- ILYAS, F., 2012. Samples of vegetable, fruit found highly contaminated. *DAWN News*. [online] Available at: <http://www.dawn.com/news/768407/samples-of-vegetable-fruit-found-highly-contaminated> [Accessed on January 11, 2013]
- ILYAS, F., 2015. Eating out: the fault in our food. *The Express Tribune*. [online] Available at: <http://tribune.com.pk/story/912988/eating-out-the-fault-in-our-food/> [Accessed on January 11, 2013]

- INGLIS, V., BALL, K., and CRAWFORD, D., 2005. Why do women of low socioeconomic status have poorer dietary behaviours than women of higher socioeconomic status? A qualitative exploration. *Appetite*, **45**(3), pp. 334–343.
- IRIN, 12 November 2012, 2012-last update, Inflation hits food security [Homepage of IRIN News], [Online]. Available: <http://www.irinnews.org/report/96849/pakistan-inflation-hits-food-security> [9 October 2015, 2015].
- IRWIN, A., 2003. *Science, Social Theory and Public Knowledge*. Maidenhead: Open University Press.
- IVANIC, M., MARTIN, W., 2008. Implications for higher global food prices for poverty in low income countries. *Agricultural Economics* **39** (s1), 405-416.
- JABER, J. and PROBERT, S., 2001. Energy demand, poverty and the urban environment in Jordan. *Applied Energy*, **68**(2), pp. 119-134.'
- JABS, J., DEVINE, C.M., SOBAL, J., 1998. Maintaining vegetarian diets: Personal factors, social networks, and environmental resources. *Canadian Journal of Dietetic Practice Research*. **59**(4), pp. 183-89
- JACKSON, P., 1999a. Consumption and identity: The cultural politics of shopping. *European Planning Studies*, **7**(1), pp. 25-39.
- JACKSON, P., 1999b. Commodity Cultures: The Traffic in Things. *Transactions of the Institute of British Geographers*, **24**(1), pp. 95-108.
- JACKSON, P., 2004. Local consumption cultures in a globalizing world. *Transactions of the Institute of British Geographers*, **29**(2), pp. 165-178.
- JACKSON, P. and EVERTS, J., 2010. Anxiety as Social Practice. *Environment and Planning A*, **42**(11), pp. 2791-2806.
- JACKSON, P., WARD, N. and RUSSELL, P., 2010. Manufacturing meaning along the chicken supply chain: consumer anxiety and the spaces of production. In: Goodman, M.K., Goodman, D and Redclift, M, eds., *Consuming Space: Placing Consumption in Perspective*. Ashgate: Aldershot, pp. 163-187.
- JACKSON, P., WATSON, M. and PIPER, N., 2013. Locating anxiety in the social: The cultural mediation of food fears. *European Journal of Cultural Studies*, **16**(1), pp. 24-42.
- JACKSON, P., 2015. *Anxious Appetites: Food and Consumer Culture*. London: Bloomsbury.
- JAFAR, T.H., LEVEY, A.S., WHITE, F.M., GUL, A., JESSANI, S., KHAN, A.Q., JAFARY, F.H., SCHMID, C.H. and CHATURVEDI, N., 2004. Ethnic differences and determinants of diabetes and central obesity among South Asians of Pakistan. *Diabetic Medicine*, **21**(7), pp. 716-723.

JALIL, H., HUSSAIN, S.S. and SIDDIQI, A.F., 2013. An Empirical Study of Meat Supply Chain and Prices Pattern in Lahore (Pakistan): A Case Study. *Journal of Supply Chain Management Systems*, **2**(4), pp. 44-53.

JANJUA, N.Z., IQBAL, R. and MAHMOOD, B., 2011. Association of Socioeconomic Position With Under- and Overnutrition in Pakistan. *Annals of Epidemiology*, **21**(12), pp. 884-891.

JANSSEN, M. and HAMM, U., 2012. Product labelling in the market for organic food: Consumer preferences and willingness-to- pay for different organic certification logos. *Food Quality and Preference*, **25**(1), pp. 9-22.

JASANOFF, S., 1997. Civilization and madness: The great BSE scare of 1996. *Public Understanding of Science*, **6**(3), pp. 221-232.

JEFFREY, C., 2010. Timepass: Youth, class, and time among unemployed young men in India. *American Ethnologist*, **37**(3), pp. 465-481.

JEFFREY, C. and YOUNG, S., 2012. Waiting for change: youth, caste and politics in India. *Economy and Society*, **41**(4), pp. 638-661.

JOHNSEN, F.H., 1999. Burning with enthusiasm: Fuelwood scarcity in Tanzania in terms of severity, impacts and remedies. *Forum for Development Studies*, **1**(1), pp. 107-131.

JOHNSTON, J., SZABO, M. and RODNEY, A., 2011. Good food, good people: Understanding the cultural repertoire of ethical eating. *Journal of Consumer Culture*, **11**(3), pp. 293-318.

JOHNSTON, L. and LONGHURST, R., 2012. Embodied geographies of food, belonging and hope in multicultural Hamilton, Aotearoa New Zealand. *Geoforum*, **43**(2), pp. 325-331.

JOOSSE, S. and HRACS, B.J., 2015. Curating the quest for 'good food': The practices, spatial dynamics and influence of food-related curation in Sweden. *Geoforum*, **64**, pp. 205-216.

JUNAIDI, I., 2015. 17 outlets sealed as food campaign reaches Islamabad. *DAWN news* [online] Available at: <http://tribune.com.pk/story/912988/17%20outlets%20sealed%20as%20food%20campaign%20reaches%20Islamabadeating-out-the-fault-in-our-food/> [Accessed on: January 11, 2016]

JONES, A., 2001. Eating Oil: Food supply in a changing climate. *Sustain, London and Elm Farm Research Centre*, Newbury.

KAASE, M., 1999. Interpersonal trust, political trust and non- institutionalised political participation in Western Europe. *West European Politics*, **22**(3), pp. 1-21.

- KAKAKHEL, I., 2015, February 24, 2015. Haraam edibles being sold openly in Pakistani markets. *Daily Times* [print edition] Section: National.
- KALRA, J. and PANT, P., 2004. *Classic Cooking Of Punjab*. 2nd ed. Allied Publishers Pvt. Ltd.
- KANDOGAN, Y. and JOHNSON, S.D., 2015. Freedom and the emerging global middle class. *International Business Review*, pp. 1-15.
- KAPLAN, D., 2013. Food and class distinction at Israeli weddings: New middle class omnivores and the “simple taste”. *Food, Culture & Society* **16**(2) pp. 245-264.
- KÄRRHOLM, M., 2009. To the rhythm of shopping—on synchronisation in urban landscapes of consumption. *Social & Cultural Geography*, **10**(4), pp. 421-440.
- KAWULICH, B.B., 2005. Participant observation as a data collection method, In: *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* (Vol. 6, No. 2).
- KAZI, T.G., JALBANI, N., BAIG, J.A., ARAIN, M.B., AFRIDI, H.I., JAMALI, M.K., SHAH, A.Q. and MEMON, A.N., 2010. Evaluation of toxic elements in baby foods commercially available in Pakistan. *Food Chemistry*, **119**(4), pp. 1313-1317.
- KELLY, B., FLOOD, V.M. and YEATMAN, H., 2011. Measuring local food environments: An overview of available methods and measures. *Health & Place*, **17**(6), pp. 1284-1293.
- KESTENS, Y., LEBEL, A., DANIEL, M., THÉRIAULT, M. and PAMPALON, R., 2010. Using experienced activity spaces to measure foodscape exposure. *Health & Place*, **16**(6), pp. 1094-1103.
- KHAN, M.A., 1990. Production and utility of chickpea in Pakistan. *Progressive Farming (Pakistan)*, **10**(6), pp. 28-34.
- KHAN, M.U., MALIK, R.N., MUHAMMAD, S., ULLAH, F. and QADIR, A., 2014. Health Risk Assessment of Consumption of Heavy Metals in Market Food Crops from Sialkot and Gujranwala Districts, Pakistan. *Human and Ecological Risk Assessment: An International Journal*, pp. 327-337.
- KHAN, R.S., 2013, Jan 29, 2013. Watch What You Eat. *DAWN news*. [online] Available at: <http://www.dawn.com/news/782182/watch-what-you-eat> [Accessed on: August 12, 2015]
- KHAN, R.S., 2013, April 30, 2013. The Khalis Food Movement. *DAWN news*. [online] Available at <http://www.dawn.com/news/794899/the-khalis-food-movement> [Accessed on: July 8, 2015]
- KHAN, S.A., 2013. *Food Legislation in South Asia and its link with Food Security: A case study of Pakistan*. Sustainable Development Policy Institute (SDPI).
- KHARAS, H., 2010. *The Emerging Middle Class in Developing Countries*. Organisation for Economic Co-operation and Development. No. 285. Doi 10.1787/5kmmmp8Incrns-en

- KHARAS, H. and GERTZ, G., 2010. The new global middle-class: a cross-over from West to East. In: L. CHENG, ed, *China's Emerging Middle Class*.
- KHAWAJA, T., KHAN, S.H., MUKHTAR, N., ALI, M.A., AHMED, T. and GHAFAR, A., 2012. Comparative study of growth performance, egg production, egg characteristics and haemato-biochemical parameters of Desi, Fayoumi and Rhode Island Red chicken. *Journal of Applied Animal Research*, **40**(4), pp. 273-283.
- KIMANI-MURAGE, E.W., SCHOFIELD, L., WEKESAH, F., MOHAMED, S., MBERU, B., ETTARH, R., EGONDI, T., KYOBUTUNGI, C. and EZEH, A., 2014. Vulnerability to Food Insecurity in Urban Slums: Experiences from Nairobi, Kenya. *Journal of Urban Health*, **91**(6):1098-1113
- KING, N., 2010. *Interviews in Qualitative Research*. London: SAGE.
- KIRWAN, J., 2004. Alternative strategies in the UK agro-food system: interrogating the alterity of farmers' markets. *Sociologia Ruralis*, **44**(4), pp. 395-415.
- KJÆRNES, U., 2006. Trust and Distrust: Cognitive Decisions or Social Relations? *Journal of Risk Research*, **9**(8), pp. 911-932.
- KJÆRNES, U., 2007. *Trust in Food: A Comparative and Institutional Analysis*. Basingstoke: Palgrave Macmillan.
- KJÆRNES, U., 2013. Risk and Trust in the Food Supply. In: A. MURCOTT, W. BELASCO and P. JACKSON, eds, *The Handbook of Food Research*. 1st ed. Bloomsbury Publishing, pp. 410-423.
- KLEIN, J., 2009. Creating ethical food consumers? Promoting organic foods in urban Southwest China1. *Social Anthropology*, **17**(1), pp. 74-89.
- KLEIN, J.A., 2013. Everyday Approaches to Food Safety in Kunming. *The China Quarterly*, **214**, pp. 376-393.
- KLEIN, J., JUNG, Y. and CALDWELL, M., 2014. Ethical Eating and (Post)socialist Alternatives. In: J. KLEIN, Y. JUNG and M. CALDWELL, eds., *Ethical Eating in the Postsocialist and Socialist World*. Berkeley, University of California Press, pp. 1.
- KNEAFSEY, M., HOLLOWAY, L., VENN, L., COX, R., DOWLER, E. and TUOMAINEN, H., 2004. Consumers and Producers: Coping with Food Anxieties through 'Reconnection'. *Cultures of Consumption, Working Paper no*, 19.
- KNEAFSEY, M., COX, R., HOLLOWAY, L., DOWLER, E., VENN, L. and TUOMAINEN, H., 2008. *Reconnecting Consumers, Producers and Food: Exploring 'Alternatives'*. Oxford: Berg.
- KNOX, J., HESS, T., DACCACHE, A. and WHEELER, T., 2012. Climate change impacts on crop productivity in Africa and South Asia. *Environmental Research Letters*, **7**(3), pp. 34-32.

- KRAAK, V.I., SWINBURN, B., LAWRENCE, M. and HARRISON, P., 2014. A Q methodology study of stakeholders' views about accountability for promoting healthy food environments in England through the Responsibility Deal Food Network. *Food Policy*, **49**(P1), pp. 207-218.
- KRAFTL, P., 2007. Utopia, performativity, and the unhomely. *Environment and Planning D: Society and Space*, **25**(1), pp. 120-143.
- KREUTZMANN, H., 2013. Planning and Living in Islamabad. Master Plan Changes and People's Actions are Transforming Pakistan's Capital. In: K. BAJWA, ed, *Urban Pakistan. Vol. 1: Mapping the city*. Oxford University Press, pp. 127.
- KUEVER, E., 2013. *"In today's China, you don't starve, you're poisoned": Consumer welfare and citizenship in urban China*. Ph.D. Indiana University.
- KUMAR, S., 2014. Indian Consumer Attitudes Toward Food Safety: An Exploratory Study. *Journal of Food Products Marketing*, **20**(3), pp. 229-243.
- KUSENBACH, M., 2003. Street Phenomenology: The Go- Along as Ethnographic Research Tool. *Ethnography*, **4**(3), pp. 455-485.
- KWAN, S., and ROTH, L., 2004. Meat consumption and its discontents: Vegetarianism as counter-hegemonic embodiment. In *Conference Papers – American Sociological Association* pp. 1–14.
- LABELLE, B., 2008. Pump Up the Bass—Rhythm, Cars, and Auditory Scaffolding. *The Senses and Society*, **3**(2), pp. 187-203.
- LAGERKVIST, C.J., OKELLO, J. and KARANJA, N., 2015. Consumers' evaluation of volition, control, anticipated regret, and perceived food health risk. Evidence from a field experiment in a traditional vegetable market in Kenya. *Food Control*, **47**(0), pp. 359-368.
- LAKE, A.A., BURGOINE, T., GREENHALGH, F., STAMP, E. and TYRRELL, R., 2010. The foodscape: Classification and field validation of secondary data sources. *Health & Place*, **16**(4), pp. 666-673.
- LANG, J.T. and HALLMAN, W.K., 2005. Who does the public trust? The case of genetically modified food in the United States. *Risk Analysis*, **25**(5), pp. 1241-1252.
- LANG, J.T., 2013. Elements of public trust in the American food system: Experts, organizations, and genetically modified food. *Food Policy*, **41**, pp. 145-154.
- LANGE, H. and MEIER, L., 2009. Who are the new middle classes and why are they given so much attention? In: H. LANGE and L. MEIER, eds., *The New Middle Classes: Globalizing Lifestyles, Consumerism and Environmental Concern*. Springer, pp. 1-28.
- LARSEN, K. and GILLILAND, J., 2008a. Mapping the evolution of 'food deserts' in a Canadian city: Supermarket accessibility in London, Ontario, 1961–2005. *International Journal of Health Geographics*, **7**(1), pp. 1.

- LARSEN, K. and GILLILAND, J., 2008b. Mapping the evolution of ' food deserts' in a Canadian city: Supermarket accessibility in London, Ontario, 1961–2005. *International Journal of Health Geographics*, **7**, pp. 16-16.
- LAUDAN, R., 2004. Slow Food: The French Terroir Strategy, and Culinary Modernism: an essay review. *Food, Culture & Society*, **7**(2), pp. 133-144.
- LAVIN, C., 2013. *Eating Anxiety: The Perils of Food Politics*. Minneapolis: University of Minnesota Press.
- LEA, E., and WORSLEY, A., 2003. Benefits and barriers to the consumption of a vegetarian diet in Australia. *Public Health Nutrition*, **6** (5), pp. 505-511.
- LEACH, G., 1987. Energy and the urban poor. *Institute of Development Studies Bulletin*, **18**(1), pp. 31-38.
- LEBEL, L., KRITTASUDTHACHEEWA, C., SALAMANCA, A. and SRIYASAK, P., 2012. Lifestyles and consumption in cities and the links with health and well-being: the case of obesity. *Current Opinion in Environmental Sustainability*, **4**(4), pp. 405-413.
- LEDoux, T.F. and VOJNOVIC, I., 2014. Examining the role between the residential neighborhood food environment and diet among low-income households in Detroit, Michigan. *Applied Geography*, **55**(0), pp. 9-18.
- LEE, M.H., LEE, H.J. and RYU, P.D., 2001. Public health risks: Chemical and antibiotic residues-review. *Asian-Australasian Journal of Animal Sciences*, **14**(3), pp.402-413.
- LEFEBVRE, H., 2004. *Rhythmanalysis: Space, Time and Everyday life*. London: A&C Black.
- LEITCH, A., 2000. The social life of lardo. *The Asia Pacific Journal of Anthropology*, **1**(1), pp. 103-118.
- LEUNG, M.M., FU, H., AGARONOV, A. and FREUDENBERG, N., 2015. Diet-related determinants of childhood obesity in urban settings: A comparison between Shanghai and New York. *Public Health*, **129**(4), pp. 318-326.
- LEVENSTEIN, H.A., 1993. *Paradox of Plenty: A Social History of Eating in Modern America*. Oxford: Oxford University Press.
- LEVENSTEIN, H.A., 2013. *Fear of Food: A History of Why We Worry about What We Eat*. Chicago: University of Chicago.
- LÉVI-STRAUSS, C., 1994. *The Raw and the Cooked: Introduction to a Science of mythology*. London: Pimlico.
- LEWIS, N. and LE HERON, R., 2015. Geographies of Food: Politics, Place, Power Revisited. In: J.D. WRIGHT, ed., *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)*. Oxford: Elsevier, pp. 76-82.

- LIU, R., PIENIAK, Z. and VERBEKE, W., 2014. Food-related hazards in China: Consumers' perceptions of risk and trust in information sources. *Food Control*, **46**(0), pp. 291-298.
- LOBB, A.E., MAZZOCCHI, M. and TRAILL, W.B., 2007. Modelling risk perception and trust in food safety information within the theory of planned behaviour. *Food Quality and Preference*, **18**(2), pp. 384-395.
- LOCKIE, S., LYONS, K., LAWRENCE, G. and GRICE, J., 2004. Choosing organics: a path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, **43**(2), pp. 135-146.
- LOCKIE, S. and HALPIN, D., 2005. The 'conventionalisation' thesis reconsidered: Structural and ideological transformation of Australian organic agriculture. *Sociologia Ruralis*, **45**(4), pp. 284-307.
- LONG, R.D., 2015. *A history of Pakistan*. Oxford University Press, Karachi.
- LÓPEZ-CALVA, L. and ORTIZ-JUAREZ, E., 2014. A vulnerability approach to the definition of the middle class. *The Journal of Economic Inequality*, **12**(1), pp. 23-47.
- LUHMANN, N., 1979. *Trust and Power: Two Works*. Chichester: Wiley.
- LUHMANN, N., 2000. Familiarity, confidence, trust: Problems and alternatives. In: GAMBETTA, D. (eds) *Trust: Making and Breaking Cooperative Relations*, **6**, pp. 94-107.
- LUNA, M., 2008. Out of sight, out of mind: Distancing and the geographic relationship between electricity consumption and production in Massachusetts. *Social Science Quarterly*, **89**(5), pp. 1277-1292.
- LUPTON, D., 1996. *Food, the Body and the Self*. London: SAGE.
- LYLE, G., 2013. Estimating the spatial and temporal impacts of climate change on rainfall reliability: An example in a Mediterranean agricultural region. *Applied Geography*, **45**, pp. 98-108.
- MACCLANCY, J., 2004. Food, Identity, Identification. In: H. MACBETH and J. MACCLANCY, eds., *Researching Food Habits: Methods and Problems*. Berghahn, pp. 63.
- MACDONALD, B., JOHNS, T., GRAY-DONALD, K., and RECEVEUR, O. 2004. Ecuadorian Andean women's nutrition varies with age and socioeconomic status. *Food and Nutrition Bulletin*. **29**(3), pp. 239-247
- MAGUEN, S., PAPA, A. and LITZ, B.T., 2008. Coping with the threat of terrorism: A review. *Anxiety, Stress, & Coping*, **21**(1), pp. 15-35.
- MAINS, D., 2007. *"We are Only Sitting and Waiting": Aspirations, Unemployment, and Status Among Young Men in Jimma, Ethiopia*. PhD. Emory University.

- MAJEED, H., 2014. Processed: Pakistan's Unhealthy Trend. *DAWN News*. [online] Available at: <http://www.dawn.com/news/1140298> [Accessed on 9 December, 2015]
- MAJOR, J., 2011. *Constructions of the Tongue: Language, Nationalism, and Identity in South Asia*. London: Taylor & Francis Group.
- MALIK, L. and HUSSAIN, N., 1994. Women in higher education in Pakistan: Separate but equal? In: S.S. LIE, MALIK and D. & HARRIS, eds., *The Gender Gap in Higher Education. World Yearbook of Education 1994*. London: Kogan.
- MALIK, S., 2005. Agricultural growth and rural poverty: A review of evidence. *Asian Development Bank*.
- MANNUR, A., 2002. *Culinary scapes: Contesting food, gender and nation in South Asia and its diaspora*. Ph.D. University of Massachusetts Amherst.
- MANSFIELD, B., 2003. 'Imitation crab' and the material culture of commodity production. *Cultural Geographies*, **10**(2), pp. 176-195.
- MAQSOOD, A., 2014. 'Buying Modern'. *Cultural Studies*, **28**(1), pp. 84-107.
- MARIA, S.I. and IMRAN, M., 2006. Planning of Islamabad and Rawalpindi: What Went Wrong? *42nd ISoCaRP Congress, Istanbul, Turkey, 2006* 2006, ISoCaRP, pp. 1.
- MARS, G. and MARS, V., 2004. Doing it wrong: Why bother to do imperfect research. In: H. MACBETH and J. MACCLANCY, eds., *Researching Food Habits: Methods and Problems*. Berghahn, pp. 75.
- MARSHALL, D., 2005. Food as ritual, routine or convention. *Consumption Markets & Culture*, **8**(1), pp. 69-85.
- MASON, J., 2002. *Qualitative Researching*. 2nd ed. London: SAGE.
- MASOOD, M.T. and SHAH, F., 2012. Dilemma of third world countries-problems facing Pakistan energy crisis a case-in-point. *International Journal of Business and Management*, **7**(5), pp. 231.
- MAXWELL, D., 1999. The political economy of urban food security in Sub-Saharan Africa. *World Development*, **27**(11), pp. 1939-1953.
- MAY, J. and THRIFT, N., 2003. *Timespace: Geographies of Temporality*. London: Routledge.
- MCDONALD, S., 2005. Studying actions in context: a qualitative shadowing method for organizational research. *Qualitative Research*, **5**(4), pp. 455-473.
- MCENTEE, J. and AGYEMAN, J., 2010. Towards the development of a GIS method for identifying rural food deserts: Geographic access in Vermont, USA. *Applied Geography*, **30**(1), pp. 165-176.

- MCEWAN, C., HUGHES, A. and BEK, D., 2015. Theorising middle class consumption from the global South: A study of everyday ethics in South Africa's Western Cape. *Geoforum*, **67**, pp. 233-243.
- MCKINSEY, 2010. Capturing the world's emerging middle class. *Mckinsey Quarterly*.
- MCWILLIAMS, J.E., 2010. *Just Food: Where Locavores Get It Wrong and How We Can Truly Eat Responsibly*. New York: Back Bay Books/Little, Brown and Co.
- MEAD, M., 1943. The Factor of Food Habits. *Annals of the American Academy of Political and Social Science*, **225**, pp. 136-141.
- MELGAR-QUINONEZ, H.R., ZUBIETA, A.C., MKNELLY, B., NTEZIYAREMYE, A., GERARDO, M.F. and DUNFORD, C., 2006. Household food insecurity and food expenditure in Bolivia, Burkina Faso, And the Philippines. *The Journal of Nutrition*, **136**(5), pp. 1431S-1437S.
- MEMON, N.A., 2012. Poultry: Country's second-largest industry. *Exclusive on Poultry*. Food Journal, Pakistan.
- MEYER, S.B., COVENEY, J., HENDERSON, J., WARD, P.R. and TAYLOR, A.W., 2012. Reconnecting Australian consumers and producers: Identifying problems of distrust. *Food Policy*, **37**(6), pp. 634-640.
- MILANOVIC, B. and YITZHAKI, S., 2002. Decomposing world income distribution: Does the world have a middle class? *Review of Income and Wealth*, **48**(2), pp. 155-178.
- MILES, S. and FREWER, L.J., 2001. Investigating specific concerns about different food hazards. *Food Quality and Preference*, **12**(1), pp. 47-61.
- MILLER, D., 1998. *A Theory of Shopping*. Cambridge: Polity.
- MILNE, R., WENZER, J., BREMBECK, H. and BRODIN, M., 2011. Fraught cuisine: food scares and the modulation of anxieties. *Distinktion: Scandinavian Journal of Social Theory*, **12**(2), pp. 177-192.
- MINAKER, L.M., RAINE, K.D., WILD, T.C., NYKIFORUK, C.I.J., THOMPSON, M.E. and FRANK, L.D., 2013. Objective food environments and health outcomes. *American Journal of Preventive Medicine*, **45**(3), pp. 289-296.
- MINTZ, S.W., 1986. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Penguin Books.
- MIRZA, F., 2012. Animal welfare – a long way from home. DAWN News [online] Available at: <http://www.dawn.com/news/687007/animal-welfare-a-long-way-from-home>. [Accessed on August 19, 2016]
- MOHYUDDIN, A. and AMBREEN, M., 2012. Economic empowerment of women in the rural areas of Balochistan. *Pakistan Journal of Women's Studies*, **19**(2), pp. 239.

- MOL, A.P.J. and BULKELEY, H., 2002. Food risks and the environment: changing perspectives in a changing social order. *Journal of Environmental Policy & Planning*, **4**(3), pp. 185-195.
- MOLLERING, G., 2001. The Nature of Trust: From Georg Simmel to a Theory of Expectation, Interpretation and Suspension. *Sociology*, **35**(2), pp. 403-420.
- MOORE, P.J., CHRABASZCZ, J.S., PETERSON, R.A., ROHRBECK, C.A., ROEMER, E.C. and MERCURIO, A.E., 2014. Psychological resilience: The impact of affectivity and coping on state anxiety and positive emotions during and after the Washington, DC sniper killings. *Anxiety, Stress and Coping*, **27**(2), pp. 138-155.
- MORALES, E., 1995. *The Guinea Pig: Healing, Food, and Ritual in the Andes*. Tucson: University of Arizona Press.
- MORGAN, K., 2010. Local and green, global and fair: the ethical foodscape and the politics of care. *Environment and Planning A*, **42**(8), pp. 1852-1867.
- MORRIS, C. and KIRWAN, J., 2006. Vegetarians: Uninvited, Uncomfortable or Special Guests at The Table Of The Alternative Food Economy? *Sociologia Ruralis* **46**(3) pp. 192-213.
- MORRIS, C. and KIRWAN, J., 2010. Food commodities, geographical knowledges and the reconnection of production and consumption: The case of naturally embedded food products. *Geoforum*, **41**(1), pp. 131-143.
- MOUNTZ, A., 2011. Where asylum-seekers wait: feminist counter-topographies of sites between states. *Gender, Place & Culture*, **18**(3), pp. 381-399.
- MURCOTT, A., 1993. Talking of good food: An empirical study of women's conceptualizations. *Food and Foodways*, **5**(3), pp. 305-318.
- MURDOCH, J., MARSDEN, T. and BANKS, J., 2000. Quality, nature, and embeddedness: some theoretical considerations in the context of the food sector*. *Economic Geography*, **76**(2), pp. 107-125.
- MUSANGO, J.K., 2014. Household electricity access and consumption behaviour in an urban environment: The case of Gauteng in South Africa. *Energy for Sustainable Development*, **23**, pp. 305-316.
- MUSSADAQ, M., 2012. Cafe Culture: Winter delights for Islooites. *The Express Tribune* [online] Available at: <http://tribune.com.pk/story/325705/cafe-culture-winter-delights-for-islooites/> [Accessed on 11 January 2015]
- MYTHEN, G., 2004. *Ulrich Beck: A Critical Introduction to the Risk Society*. London: Pluto Press.
- NAYAB, D., 2011. Estimating the Middle Class of Pakistan. *PIDE Working Papers*, **77**, pp. 1.

- NAYAK, B.P., WERTHMANN, C. and AGGARWAL, V., 2015. Trust and cooperation among urban poor for transition to cleaner and modern cooking fuel. *Environmental Innovation and Societal Transitions*, **14**(0), pp. 116-127.
- NAZIR, S., 2011. *Socio-economic conditions of female domestic workers before and after migration in Faislabad city*. MA. University of Agriculture, Faislabad, Pakistan.
- NISBETT, N., 2007. Friendship, consumption, morality: practising identity, negotiating hierarchy in middle-class Bangalore. *Journal of the Royal Anthropological Institute*, **13**(4), pp. 935-950.
- O'CONNOR, P., 2014. Hong Kong Muslims on Hajj: Rhythms of the Pilgrimage 2.0 and Experiences of Spirituality Among Twenty-First Century Global Cities. *Journal of Muslim Minority Affairs*, **34**(3), pp. 315-329.
- O'DOUGHERTY, M., 2002. *Consumption Intensified: The Politics of Middle-Class Daily Life in Brazil*. Durham, Duke University Press.
- OHNUKI-TIERNEY, E., 1993. *Rice as Self: Japanese Identities through Time*. Princeton: Princeton University Press.
- ORIOLA, T. and HAGGERTY, K.D., 2012. The Ambivalent Insider/Outsider Status of Academic 'Homecomers': Observations on Identity and Field Research in the Nigerian Delta. *Sociology*, **46**(3), pp. 540-548.
- PADDOCK, J., 2015. Invoking simplicity: 'Alternative' food and the reinvention of distinction. *Sociologia Ruralis*, **55**(1), pp. 22-40.
- PANAGIA, D., 2007. "You're Eating Too Fast!" On Disequality and an Ethos of Convivium*. *Journal for Cultural Research*, **11**(3), pp. 177-201.
- PANELLI, R. and TIPPA, G., 2009. Beyond foodscapes: Considering geographies of Indigenous well-being. *Health & Place*, **15**(2), pp. 455-465.
- PARHAM, S., 2015. *Food and Urbanism: The Convivial City and a Sustainable Future*. London: Bloomsbury.
- PARK, Y., QUINN, J., FLOREZ, K., JACOBSON, J., NECKERMAN, K. and RUNDLE, A., 2011. Hispanic immigrant women's perspective on healthy foods and the New York City retail food environment: A mixed-method study. *Social Science & Medicine*, **73**(1), pp. 13-21.
- PARVATHI, P. and WAIBEL, H., 2013. Fair Trade and Organic Agriculture in Developing Countries: A Review. *Journal of International Food & Agribusiness Marketing*, **25**(4), pp. 311-323.
- PARVATHI, P. and WAIBEL, H., 2016. Organic Agriculture and Fair Trade: A Happy Marriage? A Case Study of Certified Smallholder Black Pepper Farmers in India. *World Development*, **77**, pp. 206-220.

- PEACH, S., 2014. What to do about pig poop? North Carolina fights a rising tide. *National Geographic*. [online] Available at: <http://news.nationalgeographic.com/news/2014/10/141028-hog-farms-waste-pollution-methane-north-carolina-environment/> [Accessed on 12 October 2015]
- PEATTIE, K., 2001. Golden goose or wild goose? The hunt for the green consumer. *Business Strategy and the Environment*, **10**(4), pp. 187-199.
- PEATTIE, K., 2010. *Green Consumption: Behavior and Norms*. Annual Review of Environment and Resources **35**, pp. 195-228
- PEI, X., TANDON, A., ALLDRICK, A., GIORGI, L., HUANG, W. and YANG, R., 2011. The China melamine milk scandal and its implications for food safety regulation. *Food Policy*, **36**(3), pp. 412-420.
- PEICHL, A., SCHAEFER, T. and SCHEICHER, C., 2010. Measuring richness and poverty: A micro data application to Europe and Germany. *Review of Income and Wealth*, **56**(3), pp. 597-619.
- PHILO, C. and WILBERT, C., 2000. *Animal Spaces, Beastly Places: New Geographies of Human-Animal Relations*. Abingdon: Psychology Press.
- PINGALI, P., MARQUEZ, C. AND PALIS, F. 1994. Pesticides and Philippine Rice Farmer Health: A Medical and Economic Analysis. *American Journal of Agricultural Economics*, **76**(3), p.587.
- PINGALI, P., 2007. Westernization of Asian diets and the transformation of food systems: Implications for research and policy. *Food Policy*, **32**(3), pp. 281-298.
- PLESSZ, M. and GOJARD, S., 2015. Fresh is best? Social position, cooking, and vegetable consumption in France. *Sociology*, **49**(1), pp. 172-190.
- PLOUS, S., 1993. Psychological Mechanisms in the Human Use of Animals. *Journal of Social Issues*, **49**(1), pp. 11-52.
- POLLAN, M., 2011. *The Omnivore's Dilemma: The Search for a Perfect Meal in a Fast-food World*. London: Bloomsbury.
- POLLOCK, N., 2004. Reconstructing Diets for Compensation for Nuclear Testing in Rongelap, Marshall Islands. In: H. MACBETH and J. MACCLANCY, eds., *Researching Food Habits: Methods and Problems*. Berghahn, pp. 169.
- PONCE, X., RODRIGUEZ-RAMIREZ, S., MUNDO-ROSAS, V., SHAMAH, T., BARQUERA, S., and GONZALEZ DE COSSIO, T., 2014. Dietary quality indices vary with sociodemographic variables and anthropometric status among Mexican adults. A cross-sectional study. Results from the 2006 National Health and Nutrition Survey. *Public Health Nutrition*, **17**(8), pp. 1717–1728.

- POPKIN, B.M., DUFFEY, K. and GORDON-LARSEN, P., 2005. Environmental influences on food choice, physical activity and energy balance. *Physiology & Behavior*, **86**(5), pp. 603-613.
- POPKIN, B., ADAIR, L. and NG, S. 2012. Global nutrition transition and the pandemic of obesity in developing countries. *Nutrition Reviews*, **70**(1), pp.3-21.
- POTTINGER, L., 2013. Ethical food consumption and the city. *Geography Compass*, **7**(9), pp. 659-668.
- POTTS, A., and WHITE, M., 2008. New Zealand vegetarians. At odds with their nation. *Society and Animals* (16). Pp. 226-353
- PRETTY, J., 2001. *Some benefits and drawbacks of local food systems*. Briefing note for TVU/Sustain AgriFood Network, November 2
- PREYLO, B.D., and ARIKAWA, H., 2008. Comparison of vegetarians and non-vegetarians on pet attitude and empathy. *Anthrozoos*, **21**(4). Pp. 287-395
- PRINCEN, T., MANIATES, M., CONCA, K. and EBRARY, I., 2002. *Confronting Consumption*. Cambridge: MIT Press.
- PRINCEN, T., 1997. The shading and distancing of commerce: When internalization is not enough. *Ecological Economics*, **20**(3), pp. 235-253.
- PUGLIESE, P., ZANASI, C., ATALLAH, O. and COSIMO, R., 2013. Investigating the interaction between organic and local foods in the Mediterranean: The Lebanese organic consumer's perspective. *Food Policy*, **39**, pp. 1-12.
- QIDWAI, W., SALEHEEN, D., SALEEM, S., ANDRADES, M. and AZAM, S.I., 2003. Are our people health conscious? Results of a patients survey in Karachi, Pakistan. *Journal of Ayub Medical College, Abbottabad*, **15**(1), pp. 10-13.
- RAUH, V., ARUNAJADAI, S., HORTON, M., PERERA, F., HOEPNER, L., BARR, D. AND WHYATT, R. 2011. Seven-Year Neurodevelopmental Scores and Prenatal Exposure to Chlorpyrifos, a Common Agricultural Pesticide. *Environment Health Perspective*. **119**(8), pp.1196-1201.
- RAMZI, S., 2012. *Food Prints: An Epicurean Voyage through Pakistan - Overview of Pakistani Cuisine*. Oxford University Press, Karachi.
- RANI, S., KHAN, M. A., SHAH, H., and ANJUM, A. S., 2013. Profitability Analysis of Organic Cauliflower, Radish and Turnip Produce at National Agriculture Research Centre, Islamabad, Pakistan. *Asian Journal of Agriculture and Rural Development*, **3**(12), pp. 929-935.
- RANSOM, E., 2011. Botswana's beef global commodity chain: Explaining the resistance to change. *Journal of Rural Studies*. **27**, pp. 431-439

- RAO, S., YAJNIK, C.S., KANADE, A., FALL, C.H.D., MARGETTS, B.M., JACKSON, A.A., SHIER, R., JOSHI, S., REGE, S., LUBREE, H. and DESAI, B., 2001. Intake of micronutrient-rich foods in rural Indian mothers is associated with the size of their babies at birth: Pune maternal nutrition study. *Journal of Nutrition*, **131**(4), pp. 1217-1224.
- RASHID, S., DOROSH, P.A., MALEK, M. and LEMMA, S., 2013. Modern input promotion in sub-Saharan Africa: insights from Asian green revolution. *Agricultural Economics*, **44**(6), pp. 705-721.
- RAVALLION, M., 2010. The Developing World's Bulging (but Vulnerable) Middle Class. *World Development*, **38**(4), pp. 445-454.
- RAYNOLDS, L., 2000. Re-embedding global agriculture: The international organic and fair trade movements. *Agriculture and Human Values*, **17**, pp. 297-309.
- RAYNOLDS, L., 2003. Forging new local/global links through fair trade agro-food networks, in Almas, R. and Lawrence, G. (eds), *Globalization, Localization and Sustainable Livelihoods*, Basingstoke, Ashgate.
- RAYNOLDS, L., 2004. The Globalization of Organic Agro-Food Networks. *World Development*, **32**(5), pp. 725-743.
- RAZA, S., 2013. *Risk Analysis, Pakistan Status*. Technical Training on Risk Analysis in SAARC countries, New Delhi.
- REARDON, T., TIMMER, C.P. and BERDEGUE, J.A., 2004. The Rapid Rise of Supermarkets in Developing Countries: Induced Organizational, Institutional, and Technological Change in Agrifood Systems. *Electronic Journal of Agricultural and Development Economics*, **1**(2), pp. 168-183
- REARDON, T., HENSON, S., GULATI, A., 2010. Links between supermarkets and food prices, diet diversity and food safety in developing countries. In: HAWKES, C., BLOUIN, C., Henson, S., DRAGER, N., DUBE, L., (Eds.), *Trade, Food, Diet and Health: Perspectives and Policy Options*. Wiley-Blackwell, Hoboken, U.S, pp. 111-130.
- REED, M., 2001. Fight the future! How the contemporary campaigns of the UK organic movement have arisen from their composting past. *Sociologica Ruralis*. **41**(1) pp. 131-145
- REILLY, J., 1998. Just another food scare? Public understanding of the BSE crisis. In: G. PHILO, ed., *Message Received: Glasgow Media Group Research 1993-1998*. Harlow: Glasgow Media Group, pp. 128.
- RENTING, H., MARSDEN, T.K. and BANKS, J., 2003. Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A*, **35**(3), pp. 393-411.
- RILEY, L. and LEGWEGOH, A., 2014. Comparative urban food geographies in Blantyre and Gaborone. *African Geographical Review*, **33**(1), pp. 52-66.

ROWE, E., 2015. Theorising "Geo-Identity" and David Harvey's Space: School Choices of the Geographically Bound Middle- Class. *Critical Studies in Education*, **56**(3), pp. 285-300.

ROY, S., 2008. *Indo-Pak Cuisine*. London: IBS Books.

ROZIN, P., MARKWITH, M., & STOESS, C., 1997. Moralization and becoming a vegetarian: the transformation of preferences into values and the recruitment of disgust. *Psychological Science*, **8**, pp. 67 – 73.

RUBEN, R., VAN TILBUR, A., TRIENEKENS, J., VAN BOEKEL, M., 2007. Linking market integration, supply chain governance, quality, and value added in tropical food chains. In RUBEN R., VAN BOEKEL, M, VAN TILBUR, A., and TRIENEKENS, J., Tropical food chains: Governance regimes for quality management. *Wageningen Academic Publishers*, 13-46.

RUBIN, M. S., COLEN, C. G., and LINK, B. G., 2010. Examination of inequalities in HIV/AIDS mortality in the United States from a fundamental cause perspective. *American Journal of Public Health*, **100**(6), pp. 1053–1059.

RUBIN, H.J. and RUBIN, I.S., 2011. *Qualitative Interviewing: The Art of Hearing Data*. London: SAGE.

RUBY, M. B., 2012. Vegetarianism. A blossoming field of study. *Appetite*. **58**, pp. 141-150

RUBY, M.B., HEINE, S., KAMBLE, S., CHENG, T. and WADDAR, M., 2013. Compassion and contamination. Cultural differences in vegetarianism. *Appetite*, **71**, pp.340-348.

SAAVALA, M., 2003. Auspicious Hindu houses. The new middle classes in Hyderabad, India*. *Social Anthropology*, **11**(2), pp. 231-247.

SABA, A. and MESSINA, F., 2003. Attitudes towards organic foods and risk/benefit perception associated with pesticides. *Food Quality and Preference*, **14**(8), pp. 637-645.

SAEED, M., 2015, May 31, 2015. Healthy living: farmer's markets come to Pakistan. *The Express Tribune* (print edition) Section: Food.

SAGE, C., 2003. Social embeddedness and relations of regard: alternative 'good food' networks in south-west Ireland. *Journal of Rural Studies*, **19**(1), pp. 47-60.

SAGE, C., 2003. Quality in alternative food networks: Conventions, regulations and governance. In Policies, governance and innovations for rural areas: International seminar. *Universita della Calabria, Arcavacata di Rende*.

SAHOUTARA, N., 2014. Know your rights – animal rights. The Express Tribune. [online] Available at: <http://tribune.com.pk/story/769400/know-your-rights-animal-rights/> [Accessed on August 19 2016]

SALAMAN, R.N. and HAWKES, J.G., 1949. The character of the early European potato. In: *Proceedings of the Linnean Society of London* 1949, (Vol. 161, No. 1) Blackwell Publishing Ltd., pp. 71-84.

SANDHU, S., 2007. *Night Haunts: A Journey Through the London Night*. New York: Verso Books.

SAYEED, A., SINGH, P. and THANDI, S., 1996. Growth and Mobilisation of the Middle Classes in West Punjab: 1960–1970. *Globalisation and the Region: Explorations in Punjabi Identity*, pp. 259-286.

SCHENSUL, S.L., SCHENSUL, J.J. and LECOMPTE, M.D., 1999. *Essential Ethnographic Methods: Observations, Interviews, and Questionnaires*. Lanham: Rowman Altamira.

SCHLOSSER, E., 2001. *Fast Food Nation: The Dark Side of the All-American Meal*. Boston: Houghton Mifflin.

SCHOLLIERS, P., 2008. Defining food risks and food anxieties throughout history. *Appetite*, **51**(1), pp. 3-6.

SCHWENKEN, H. and HEIMESHOF, L., 2011. *Domestic Workers Count: Global Data on an Often Invisible Sector*. Kassel: Kassel University Press.

SEN, A., 1981. Ingredients of Famine Analysis: Availability and Entitlements. *The Quarterly Journal of Economics*, **96**(3), pp. 433-464.

SERPELL, J., 1986. *In the Company of Animals: A Study of Human-Animal Relationships*. Oxford: Blackwell.

SEYFANG, G., 2006. Ecological citizenship and sustainable consumption: Examining local organic food networks. *Journal of Rural Studies*, **22**(4), pp. 383-395

SHAH, B., DWYER, C. and MODOOD, T., 2010. Explaining Educational Achievement and Career Aspirations among Young British Pakistanis: Mobilizing 'Ethnic Capital'? *Sociology*, **44**(6), pp. 1109-1127.

SHAHID, A., 2014. A Maid's Work. *Tanged: A magazine of politics and culture*. [online] Available at: <http://www.tanged.org/2014/01/a-maids-work/> [Accessed on: 17 November 2015]

SHAW, H.J., 2014. *The Consuming Geographies of Food: Diet, Food Deserts and Obesity*. Abingdon: Routledge.

SHEPPARD, B.H. and SHERMAN, D.M., 1998. The Grammars of Trust: A Model and General Implications. *The Academy of Management Review*, **23**(3), pp. 422-437.

SHIU, E.C.C., DAWSON, J.A. and MARSHALL, D.W., 2004. Segmenting the convenience and health trends in the British food market. *British Food Journal*, **106**(2), pp. 106-127.

- SHRYOCK, A., 2008. On Discipline and Inclusion. In: K.P. EWING, ed, *Being and Belonging: Muslims in the United States since 9/11*. 1st ed. The Russel Sage Foundation, pp. 200.
- SIBLEY, D., 2000. Placing anxieties. *Cultural Turns/Geographical Turns*, Pearson Education, Harlow, pp. 359-369.
- SIERRA, J.J. and MCQUITTY, S., 2007. Attitudes and emotions as determinants of nostalgia purchases: An application of social identity theory. *Journal of Marketing Theory and Practice*, **15**(2), pp. 99-112.
- SILVERMAN, S.J., 2014. Detaining immigrants and asylum seekers: a normative introduction. *Critical Review of International Social and Political Philosophy*, **17**(5), pp. 600-617.
- SINGH, S., 2008. *Pakistan & the Karakoram Highway*. 7th ed. London: Lonely Planet.
- SMALL, D.A., LERNER, J.S. and FISCHHOFF, B., 2006. Emotion priming and attributions for terrorism: Americans' reactions in a national field experiment. *Political Psychology*, **27**(2), pp. 289-298.
- SMITH, D.F., 2007. Food panics in history: corned beef, typhoid and "risk society". *Journal of Epidemiology and Community Health*, **61**(7), pp. 566.
- SMITH, J. and JEHLICKA, P., 2007. Stories around food, politics and change in Poland and the Czech Republic. *Transactions of the Institute of British Geographers*, **32**(3), pp. 395-410.
- SMITH, L.C., EL OBEID, A.E. and JENSEN, H.H., 2000. The geography and causes of food insecurity in developing countries. *Agricultural Economics*, **22**(2), pp. 199-215.
- SMITH, M., 2002. The 'ethical' space of the abattoir: On the (in) human (e) slaughter of other animals. *Human Ecology Review*, **9**(2), pp. 49-58.
- SMITH, E., and MARSDEN, T., 2004. Exploring the 'limits to growth' in UK organics: beyond the statistical image. *Journal of Rural Studies*. **20**(3), pp. 345-357
- SMITH-SPANGLER, C., BRANDEAU, M.L., HUNTER, G.E., CLAY BAVINGER, J., PEARSON, M., ESCHBACH, P.J., SUNDARAM, V., LIU, H., SCHIRMER, P., STAVE, C., OLKIN, I. and BRAVATA, D.M., 2012. Are organic foods safer or healthier than conventional alternatives? A systematic review. *Annals of Internal Medicine*, **157**(5), pp. 348-366.
- SOLOMON, G. M., AND SCHETTLER, T., 2000. Environment and health: 6. Endocrine disruption and potential human health implications. *Canadian Medical Association Journal*. **163**(11), pp. 1471-1476.
- SONNINO, R. and MARSDEN, T., 2006. Beyond the divide: rethinking relationships between alternative and conventional food networks in Europe. *Journal of economic geography*, **6**(2), pp.181-199

- SONNINO, R., 2007a. Embeddedness in action: Saffron and the making of the local in southern Tuscany. *Agriculture and Human Values*, **24**(1), pp. 61-74.
- SONNINO, R., 2007b. The power of place: embeddedness and local food systems in Italy and the UK. *Anthropology of Food*, (S2).
- SONNINO, R., 2013. Local foodscapes: Place and power in the agri-food system. *Acta Agriculturae Scandinavica Section B: Soil and Plant Science*, **63**(SUPPL.1), pp. 2-7.
- SPENCER, C., 2016. *Vegetarianism, a history*. New York: Four Walls Eight Windows.
- STEEL, C., 2013. *Hungry City: How Food Shapes Our Lives*. London: Vintage.
- STEINBERG, S., KEHLER, M. and CORNISH, L. 2010. Boy culture. Santa Barbara, Calif.: Greenwood.
- STIBBE, A., 2001. Language, power and the social construction of animals. *Society & Animals*, **9**(2), pp. 145-161.
- SUDO, N., SEKIYAMA, M., WATANABE, C., BOKUL, A.T.M.M.H., and OHTSUKA, R. 2004. Gender differences in food and energy intake among adult villagers in northwestern Bangladesh: A food frequency questionnaire survey. *International Journal of Food Sciences and Nutrition*. **55**(6), pp. 499-509
- SUNDBO, D.I.C., 2013. Local food: the social construction of a concept. *Acta Agriculturae Scandinavica, Section B — Soil & Plant Science*, **63**, pp. 66-77.
- TANCOCK, K., 7 January 2016, 2016-last update, The Geography of Food [Homepage of Elsevier], [Online]. Available: <https://www.elsevier.com/social-sciences/geography-planning-and-development/the-geography-of-food-an-article-selection#wgm> [11 November, 2015].
- TARIQ, M.I., AFZAL, S., HUSSAIN, I. and SULTANA, N., 2007. Pesticides exposure in Pakistan: A review. *Environment international*, **33**(8), pp. 1107-1122.
- TAKEDA, W., BANWELL, C., and DIXON, J., 2016. Advancing food sovereignty or nostalgia: The construction of Japanese Diets in the National Shokuiku Policy. *Anthropological Forum*, **26**(3), pp. 276-288
- TAUS-BOLSTAD, S., 2008. *Pakistan in Pictures*. London: Lerner Books.
- TEMELOVÁ, J. and NOVÁK, J., 2011. Daily street life in the inner city of Prague under transformation: the visual experience of socio-spatial differentiation and temporal rhythms. *Visual Studies*, **26**(3), pp. 213-228.
- TENG, P., ESCALER, M. and CABALLERO-ANTHONY, M., 2011. Urban food security: Feeding tomorrow's cities. *Significance*, **8**(2), pp. 57-60.

THØGERSEN, J., 2000. Psychological Determinants of Paying Attention to Eco- Labels in Purchase Decisions: Model Development and Multinational Validation. *Journal of Consumer Policy*, **23**(3), pp. 285-313.

THOUVENOT, C., 1978. Studies in food geography in France. *Social Science & Medicine. Part D: Medical Geography*, **12**(1), pp. 43-54.

TILKIDJIEV, N., 1998. The Middle Class: The New Convergence Paradigm. *Institute of Sociology, Bulgarian Academy of Sciences*.

TORRES, L.T., 2011. *Health behaviors in the Chamorro community: Beliefs and practices in nutrition and physical activity*. M.A. California State University, Long Beach.

TOWNSHEND, T. and LAKE, A.A., 2009. Obesogenic urban form: Theory, policy and practice. *Health & Place*, **15**(4), pp. 909-916.

TSCHARNTKE, T., KLEIN, A.M., KRUESS, A., STEFFAN-DEWENTER, I. and THIES, C., 2005. Landscape perspectives on agricultural intensification and biodiversity–ecosystem service management. *Ecology Letters*, **8**(8), pp. 857-874.

TSCHIRLEY, D., HICHAAMBWA, M., 2010. The Structure and Behavior of Vegetable Markets Serving Lusaka. Main Report (No. 93006). Michigan State University, Department of Agricultural, Food, and Resource Economics.

TUCKER, M., WHALEY, S.R. and SHARP, J.S., 2006. Consumer perceptions of food-related risks. *International Journal of Food Science & Technology*, **41**(2), pp. 135-146.

TUCKER, P. and SPEIRS, D., 2003. Attitudes and Behavioural Change in Household Waste Management Behaviours. *Journal of Environmental Planning and Management*, **46**(2), pp. 289-307.

TURGEON, L. and PASTINELLI, M., 2002. "Eat the World": Postcolonial Encounters in Quebec City's Ethnic Restaurants. *Journal of American Folklore*, **115**(456), pp. 247-268.

UNDERWOOD, T., MCCULLUM-GOMEZ, C., HARMON, A., and, ROBERTS, S., 2011. Organic Agriculture Supports Biodiversity and Sustainable Food Production. *Journal of Hunger and Environmental Nutrition*, **6**(4), pp. 398-423.

VALENTINE, G., 2002. In-corporations: Food, Bodies and Organizations. *Body & Society*, **8**(2), pp. 1-20.

VALERO-GIL, J.N., and VALERO, M., 2008. The effects of rising food prices on poverty in Mexico. *Agricultural Economics*, **39**(s1), pp. 485-496.

VAN CAUWENBERG, J., VAN HOLLE, V., SIMONS, D., DERIDDER, R., CLARYS, P., GOUBERT, L., NASAR, J., SALMON, J., DE BOURDEAUDHUIJ, I., and DEFORCHE, B., 2012. Environmental factors influencing older adults' walking for transportation: a study using walk-along interviews. *International Journal of Behavioral Nutrition and Physical Activity*, **9**(1), pp. 85.

- VAN LAREBEKE, N., HENS, L., SCHEPENS, P., COVACI, A., BAEYENS, J., EVERAERT, K., BERNHEIM, J.L., VLIETINCK, R. and DE POORTER, G., 2001. The Belgian PCB and dioxin incident of January-June 1999: exposure data and potential impact on health. *Environmental Health Perspectives*, **109**(3), pp. 265-273.
- VAN LIERE, M.J., BROUWER, I.D. and DEN HARTOG, A.P., 1996. A food ethnography of the Otammari in north-western Benin: A systematic approach. *Ecology of Food and Nutrition*, **34**(4), pp. 293-310.
- VANNINI, P., 2012. In time, out of time Rhythmanalyzing ferry mobilities. *Time & Society*, **21**(2), pp. 241-269.
- VANNINI, P. and TAGGART, J., 2013. Solar energy, bad weather days, and the temporalities of slower homes. *Cultural Geographies*, **22**(4), pp. 637-657.
- VARTANIAN, L. R., HERMAN, C. P., and POLIVY, J., 2007. Consumption stereotypes and impression management: How you are what you eat. *Appetite*, **48**, pp.265–277
- VEECK, A., HONGYAN YU, and BURNS, A.C., 2010. Consumer Risks and New Food Systems in Urban China. *Journal of Macromarketing*, **30**(3), pp. 222-237.
- VIQAR-UN-NISA, AHMED, R. and MOHAMMAD, M., 2005. Levels of selected essential and toxic elements in the foodstuffs of Islamabad as analyzed by DPASV. *Toxicological & Environmental Chemistry*, **87**(1), pp. 67-75.
- WADHWA, S.K., KAZI, T.G., AFRIDI, H.I., TÜZEN, M. and CITAK, D., 2013. Arsenic in water, food and cigarettes: A cancer risk to Pakistani population. *Journal of Environmental Science and Health, Part A*, **48**(14), pp. 1776-1782.
- WAGNER, B., and HAMILTON, K., 2011. Sharing Nostalgia and Afternoon Tea Consumption: Thinking of Home. Unpublished working paper. Glasgow: The University of Strathclyde.
- WAHEED, A. and AHMAD, M.M., 2012. Socioeconomic Impacts of Terrorism on Affected Families in Lahore, Pakistan. *Journal of Aggression, Maltreatment & Trauma*, **21**(2), pp. 202-222.
- WALKER, R.E., KEANE, C.R. and BURKE, J.G., 2010. Disparities and access to healthy food in the United States: a review of food deserts literature. *Health & Place*, **16**(5), pp. 876-884.
- WANG, R. and SHI, L., 2012. Access to food outlets and children's nutritional intake in urban China: A difference-in-difference analysis. *Italian Journal of Pediatrics*, **38**(1).
- WANG, Z., MAO, Y. and GALE, F., 2008. Chinese consumer demand for food safety attributes in milk products. *Food Policy*, **33**, pp. 27-36.
- WARDE, A., 1997. Consumption, food and taste. Sage. London.

- WARDE, A., 1999. Convenience food. Space and timing. *British Food Journal*, **101**(7), pp. 518–527.
- WASIM, A., 2015. Haram ingredients in most of imported food items. *DAWN news* [online] Available at: <http://www.dawn.com/news/1165567> [Accessed 20 May, 2015]
- WATKINS, J., KITNER, K.R. and MEHTA, D., 2012. Mobile and smartphone use in urban and rural India. *Continuum*, **26**(5), pp. 685-697.
- WATTS, D.C.H., ILBERY, B. and MAYE, D., 2005. Making reconnections in agro- food geography: alternative systems of food provision. *Progress in Human Geography*, **29**(1), pp. 22-40.
- WATTS, J., 2006. 'The outsider within': dilemmas of qualitative feminist research within a culture of resistance. *Qualitative Research*, **6**(3), pp. 385-402.
- WATTS, M., 1983. *Silent Violence: Food, Famine and Peasantry in Northern Nigeria*. Berkeley: University of California Press.
- WEATHERELL, C., TREGGAR, A. and ALLINSON, J., 2003. In search of the concerned consumer: UK public perceptions of food, farming and buying local. *Journal of Rural Studies*, **19**(2), pp. 233-244.
- WEBB, P., 2010. Medium- to long-run implications of high food prices for global nutrition. *The Journal of Nutrition*, **140**(1), pp. 143S.
- WEBBER, C.B., SOBAL, J. and DOLLAHITE, J.S., 2010. Shopping for fruits and vegetables. Food and retail qualities of importance to low-income households at the grocery store. *Appetite*, **54**(2), pp. 297-303.
- WEGENER, C., 2014. 'Would you like a cup of coffee?' Using the researcher's insider and outsider positions as a sensitising concept. *Ethnography and Education*, **9**(2), pp. 153-166.
- WEINSIER, R., 2000. Use of the term vegetarian. *American Journal of Clinical Nutrition*, **71**, pp. 1211–1212
- WERBNER, P., 1996. Fun Spaces: On Identity and Social Empowerment among British Pakistanis. *Theory, Culture & Society*, **13**(4), pp. 53-79.
- WERTHEIM-HECK, S.C.O., SPAARGAREN, G. and VELLEMA, S., 2014. Food safety in everyday life: Shopping for vegetables in a rural city in Vietnam. *Journal of Rural Studies*, **35**, pp. 37-48.
- WFP, 2013. *Vulnerability Analysis and Mapping*. Pakistan Food Security Bulletin. Issue 1. World Food Programme.
- WHATMORE, S.J., and THORNE, L.B., 1997. Nourishing Networks: alternative geographies of food. In: D. GOODMAN and M. WATTS, eds., *Globalising Food: Agrarian Questions and Global Restructuring*. Routledge, pp. 287-384.

- WHATMORE, S., STASSART, P., and RENTING, H., 2003. What's alternative about alternative food networks? *Environment and Planning A*, **35**, pp. 389-391
- WHEARY, J., 2005. *Measuring the Middle: Assessing What It Takes to Be Middle Class*. Dēmos, New York.
- WHORTON, J.C., 1994. Historical Development of Vegetarianism. *The American Society for Clinical Nutrition*, **59**(5), pp. 11035-11095
- WIDENER, M.J., METCALF, S.S. and BAR-YAM, Y., 2011. Dynamic Urban Food Environments: A Temporal Analysis of Access to Healthy Foods. *American Journal of Preventive Medicine*, **41**(4), pp. 439-441.
- WIDENER, M.J. and SHANNON, J., 2014. When are food deserts? Integrating time into research on food accessibility. *Health & Place*, **30**(0), pp. 1-3.
- WILCOCK, A., PUN, M., KHANONA, J. and AUNG, M., 2004. Consumer attitudes, knowledge and behaviour: a review of food safety issues. *Trends in Food Science & Technology*, **15**(2), pp. 56-66.
- WILLIAMS, H., 1883. *The Ethics of Diet: A Catena of Authorities Deprecatory of the Practice of Flesh-Eating*. London. F Pitman.
- WILLIAMS, P.R.D. and HAMMITT, J.K., 2001. Perceived risks of conventional and organic produce: Pesticides, pathogens, and natural toxins. *Risk Analysis*, **21**(2), pp. 319-330.
- WILLS, W., BACKETT-MILBURN, K., ROBERTS, M.L. and LAWTON, J., 2011. The framing of social class distinctions through family food and eating practices. *The Sociological Review*, **59**(4), pp. 725-740.
- WINTER, M., 2003a. Embeddedness, the new food economy and defensive localism. *Journal of Rural Studies*, **19**(1), pp. 23-32.
- WINTER, M., 2003b. Geographies of food: agro-food geographies - making reconnections. *Progress in Human Geography*, **27**(4), pp. 505-513.
- WINTER, M., 2005. Geographies of food: agro-food geographies - food, nature, farmers and agency. *Progress in Human Geography*, **29**(5), pp. 609-617.
- WONG, L., 2007. Market Cultures, the Middle Classes and Islam: Consuming the Market? *Consumption Markets & Culture*, **10**(4), pp. 451-480.
- WONG, V., TURNER, W. and STONEMAN, P., 1996. Marketing Strategies and Market Prospects for Environmentally-Friendly Consumer Products¹. *British Journal of Management*, **7**(3), pp. 263-281.
- WORLD BANK 2006. Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action. Directions in Development Series. Washington DC.

- WORSLEY, A., and SKRZYPKIEC, G., 1998. Do attitudes predict red meat consumption among young people? *Ecology of Food and Nutrition*, **37**(2), pp. 163-195
- WUNDERLICH, F.M., 2013. Place-Temporality and Urban Place-Rhythms in Urban Analysis and Design: An Aesthetic Akin to Music. *Journal of Urban Design*, **18**(3), pp. 383-408.
- WYNNE, B., 1996. May the sheep safely graze? A reflexive view of the expert-lay knowledge divide. In: S. LASH, B. SZERSZYNSKI and B. WYNNE, eds, *Risk, Environment and Modernity*. London: SAGE, pp. 44-83.
- WYNNE, B., 2001. Creating Public Alienation: Expert Cultures of Risk and Ethics on GMOs. *Science as Culture*, **10**(4), pp. 445-481.
- YADAV, K. and KRISHNAN, A., 2008. Changing patterns of diet, physical activity and obesity among urban, rural and slum populations in north India. *Obesity Reviews*, **9**(5), pp. 400-408.
- YAN, Y., 2012. Food Safety and Social Risk in Contemporary China. *The Journal of Asian Studies*, **71**(3), pp. 705-729.
- YOUNG, K.E., 2014. Adorno, Gastronomic Authenticity, and the Politics of Eating Well. *New Political Science*, **36**(3), pp. 387-405.
- YUAN, Z., GUANGHUA, W. and KHOR, N., 2011. The rise of the middle class in the People's Republic of China. *Asian Development Bank Economics Working Paper*, (247).
- ZAIDI, S.A., 2006. The Improbable Future of Democracy in Pakistan. *Project on State of Democracy in South Asia as part of the Qualitative Assessment of Democracy Lokniti (Programme of Comparative Democracy) Centre for the Study of Developing Societies Delhi*,
- ZARRILLI, S., JHA, V., and VOSSENAAR, R., 1997. *Eco-labelling and international trade*. Basingstoke: Macmillan in association with United Nations Conference on Trade and Development.
- ZENK, S.N., SCHULZ, A.J., ISRAEL, B.A., JAMES, S.A., BAO, S., and WILSON, M.L., 2005. Neighborhood racial composition, neighborhood poverty, and the spatial accessibility of supermarkets in metropolitan Detroit. *American Journal of Public Health*, **95**(4), pp. 660-667.
- ZENK, S.N., SCHULZ, A.J., IZUMI, B.T., MENTZ, G., ISRAEL, B.A. and LOCKETT, M., 2013. Neighbourhood food environment role in modifying psychosocial stress–diet relationships. *Appetite*, **65**(0), pp. 170-177.
- ZHANG, L., 2012. *In Search of Paradise: Middle-class Living in a Chinese Metropolis*. Ithaca, Cornell University Press.
- ZLOMKE, K.R., and JETER, K.M., 2014. Stress and worry: examining intolerance of uncertainty's moderating effect. *Anxiety, Stress, & Coping*, **27**(2), pp. 202-215.

Appendix A: Respondent Details

A record of the participants is given below. In order to protect their identity, pseudonyms are used throughout this dissertation. In each case, I identify the household by the name of the 'primary' person being interviewed, i.e. the one making most of the food decisions in the house.⁹⁷ However, there was always a significant amount of input from other members of the family as well. In 'Number of interactions', I only tabulate those interactions that lasted over an hour and not the shorter phone conversations, messages and chats.

No.	Name	Age	Occupation	Number of Interactions
1	Majeed	40	Banker	3
2	Laila	50	Housewife	7
3	Navid	30	Receptionist	8
4	Farah	35	Teacher	10
5	Yasmin	30	Student	6
6	Naila	39	Housewife	8
7	Rihana	29	Housewife	5
8	Aishah	29	Military	15
9	Munirah	41	Doctor	6
10	Azizah	40	Doctor	8
11	Jamilia	40	Housewife	11
12	Safa	39	Teacher	4
13	Karimah	34	Receptionist	2
14	Samiyah	55	Banker	5
15	Hadiya	54	Analyst	12
16	Ayah	63	Designer	9
17	Batool	30	Business Owner	8
18	Huma	29	Teacher	10
19	Aisha	28	Doctor	5
20	Aminah	60	Doctor	6
21	Nura	50	Engineer	4
22	Azeeza	28	Architect	10

⁹⁷ In most of the first interviews, the family was interviewed as a whole when meeting them for tea or a meal and the primary 'food person' was often identified by the family as the 'female head' of the house and would either be the wife or grandmother. In almost all cases, the women would be making the food decisions for meal times (with input from the other members of the family), what to buy for groceries and snacks, and had most of the power for food acquisitions, even if the actual shopping or cooking was performed by the husbands or cooks.

23	Faiza	35	Doctor	18
24	Manal	29	Student	8
25	Habibah	39	Housewife	11
26	Shafiqah	41	Housewife	5
27	Sheereen	43	Housewife	5
28	Khaalid	38	Consultant	6
29	Zainab	35	Doctor	9
30	Zaib	28	Student	7
31	Sana	30	Creative Industry	10
32	Samina	29	Journalist	17
33	Jaafer	28	Administrator	3
34	Rafeeqa	45	Business Owner	5
35	Parvin	61	Housewife	8
36	Hinna	38	Housewife	14
37	Baano	37	Consultant	7
38	Sanobar	38	Student	8
39	Anisa	51	Housewife	9
40	Basit	54	Business Owner	5
41	Lubaba	27	Student	3
42	Naseeba	27	Teacher	12
43	Sakinah	30	Teacher	14
44	Fareedah	30	Private Industry	15
45	Saadiqa	29	Teacher	11
46	Hanna	26	Student	11
47	Hoor	43	Architect	18
48	Saleema	55	Computing	19
49	Nureen	41	Accountant	21
50	Hussain	37	Engineer	13
51	Shamima	34	Doctor	4
52	Husna	31	Computing	6
53	Salwa	29	Consultant	12
54	Hakim	26	Student	5
55	Salihah	27	Student	9
56	Tahseen	65	Housewife	15
57	Farzana	51	Housewife	4
58	Mona	41	Private Industry	8
59	Mehak	23	Student	12
60	Salima	44	Designer	6

Appendix B: Interview Guide

What follows is a list of the topics I would discuss with the respondents, especially in the earlier interviews to ensure that I had a more complete picture of their food consumption habits and perceptions. Codes associated with foods of concern are included after the useful feedback of Professor Patricia Daley following the Transfer of Status examination and refined in accordance with the guidelines presented by Annie Hubert (2004) on conducting qualitative research in the anthropology of food. It was amended frequently in response to topics that would be introduced by the respondents.

Everyday Life

People living in the house,

Individuals and influences responsible for food decisions,

People who shop for food,

Frequency of food shopping

Foods (meals, snacks) consumed at home,

Who eats out of the house, how often and where

Food grown in the house

Food preserved in the house

Food Shopping

Sub-sector market

Sector market

Super Market, Jinnah Super Market

Centaurus Mall and similar

Friday, Tuesday, Sunday Market

Time Spent (daily/weekly/monthly)

Mode of transport used

Location and route of shopping trip

Price
Convenience
Quality
Quantity
Reputation
Personal relationship with shop owner
Other shops/places in the vicinity
How often they are frequented
How the places are selected
Previously frequented places
Why the change to a different place
Motivation for visiting there

Foods

Social Drivers

Doctor's advice
Recommendations
Diets
Social acceptability and visibility
Social events
Gifting foods
Takeaways
Eating at work
Cafes
Traditional Fast Food

Problematic Foods

Chicken

Produce

Milk

Oil

Fish

Processed foods

Baked goods

Junk Food

Frozen, Refrigerated Foods

Street Foods

Food Worries

Chemical contaminants

Fraud – additives, substitutions, etc.

Where is it from

What has been done to it

How is it getting here

How is it preserved

Industrialized production

Traditional production

Food safety – restaurants, street food

Modified – genetic, chemical, etc.

‘Too westernized’

Food and History

Personal earlier experiences – farms, food taste, forms, etc.

Parents and grandparents experiences

Changes in role of food in society

Changes in personal preferences of food

Preferences

Most consumed and why

Least consumed and why

Never consumed and why

Differences in preferences within a household

Differences between close friends and family

Good Food

Healthy

Fresh

Prescribed

Beauty

Nostalgia

Comfort

Organic

Local

Ethical

Sustainable

Pakistani

Sociability

Ease

Value for the money and effort

Changes over time

