Domestic Kitchen Practices: Findings from the 'Kitchen Life' study

University of Hertfordshire

Social Science Research Unit

Food Standards Agency
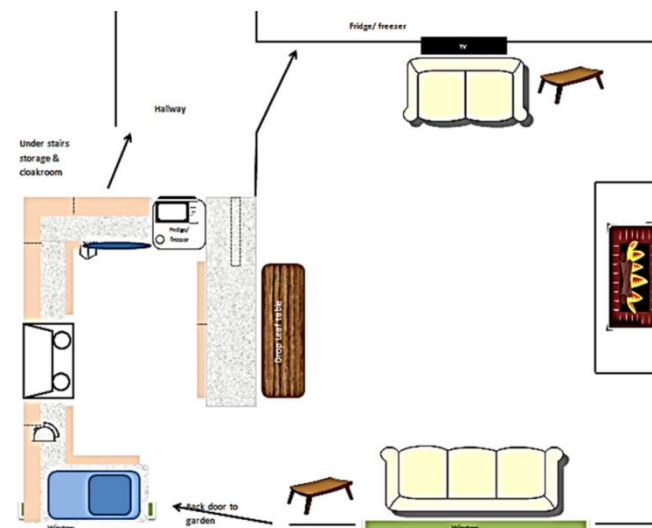
July 2013

Unit Report 24

University of Hertfordshire

Domestic Kitchen Practices: Findings from the 'Kitchen Life' Study

University of Hertfordshire report for the Food Standards Agency

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July 2013

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Acknowledgements

Copyright statement

The report's authors

The authors are social scientists based in the Centre for Research in Primary and Community Care at the University of Hertfordshire. **Dr Wendy Wills** is Reader in Food and Public Health. **Dr Angela Meah** is a Research Fellow on the Kitchen Life study. **Dr Angela Dickinson** is a Senior Research Fellow specialising in research on older people and **Dr Frances Short** is a Visiting Research Fellow.

The authors drew on their respective and collective backgrounds and expertise during this study, which includes social research methodology/methods, sociology, geography, gerontology, food policy and public health.

Summary

This report presents a study designed to investigate, document, analyse and interpret domestic kitchen practices. The study was intended to generate insights about 'what goes on and why' in UK kitchens, to inform the Food Standards Agency's (FSA) thinking about how to reduce the burden of foodborne disease. A key focus of earlier FSA research has been on reported behaviours – the *Kitchen Life* study took a different approach, to examine what people do, what they say about what they do and the role of the kitchen itself and its assorted things, technologies and resources (chopping boards, microwaves and cupboards, for example).

A qualitative and ethnographic approach was taken to investigate domestic kitchen practices in 20 UK households. The practices of those aged 60+ years and pregnant women are of particular interest to the FSA as these groups are vulnerable to foodborne illness; these household-types were therefore included in the study. The study findings are organised around four themes which broadly relate to where, exactly, kitchen life takes place, how, with whom and why. They are:

- *Where?* The *boundaries* of the kitchen with other inside and outside spaces
  - Study households used their kitchens for different aspects of domestic life, far beyond food-related activities. Additionally, food-related activities were not confined to the kitchen; they also took place in other internal and external spaces within the home.
  - Kitchens can be inefficient in terms of design, size and layout; this was particularly so for participants living in social housing and for study households with very young children and older adults.

- *How?* The *entanglement* of kitchen practices – where do practices begin and end?
  - Food-related and non-food related elements of kitchen practice were entangled; household practices incorporated multiple activities, things (such as chopping boards and utensils), people and places in and outside the home that flowed seamlessly together.
  - The cleaning of sites, surfaces and things, including floors, work surfaces, food and utensils, was often entangled within other elements of kitchen practice rather than being a discrete practice within study households.
  - Pets were often fully integrated as members of a household; their care was not necessarily separated from other kitchen practices.

- *With whom? Encounters* with others in the kitchen
  - Practices were negotiated and shaped through social encounters between adults and children within households and through encounters with other people, such as cleaners, carers and relatives.

- *Why?* Household logics and principles
  - These related to 'rules of thumb' about 'how things are done'; such principles were inconsistently drawn on by study households, particularly in relation to washing meat, poultry and fish; and salad and vegetables.

- o 'Expert' knowledge was not seen by participants as being better than knowledge based on experience.

Potential pathways to foodborne illness have been highlighted through this study, revealing the way that non-food actions and things interact with food-related activities. This suggests that it is important to consider practices with their meaning and context intact. The findings offer new ways to consider how vulnerability and risk are defined. We suggest that older people (aged 60+ but particularly those aged 80+) have more 'working against them' in the home (mobility problems and ageing kitchen appliances for example) which might increase their risk of foodborne illness. Considering a household's assets (not just economic assets) and coping capacities (e.g. asking for advice about reheating food) may complement an approach which examines why and how households fail to adhere to recommended practice.

EXECUTIVE SUMMARY

This report presents a study designed to investigate, document, analyse and interpret domestic kitchen practices. The study was intended to generate insights about 'what goes on and why' in UK kitchens to inform the Food Standards Agency's (FSA) thinking about how to reduce the burden of foodborne disease. A key focus of earlier FSA research has been on reported behaviours – the *Kitchen Life* study took a different approach, to examine what people do, what they say about what they do and the role of the kitchen itself and its assorted things, technologies and resources (chopping boards, microwaves and cupboards, for example).

Kitchen Life was conceived as a study in which the central concern would lie with social practices, thereby not ignoring the mundane, difficult-to-recall aspects of kitchen life, to avoid focusing on individuals and their behaviour or on pre-determined activities often thought to influence food safety, like 'cooking' or 'cleaning'. Using current theories of practice meant looking at the 'whole' of kitchen life; rather than isolating particular aspects, such as the people involved; their behaviour, attitudes or beliefs; or the kitchen technologies they have access to – a practices approach encompasses all of these elements, and more, and investigates how they are interconnected within everyday routines.

The objectives of this study were to address:

- What constitutes everyday 'kitchen life' in contemporary UK households?
- What relationships exist, and why, between what people do and say and the kitchen space/place?
- What potential pathways exist between practices and food safety within domestic kitchens?
- How can we identify and define the most 'at risk' households in terms of their kitchen practices?
- How, if at all, do households encompassing older and younger people and pregnant women differ?

Research design

Kitchen Life drew on a qualitative methodology using an ethnographic approach. We recruited 20 households as case studies to investigate the kitchen lives of people aged under-60 years (including some women who were pregnant) and people aged 60 years and older. Age and pregnancy-status were the main selection criteria because of the Agency's interest in groups thought to be particularly vulnerable to foodborne illness[1]. A range of qualitative methods was used to generate insights about what goes on and why in UK kitchens, including a participant-led kitchen tour, observation, video observation and informal interviews.

The study findings are organised around four themes which broadly relate to where, exactly, kitchen life takes place, how, by whom and why. The themes relate to the boundaries of the

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[1] There was not scope to explicitly include households with people with compromised immunity.

kitchen; the way that kitchen practices are entangled; encounters with others in the kitchen; and household[2] logics and principles.

Where? The boundaries of the kitchen

The kitchen has meanings which extend far beyond food-related activities.

Perhaps contrary to the way it is often characterised, the data reveal that the kitchen is not a neatly bounded space or room reserved exclusively for practices relating to foodwork. Kitchens in the study were spaces in which different aspects of domestic life took place: laundry, cleaning, child care, pet care, social life, school and office work, art and craft activities, music practice, reading, gardening and bicycle repairs. Indeed, the kitchen was a space in which objects or appliances were routinely found that might be deemed 'out of place', in a food-focused view of the kitchen. These included fixed items such as washing machines, dryers, boilers and utility meters, along with others which were moveable including pets, plants, bins, items for recycling, coats, mail, magazines, newspapers, bags, laptops, keys and phones. In some study households, the presence of items such as coats, keys and mobile phones pointed toward the kitchen as a 'gateway' or 'hub' into the home; a first – or last – port of call on entering or leaving the house.

Foodwork was not confined to the kitchen – it took place in other internal and external spaces within the home.

The kitchen was a space with multiple meanings in which the boundaries could be seen as being *blurred*. This blurring incorporated both outdoor as well as indoor spaces and this could have implications for how issues of food safety and cross-contamination can be understood. For example, lack of available storage space meant that some participants stored items such as drinks, tinned and dried goods and vegetables in such places as under-stair cupboards, the garage, utility rooms, bedrooms, a downstairs shower cubicle or even a relative's home. It was not uncommon for larger appliances, such as fridges and freezers, to be located in adjacent rooms, or a garage, or for particular aspects of foodwork to take place in other parts of participants' homes.

Kitchens can be inefficient in terms of design, size and layout – particularly for participants living in social housing and for those households with younger children or older adults.

The kitchens in our sample varied in size and shape and while a number of participants were content with their kitchens, others reflected on spatial constraints that they felt inhibited what they could do. While some study households were able to fulfil their design aspirations, albeit, in some cases, within a limited budget - others had a more limited capacity to make the changes they desired. Participants who lived in social and former social housing were particularly likely to express dissatisfaction with the layout of their kitchens. Smaller kitchens were, though, sometimes advantageous for households with older people with additional health, mobility or care needs.

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[2] The term household, when used in this section and throughout the report, refers to the households who took part in the study.

How? The entanglement of kitchen practices

Food-related and non-food related elements of kitchen practice were entangled; practices incorporated multiple activities, things, people and places in and outside the home that flowed seamlessly together.

Kitchen life was clearly a complex business. When households were doing things in the kitchen it often involved a whole range of actions and interactions; frequently these had little to do with food preparation or eating, but they were embedded in practices which *did* involve food. Rearranging a bin liner, petting a dog or answering the phone were not discrete practices, but were unknowingly carried out and, often, unlikely to be perceived as related to food safety. Seen in this light, what we saw was not *'a practice'* – cooking; cleaning; feeding the dog – but a *complex entanglement* of practices set in the context of everyday life. This complex entanglement also meant that many household practices were *inconsistently* carried out, changing according to the context or circumstances – including pregnancy, illness or what else was going on in the kitchen.

The cleaning of sites, surfaces and things, including floors, work surfaces, food and utensils, was often entangled within other elements of kitchen practice rather than being a discrete activity.

In the context of the domestic kitchens we studied, 'cleaning' was unevenly entangled within practices relating to a range of sites, surfaces and things, including food and utensils. Households in the study appeared to base their assessments about cleanliness against self-defined levels of social acceptability. What might be 'normal' for one household, in terms of when dishcloths needed changing or when a work surface was 'clean', for example, was completely unacceptable for another household. Further, what constituted 'cleaning' ranged from the 'aesthetic' tidying or clearing of surfaces – perhaps involving the removal of debris by brushing crumbs from a worktop with one's hand, for example – to a concern with 'microbial' cleaning and the perceived removal of potentially harmful bacteria. Cleaning - either of hands or things - was not something that generally took place as a discrete practice. More often than not, cleaning was something which was entangled within the 'gaps' in between waiting for the kettle to boil, or for something to cook, or until it was time to leave the kitchen or house.

Pets were often fully integrated as members of a household; their care was not necessarily separated from other kitchen practices.

Pet-owners in this study did not generally see encounters with their cats, dogs, gerbils and goldfish as problematic or as potential 'pathways' to illness. Their care was entangled with other things that occurred in the kitchen. So, whilst some households took particular care in cleaning chopping boards and spraying surfaces, for example, they did not always wash their hands in between petting animals and handling food, or separate pets' dishes from their own. This is a useful insight in terms of the way that practices are taken-for-granted and embedded in the flow of everyday life.

With whom? Encounters in the kitchen

Practices are negotiated and shaped through social encounters between adults and children within households - and also through encounters with others, such as cleaners, carers and relatives.

We analysed the ways in which practices were shared, reproduced, resisted and negotiated through encounters between the people in and external to study households. We use the term 'encounters' because this encompasses not just the people involved, but also the setting and activities which might be undertaken. All the encounters observed and reported could potentially affect food safety outcomes, though these issues were generally subsumed within broader concerns about learning how to act in the kitchen, either in a 'safe' or 'responsible' manner (for children), or in a harmonious or a contested manner (for children and adults). Even in lone households kitchen life was influenced and shaped by carers, cleaners, delivery people, friends and non-cohabiting relatives. Central to these findings was the matter of one person's autonomy to do things and how this was either negotiated or undermined by others. While one person in a household was sometimes 'in charge' of the everyday *choreography* or organisation of kitchen life, this was not always the case and the role was sometimes shared. In households with children and teenagers, even the youngest were active participants in kitchen life.

Why? Household logics and principles

 'Rules of thumb' about 'how things are done' were inconsistently drawn on by households in the study, particularly in relation to washing meat, poultry and fish; and salad and vegetables.

We use 'logics and principles' as a term relating to the rules of thumb drawn on by participants; the common sense values and 'ways of doing things', as told to us by household members. Dimensions of trust in relation to production processes and packaging emerged as salient issues in some participants' explanations for why they did certain things and these were particularly apparent in the context of meat, poultry and fish, as well as in relation to vegetables and salad. A number conveyed a sense of unease, or mistrust concerning the purchase of meat. While some participants did not see any value in washing meat, others felt that blood, bone fragments, dust and imagined handling processes prior to the point of purchase needed to be 'washed away'. There was a great deal of unevenness in participants' practices concerning whether salad and vegetables, including 'prewashed' items, should be washed.

'Expert' knowledge existed alongside other logics and principles – expert knowledge was not seen as better than knowledge based on experience.

The findings highlight the complex terrain in which kitchen practices and food safety were negotiated. The ethnographic approach brought to the fore both a number of uncertainties and confusions regarding production processes and current best-practice advice as well as a range of personal beliefs, values and logics which perhaps rubbed alongside 'expert' guidance. It is in these gaps - where conflict and ambivalence arose between expert and lay knowledge – that food safety practices were negotiated at the level of individual study households. Importantly, where there was doubt or a lack of knowledge concerning the

perceived efficacy of guidance relating to recommended practice, this appeared to open up the potential for households to rely on 'tried and tested' logics based on personal experience. Sensory logics were drawn upon by participants, for example, particularly when it was felt that there was some doubt about either the science behind date labelling, or the trustworthiness of its application by manufacturers or retailers. Aside from smell, a range of other senses were relied on to assess food for freshness. Participants reported judging food by the presence of mould, for example, or whether food 'felt' cold in the refrigerator.

Conclusions

By bringing to life contemporary kitchens, through a 'close-up' examination of practices, *Kitchen Life* provides insights that could be useful in the Agency's efforts to support effective food safety in the home, by revealing the relationships that exist (and why) between what people do and say and the kitchen space/place.

What constitutes everyday 'kitchen life' in contemporary UK households?

Study households were neither aware of some of their mundane actions, nor of the contradictions in their accounts, because of the habitual nature of what goes on in the kitchen. Kitchen life was also not necessarily seen by households as incorporating issues of 'food safety' and this has implications when communicating messages to the general public. The findings also demonstrate that kitchens were often not under the control of one person and therefore the practices of each member of a household (individually and collectively) need to be considered. The findings present an opportunity for fresh or renewed thinking about food safety policy.

One suggestion for the way the Agency could draw on the findings would be to carefully craft information which takes account of the context of everyday life, to provide households with a different, enhanced mode of communication about domestic kitchen practices. This could perhaps be achieved through the use of illustrative 'real life' case studies. Illustrative case studies could be utilised at the points at which households might consider changing aspects of their kitchen practice – so-called 'points of leverage'[3] – when food safety could potentially be enhanced through minor changes. Pregnancy and moving home are suggestions for such leverage points.

What potential pathways exist between practices and food safety within domestic kitchens?

A key finding to emerge from this study is the extent and ways that kitchen practices are entangled and impossible to 'pull apart'. 'Cleaning', for example, was part of the flow of an overall practice and *not considered* as 'cleaning' by many people in the study. Campaigns like the 4 Cs, which 'pull apart' and isolate behaviours, risk actions - like preventing cross-contamination through careful cleaning of chopping boards - being perceived by consumers as the *only* activity they need concern themselves with in relation to practices involving items such as a chopping board. The insights offered in this report present some new avenues of enquiry, particularly relating to the interaction between the non-foodwork and foodwork elements of kitchen practice and the blurring of the boundaries with spaces outside the kitchen. This could have implications for food safety, in terms of the number of 'things' touched – food or otherwise.

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[3] This term arose from a workshop organised by the FSA to discuss the findings of this study, held at Aviation House on 9th May 2013.

How can the most 'at risk' households be identified and defined in terms of their kitchen practices?

All of the households studied could be seen to take risks, in terms of not following FSA recommended practice, at least on some occasions. However, these individuals did not set out, usually, to act in a risky manner nor did they perceive their actions to be risky, so it is worth examining the gap between the Agency's definition of risk versus possible household-level definitions of risk, as well as the reasons why this gap might exist. Adopting a generic risk framework tends to ignore most of the meanings which are inherent in everyday life and instead puts an emphasis on how institutions view individuals and their 'failing' behaviour. Consideration of alternative frameworks is recommended.

How, if at all, do households encompassing older and younger people and pregnant women differ?

Our findings suggest that older people, in particular, might be at risk of harm from foodborne illness because there are more factors working against them than in other household types. The risks to older people are not straight-forward, however, because changes in practice that occur, for example, as a result of bereavement, frailty or failing health, might result in greater *or* fewer pathways to a risk of contracting foodborne illness. The findings suggest that considering a household's *assets* (not just economic assets) and *coping capacities* (e.g. asking for advice about reheating food) could complement an approach which examines why and how households fail to adhere to recommended practice.

CHAPTER 1 Introduction and background

Reducing the burden of foodborne illness is a priority for the FSA.

Food prepared or eaten at home is one route to foodborne illness and the FSA wishes to strengthen the evidence base about 'what goes on and why' in this setting.

Kitchen Life was commissioned and designed to investigate domestic kitchen practices.

The study focuses on *practices* to avoid looking solely at individuals or their reported behaviour.

This report presents a study designed to investigate, document, analyse and interpret domestic kitchen practices. In 2011, the Food Standards Agency (FSA or Agency) commissioned the University of Hertfordshire to conduct the study and build on the Agency's evidence base about food safety in the home. The investigation consisted of a qualitative study taking an ethnographic approach to investigate domestic kitchen practices. A feasibility study was also undertaken by Newcastle University, to assess the value and application of installing Activity Recognition and Temperature (ART) devices into people's homes. This report presents the qualitative study; the ART feasibility study is presented by Newcastle University in a separate report.

This chapter continues by outlining the reasons for commissioning a study of domestic kitchen practices. It then moves on to define 'practices' and to discuss the practice-based approach before describing the objectives of the study. The chapter ends by outlining the subsequent chapters in the report.

Background

Safer food for the nation is the strategic objective of the FSA (Food Standards Agency 2011b)[4]. Reducing the burden of foodborne illness is a key part of this objective as it is estimated that there are a million cases of foodborne illness each year in the UK, resulting in 200,000 hospital admissions and 500 deaths (Food Standards Agency 2011a). The economic burden from foodborne illness in the UK is estimated at £1.9 billion (Food Standards Agency 2012).

Foodborne illness can develop from food contaminated with bacteria or viruses at any point of the food chain, from farm to fork. A strategic outcome of the Agency is to ensure that consumers have the information and understanding to make informed choices about where and what to eat. In order to achieve this, the Agency has developed its scientific evidence base and implemented a range of actions and interventions. Part of this programme of work has focused on food prepared and eaten at home, because foodborne illness is as likely to be contracted at home as it is outside the domestic setting (Food Standards Agency 2011a).

A package of work has been commissioned by FSA to investigate domestic food hygiene practices. This package of work is based on specific recommendations made by the Advisory Committee on the Microbiological Safety of Food (ACMSF) and the Social Science Research

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[4] The FSA Strategy has since been refreshed; for more information please see http://www.food.gov.uk/about-us/publications/busreps/strategicplan/

Committee (SSRC)[5]. Sparked by an increase in the incidence of listeriosis amongst the over 60s, the ACMSF investigated this rise and presented a report on the issue in March 2008[6]. The report highlighted a need for a stronger evidence base regarding the food storage, handling and consumption practices of the over 60s. The SSRC set up a working group in November 2008 to examine these issues in some detail. The resulting report indicated that the evidence base was fragmented therefore the group recommended that the Agency commission a programme of work to include[7]:

- A quantitative assessment of reported behaviours.
  - This is being addressed through the FSA's *Food and You* survey of attitudes, reported behaviours and knowledge of food safety issues. To date, findings from two waves of data have been published, from the 2010 and 2012 surveys (Prior et al. 2011; Prior et al. 2013)[8].
- A comprehensive review of existing evidence about food storage and food handling in the home (Greenstreet Berman 2011)[9].
- A study to examine food-safety behaviours in the home, focusing on 'actual' rather than reported behaviours.

This study was commissioned to address the third of these recommendations and to complement findings from *Food and You* and the evidence review.

A report from the second wave of the *Food and You* (2012) survey was published in 2013 (Prior et al. 2013); the findings build on those of the first survey, conducted in 2010. Findings are based on interviews with 3,231 adults across the UK and cover eating, shopping and cooking habits; awareness of, attitudes to and reported behaviour relating to recommended food safety practices and use of use-by dates; experiences of food poisoning and concerns about food and food production. The 2012 *Food and You* survey findings were also used to derive an index of recommended practice (RP), based on a range of FSA guidance about the 4 Cs (cleaning, cooking, chilling and cross-contamination) and use-by dates. Survey respondents were classified according to the extent that their reported food safety activities were not in line with FSA guidance. The report indicates that the area where people were *least* in line with RP was with regard to the use of use-by dates, with 91% of respondents reporting at least one way in which they did not follow the RP for using use-by dates. Next was chilling food with 80% of respondents reporting at least one way they did not follow the RP with regard to chilling food. People were more likely to report activities in line with RP with regard to cooking and cleaning, with only 31% and 4% respectively reporting any practice not in line with the RP.

The review of published evidence, which was supplemented with interviews with key experts in food safety, found that people's knowledge about recommended practices regarding food safety was relatively low and that there was a weak association between

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[5] The SSRC is an independent Scientific Advisory Committee set up to provide advice and challenge to the Agency on social science matters; further information can be found at: http://ssrc.food.gov.uk
[6] http://www.food.gov.uk/multimedia/pdfs/committee/acmsflisteria.pdf
[7] To read the full report by the SSRC please see:
http://www.food.gov.uk/multimedia/pdfs/committee/acm954ssrcrep.pdf
[8] http://www.food.gov.uk/science/research/ssres/foodandyou/
[9] http://www.food.gov.uk/science/research/ssres/foodsafetyss/x04009/

people's knowledge about food safety and their behaviour (Greenstreet Berman 2011). With regard to older people, the review found that this group were not aware of the link between certain behaviours and the risk of foodborne illness; the review also found that older people consumed 'high risk' foods (meat, fish and poultry) but did not follow RP with regard to following use-by date information on packaging. The review of published evidence concluded that there was limited research which looked at observed rather than reported behaviours, that future studies should seek to do so and that these should include the observation of pregnant women, older people and those with compromised immune systems, since these groups are particularly vulnerable to foodborne illness[10] (Greenstreet Berman 2011).

Rationale for the *Kitchen Life* study

As alluded to in the evidence review (Greenstreet Berman 2011), there are gaps in knowledge and understanding regarding what people *do*, what they *say* about what they do and what they *know* about food safety. Social theorists argue that much of everyday life is mundane and taken-for-granted (Bourdieu 1984; Giddens 1984) and therefore what goes on in the kitchen cannot always be easily recalled or articulated (Wills et al. 2011; O'Connell 2012; Wills 2012). For example, people may not be aware of *how often* they wash their hands or *why* they change their tea towel and these actions may or may not be related to 'food safety' when understood from their perspective. Research that asks individuals to recall specific behaviours generates one type of knowledge and gives the Agency an indicator of whether the UK population complies with its recommendations, but it cannot, by design, go beyond this to examine the context or meaning behind 'why people do what they do' - what are the 'good' reasons for 'poor' practices (Meah In press)? There is a danger, when context and meaning do not inform the evidence base that policy starts to rely on a *deficit* approach by focusing on what people fail to know or do, as seen from a narrow understanding of what is considered *right*. Such a deficit approach has long been critiqued within the public understanding of science literature as being quite limiting (Wynne 1992). Complementing such perspectives through an appreciation of *different* forms of knowledge (*public* knowledge and understanding *as well as scientific* knowledge, for example) is potentially a positive move to bring about effective policy developments.

The rationale for this study of domestic kitchen practices - known as the *Kitchen Life* study - was, therefore, to take an approach that would investigate the meanings and context of everyday kitchen life (Shove et al. 2012). The aim was to focus on examining the mundane, difficult-to-recall, routine aspects of kitchen life and avoid an emphasis simply on individuals and 'what they know about what they do'. We also wanted to avoid looking at the pre-determined activities often thought to influence food safety, such as 'cooking' or 'cleaning'. Indeed, we also started by being open-minded about where a kitchen begins or ends and what kinds of things are conducted in a kitchen. In summary, the focus of the study was to be the domestic kitchen practices of UK households.

Drawing on current theories of social practice[11], *Kitchen Life* represents a move away from a focus on the notion that individuals act on singular, informed or rational choices (Coleman

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[10] The Agency defines vulnerability as being a predisposition to foodborne illness, because of age, pregnancy or having compromised immunity.

[11] We use the terms 'theories of practice', practice(s)-based approach(es) and 'literature on practices' interchangeably throughout the report as there is no single 'theory' about practices.

1990; Scott 2000) that can be thought about and acted on in something of a social vacuum (Halkier and Jensen 2011; Brooks et al. 2013). For example, rational choice approaches would deem that an individual washes their hands (or does not wash their hands) before preparing dinner based on their knowledge about the reasons for hand washing. Their decision to wash or not wash would therefore be based on their level of understanding of the evidence and their attitude towards the risk of complying with or ignoring 'what they know'. This contrasts with a practice-based approach, which sees the washing of hands as part of an overall socially-constructed process, one piece of a jigsaw puzzle, influenced by and intertwined with a range of factors that includes other people (and their knowledge, actions and experience), the resources available, the layout of the kitchen and what else is 'going on' when food is prepared – some of which will not be explicitly 'known' to the individual when they 'decide' to wash their hands as it is simply 'what they do' (Bourdieu 1990).

The turn towards theories of practices to explain social life began to receive academic consideration only in the last 15 years or so, though the theoretical underpinnings go back much further than this (see Halkier and Jensen 2011 for discussion of the chronology of theories of practice). The literature on practices aims to unveil the 'normativity of regulation' (Halkier and Jensen 2011:106) – why, how and when people do what they do. In order to achieve this, a practices approach takes into account different social contexts and does not ignore 'the things' involved, the people who may be present, the resources available, the history, experiences and the meanings that underpin everyday life and that contribute to 'normal' behaviour. With a practice perspective, people are one part of the jigsaw puzzle, or of 'the bigger picture'. Research that takes a practice approach is, therefore, more grounded in 'the everyday' and the complexities of social ('real') life than that which focuses more singularly on individuals and their behaviour. Notable work that has used practice theory has done so to examine food and eating (Halkier and Jensen 2011; Domaneschi 2012), domestic laundry processes and 'doing the dishes' (Pink 2012), car use (Warde 2005), 'DIY' (Watson and Shove 2008), home extensions (Southerton 2007) and climate and behaviour change (Hargreaves 2011; Shove et al. 2012). Such work appreciates that kitchen practices are not fixed or unchangeable (Shove et al. 2012); as people, places, meanings, relationships, things or knowledge, for example, shift, so too can the overall kitchen practice. This, then, is an approach that can help us understand not just when and why practices change, but also why they can remain the same in the face of new or newly acquired knowledge or resources relating to, for example, use-by dates or chopping boards. Knowledge and resources, like people, are just component parts of the jigsaw puzzle and might not be sufficient, alone, to enable a shift in 'what goes on' in the kitchen.

The term 'practices' is used throughout this report to summarise what we are investigating, which includes:

- What people do in the kitchen
- What people say about what they do in the kitchen
- The kitchen itself and its associated things, products, design and resources.

This translates into a set of more detailed research questions, as follows:

- What range of things happen in the kitchen and why?
- Do activities which are usually linked to the kitchen (e.g. food storage) take place elsewhere?
- Who comes into the kitchen? When? Why?
- Who, if anyone, 'controls' or 'owns' the kitchen? Does this vary and if so, when and under what circumstances?
- How do household members account for 'what goes on' in the kitchen? What is their understanding of what they do?
- What products, resources and technologies are used in the kitchen and associated spaces and when/how/why are they used?
- What do people say and do about food safety, cross-contamination, cooking, cleaning, cooling, storing and disposing of food?

The aim of the study was to examine practices in the domestic kitchen to assess whether and how such practices have the potential to influence food safety in the home. We wanted to generate insights into domestic kitchen practices, to help enable the FSA to support UK households to engage more consistently in effective domestic food safety practice.

The objectives of *Kitchen Life* were to examine:

- What constitutes everyday 'kitchen life' in contemporary UK households?
- What relationships exist, and why, between what people do and say and the kitchen space/place?
- What potential pathways exist between practices and food safety within domestic kitchens?
- How can we identify and define the most 'at risk' households in terms of their kitchen practices?[12].
- How, if at all, do households encompassing older and younger people and pregnant women differ?

The remainder of this report is divided into six chapters:

Chapter 2 details the methods and methodological approach taken.

Chapters 3-6 present the findings from the study, organised around four themes which broadly relate to where kitchen life takes place, how, by whom and why.

> **Chapter 3** focuses on the findings relating to the 'boundaries of the kitchen'.

> **Chapter 4** presents findings relating to the 'entanglement of practices'.

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[12] Note: the original objective used the term 'vulnerable' but has been changed to reflect the definitions supplied by the Agency whereby 'vulnerability' relates to a person's pre-disposition to contracting foodborne illness due to age, pregnancy or compromised immunity. Being 'at risk', by the Agency's definition, relates to behaviour which increases a person's susceptibility to foodborne illness and this is considered more appropriate, in terms of what we are able to explore in a qualitative study.

Chapter 5 presents findings that relate to 'encounters' in the kitchen.

Chapter 6 focuses on the findings about 'household logics and principles'.

Chapter 7 discusses the findings and addresses them in relation to the study's objectives and in relation to the space and design of kitchens in the UK.

CHAPTER 2 The methodological approach and methods used

Summary of key points in chapter 2

A qualitative and ethnographic approach using a range of methods was used to investigate, document, analyse and interpret domestic kitchen practices in 20 UK households.

Methods used during the study included a kitchen tour, informal interviews, photographs and photo-elicitation, observation and video observation, diaries and scrapbooks.

The approach taken means that an insight into the 'real lives' of the households in the study is revealed for the benefit of shaping the Agency's thinking about 'what goes on and why' in UK kitchens.

Quality and rigour were built into the methodological approach.

A study that aims to examine kitchen practices needs to draw on an approach that can 'unpack' the complexity of kitchen life. *Kitchen Life* drew on a qualitative methodology to investigate, document, analyse and interpret the lives of others. One style of qualitative research, known variously as participant observation or ethnography, entails prolonged study by the researchers living, as far as is feasible, alongside those whose way of life is to be studied (Hammersley and Atkinson 1995; Tedlock 2003). We adapted this approach to develop a close understanding of social life in the domestic kitchen, to generate insights for the Agency about 'real' kitchens. We built quality and rigour into the overall research process[13], from the way participants were selected, throughout the data collection and documentation stages and through the 'audit trail' created during the analytic phase.

The design for *Kitchen Life* was presented to the University of Hertfordshire Nursing, Midwifery and Social Work research ethics committee in December 2011 and given approval to proceed. All participant and recruitment documentation was subsequently submitted to the committee and approved for use. Before discussing the specific methods used, we first turn to the selection and recruitment of participants. The analytic strategy is then described in detail, along with consideration of obtaining informed consent from participants and the quality assurance and research data management procedures we adopted.

Selection and recruitment of participants

Typical of a qualitative study taking an ethnographic approach, we set out to purposefully recruit households to act as case studies or examples of particular phenomena (Patton 1990); in this study it was the age of participants and whether they were pregnant which were the key selection criteria. Age (under and over 60 years) and pregnancy-status were the main selection criteria because of the Agency's interest in groups thought to be particularly vulnerable to foodborne illness. The focus on practices meant it was the *household* rather than just *individuals* we were interested in studying, as our concern was with the 'whole' of kitchen life. We therefore set out to recruit 20 households to examine the kitchen lives of people aged under 60 years (including some women who were pregnant) and people aged 60 years and older. People aged under 60 years (and who were

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[13] See Spencer et al. for a widely used framework for evaluating the quality of qualitative studies
http://www.civilservice.gov.uk/wp-content/uploads/2011/09/a_quality_framework_tcm6-7314.pdf

not pregnant) were recruited so that we could consider in some depth the diversity of practices in these households as well as those including older people and pregnant women. With an in-depth examination of a small number of households there is a focus on the specific aspects of each 'case' but there is also merit in looking for cross-case (or cross-household) patterns. Therefore in order to ensure that we did not interpret patterns from only a small range of household 'types' we aimed to maximise variation by recruiting households that met other, selected criteria (detailed below) (Patton 1990). This strategy of broadening the range of households also helped to increase the relevance and credibility of the findings (Mays and Pope 2000). Twenty households were sufficient to address the study's objectives and the underlying research questions, whilst maximising the variation across the household types.

In May 2012 we wrote to 800 people randomly selected from the FSA's database of individuals who had taken part in the 2010 *Food and You* survey and who had agreed to being re-contacted about taking part in future research commissioned by the Agency (n=2402). Individuals were sent a letter from the research team, a study information leaflet and a short screening questionnaire with a reply-paid envelope[14]. All letters sent to households in Wales included a Welsh translation of the study documentation. People were asked to indicate their willingness to take part, to supply their contact details and to respond to 8 screening questions[15]. These questions were included so that we could ensure inclusion of as wide a variation as possible within the main categories of under/over 60 years and pregnant/non-pregnant women. The questions were based on the research team's knowledge of the literature about food safety and our experience of other, similar research projects; there are other questions we could have asked, these were simply selected to provide an initial indicator of the diversity of kitchen life.

A total of 148 (18%) questionnaires was returned. Of these, 105 households wished to be considered for the study (although three of these failed to complete the screening aspect of the questionnaire) and 43 declined to participate, with 35 explaining why[16]. The reasons given for declining the request to participate were primarily related to the necessary time commitment, the perceived intrusiveness of the study, or health issues. After selecting a range of households from the possible pool, we emailed or telephoned to check if households were still interested in participating and 20 were successfully recruited as follows:

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[14] See Appendix A

[15] The questions included: who participants lived with (including people's ages and their relationship to the person we wrote to); whether anyone in the household was pregnant; whether anyone received help with cleaning, washing up, preparing food or whether they had meals delivered ('meals on wheels', for example); whether they had any pet/s; any appliances located outside the kitchen; whether they sat and ate regularly in the kitchen; and the type of house they lived in (detached or terraced, for example).

[16] Households were asked to consider returning the questionnaire even if they did not wish to be considered for inclusion in *Kitchen Life* and to give their reasons for this.

- 10 households with people aged under 60 years
    - 2 households with women who were pregnant[17]
- 10 households with people aged 60 years and older
    - 5 households with people aged 60-79 years
    - 5 households with people aged 80-87 years

In terms of variation within the 20 households recruited, this is summarised in Table 1 below:

Table 1. Variation across the sample households

Variable:	No. of households
In employment[a]	9
Couple household	10
Single adult household [b] (female)	6
Single adult household [b] (male)	4
Households with children (aged 2-17 years)	6
Limiting long term health condition[a]	9
Pet/s	9
Sits/eats in the kitchen	6
Some appliances outside the kitchen	8
Has help with domestic tasks	4

[a] Information ascertained after fieldwork commenced
[b] One single (female) and one single (male) household each had another adult relative residing with them at the time of fieldwork; both of these consented to take part in the study.

Four of the dwellings of participating households were detached houses; 8 were semi-detached; 4 terraced; 1 was a bungalow and 3 were flats. The households were located across the UK and included a mix of social and private (including some former local authority stock) housing. Despite the variation achieved across the sample, there were some notable household types who either did not opt in or whom we were unable to recruit (because they had changed their minds about participating once we contacted them, for example). This included student and multiple occupancy households; people from ethnic minority groups; households with significant health or care needs attended to by external agencies and people living in sheltered housing.

Research methods

Whilst there is no standard ethnographic approach there are accepted procedures that are often used. It was important, for example, to conduct the research in the place/s where the activity of interest occurred (in this case, the kitchen or home). It was also important to use a range of methods for collecting data that were appropriate for this setting and to remain flexible 'in the field' to maximise what we could see, hear and experience (Hammersley and

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[17] We aimed to have 3 pregnant women in the sample and although a 3rd household opted to be contacted we were unable to recruit them to take part because of language difficulties and only managing contact with the male of the household. The 20th household recruited was therefore not pregnant but was selected as they had young children.

Atkinson 1995). The focus on kitchen practices required 'making the familiar strange' and also making the 'strange familiar' (Mannay 2010) to find a way to examine phenomena that may otherwise be dismissed as unremarkable to a participant or a researcher (Scott 2009), like feeding a pet, wiping a chopping board or washing meat before cooking, for example. As so many kitchen practices are mundane or taken-for-granted and therefore difficult to make explicit (Bourdieu 1977), we drew on multiple methods to avoid an over reliance on the articulation of thoughts or reasoning (Power 2003; Sweetman 2009; O'Connell 2012; Wills 2012). We used methods to enable the capture of verbal, visual, observational, auditory and written data from within each kitchen and its adjoining spaces, to avoid trying to analyse kitchen practices from 'just' words (Harper 2003) or from 'just' the stories participants wanted to tell.

Whilst others have focused on the 'sayings' produced through everyday practices, through our use of more varied and multiple observational methods, this study could attempt to 'expose' the full complexity of the 'sayings and doings' of kitchen life (Schatzki 1996). This enabled us to move beyond solely using what could be called 'proxy' measures (like interview data) to draw conclusions about what people *do* on the basis of what they *say* they do, and this enabled us to get closer to experience what happens in the kitchen and why (Murcott 2000). This was important in terms of developing a more nuanced understanding about the breadth of what constitutes kitchen practices in UK households.

We used the following techniques and methods as part of the ethnographic approach:

- A kitchen tour and mapping exercise
- Photography and photo-elicitation
- Observation and video-observation
- Informal interviews
- Other techniques for participant engagement, including the use of diaries and scrap books

There was a certain amount of overlap and integration within and between these techniques; illustrations of some of the techniques used can be found in Appendix B.

'Setting the scene': Tours of participants' kitchens

We wanted a way of 'getting to know' participants whilst examining the kitchen and its meaning and place in each household. Whilst the kitchen space might be a room or rooms (or parts of a room) in a house or dwelling and might include cupboards, work surfaces, a sink, oven and other technologies, how individuals inhabited these spaces (when and how a space becomes a place) was of interest within our aim to examine kitchen practices. Other studies of everyday practice have employed what has been called a ''go-along'' technique (Kusenbach 2003; Linderson 2010; Evans 2012; Meah and Jackson In press) as part of an ethnographic approach and this was adapted and used in *Kitchen Life*. Typically a 'go-along' is conducted in the settings participants inhabit. For example, in a study of urban households, Kusenbach chose to spend time with her participants in whatever places they usually went to (Kusenbach 2003). Meah and Jackson (In press) and Evans (2012) also took this approach, accompanying people when they went shopping, at home and in the kitchen, while they were engaged in family life and everyday acts of food preparation and disposal. Linderson (2010) took a slightly different approach, organising to meet participants in a variety of locations to undertake a series of informal interviews. Interviews were, however,

also drawn on by Kusenbach; Evans; and Meah and Jackson, whilst they were conducting the 'go-along'. Some 'go-alongs' have been audio-recorded (Kusenbach 2003) and some also involved videoing participants and taking photographs (Meah and Jackson In press).

In *Kitchen Life* members of participating households led the researchers on a tour of their kitchen at the initial fieldwork visit. The 'go-along' tour helped us to begin to understand the importance of the kitchen as a 'place' in everyday life and this ethnographic technique shaped the way subsequent data were collected for the study. Sketches were often drawn by the researcher and accompanying notes and annotations were made. This involved documenting the whereabouts and positioning of technologies and appliances in the kitchen and other associated areas (a fridge or freezer in a utility room or garage, for example). Each researcher also took extensive photographs of the kitchen layout, work surfaces and visible objects/paraphernalia, and of the contents of kitchen cupboards, drawers, the fridge/freezer and any storage areas where other aspects of foodwork took place which were external to the kitchen. A plan was then drawn by the researcher, showing the layout of technologies and appliances as well as eating areas, doors, sinks, bins, pet feeding areas and so on[18]. The 'go-along' tour proved to be an effective way of building rapport with each household, since it was generally directed by the participants rather than the researcher. As the 'go-along' tour was task-focused this may also have helped to facilitate participants' engagement with the study more easily than if we had asked to 'interview' them at the outset. Children, in particular, were involved, alongside their parent(s), in 'guiding' the researcher around their kitchen space thereby engaging them in the study from the first visit and making it easier to subsequently elicit their views on kitchen life.

Households were given disposable cameras, a notebook and coloured pencils in a 'Kitchen Life wallet' so that they could capture information they thought was relevant between our visits (Ison 2009; Monrouxe 2009). This meant all household members could contribute according to their particular competencies or preferred ways of engaging with the research, and in the time that they had available. Such an approach facilitated the co-production of knowledge between researchers and participants and helped participants to reveal their kitchen life in ways which were meaningful for them (Pink 2004). A US study (Hinck 2004) successfully engaged older people (aged 85-98) with taking photographs using a disposable camera, indicating that age need not be a barrier to collecting data using this method. However, in *Kitchen Life* some older participants had difficulties, due to physical or health problems affecting dexterity, in using the disposable cameras which prevented them from engaging with this method. Most, however, did use the other methods offered to them therefore no one was prevented from taking part because of the technologies used.

Participants were given examples of how they might consider using the notebook, this included keeping a diary of kitchen life; providing a written record of photographs they had taken with the disposable camera or using it as a scrap-book. Mannay (2010) has commented on the use of 'collage' or 'memory books' as a method which not only disrupts a purely narrative driven presentation of the self, but foregrounds participants' cultural resources and technologies, enabling them to create representations of their worlds using pictures, photographs and words from a range of sources, including magazines, newspapers and the internet. Some *Kitchen Life* participants wrote at length in the notebook, either about their everyday life or their feelings on various topics, for example, food labelling, use-

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[18] See the front cover of this report for an example of a kitchen plan.

by dates and dynamics within the household. Others used it as a food diary, to record recipes, or to keep a record of the activities they had photographed or videoed. Through making several return visits and giving participants the freedom to use the resources and equipment as they wished and in 'their own time', we were able to develop a relationship with participants and so elicit ideas, thoughts and narratives which we would not otherwise have had access to (Wills 2012).

Discussing with participants the contents of their notebooks and the photographs they had taken created an opportunity to examine what was important to them in ways which might not be immediately obvious, or captured, via other means. Like Belin (Belin 2005), we found that employing photo-elicitation, a technique whereby the researcher and participant/s talk about photographic images, it was the images themselves rather than the researcher's questions that became the focus of discussions. Photo elicitation can be particularly useful for engaging children, some of whom might otherwise find being interviewed intimidating or boring (O'Connell 2012; Whiting et al. 2012).

The study generated 2200 photographs, of which participants took 300; on average we have 111 photographs for each household.

Observation and video observation

Ethnographers usually spend extended periods observing the phenomena in which they are interested and making extensive fieldnotes about their observations (Hammersley and Atkinson 1995). For this study, as well as observation, each researcher also used video to record everyday kitchen life. Visual and audio-visual methods are a useful way of 'getting at' practices which are difficult to articulate or to convey through methods which rely on language (Sweetman 2009; O'Connell 2012). Video-recording and direct observation extended the possibilities of each of these techniques and overcame some of the limitations of each individual method (Paterson et al. 2003). For example, video recording observations overcame the potential loss of finer level detail which occurs when relying on researchers writing up their fieldnotes after a period of observation (Creswell 2007). Video recording observations allowed us to look back, to replay and to discuss emergent themes and nuances of the researcher-participant-kitchen interaction which might not be seen *in situ*. Conversely, observation in the kitchen informed what to video record.

Determining what, when and who to record /observe/document within each household was an important issue (Power 2003). We did not want to record extensive footage which would be impossible to view or analyse within the confines of the project timetable (Martens 2005) but we wanted to record a range of practices, moments and interactions involving all those within a household (pets as well as people). The 'go-along' tour, observation in the kitchen and talking to participants helped to identify suitable periods for video recording observation (Paterson et al. 2003). This included identifying periods when different household members would be present (singly and in different combinations). In one household, for example, the researcher was present during and after a young child had a daytime nap to film different kitchen practices being performed throughout these periods.

Video recording equipment is, nowadays, so small, unobtrusive and easy to use that it need not 'get between' the participant and the researcher (Paterson et al. 2003). One unanticipated aspect of using this method was that many participants were willing to use

the video recording equipment themselves, in between our visits. We discussed with participants the range of things we were interested in, based on our prior observations and the 'go-along' tour, and we stressed our interest in both the mundane aspects of kitchen life and things that were not necessarily food related. Beyond these instructions, participants made their own decisions about what to record and when. Filming of footage by participants was somewhat different from that filmed by the research team. First, participants could record at any time of the day or week. As a result, we have footage of early morning porridge making and cups of tea; participants in their dressing gowns; late night floor cleaning, dog brushing and shopping being put away, none of which would have been captured by the research team. Participants also chose to narrate their footage or to remain silent (we have evidence of both) and when to turn the camera on and off. This meant, for example, that in some cases food preparation was filmed but the actual 'cooking' of that food was not (and *vice versa* in other cases).

Video footage, whether filmed by the participants or the researchers, is not a taken-for-granted record of everyday life. It is a representation, a version of events (Heath et al. 2010) co-produced by the filmmaker/s and the viewer/s and subject to interpretation by each of these (plus other audiences), as with any other source of data (Gibson 2005). Others have questioned whether using technology to record visual data simply adds a further layer to the analysis and leads researchers to be 'less present' during interactions with participants than if they attend with a notebook and pencil (Travers 2009). We found, however, that in a multi-researcher, multiple method project video recording provided a permanent record of phenomena which could be shared within the research team and with the participants during fieldwork; it could be pored over, repeatedly viewed and reflected upon as the analysis proceeded (O'Connell 2012).

Between 18 minutes and 4 hours of video footage was generated from each study household, with an average of 2 hours per household. Participants recorded between 0-120 minutes of the footage from their household.

Informal interviews

Rather than being conducted as one or more 'standalone' or formal interviews, talking to participants was continuous and informal. Nonetheless, some of the principles of interviewing participants were particularly relevant to our rationale for wanting to hear how people explained, or accounted for (Scott and Lyman 1968), their practices.

Informal interviews were intended to give participants an opportunity to account for events and 'stories' relating to kitchen life and the factors that they believe shaped them over the life course (Czarniawska 2004; Wills et al. 2008; Meah and Watson 2011; Wills et al. 2011). Informal interviews gave both the participating households, and the research team, opportunities to question and 'make sense' of the ways in which practices develop and to reveal some of the embedded factors that shaped these experiences. Talking with participants helped identify 'key moments' when practices, or a participant's *interpretation* of practices, might have undergone a shift or rupture, at transition points during the life course, for example (Polkinghorne 1995; Meah and Watson 2011). Furthermore, informal interviews allowed us to investigate the *performative* aspects associated with kitchen life (Goffman 1959), i.e. how kitchen practices are 'played up' or displayed in a particular way when verbally articulated by participants (Mauthner 1997; Warin et al. 2007; Housley and

Smith 2010; Meah and Jackson In press). At the final fieldwork visit we drew on the 'key' household member's responses from the 2010 *Food and You* survey to elicit further information about some topics. For example, the *Food and You* responses were used to probe on experiences of food poisoning, if this had not previously been raised by participants. The survey responses were also used to probe answers which appeared to be different in the survey from what was observed or reported, some 2-3 years later, during *Kitchen Life* fieldwork.

As the household was the unit of analysis we endeavoured to include everyone in each household in informal interviews at some point during fieldwork. This approach meant that individuals were spoken to alone or with others present, usefully revealing the negotiated and contested nature of some practices and relationships (Valentine 1999; Wills 2012). For example, some participants spoke at length only when their spouse was not present; other couples openly 'bickered' about their kitchen lives in front of the researcher and the researcher's questions led some couples to question each other's practices.

Pilot study

A pilot study was conducted in February and March 2012 to test and refine the study's aims, objectives, approach, methods and analytic strategy. Six households were recruited for this phase, drawing on the research teams' networks[19]. To mirror the design of the main study, the pilot study sample included households with people aged under 60 years of age (n=2); aged 60-79 years (n=1), 80+ (n=2) and pregnant women (n=1).

Study documentation (a letter to participants, a leaflet about the study, a screening questionnaire and the study consent forms[20]) were discussed with each pilot household. In order to gain additional feedback on these research tools, the participant information letters, leaflets and screening questionnaires were sent for comment to the University of Hertfordshire's Public Involvement in Research (PIR) group. Feedback from the pilot study participants, the PIR group and the FSA led to changes being made to the study documentation - some of the language was simplified and the detail condensed to aid clarity and readability, for example.

We tested different types of video recording equipment in the pilot study and decided to use small handheld video recorders with occasional use of larger camcorders. The decision was based on ease of use (for us and participants); the non-intimidating nature of a small video recorder; and the simplicity of recharging and uploading files via a USB port. The disposable cameras we selected were changed prior to the main study because some participants found it difficult to use those we bought for the pilot study.

In the pilot study, we conducted more formal interviews, rather than the informal interviews used in the main study. As others have reported (Kusenbach 2003), formal interviews have a tendency to disrupt participants' usual routines and their flow of everyday life. We found that to undertake formal interviews we sometimes had to conduct interviews outside the kitchen or take participants away from, for example, attending to children or preparing dinner. The interviews therefore became too distinct from the overall

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[19] The team from Newcastle University, who subsequently conducted the ART feasibility study, took part in the *Kitchen Life* pilot study fieldwork.
[20] See Appendix A

ethnographic approach and needed to be more thoroughly integrated so this led us to use informal interviews in the main study. As a result of this and in order to address our underlying research questions, rather than use a specific interview 'schedule' we developed a topic 'guide' to draw on during the time we spent collecting data with each household[21].

During the pilot study we tested the use of microbiological sampling to assess levels of bacteria in participants' kitchens. This did not fit well with the overall ethnographic approach and the microbiological findings contributed little to the qualitative inquiry about practices therefore, as a consequence, this method was dropped from the main study.

We also tested the installation of Activity Recognition and Temperature (ART) devices into the overall study design though due to technical problems data were only collected from two households. As there was insufficient data on which to base a decision about the value of this element, the team responsible for this part of the work, from Newcastle University, were invited to conduct a separate feasibility study of the value and process of installing ART devices, to run parallel with, but separate from, the *Kitchen Life* study. A separate report is being published to report on this feasibility study.

The aims and objectives were revised to take account of the changes made during the pilot study.

The process of collecting data for the main study

Fieldwork was conducted for the main phase of data collection in June-December 2012 by three of the report's authors and a further colleague employed for this specific purpose[22].

It is impossible to know the full extent to which our presence, and the presence of the technologies we took with us (digital recorders; cameras; video cameras; tripods) had an effect on household practices (Paterson et al. 2003). Our presence could have reasonably provoked a change to a person's usual 'presentation of self' (Goffman 1959), warranting a certain level of formality or circumspection, initially at least. Rapport developed with each household during the course of fieldwork meant that we were allowed access to some 'backstage' activities and were not restricted to the 'front stage' (Goffman 1959) of kitchen life. For example, participants said they were happy for us to 'rummage' in their fridge and kitchen cupboards; to ask questions and take photographs/video footage of these areas; and to open doors to other rooms beyond the kitchen. It is impossible to know to what extent these areas were 'tidied' or 'cleaned' prior to our visits though some participants told us they had done so, but usually only the 'front stage' areas were said to have been cleaned or tidied and usually only prior to the first fieldwork visit; any conclusions we draw about the extent that this happened cannot be verified. We therefore must remain aware of the potential impact our presence had on households.

Three to four visits were made to each participating household. Each fieldwork visit lasted from one to four hours. Whilst what we did at each visit (and the total number of visits) varied according to what occurred or was achieved at preceding visits, here we account for and summarise some of the important processes and the approach that was adopted during

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[21] See Appendix C

[22] Wendy Wills, Angela Meah, Angela Dickinson and Jessica Mitchell conducted the fieldwork. All are experienced qualitative researchers with expertise in researching food and eating practices and/or everyday life.

fieldwork. A detailed protocol was developed and followed (see Appendix C). A topic guide was also developed (see Appendix D). The purpose of these documents was to provide the researchers with an overview of what needed to be covered *over the course of the fieldwork*; the order and ways in which we achieved this differed for each household. The topic guide was developed by drawing on the relevant research literature, the experience of the research team, and reflecting on the pilot study. The topics covered included: use of the kitchen (by whom, for what, when); the spatial dynamics of the kitchen (space/design/boundaries); shopping and storage practices; food preparation practices; and 'cleaning' practices. Information was elicited through informal interviews therefore these topics were probed in the course of conversations with different people, at different times, in each household. The topics were therefore often embedded in general 'chatter' about everyday life, often involving lengthy story-telling by some participants and researchers.

Visit 1:

- Discuss study and obtain informed consent
- Discuss 'thank you' voucher/participant incentive
- Conduct kitchen 'go-along' tour, observation and mapping exercise
- Leave *Kitchen Life* wallet with households
- Leave video camera if household willing to film

Visits 2-4

- Observation
- Video-observation
- Informal interviews
- Take away disposable camera/s for processing (at penultimate visit)

Final visit

- Discuss participant-produced photographs and video footage
- Discuss participant use of the *Kitchen Life* notebook
- Ensure all sections from the topic guide have been covered
- Use participant responses to the *Food and You* 2010 survey to elicit further information
- Give household vouchers
- Discuss ART feasibility study and whether household wishes their contact details to be passed to Newcastle University
- Hand out FSA leaflet about food safety

Informed consent

There are a number of issues to consider when asking potential participants to give informed consent, particularly when participants are drawn from potentially vulnerable groups such as children or those who are frail or seriously ill. Appropriate professional guidelines for conducting social research[23] underpinned our approach, coupled with the extensive experience of the research team with regard to conducting research with children

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[23] http://www.britsoc.co.uk/media/27107/StatementofEthicalPractice.pdf and
http://www.britishgerontology.org/ageing-studies/bsg-ethical-guidelines.html

and older people. We took a rights-based approach to informed consent, which foregrounds respect for individuals; ensures harm is not inflicted; and gives people the right to participate in and withdraw from research (Alderson 2004). Rather than viewing consent as a one-off action (through asking participants to sign a consent form, for example) we took the view that obtaining informed consent was a *process* and it was therefore considered throughout the project (Lawton 2001; Dewing 2008). The FSA contributed to refining the study's consent forms.

In addition to study documentation being tested for readability and accessibility by the pilot study participants and the University of Hertfordshire's Public Involvement in Research Group, several children were asked to comment on a child version of the study information leaflet to ensure it 'made sense' to children aged approximately 7-11 years. It is usual in research with children that consideration is given to the *capacity* of an individual child to give their own consent, based on them having *sufficient understanding* of the research and what is expected of them (Wiles et al. 2005; Alderson 2007); this is the procedure followed in *Kitchen Life*.

Children and young people aged 7-17 years in the *Kitchen Life* study households gave their own written consent. Each child or young person read the consent form[24] at the first visit and asked the researcher questions. Three younger children (aged 2-6 years) were not able to provide written consent therefore their parents gave written consent for them to participate. All three younger children, however, decided for themselves when they did or did not wish to participate - by showing the researcher where they ate their dinner, for example, or refusing to be photographed.

Written consent was discussed and obtained from all adults at the first visit[25]. Consent was also obtained from an adult friend and the young nephew of one participant who regularly visited this particular household (the child's mother also gave her consent for her son to participate). When footage or other data were obtained relating to non-resident family members from whom we did not have consent, these data were excluded from the analysis. We were careful not to arrange fieldwork visits when carers or cleaners would be present as involving them in the study raised a number of ethical issues[26].

At each subsequent visit we confirmed whether participants were happy to continue participating in the study and whether they had additional questions about taking part. Others have noted that it is appropriate for researchers to 'get to know' their participants and to decide how to deal with specific issues that arise which may not have been foreseen at the outset (Alderson 2004). This is particularly salient with regard to ethnographic research (Lawton 2001) as the way that fieldwork unfolds cannot be fully determined at the start of the process and the researcher needs to 'think on her feet', particularly if the circumstances of individual participants change during fieldwork. As many households self-filmed video footage, which was not foreseen at the outset, a statement was hand written on to the already signed consent forms and participants were asked if they would initial

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[24] See Appendix E
[25] See Appendix E
[26] For example, whether such individuals could participate in 'work time'; whether we needed to pay them for their time, and the implications which could arise from what they revealed to us about the practices of their clients or employers.

their agreement to us using this footage. One participant, who lived with her daughter, was frail and suffering from a serious illness. Whilst she had capacity to understand what the study was about and gave written consent at the first visit (with the assistance of her daughter), she was too tired to sign to agree to video footage filmed by her daughter (in which she featured) being used. The issue was fully discussed with the participant, however, and she gave her verbal consent; her daughter signed the consent form on her mother's behalf. This was deemed appropriate on this occasion as the woman had met the researcher on previous occasions, had given written consent at the start, gave verbal consent regarding the emergent issue, but was simply unable to write her name or hold a pen at this particular visit (Cameron et al. 2004). These issues were discussed at length by the research team and the incident was duly written up in fieldnotes.

Giving incentives to research participants is sometimes seen as influencing whether an individual takes part in research as well as their level of participation (Wiles et al. 2005; Head 2009). However, we were expecting households to give up a number of hours over several days for the benefit of this research and it was considered appropriate to compensate households for their time. Each household was given £100 in vouchers from a store of their choice. They were informed about this incentive at the outset and the voucher was given at the final visit.

Quality assurance procedures during fieldwork

Providing assurances about the quality of a research study is always important. This is particularly the case when the findings may have practical or policy-relevant implications (Spencer et al. 2003), such as those generated from *Kitchen Life*. Therefore we ensured the 'decision trail' of the fieldwork phase was thoroughly documented from the start (Hinck 2004).

A protocol[27] was developed by the team and followed by each researcher, as discussed earlier in this chapter. The lead author regularly checked that this was being used and any issues which arose were discussed and resolved at regular team meetings. Conducting the pilot study also helped to identify potential issues that might arise during fieldwork and these were addressed before the main period of data collection commenced. These included, for example, taking additional consent forms to each visit in case visitors had taken part in data collection.

All data were recorded using either a digital audio recorder, camera, video recorder or in extensive fieldnotes written by the researcher. There is no standard way of writing fieldnotes in an ethnographic study (Emerson et al. 2011) but we took the approach that the fieldnotes should record 'what happened' as well as our reflections and thoughts about 'what happened'. For these reasons, we also ensured that fieldnotes were written as soon after the fieldwork encounter as was feasible, to facilitate the recall of events. Fieldnotes were kept from the first moment of contact with a household (which was usually by telephone) and were used to record observations about where households were located; the house/dwelling itself; experiences during fieldwork; conversations that took place (especially those not recorded by other means); and reflections on earlier visits and on the

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[27] See Appendix D

data collected. Fieldnotes were typed after each fieldwork visit and ran to an average of 20 pages per household (approx. 10,000 words).

The kitchen 'go-along' tours were audio recorded and recordings were later transcribed and anonymised to remove any identifying information about households. Subsequent visits were usually audio recorded and/or video recorded though some conversations occurred outside of these recordings, during the natural flow of the visit (people coming and going between rooms, for example) and these were recorded in fieldnotes. Some of the audio recordings from visits 2-4 were transcribed; it depended whether conversations were also video recorded and/or written up in fieldnotes.

Analysis

As the overall aim of this study was to investigate, document and interpret domestic kitchen practices, the analytic strategy reflected this aim and was geared towards generating *thick description* (Geertz 1973). In the ethnographic tradition, thick description is often a goal of analysis, to give meaning and context to that which has been observed and studied; that is, to 'flesh out' the interpretation of data to the extent that others can begin to understand phenomena, in this instance, the domestic kitchen practices of UK households. A number of procedures (discussed in more detail later in this chapter) were put in place to rigorously test the analysis and interpretation of the data. At the point that we wrote this report we were satisfied, as a team, that the analysis had reached what is sometimes referred to as data saturation (Glaser and Strauss 1967); that is that no new major themes were being identified from the analysis of individual households or relating to common patterns across the dataset.

Overview of the analytic approach

The analysis was approached from 'the bottom up', with the aim of limiting the imposition of a view of what we might find or look for, as far as possible (Seale 1999). It would be misleading to claim the analysis was truly inductive, however, (i.e. that the analysis was fully data-led) as we could not ignore our knowledge of the relevant literature on practices or the study's research questions and objectives. A practice-based approach does not easily translate into empirical work – social theories are rarely easy to apply - but our approach was to keep an 'open mind' about what we were seeing and reading in the data, within the realms of our research questions (Strauss 1987).

We did not analyse the data only to look for common patterns and data generated by one method (e.g. video) was not privileged over data generated by another (e.g. informal interviews) (Moran-Ellis et al. 2006). Instead, data were used to corroborate, elaborate, contradict and complement other data in order to interpret the meaning of kitchen practices (Brannen 2005). We worked across the data sources, moving from analysis of the *particular* –the specific nature of each household in the study - to the *general* – looking for patterns within and across households (Hammersley and Atkinson 1995). The analysis was therefore more than a sum of its parts.

In summary, the analytic phase involved the following steps:

1. We repeatedly read, viewed, listened to, discussed and compared data from each household.

2. Each researcher wrote extensive analytic notes or 'memos' (Strauss 1987).
3. We identified categories from analysis of the interview transcripts and notes written during fieldwork.
4. All data relating to the identified categories were highlighted in the interview transcripts and fieldwork notes using NVIVO software. A summary of this analysis was then written for each household.
5. We extensively reviewed and discussed all of the video and photographic data.
6. Summaries from analysis of the visual data were written for each household.
7. At this stage we moved from the descriptive level (who did what?) to investigate 'what might explain why that person/s did that?' - identifying and testing four conceptual level themes.
8. Further summaries were written for each household.

The steps above were initially undertaken in the order shown, although most were iterative and returned to repeatedly. In order to illustrate the analytic approach, outputs from some of the steps can be found in Appendix F. The procedures we followed are based on the method of grounded theory (Charmaz 2006) which manages to make transparent the *process* of analysing data. This process is now described in more detail.

Further details of the analytic procedures

Throughout the early phase we repeatedly read, viewed, listened to, discussed and compared the data collected through photography, video, direct observation, informal interviews and the diaries/scrap books people generated. The research questions, below, framed the analysis and the writing of *analytic memos*[28] but, importantly, they did not preclude us from exploring other avenues in the data and did not limit our thinking about what we were seeing or reading. For example, examining data about 'relationships with siblings' was fruitful, in some cases, to examine 'who comes into the kitchen (When? Why?)'.

- What range of things happen in the kitchen and why?
- Do activities that are usually linked to the kitchen (e.g. food storage) take place elsewhere?
- Who comes into the kitchen? When? Why?
- Who, if anyone, 'controls' or 'owns' the kitchen? Does this vary and if so, when and under what circumstances?
- How do households account for 'what goes on' in the kitchen? What is their understanding of what they do?
- What products, resources and technologies are used in the kitchen and associated spaces and when/how/why are they used?
- What do people say and do about food safety, cross-contamination, cooking, cleaning, cooling, storing and disposing of food?

Analytic memos were written throughout the analytic phase; memos did not follow a formal structure, but typically they allowed us to freely question the data and to document themes that were being identified during the analysis (Charmaz 2006). Memos were constantly

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[28] Analytic memos (see Appendix G) took the form of hand written and typed notes, annotations written within transcripts and fieldnotes, the writing up of longer paragraphs of text and the adding of annotations to each other's memos.

compared and read by other members of the team, leading to further analytical reflection and memo writing (Boyatzis 1998).

Drawing on these analytic memos, a *coding frame* was then developed to describe and summarise the initial categories identified. The purpose of coding is to show 'how you select, separate, and sort data' (Charmaz 2006: 943). The coding frame was discussed and refined over a period of weeks. It was important that the categories of the coding frame were not labelled based on judgements or assumptions. We avoided use of labels like 'breakfast', for example, since early morning 'events' involved food preparation (which may or may not called 'breakfast' by participants) as well as non-food related activities (ironing uniforms and caring for pets, for example).

More consideration was then given to the categories of the coding frame (known as *axial coding* in grounded theory), to 'flesh out' what we 'meant' by each category (Strauss 1987; Charmaz 2006). For example, should 'washing up' be seen as part of food-related or non-food related events that happen in the kitchen? The decision was that it was food-related *if* it involved washing items used for the preparation or consumption of food. If a participant talked about *why* they washed up in a certain way, however, without there being observational evidence to accompany the talk, it was coded under the 'values, beliefs' category.

We tested the coding frame using NVIVO (version 9.0) software. NVIVO is a software package for the management of qualitative data. Transcripts and fieldnotes were imported into NVIVO and segments from a selection of documents were initially coded into each category to test if the categories were sufficient to capture 'what was going on and why'. Some revisions were then made to the coding frame in the light of the test phase. We dropped the use of sub-categories, for example, as this was too fine grained and did not have sufficient merit to warrant the substantial amount of extra time needed to code to finer-level sub-categories.

Categories in the finalised coding frame:

Kitchen space and design

> Design, layout, boundaries with other rooms/spaces (now and in the past)

Food-related events that happen in the kitchen

> Including things that happen 'around' the food-related event e.g. washing dishes

Food-related events that happen outside the kitchen

> e.g. shopping; growing vegetables; food storage

Food-related items and appliances stored or located in the kitchen

> Including large items (e.g. fridge and dishwasher) and smaller appliances (e.g. toaster and microwave)

Non-food related events that happen in the kitchen

> e.g. laundry, arts and crafts

Non-food related items and appliances stored or located in the kitchen

> e.g. bicycles, DIY tools

Interactions

> Between people and with animals

Knowledge, attitudes, meanings, values, beliefs and discourses

> Things that were not immediately related to the 'doing' of something i.e. that were not discussed simultaneously with an action occurring

Context/reflections

> Background information about each household

Two research assistants were trained to select (code) data from the transcripts and fieldnotes against the categories of the coding frame. The coded data were subsequently used for ease of reference to a particular category, to get an overview of a category for a specific household or to find relevant, supporting quotes and extracts. This did not replace, however, the research team's in-depth knowledge and familiarity with the dataset as a whole or the focus on households as individual cases. We produced a summary about each household from the coded data, which helped to draw together 'what was happening and why' for each household.

The photographs and video data were not coded using NVIVO as we wished to analyse different elements of the visual data, to take advantage of 'seeing' the multi-dimensional or multi-layered aspects of kitchen life. The visual data helped to reveal the interactions, noises, emotions, facial expressions, talk, performance, physicality and rhythm of the kitchen (Bezemer and Mavers 2011). We extensively viewed, reviewed and discussed the data and wrote analytic memos. This approach worked well with our practice-based focus because, instead of concentrating on looking specifically at or 'writing down' what people said, or their interactions with each other, we could look at both of these constituent parts of the jigsaw, and more besides (Heath et al. 2010). Summaries were written and discussed, to provide an overview of the visual analysis for each household.

The above stages resulted in moving the analysis from the descriptive (who did what?) to the conceptual or explanatory (what might explain why that person/s did that?). Conceptual coding also 'cuts across' data to highlight common themes or patterns (Charmaz 2006). The potential conceptual categories were discussed extensively over a period of time which involved returning to all sources of data for repeated viewing/reading and the writing of further, more detailed, analytic memos for discussion amongst the team. The memos produced by this stage often included visual images (photographs or stills taken from video footage) and quotes from the text-based data (transcripts and fieldnotes).

Conceptual categories identified:

The boundaries of kitchen life

How does the design and layout of a house/kitchen influence kitchen life? How does kitchen life 'flow' to other parts of the house/outside space? How, if at all, do households turn the kitchen *space* into a *place* (i.e. what gives the kitchen 'meaning')?

The entanglement of kitchen practices

Where do practices 'begin' or 'end'? How do actions/events link together and why?

Encounters in the kitchen

Who has contact with whom in the kitchen? Who has influence or responsibility? How does this shape kitchen life? What processes of negotiation, conflict and compromise can we see?

Household logics and principles

Why do people do what they do, at different times and in different contexts? What shapes these logics and principles? How set are these logics and principles?

The final phase of analysis involved the writing of two further summaries for each household. One summary was based on the descriptive coding and one on the conceptual analysis (see Appendix F). These acted as aide-memoires for the research team and also helped to maintain the specificity and 'wholeness' of each household.

Quality assurance procedures during the analytic phase

Our aim was to make the analytic phase both transparent and rigorous in order to increase the validity and credibility of the findings. To ensure clarity in the documentation process we undertook a number of actions and steps and these are explained in the following section.

All four report authors were actively and extensively involved throughout the project and in particular during the analytic phase. All fieldnotes and analytic memos were read and critically discussed by several members of the team and all were involved in contributing to the development of the coding frame which was frequently and rigorously discussed and amended as analysis progressed. This type of team reflexivity contributes to rigour within qualitative research (Barry et al. 1999). There was also an advantage in having researchers who had not collected data for a specific household conducting analysis for that household (in addition to the researcher who had collected the data). The interpretations of each researcher were sometimes different, with each person bringing their particular expertise and experience to bear when exploring the data. Each individual researcher's assumptions, language and judgements about, for example, 'cleanliness', the place of pets in the kitchen or the social class of participants were questioned and discussed, strengthening the analytic memos written during the process as they had been through a rigorous system of checking for internal validity. This inherent system of checking and critiquing was not designed to promote consensus amongst the team about the data, but was a way of more deeply interrogating the data and exploring alternative explanations (Barbour 2001).

As all data and analytic memos were stored electronically on a shared, secure, drive this meant that the lead author could regularly and repeatedly check the 'analytic trail' (Mays and Pope 2000) for completeness and coherence as the analysis proceeded.

Research data management

From the outset we had a clear research data management (RDM) protocol, developed with the FSA and refined according to the requirements of the Data Protection Act (1998) and

University of Hertfordshire regulations and resources. A project specific secure drive was set up to which only the research team had access. The drive was backed up centrally each day. When data needed to be worked with off the secure drive they were transferred onto an encrypted external hard drive for temporary use.

All data on other electronic devices (cameras, video cameras and digital audio recorders) were uploaded to the project's secure drive as soon as was feasible following fieldwork and then deleted from the devices. We developed a file labelling convention to ensure that data 'housekeeping' was in order from the start. Digital audio recordings were sent securely between the transcription agency and the research team. Transcripts were anonymised on receipt, to protect the identity of each household (names and places were changed, for example).

All staff involved with the project, including the research team, casual staff and administrators, received full and regular training on RDM and each signed a confidentiality agreement relating to RDM. Staff at the transcription agency also signed a confidentiality agreement specific to the study.

Whilst we support the need to make publically-funded data available for other researchers to analyse, the nature of much of the *Kitchen Life* data makes this extremely challenging – we are unable to anonymise the video data or photographs, for example. For this reason only anonymised transcripts from the informal interviews will be deposited with the UK Data Service (the national archive), to make these available for future analysis.

Presentation of data in subsequent chapters

The next four chapters present findings based around the key themes or categories identified from the data; these themes broadly relate to where kitchen life takes place, how, by whom and why focusing on 'the boundaries of the kitchen'; 'the entanglement of practices'; 'encounters in the kitchen'; and 'household logics and principles'. When people or households are referred to in the following chapters this relates to those people and households who took part in the study. The findings chapters draw extensively on examples from the data collected and analysed to illustrate the points being made. The reader is reminded that the findings are intended to generate insights about the study households to help the FSA to reduce the burden of foodborne illness.

Photographs, along with still images taken from video footage, plus extracts from informal interview transcripts, are used to 'bring alive' the findings in the next four chapters; boxes are used to present mini case-studies on each theme. We present data across the findings chapters from all 20 of the participating households though, inevitably, some are presented in more depth than others. In order to protect the identity of participating households, all names have been changed and other identifying information (place names, for example) has been removed. In addition, we have honoured our duty of care to protect the identity of individual households by avoiding presenting 'too much' data, which could be overly revealing or intrusive (Muir and Mason 2012). Participants own words are presented in double speech marks using an italic font (e.g. "*italics").* Households are identified as being aged 60-79 or 80+. If no age is given it means the household is categorised as being under 60 years. The precise ages of children are not given in order to further protect the identity of the household. Appendix H summarises the pseudonyms and category of each household (by age and pregnancy status).

CHAPTER 3 The boundaries of the kitchen

Summary of key points in Chapter 3

The kitchen has meanings which extend far beyond food-related activities.

Foodwork was not confined to the kitchen in study households – it took place in other internal and external spaces within participant's homes.

The boundaries between the kitchen/other spaces and food/non-food activities were therefore *blurred* which could have implications for food safety.

Kitchens were sometimes inefficient in terms of design, size and layout – this was particularly so for participants living in social housing and for study households with very young children and older adults.

Smaller kitchens were sometimes advantageous for households in the study with older people with additional health, mobility or care needs.

Perhaps contrary to the way it is characterised in advertising, popular social commentary and policy, our data revealed that the kitchen is not a neatly bounded space or room reserved exclusively for practices relating to food preparation and consumption. Bordering with external spaces, such as yards and gardens, as well as other living spaces within the home, including dining and living rooms, utility rooms, bathrooms and toilets, the kitchen was a space in which different aspects of domestic life took place: laundry, cleaning, child care, pet care, social life, school and office work, arts and craft activities, music practice, reading, gardening and bicycle repairs. Indeed, the kitchen was a space in which objects or appliances were routinely found that might be deemed 'out of place' in a food-focused view of the kitchen. These included fixed items such as washing machines, dryers, boilers and utility meters, along with others which were moveable, including pets, plants, bins, items for recycling, coats, mail, magazines, laptops, newspapers, bags, keys and phones. The presence of items such as coats, shoes, lunchboxes, bags, keys and mobile phones pointed toward the kitchen as a 'gateway' or 'hub' into the home; a first – or last – port of call on entering or leaving the house.

The boundaries of the kitchen space and the way it was designed presented both constraints and opportunities for study households. The way that they negotiated these, in order to undertake the myriad of things they wished to do, represented the way that the boundaries were blurred between the kitchen as a room and the kitchen having meaning as the hub of the home.

Space and design: constraints and opportunities
The kitchens in our sample varied in size and shape: some were very compact and the opening and closing of cupboard and refrigerator doors to photograph their contents sometimes proved quite challenging even with only one participant and the researcher in the space. Others were much larger, comfortably accommodating several people during the same exercise. While participants were sometimes content with their kitchens, others

reflected upon spatial constraints which, they felt, inhibited what they could do. For example, Rachel Jenner expressed frustration at the lack of worktop space:

> "…it makes you feel kind of, it's quite claustrophobic in some respects and there's no place for everything at the same time 'cos there's always something out…".

Video footage recorded by the Jenner family highlighted how challenging this might be on those occasions when attempts were made to involve the Jenners' two young sons in baking. In the absence of a table, the two children accessed the narrow worktop where the activity took place by standing on a single stool and could sometimes be seen trying to sit on the worktop.

Geoffrey Smith, in his 80s, was one of the participants who reported that his small kitchen was ideal for him as it meant that everything was within easy reach. Unlike Helen Benn (Box 3.1), he had no outside assistance with cleaning and cooked with fresh, raw ingredients on a daily basis, often *"inventing"* his own dishes. Another participant, Julia Jacobs was recovering from a serious illness and reported that the community physiotherapist saw the small size of her kitchen as advantageous during her rehabilitation (Box 3.2).

Box 3.1 Helen Benn (aged 80+)

Helen moved to her current home after the death of her husband, 18 years ago. Although she has cleaners who visited once a fortnight, she has no other outside help. She continued to drive and did her own shopping but also had frozen meals delivered from a specialist provider. These were stored in her freezer, which was located in the garage and accessed via an interior door in the house. She cooked these in the oven from frozen in the evening. Helen reported that when her family came to stay every couple of months, she would cook a joint of meat and prepare fresh vegetables. This, however, was something which she said she found tiring. She explained that if she could, she would not have a cupboard under the sink and would, instead, use the space to keep a stool which would enable her to sit by the sink, with space for her knees, when she needed to.

She explained: *"If I could tuck my knees under the sink… and sit on the stool… I could then prepare vegetables and food and things… it's an awful job to stand there and sort of lean on*

the sink". While Helen found the layout of her kitchen problematic, she said the size of the space was convenient to her needs.

She explained that for her, a smaller kitchen was preferable and that additions such as kitchen 'islands' would present an *"obstruction"*. Specifically, she said: "…*the larger the kitchen the more work in keeping it clean and hygienic. There was a time when I had a large square kitchen, but in old age I'm very happy to have said goodbye to it and have a small space with everything at arm's length. As far as a kitchen diner is concerned, no thank you, I like my meals in peace and quiet in the dining room….The less time spent in the kitchen the better"*

While some participants, such as Helen Benn, expressed reluctance at initiating design alterations, others had spent significant amounts of time and money in redesigning their kitchens to meet their specific needs and desires. Andy and Ann Spencer, for example, spent two years planning an ergonomic space which both limited extraneous movements and enabled them to feel good about spending time in their kitchen. This couple drew on their professional backgrounds to inform the design of the kitchen: *"It was a nice mix between the laboratory and the ergonomics, which I brought to the mix"* said Ann Spencer. Moreover, the removal of partition walls and doors had, they agreed, revitalised their relationship as a family, since it meant that the 'cook' was no longer confined to the kitchen and that meals were not consumed off trays in front of the television. However, while there was a dining table in this new, open-plan space, their teenage son, Edward, continued to eat his meals in the living room; the revitalisation of the kitchen for this household had not ensured that all three family members spent time together.

Box 3.2 Julia Jacobs (Aged 60-79 years)

Julia was married and had lived in her flat for several decades. The flat has two kitchens on different floors. She designed the main kitchen herself and built some of the units. It was a very small space, which Julia reported dissatisfaction with and suggested that she would like to move to a bigger property. It was filled from floor to ceiling, and there was overspill into
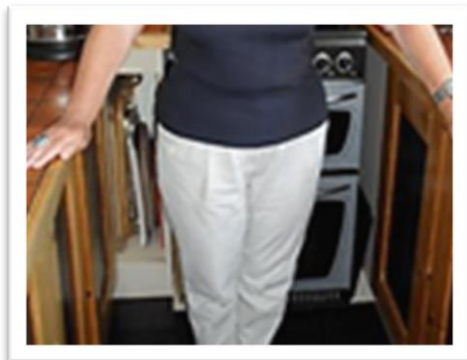
other rooms in the flat, including the second kitchen. The main kitchen was narrow and Julia could stand in the middle and reach the worktops on either side (see picture, left). However, she acknowledged that in the period immediately following the onset of a life-changing illness, the size of her kitchen proved beneficial and the community physiotherapist who assessed the space *"thought that it actually was very good because I could just stand here, you know, fill the kettle, put the kettle, they want to see you make a cup of coffee or a cup of tea or something. And the advantage with a kitchen like this, you've got something to hold onto, and that's what I found tricky when I was first getting, trying to get my balance back".*

In another household, replacing a dirty and *"not loved"* kitchen was the first priority of Claire Thorpe (who was pregnant during fieldwork) when she bought her house. That the kitchen could be a space which had meanings beyond food was highlighted particularly in families with children, and through older participants whose families had long since left home. In such cases, the kitchen table facilitated spending time spent together as a family, not only through the sharing of meals, but also as a place where family members could work, study or simply read the papers while someone else was occupied with food preparation. The kitchen was also observed to be a place for younger children to undertake homework under the supervision of a parent who was simultaneously preparing food, as was directly observed in both the Green and Thorpe households. Hannah Green, for example, was observed standing at the worktop writing out 'spellings' that her mother,

Bernie, tested her on while waiting for something to cook. When planning her new kitchen, Claire Thorpe specifically envisaged having a television and somewhere to sit, where she and son, Sam, could spend time together:

> *"I just thought it'd be a really nice place to do things together and I thought I could be cooking, maybe watching the news, just quietly, while he's maybe doing something at the table, or I'm stuck in the kitchen cooking and can watch the news, or..."*

Marion and Bill Scargill (aged 80+) had – with the help of their son - redesigned and replaced their kitchen 25 years ago. While they had made some minor changes since then, such as the installation of a dishwasher, the kitchen remained largely unchanged. Marion felt this was due to the quality of the appliances and units she had selected, but also she had found the process of replacing the kitchen very disruptive as *"it is the heart of the house really isn't it?"* Vera and Bob Jones (aged 60-79 years) initially indicated that they had done nothing – beyond replacing the unit doors - to their kitchen since they moved in over 20 years ago. It subsequently emerged that some significant alterations had been made, including the addition of an extra wall unit, replacing a damaged worktop and swapping the location of the fridge and washing machine. While the kitchen was small, Vera said:

> *"I'm happy with it as it is, I can work around the way I am... If I had anything different I might feel uncomfortable or it might not look right".*

While a number of households in the study were able to fulfil their design aspirations – albeit, in some cases, within a limited budget – others had a more limited capacity to affect the changes they desired. Participants who lived in social housing or former local authority housing stock, for example, were particularly likely to express dissatisfaction with the layout of their kitchens. Carol Stockwell complained that it was *"totally diabolical"* to locate the bathroom adjacent to the kitchen, while Fiona Gilmour, whose frail mother lived with her, said that it was *"absolutely dreadful"* that the cooker had been positioned perpendicular to the sink, which was particularly dangerous to her mother who held onto the surfaces for stability as she moved around the kitchen to do the washing up. In both these households, limited resources and other pressures (i.e. Fiona Gilmour caring for her seriously ill mother) were contributing factors in prohibiting their capacity to redesign the layout more appropriately.

The blurring of spatial boundaries

Acknowledging that the kitchen is a space with multiple meanings for study inhabitants which may, or may not, be restricted to foodwork, facilitates an awareness both of the complexity of the encounters and practices which took place there, as well as the ways in which the boundaries of the study kitchens might be seen as *blurred*. Some kitchens in the study had open plan designs which connected with dining, living or utility areas or conservatories; both adult and child participants brought things into the kitchen from other parts of the house or outside space; and cats and dogs moved between the kitchen and other rooms in the home. As this kind blurring incorporated both outdoor as well as indoor spaces it could have implications for how issues of food safety and cross-contamination can be understood. For example, in some of the study households, lack of available storage space meant that participants stored items such as drinks, tinned and dried goods and vegetables in under-stairs cupboards, the garage, utility rooms, bedrooms, a downstairs

shower cubicle or even a relative's home. It was not uncommon for larger appliances, such as fridges and freezers, to be located in adjacent rooms, or a garage, or for particular aspects of foodwork to take place in other parts of participant's homes. Perhaps inconsistent with the image of individuals often represented in public discourses of culinary 'deskilling' or ignorance regarding where food comes from, participants grew fruit and vegetables in their gardens or allotments or picked berries in local green spaces; one household also kept chickens in the garden and another kept bees and collected honey. These activities illustrate fluidity in what constituted 'foodwork' – it could involve producing food as well as 'cooking' it – as well as the spatial dynamics in which it took place – including gardens and airing cupboards. Indeed, while the preparation of a meal - for some participants - sometimes involved the assembly of ingredients cooked from frozen, for others, it could involve the preparation of fresh ingredients grown in their own garden which had been washed, blanched, frozen or preserved and accompanied with home-baked bread, such was the variation within the study households. With this fluidity, soil and other 'matter' were therefore brought into the kitchen from the garden, while food might have been exposed to a range of other non-food related contaminants outside of the kitchen, for example in under-stairs cupboards, utility rooms or even in the upstairs airing cupboard where one participant proofed his bread dough.

Similarly, there was evidence of a range of non-food related items or practices within each kitchen we studied which highlighted how the meanings of the kitchen as a place for food preparation and consumption had been extended among participants. For example, for study households with pets, aspects of their care, such as feeding and grooming, took place within the kitchen, while a goldfish and gerbil permanently resided in the kitchens of two households with children (see box 3.3).

Box 3.3 Lucy the goldfish; the Green household

The Green household consisted of a couple and their primary-school aged daughter, Hannah. Lucy the goldfish lived in a bowl that sat close to the kitchen sink; the bowl was regularly washed by the family in this sink and this activity was filmed by Hannah. Lucy was removed from the bowl using a tea-strainer and was placed in a plastic measuring jug. The participants reported that these were used exclusively for this activity. As the bowl was emptied, Hannah exclaimed: *"the water is going everywhere!"* Video footage shows an ornament from the bowl on the drainer (see picture, right), while Bernie, Hannah's mother, rinsed the gravel from the bowl in a colander. During subsequent visits, the same colander appeared to be used to rinse salad leaves.

Further blurring the boundaries between indoors/outdoors and what might have previously been considered - within policy terms - as being 'non-kitchen' or 'out-of-place' activities, were those participants who included local wildlife among the animals to which leftovers were fed. Leah Osman (aged 69-79 years), for example, cut up animal fat and bones in her kitchen, to feed to wild birds and foxes. Likewise, Bill Scargill (aged 80+) described the kitchen as a *"bird-hide"*. In a note that he wrote on his computer (to give to the researcher) he described how he used the food processor to prepare a mixture of chopped nuts, lard and biscuits for the wild birds in the garden every five days.

In other households, participants reported 'bringing the garden in'. Geoffrey Smith, and also Leah Osman, described using either the sink area or worktop as a space in which to re-pot plants, sometimes using everyday cutlery, a practice frowned upon by Leah Osman's husband, Hakan. Geoffrey Smith acknowledged that garden-related kitchen work was perhaps not something that he should admit to the researchers, *"I don't know whether this is something I should tell you or not…"* Further examples of the blurring of boundaries between in/outdoors were observed through the presence of bicycles in kitchens. In the Gilmour household, the kitchen was where Fiona's bicycle was permanently stored.

The kitchen 'go-along' tours, completed during the first visit with each household, revealed a range of non-food items which were routinely stored in participants' kitchens. These ranged from medications (sometimes stored in the fridge) through to bags and purses/wallets, portable electronic devices – such as mobile phones, tablet devices, laptops and their leads, chargers – keys, toys, iron/ing and stationary. Helen Benn kept manure, bulbs and garden shoes on the kitchen worktop and secateurs in a bread bin that she used as an 'office', while other participants said things such as: *"And don't ask me why there's glue in there!"* (Claire Thorpe) and *"I don't know why I put* [mobile phone boxes] *in there, it's just habit"* (Sue Heely). In both these examples, the comments were unsolicited, perhaps indicating participants' awareness that the kitchen is often conceptualised as a place for foodwork and nothing else. Other non-food activities which took place in the kitchen of the study households included routine bicycle maintenance by Charles May and musical instrument practice by Sam Thorpe. The kitchen was the only room in the house in which Sam could practice without disturbing the neighbours' young baby. Jim and Shirley North's kitchen was a real hub of activity and they recorded a variety of non-food action during the seven-day period in which a video recorder was left with them, these included kitchen maintenance, arts and craft activities, drinking coffee and reading the papers while taking a break from their morning activities (Box 3.4).

Box 3.4 Jim and Shirley North (aged 60-79 years)

Now retired, Jim's previous occupation incorporated practical and creative elements and skills. This was reflected in some of the activities he recorded. For example, he filmed himself repairing a damaged tile on the splash-back behind the sink. Newspaper was laid on the worktop, along with tiles, adhesive and cloths (see photo, below left). Jim had taken up watercolour painting since retiring and, in another piece of footage, demonstrated how he soaked the paper in the sink to stretch it before fixing it to a board with masking tape – something that he did at the kitchen table. Shirley also used the kitchen table for craft activities (see picture, below right). Jim filmed her placing a Perspex sheet on the table and then using a sharp rotary cutter to cut fabric which she will use to make cushion covers.

Conclusion

These findings point towards a conceptual slippage between popular understandings of the kitchen as place in which food is prepared and the actual meanings that it has for participants in the course of their everyday lives. Both boundaries and meanings became blurred when we took into account the range of non-food related items found, or events which took place, in the kitchen as well as the food-related activities which took place outside of its physical boundaries; all of which has implications for the way that participants routinely negotiated matters that might relate to 'food safety' - the feeding or care of a pet, for example, or re-potting plants on a worktop. While this chapter has dealt with where kitchen life takes place, the following chapters focus on the how, who and why.

CHAPTER 4 The entanglement of kitchen practices

Summary of key points in Chapter 4

Food-related and non-food related elements of kitchen practice were seamlessly entangled in study households – incorporating multiple actions, things, people and places.

Practices flowed, seemingly without conscious thought.

Many elements of a practice were unevenly carried out – what household's in the study reported did not always correspond with what was observed and what households were observed doing was not always consistent.

Pets were often fully integrated as members of a household – their care was not necessarily separated from other practices.

Practices were not fixed – they shifted according to changes in household circumstances; this often entailed changes in knowledge, values, relationships and resources.

In thinking about how to analyse the data, we soon realised that it was neither appropriate nor helpful to think of what took place in the kitchen as discrete events such as preparing an 'evening meal', 'lunch' or 'washing dishes' - events with an identifiable beginning and ending, conceptualised in neat and 'known' ways. Researcher-recorded observations of household practices were particularly useful in unveiling the extent to which the things that occurred in the kitchen formed a complexity of practices which were entangled; that flowed and unfolded almost as if without thought. As practices flowed so seamlessly, they appeared to be 'performed', in a manner that is 'unconscious'.

Participant-recorded footage was often recorded in short segments, with the camera being turned off and back on once it had been repositioned or some other, unknown, activity had taken place. The researcher observations, however, captured more of the minutiae of what happened 'in between', including people moving into and out of the kitchen; and the kinds of things that took place while waiting for the kettle to boil or a sink to fill with water. Acknowledging that these events were 'interrupted' by the presence of a researcher either asking questions or engaging them in general chatter, practices were nonetheless undertaken and accomplished. But what constitutes a 'practice'? Was it simply the production of a meal and its component parts, or was it also preparing a partner's packed lunch, emptying the kitchen bin, helping a child with their homework, listening to music, making a decision about whether an item is edible (which may or may not involve looking at the food label) supervising children in another room, feeding a pet, 'cleaning', receiving a phone-call or making a drink? This kind of complexity was particularly visible in the study households with pets and those with younger children. The Jenner household had both children and pets and researcher-collected video data made visible the extent to which the seemingly separate activities of childcare, pet-care, food preparation and kitchen management were entangled during the flow of one evening's 'action' (Box 4.1).

Box 4.1 The Jenner Household

This household consisted of Rachel and Stuart and their two young sons, Billy and Jack. The family had two dogs that slept in the kitchen. Rachel was on leave from work at the time of data collection and so was at home during the day. Stuart leaves for work early and arrives home around 7pm. A researcher observed the activities that took place during an 'evening event' which included, but was not exclusive to, food preparation. The children were watching television in the living room while Rachel went about preparing a lasagne; onions were frying in a pan while she chats to the researcher. It appears that the dogs are either outside or in the utility room and can be heard whining. Rachel went out to them, gave them a treat, patted them on the head, shut the door and returned to the cooker.

Using her hands Rachel transferred the minced meat from its packaging to the frying pan. The empty packaging was then taken over to the peddle bin, pushed down inside and the bin liner subsequently rearranged. Rachel moved to the sink and washed her hands using hand-soap – a process which took 15 seconds. She tells the researcher that she had not realised that the soap had antibacterial properties but: *"I'm not fussed about the antibacterial thing"*.
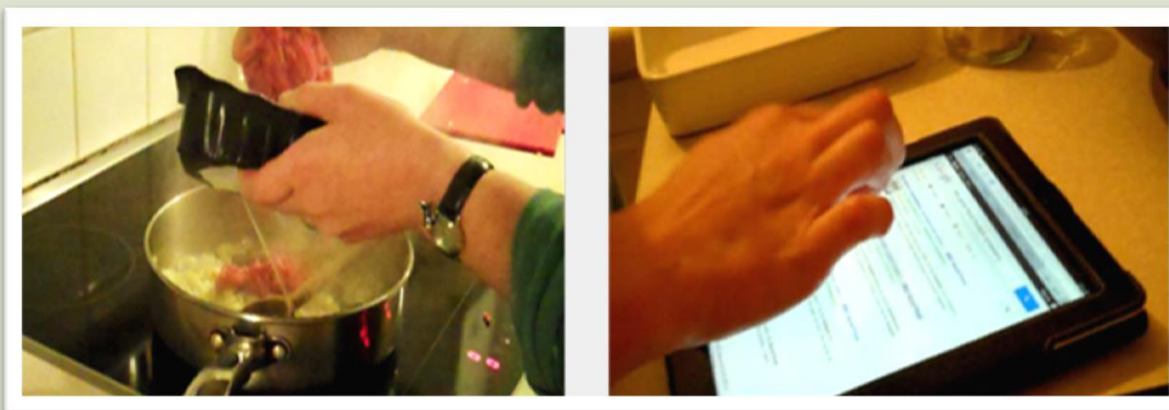
While the meat for the lasagne was browning, Rachel filled the sink with hot water and put her colour coded chopping boards in to soak. A range of other activities followed and, eventually, weighing scales were placed on the worktop and Rachel opened a bag of defrosting rhubarb – produce from the garden. She opened up her electronic tablet device and searched for a recipe, then weighed out the rhubarb, dropped a piece onto the floor and then replaced it on the scales; she rinsed her hands with water and weighed out ingredients to make a crumble topping. While all this was going on, she let the dogs in, pets them and dealt with an inquiry from Billy, who also entered the kitchen. Rachel sliced strawberries to go into the fruit crumble while a dog sat, expectantly, by her feet. She dried up items from the draining board while the lasagne cooked. And so it went on.

These data made visible the ways in which food practices were tangled up with those which were not directly related to food, or bounded by the kitchen; they had no clear beginning and ending. In the observation, above, drying up was a task which was undertaken in the gap while waiting for the lasagne to cook. That the liner had slipped inside the bin was only noticed when Rachel went to the bin with the meat packaging so she duly rearranged it. Her comforting the dog whilst she made the lasagne was part of kitchen life, yet neither this, nor

the rearrangement of the bin liner were 'cooking' or 'cleaning' and cannot be considered as discrete 'events'.

For working households, distinctions could be made between what happened on a work or school day and what happened at the weekend. Making packed lunches (for adults to take to work or children to take to school) were one component part of the complex of practices which contributed to what might occur in (or outside) the kitchen before going to work, which could also include pet care and cleaning up from the night before, as well as other preparations for work. In one household, the family's cat made his presence felt, leading to an encounter embedded within a range of practices surrounding Carol Stockwell's activity in the kitchen one morning (Box 4.2).

Box 4.2 The Stockwell household

Carol lived with her teenage children, Lee and Gemma and their cat, Toby. Although the kitchen was quite large, every available space was in use. Carol commented: *"there's so much and so little space. There's always something in the way".* While responsibilities were allocated to individuals within the kitchen, Carol reported frustration at the teenagers' failure to clear up after they had prepared food while she is out at work in the evening; there was evidence of tension in the household over this.

One morning Carol films herself, still wearing her pyjamas, beginning her day in the kitchen. She complained to the camera that although she cleaned the kitchen before she went to work the previous afternoon, Lee and Gemma had left the sink and worktops full of dirty
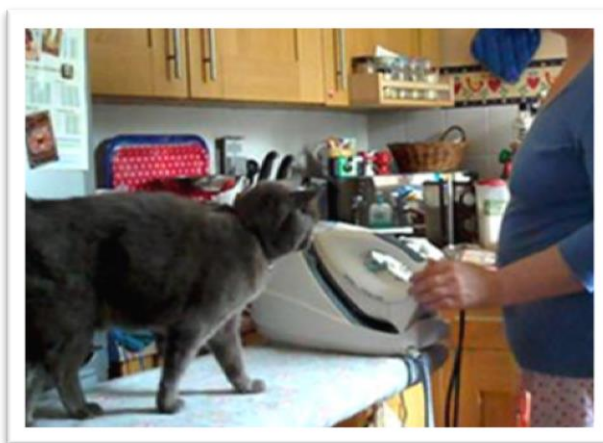
dishes and had not soaked tins that are to be recycled. As she washed up, the cat can be heard meowing. The camera was switched off and, minutes later, was turned on again having been repositioned. Carol explains that she is making beans on toast. She opens a tin of beans, poured half into a pan and put the uncovered tin into the fridge and then wipes her hands on her pyjama bottoms.

The ironing board was in front of the fridge, where it was reported (and was observed) to be permanently positioned.

The cat jumps onto it and sniffs Carol's hand which is resting on the iron (see video still, above left). She acknowledges that he wants feeding, picks up his dish from the floor and places it on the worktop next to the kettle. She empties a sachet of food into the bowl, puts it back onto the floor and then returns to the cooker. Again, she brushes her hand on her pyjama bottoms and, while waiting for the toast to brown, wipes something on the worktop with her finger. After putting her food on a plate, she washs the pan (this was heard, but not seen). Shortly afterwards, in another brief piece of footage, Carol filmed herself removing some chicken breasts from the freezer, explaining that these will be cooked in a curry for *"tea tonight".*

In the example in Box 4.2, the morning event included an indirect encounter with the teenage children – acknowledged via Carol's narration of what she was doing – as she dealt with overspill from food events the previous day (that Carol was not involved in) and a direct encounter with her cat. He made his presence felt by sniffing her hand and she responded to his demand for food, a process which involved her moving his unwashed dish from the floor to the worktop and back to the floor. It also included interactions with food objects and appliances – the tin of beans, the fridge, bread, toaster, pan, cooker, plate, freezer, chicken and so on – washing items, brushing her hands on her pyjama bottoms, wiping something off a work surface with her finger, as well as thinking ahead to a food event later in the day. These activities flowed into each other and were therefore performed in an unconscious way. Perhaps Carol felt that she could not prepare food in a messy kitchen, or required the use of a pan which was dirty and she therefore needed to wash it before use. Likewise, the cat was fed and something wiped off the worktop while she waited for her own breakfast to cook. Washing up, feeding the cat and making breakfast were not *separate* events, but interconnected and relational to each other.

Uneven and shifting practices

Specific elements of a practice, for example those which included cooking, food storage or cleaning, were not fixed or set, but shifted in relation to a range of factors. In the study households this included circumstances changing due to events like pregnancy, illness or people spending more time at home (due to changes in employment patterns, for example). Our data revealed how practices, were, in the face of such circumstances, 'un-entangled' then 're-entangled' to accommodate new situations, knowledge or beliefs and subsequent changes to relationships and values. Sometimes, however, such shifts highlighted the uneven nature of practices – revealed through differences in reported and observed actions as well as through inconsistently performed activities.

For example, in the Gilmour household, Fiona's mother, Meg, had a serious illness that had left her with a compromised immune system. Fiona was prompted, she reported, to change some of her practices which involved cleaning to ameliorate her anxieties and new, or changed, beliefs and knowledge. These concerned the risk to her mother from germs and from 'trip hazards' from food debris on the kitchen floor. However, as data from this household illustrates (see Box 4.3), the shifts reported in values, knowledge and beliefs were sometimes inconsistently or unevenly revealed through what Fiona was observed doing (see box 4.3).

Box 4.3 The Gilmour household

Meg (aged 80+) lived with her daughter, Fiona, and their dog, Dotty. Meg had a serious illness and Fiona had given up work to be her full-time carer. Meg's illness had led to an increased awareness about hygiene and Fiona was observed spraying the worktop with a multi-action antibacterial spray before and after food preparation and wiping the surface with a piece of kitchen roll. The spray and kitchen roll were also used to clean the glass chopping board prior to its use. For Fiona, wooden chopping boards are *"terrible… you can imagine what's lurking in those"*.

Since someone pointed out to Fiona that tea-towels harbour germs, dishes were now left to air dry, or kitchen roll was used to dry certain items. The cutlery drainer was something that had been dispensed with and replaced with a plastic measuring jug that, Fiona said, was

rinsed *"every single time"* prior to washing up. This was perceived to be more hygienic than a drainer with 'nooks and crannies' where germs can lurk.
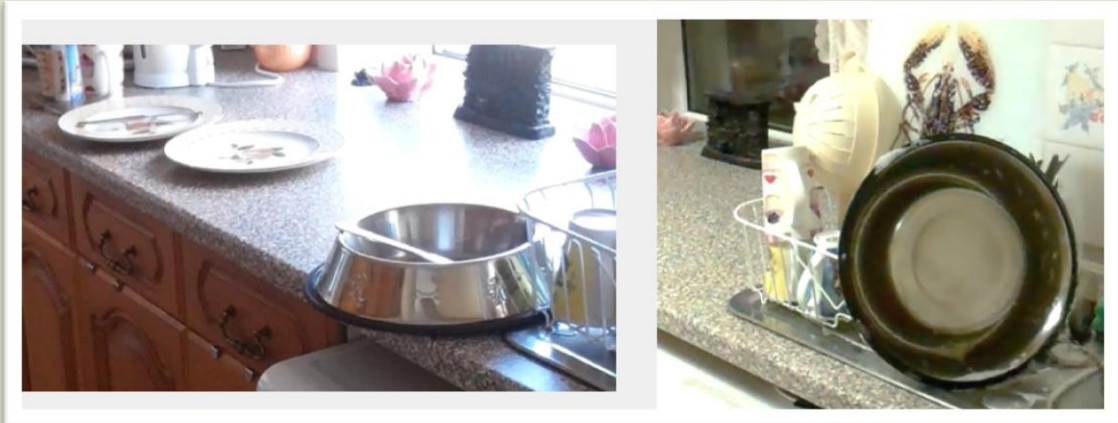
In spite of Fiona's insistence that she washed her hands *"every single time"* after touching the dog or the outdoor bins, analysis of her self-recorded video footage revealed *unevenness* in these practices. There were numerous examples of her lifting the lid of the kitchen bin with her hand and then returning to the activity of making a drink or taking food through to her mother without having first washed her hands. Moreover, how the dog's bowl was dealt with was perhaps more inconsistent with Fiona's reported beliefs concerning hygiene. For example, while Dotty's bowl was always washed after use, Fiona left it to dry on top of their own crockery (see picture, right). Likewise, when she made a snack for herself and Meg, Dotty's bowl was placed alongside their plates on the worktop as she will be having a snack too (see picture, left).

It would seem that the dog's bowl, which lived on the floor, was not conceptualised as potentially unhygienic in any way. It appeared to be treated like any other dish and did not warrant 'special treatment' in the way that the chopping board did, for example. Perhaps this was because it belonged to Dotty, who was not 'just' a dog, but a much loved and valued member of the family.

Participants sometimes sought out information about specific aspects of food safety and this was reported as prompting some distinct, though still uneven, shifts in the way practices were entangled. For example, Gilly Windsor, who was pregnant during the study, spoke about having read about the dangers of cooling cooked rice and how she felt she had to convince her partner, Dave that they needed to change their existing practices in light of this information. There was little point Gilly entangling this new information into her practice, however, if she could not ensure her partner was prepared to as well. She said:

> *"I had to get across to Dave that with the rice… it's not just reheating it thoroughly because... it's when it cools down that it can get the bacteria and then the toxins in there and it doesn't go when you heat it …so we will… rinse* [leftover rice] *in cold water and put it in the fridge straight away because, just to stop that kind of slow cooling down. … I must have found out more about it and read, worked out how it actually works rather than always thinking as long as you heat it up again it's OK".*

Dave corroborated Gilly's account, but expressed the view, through what he said and through his body language, that he felt Gilly was exaggerating the risks. He did, however, comply and the practice was changed. This stage of life, of being and becoming a mother for the second time (Gilly and Dave already had one young son), was intricately entangled, for Gilly, with her seeking out information about food safety and foodborne illness to protect, in her view, her and her family's health. Dave was inherently implicated in the 're-entangling' of practice as Gilly alone was not responsible for food provision in this household. Whilst choosing to act on her new-found knowledge about cooked rice, Gilly went on to report a lack of concern about the risk from eating "*runny*" egg yolks whilst pregnant, as she said she would "*know*" if she had experienced salmonella in the past. For Gilly, the absence of prior illness following her consumption of eggs led her to believe that she did not need to change her habits during pregnancy. However, she explained her apparent 'singling out' of rice as arising from a lack of certainty about the possible causes of previous episodes of feeling unwell after eating takeaway food:

> "*I don't think I ever have had food poisoning from rice. I've probably had indeterminate 'not feeling very well' after having a takeaway or something and not really been quite sure, you know, what it was down to*".

These data highlight that knowledge, even when sought out, may not automatically be accepted and behaviour changed as a result, but when combined with a lack of certainty about the possible cause of feeling unwell after eating particular foods, this may be enough to prompt a shift in practice. This is perhaps an important insight into the complex entanglement between different elements of a practice and how 'food safety' is negotiated.

That pet-owners in the study did not generally see their cats, dogs, gerbils and goldfish as potential 'pathways' to illness was evident from the absence of any problematisation of various aspects of their care and the way that these were unevenly entangled with other things that occurred in the kitchen. So, while households sometimes took particular care in cleaning chopping boards and spraying surfaces, they did not always wash their hands in between petting animals and handling food, or separate pets' dishes from their own. In certain households, participation in the study prompted reflection on an individual's own practices concerning the way that pet care was entangled with elements of 'human' practice. For example, Sue Heely acknowledged an awareness of some unspecified discourse which suggests that "*you're not meant to*" wash dog bowls in the sink but, in reality, "*it's just habit, in't it …you don't think… [because] they're my pets*". Likewise, Carol Stockwell explained how the cat slept on the ironing board, which was permanently positioned outside the fridge-freezer, and that her teenage children were always taking food from the fridge and placing it on top of the ironing board. She said: "*I'm thinking 'bloomin' 'eck!* [laughs] *You just don't think about it*".

Spectrums of cleaning

In the context of the domestic kitchens we studied, 'cleaning' was encapsulated within practices relating to a range of sites, surfaces and things, including food and utensils. What constituted 'cleaning' ranged from the 'aesthetic' tidying or clearing of surfaces – perhaps involving the removal of 'debris' or brushing crumbs from a worktop with one's hand– to a concern with 'microbial' cleaning and the perceived removal of potentially harmful bacteria. As some of the previous examples suggest, 'cleaning' – either hands or 'things' - was not

something that generally took place as a discrete practice. More often than not, cleaning surfaces and 'things' was something which was opportunistic, entangled within the available 'gaps', in between waiting for the kettle to boil, or for something to cook, or until it was time to leave the kitchen and sometimes it had to take place before food preparation could begin. Meanwhile, hand washing often occurred during or after the handling of food, prompted, for example, by stickiness or an awareness of having touched uncooked meat. Cleaning hands ranged from wiping fingers on clothes or aprons or rinsing them under a cold running tap, through to using liquid soap to wash the palms of hands or - closer to recommended practice - scrubbing between fingers.

So why was it that households in the study 'cleaned'? Was it to get rid of 'dirt', to 'kill germs', to deal with aspects of disgust at 'stickiness' or because something smelled 'bad'? Was it to be 'tidy', to fill time or to have the satisfaction of displaying being a 'clean' person with a well-organised kitchen that you would be happy to invite a researcher in to? It was not always possible to dis-entangle from the data the relative importance and meanings of 'microbial' versus aesthetic cleaning within the study households. However, we cannot ignore the possibility that the focus of the *Kitchen Life* study on food safety and households' awareness that it was funded by the FSA, perhaps made participants more conscious of wanting to appear to be 'clean' in the context of kitchen life.

This was particularly evident in the Spencer household (see Box 4.4), where Ann and Andy emphasised their awareness and knowledge of hygiene matters and how this shaped a number of their practices. For example, they expressed disgust at the thought of hand-washing dishes which – they believed – could not kill germs and *"sterilise"* items since a high enough temperature could not be achieved. They reported that since they started using a dishwasher, no-one in the household had experienced any stomach upsets. Ann was particularly vocal in expressing her knowledge of hygiene and *"infection control"* issues, demonstrating the 'correct' way to wash one's hands, for example – *"using froth and friction"*. The Spencer's were keen to display their perceived knowledge and compliance with 'good food hygiene practice' and yet, even in this household, unevenness of practice was observed in relation to Andy handling raw meat and then wiping his hands on a piece of dry kitchen roll.

Given that bacteria are invisible to the human eye, it is impossible for individuals to measure or assess how 'clean' their kitchen is. In the absence of special devices to indicate dangerous or unhealthy levels of bacteria, our participants appeared to base their assessments against self-defined levels of social acceptability. For some, this was ensuring that surfaces appeared to be devoid of crumbs and dirty dishes while for others, surfaces needed to be shiny and streak-free. A sponge or dishcloth which one person might deem to be *"manky"* was regarded as acceptable to another. Indeed, when considered more broadly, being 'clean' in the context of kitchen life was conceptualised by a number of participants as trying to be the opposite of other, 'dirty', households, which may not relate to reducing potential pathways to foodborne illness at all.

Box 4.4 The Spencer household

Ann and Andy Spencer lived with their teenage son, Edward and their dog, Charlotte. The couple were very proud of their refitted kitchen. While filming Ann wiping up a spill during cooking, Andy said: *"the mess gets cleaned up straight away in this house otherwise Ann gets a bit cobby"*. The clearing up of 'mess' was a priority for Ann. A short while later, filming resumes and Ann could be seen removing everything from one of the worktops and spraying it with what Andy informs us is a watered-down solution of a supermarket-brand *"eco"* detergent, which they poured into and store in a branded bottle: *"we think that's the most efficient… it's not this branded expensive stuff".* The surface was wiped with kitchen roll and 'polished' with a specialist 'e-cloth'. This, it would appear, was a regular, daily routine.

Anne told the researcher about her views on *"infection control"* and that she retained a sense of *"perspective"* about her own kitchen because *"I go in other people's kitchens and I look at them and I feel that mine's a lot cleaner than yours and I haven't cleaned it for a fortnight".* However, minutes later she moves round to what she refers to as the *"dirty area"*: the sink and draining board (see picture, above) where, Ann explained, Charlotte, the family's dog, had been *"groomed"* the night before. This involved showering her *"mucky"* bottom over the smaller of the two sinks. Ann explained that this was more *"convenient"* than doing it in the shower or bathroom. Although this area was conceptualised as both *"dirty"* and *"really dangerous"*, Ann said that she does not worry too much as this area is not used for food preparation. This seemed, however, to contradict what was observed in a separate piece of footage, filmed by the participants; the smaller sink – where the dog was 'groomed' – *was* where food was prepared and where washed food was set to drain in a colander (see picture, below).

Conclusion

Understanding what occurs in (and outside) the kitchen is clearly a complex business. When individuals were doing things in the kitchen it often involved a whole range of activities, objects and interactions which frequently had nothing to do with food preparation or eating, but which were embedded in practices which *did* involve food. Rearranging a bin liner, petting a dog, or answering the phone were not discrete practices, but unconsciously performed and were, therefore, unlikely to be problematised by the individual as having food hygiene implications. With busy lives, participants intertwined multiple tasks – for example, emptying the bin while waiting for the kettle to boil, or washing up while spending time with children or their spouse. Seen in this light, what we saw was not *'a practice'* – cooking, cleaning, feeding the dog – but a *complex entanglement* of practices set in the context of everyday life.

As these findings also illustrate, practices were not static or immutable, but were flexible and shifted in response to changing household or personal circumstances such as illness, pregnancy or bereavement. But people, as the carriers of practices, were flexible too and they changed what they did and how they did it in the face of shifting guidance, knowledge or information, as well as in response to the development of new technologies and intermediaries, such as antibacterial products. However, even on a daily basis, practices varied – for example where an activity might be positioned in relation to the spectrum of cleaning – depended on the time available to 'fill' and the list of other priorities which also needed attending to. Moreover, as well as being entangled, practices often involved negotiations with other people and, as we shall illustrate in Chapter 5, were therefore constitutive of wider family and household relations.

CHAPTER 5 Encounters in the kitchen

Summary of key points in Chapter 5

Kitchen practices shaped *and* reflected encounters with others.

Practices were negotiated and resisted through social encounters between adults and children within the study households (and non-resident 'others').

Encounters in the kitchen highlighted that children and adults had differing levels of autonomy over the extent to which they shaped practices.

Although kitchens were not generally designed to accommodate young children, they were active participants in the kitchens we observed.

These findings suggest that food safety needs to be defined and understood through social encounters with other people.

While the previous chapters have looked closely at both where kitchen life takes place and the ways in which kitchen practices flowed and became entangled in the participating households, in this chapter we focus more closely on *who* was involved in kitchen life and how household practices both shaped *and* reflected relationships and interactions between people. We use the term 'encounters' in this chapter because this encompasses not just the people involved, but also the setting and activities which might be undertaken (Goffman 1961). The people we refer to in this chapter are the adults and children of the households in the study, in addition to 'others' (other family members, carers and cleaners, for example) whose influence was both observed and reported. While one person was sometimes 'in charge' of the everyday 'choreography' or organisation of the kitchen lives we studied, this was not always the case and the role was sometimes shared. In study households with children and teenagers, even the youngest were active participants; children of all ages were involved in preparing food, unpacking shopping and (un)loading the dishwasher. Even in the lone households we observed, kitchen life was influenced and shaped by carers, cleaners, delivery people, friends and non-cohabiting (sometimes deceased) relatives. In what follows, we look at the ways in which practices were shared, reproduced, resisted and negotiated through encounters between people in and external to study households. Central to this discussion is the matter of one person's autonomy to *do* things and how this was either negotiated– in relation to both children and adults – or appeared to be undermined. All the encounters observed and reported could potentially affect 'food safety' outcomes.

Encounters in study households with children and young people

Two households with very young children were keen to involve them in food preparation. Gilly Windsor's son, Seth, for example, was filmed being helped by his mother to make toast for his breakfast. We also observed Seth finding a packet of pasta in the cupboard to help his father, Dave, make dinner. Billy and Jack Jenner were filmed choosing their own cereal and pouring the milk which had been decanted into a manageable jug by their mother, Rachel. In each of these participating households, the young boys needed to stand on a stool in order to reach the worktop. While children perhaps learn about responsibilities and

'being part of a family' through a range of domestic activities, helping in the kitchen can be fun and, perhaps unlike other rooms in the home, the kitchen is a space shared with adults and older children, a place in which things are 'accomplished' and have a reason. Such encounters allowed these children to be incorporated into family (and therefore kitchen) life, though usually in a secondary role to their parents. Children, however, had their own agency and resisted adult authority to help shape the encounter; they were not simply 'dupes' of their parents - doing 'what they were told'. Seth, for example, was quite insistent on putting the butter dish on the floor, whereas his parents had asked him to simply put it on the table ready for lunch to be served (see Box 5.1).

Box 5.1 Photographs and video stills from footage of encounters with children in the kitchen

Top left, Seth Faulkner putting the butter dish on the floor; top right, Billy Jenner getting restless while baking. Bottom left, Hannah Green drying up; bottom right, Claire Thorpe helping Sam to work toward his cub-scout cooking badge.

Indeed, while parents wanted their children to learn about food and to be involved in kitchen life, the reality is not simply that they were challenged by the fact that young children tend to have short attention spans, but also that kitchen life requires learning about risks and danger. Hot pans, boiling water, sharp knives and slippery floors need to be learned about as part of assimilation into the wider kitchen scene; indeed, Rachel Jenner was heard reminding her sons not to run in the kitchen, not to be *"silly"* and also to be

careful near a pan of boiling water. In this instance, she told them a story about their uncle, who had spent time in hospital after being scalded as a child. Relative to these immediate safety issues, asking children to wash their hands and teaching them to do so during the flow of an encounter, was perhaps less of a priority. In addition, encounters in the kitchen also shaped and reflected 'being sociable' and 'being a family' – Stuart Jenner, for example, reprimanded his sons for trying to eat the pieces of chocolate they were using in their baking activity, but they were eventually rewarded with a lick of the chocolate-covered spoon and leftover pieces of chocolate.

Older children in the study (aged seven and above) were seen taking on greater responsibilities than the younger children mentioned earlier. For example, Hannah Green regularly helped her mother to make her father's packed lunch for the following day. It was a way that mother and daughter spent time together after school. On several occasions, Hannah was seen wrapping sandwiches in foil and then drying up dishes and cutlery (see Box 5.1). Her mother, Bernie, said: *"Hannah likes to clean up and tidy up the kitchen… don't you?"* There was also footage of Hannah helping to unpack the weekly shopping and using a cake mix to make some buns. Hannah was seen wearing an apron and being supervised by her mother, who largely only instructed her daughter, leaving her to undertake most of the mixing herself. Although it could be suggested that Bernie was moulding her daughter in her own image, perhaps transferring her concerns about cleaning on to her daughter and teaching her a very gendered relationship to the kitchen, video footage recorded by the family indicated that Hannah was perhaps no less likely to mirror her father, Pete's, meticulous practices (regarding drying up, for example), as she was her mother's. Hannah also, however, overlaid her *own* way of doing things and was not merely reflecting her parents' practices.

Sam Thorpe was observed cooking spaghetti bolognaise to earn his cub-scout cooking badge. His mother, Claire, supervised him and, concerned about Sam cutting himself with the knife, helped by holding mushrooms while he sliced them (see Box 5.1). Sam was the only child in the study who was observed spontaneously washing his hands, much to the delight of his mother, who was filming him. This act was performed in the kitchen after Sam had been playing basketball. As a health professional, Claire described herself as *"OCD"* about hand-washing and had, at least to her way of thinking, instilled the importance of hand-washing into her son.

In those study households with teenagers, young people had developed a wider range of differentiated or autonomous practices that sometimes challenged parents and siblings. As reported in the previous chapter, Lee and Gemma Stockwell were a cause of frustration to their mother as a result of their failure to clear up after themselves. However, there was also conflict between the siblings themselves over the sharing of the kitchen. The Stockwell siblings had different ways of working and also different standards of tidiness. Gemma believed her own practices and standards to be superior: her way was the 'right' way and there was little or no room for negotiation. Although Lee considered his sister to be *"OCD"*, neither of their practices came up to scratch as far as their mother was concerned. It was clear that these kitchen encounters reflected, but also shaped, these sibling and parent-child relationships.

In the Spencer household, teenager Edward was observed to be a slightly peripheral part of kitchen life. While his parents reported great pleasure and pride from inhabiting their refitted kitchen, Edward reported that taking part in activities such as a family *"brunch" "is not really me"*. Not only does he appear not to want to be pressured into a 'performance' of 'family' for the benefit of the visiting researcher, but his own engagement with the kitchen sometimes seemed to challenge the systems his parents had established. For example, one of Edward's responsibilities was to load the dishwasher. Andy Spencer demonstrated to the researcher how his son over-stacks the dishwasher and puts glasses in upturned, resulting in items not being cleaned properly. This was confirmed by the family's video footage, which also revealed the unspoken words and tensions that exist between the adults and the almost-adult Edward.

Kitchen encounters between adults in study households

Whilst we might expect to see unequal power relationships and sometimes tension or conflict in kitchens where parents, children and young people interact, encounters between adults also illustrated a range of ways that such domestic interactions influenced and are influenced by, what goes on in the kitchen. As illustrated in the previous chapter, sometimes adult children and their parent/s lived in the same household, like Fiona and Meg Gilmour. Whereas Fiona saw her home as equally shared with her mother and was very mindful of paying respect to her mother's way of doing things, Joe Murphy had a more tense relationship with his adult son, Ben (see Box 5.3). In other households we observed tension and harmony between married and cohabiting couples; there was also evidence of thoughtful negotiation, conflict and, often, the unconscious flow of one person weaving around another they had lived with for many years to unconsciously perform the ritual of their kitchen lives.

When the researcher asked members of the Green household whose kitchen it was, Pete explained that since he stopped working shifts, he was less involved in food preparation. He said *"I do love cooking",* but added: *"I'm not allowed; she throws me out and takes over… She doesn't trust me".* Although his wife, Bernie, argued that she did this *"because I'm so used to it",* she attributed her lack of *"trust"* to an occasion when Pete served them still-frozen garlic bread: *"He's trying to poison me!"* Likewise - and echoing Gemma Stockwell earlier in this chapter – while Pete was active in cleaning and washing up, there was the suggestion that he did not always do it *"properly"* by his wife's standards. There was also the sense, again echoing the Stockwell siblings' encounters, that any transgression in how things 'should be done' was seen as an excuse for one individual to maintain 'control'.

In the Osman household (see box 5.2), Leah and husband, Hakan, had very different ways of doing things and different ideas about what was 'acceptable'. Although the couple had worked together until their retirement and the business had been Hakan's domain, the kitchen was reported to be Leah's. She said:

> *"Since we retired, he has tried to transfer that control that he thought he would like to have had in the* [business] *to the home, which has caused some friction; there is a small amount of friction in that way, but no, the kitchen is still my preserve really".*

Consequently, it was Leah who dictated the choice of units and what was stored in them, in their recently refitted kitchen. She choreographed kitchen life in this household and although Hakan was not shy in making his views known, Leah generally dismissed them.

While the kitchen was Leah's preserve, Hakan played an active and opposing role which could be seen as disrupting Leah's 'systems' and was counterproductive in terms of their shared interest in the avoidance of food waste.

Box 5.2 The Osman household (Aged 60-79 years)

Leah and Hakan had their kitchen refitted shortly before taking part in this study and Leah was still in the process of deciding upon a final home for a number of items; some things were therefore still packaged in the garage. During the kitchen tour, a basket filled with perfumes was spotted in one of the cupboards where food was kept. Hakan turned to the researcher and said: *"In the kitchen, that's not right, is it?"* Likewise he disapproved of her re-potting plants on the worktop using a kitchen spoon. The couple bickered openly, apparently unperturbed by the presence of the researcher and, during a discussion of whether they used separate hand and tea-towels, Hakan says that they should, turning to his wife in an almost accusatory manner. She responded: *"Right, get a separate hand towel if you want but I shan't use it. You can use it, but don't hang it on the front of the cooker!"* (see picture, left).

Although Leah did the majority of the cooking, Hakan prepared his own breakfast each day. This involved the slow and precise peeling of an apple to go on top of his muesli, which Leah filmed one morning; she was heard sighing and muttering about how long it was taking. Additionally, Hakan prepared his evening meal on the days when Leah was busy with one of her activities outside the household. Shopping was something that the couple shared but infrequently did together. While Leah experienced it as something that needed to be done and tried to do it as quickly and efficiently as possible, aided by a shopping list, Hakan was a slow shopper who *"studies"* every piece of fruit and proudly reported that he will not just go round the supermarket once, but twice. One of the reasons that Hakan was so thorough was that he liked to 'stockpile' things that were on offer, such as bread, olive oil and coffee. This proved problematic with perishable items since, Leah reported, he bought things without a plan for their use and then put them in the under-stairs cupboard where they were easily forgotten among the coats and shoes. Since he did not tell her what he had bought, they ended up going off.

Not all study households reported or displayed challenges in relation to the negotiation of practices or the distribution of responsibilities between household members; indeed, even in those households where tensions were reported, there was also evidence of harmony. In a number of households, there was an acknowledgement by one partner that their spouse did things differently but that this was accepted and even viewed as a necessary counter to their own ways. Brenda Fisher, for example did not like deciding what she and her husband would eat for 'tea' and disliked putting the shopping away – her husband Greg, however, was happy to fulfil this role. Whereas the encounters we observed initially led us to conclude that Brenda was in charge in this kitchen, it would be misleading to think that Greg's actions and the *complementarity* between the couple's roles were not essential for the flow of their household's practices. Participants in households like the Fishers were

often observed *weaving around* each other, silently anticipating things that needed to be done – a space that needed clearing, the contents of a pan that needed stirring, a bin that needed emptying – to ensure that a particular practice – 'the evening routine', for example - was accomplished efficiently; such co-constructed encounters were integral to kitchen life. Things did not flow quite as harmoniously in the Murphy household (see Box 5.3). Joe's practices were disrupted by the presence of his son Ben and, since it was Joe's flat, Joe's ways were what counted in relation to kitchen practices. These encounters were interwoven with the inequalities and conflict displayed within the overall parent-child relationship, despite Ben being 'grown up' and in his 40s.

Box 5.3 The Murphy Household (Joe, aged 60-79 years)

Joe was retired and had lived in his housing association flat for over 20 years. He had a long term condition and a carer visited each morning to check on him. Joe served in the Armed Forces as a young man, and explained how the principle 'ship-shape' had become a *"way of life"* for him: "[it was] *based on cleanliness… I suppose it's just stuck with me"*. This way of life was ruptured when Joe's son, Ben, moved in and Joe reported that Ben's practices concerning the cooker were a bone of contention between them*: "the cooker… that's one thing that really bugs me. He splashes everything all over. Once I splash onto it I like to wipe it straight away… It's little things* [like this] *that niggle… he does do it, but not to my satisfaction… It's just a way of life. Everyone's got their own ways; that's one of mine. I just believe that if you're messing about with food, respect what you're cooking it on. It doesn't take a couple of minutes to put a bit of antibacterial on it, wash it off, wipe it off. Just little things, because I am so used to doing things my own way".*

Joe also discussed the tensions arising from Ben's assumption that his son *"knows best"* because he had a catering qualification. Pointing out that *"it's my kitchen"*, Joe asserted his belief that *"to me he doesn't know best 'cause I've looked after myself for twenty-odd years and even before that. I know the way I like to do things and I know the way I like things to turn out. Now he can have all his qualifications but I don't like the way he cooks. 'You cook for yourself and I'll cook for myself' and that's the best way... I don't like being told 'Oh you're doing it wrong'. I've been doing it for fifty years at least… it's like teaching your grandmother how to suck eggs".*

Encounters with 'others'

Clearly, encounters within the personal space where kitchen life took place were not straightforward. A number of the participating households included people who lived alone and yet their kitchen lives were still shaped by their encounters with 'others', even if it was not 'in the flesh', as we later describe (see Boxes 5.4 and 5.5). The other people study households encountered included close friends and family members who lived nearby and were seen regularly and others who came to visit less frequently, from further away. These others also included carers and cleaners, employed in a minority of the study households. Similar to the way that relationships were played out *in* participating households,

encounters with external people exhibited elements of tension, conflict and harmony; regardless of this, these encounters illuminated ways that kitchen practices were moulded by and as a result of external encounters.

Helen Benn (aged 80+) had three cleaners who came in to clean her house fortnightly. Since she reported that she had employed a cleaner since her children were young, this was not something she had arranged due to being unable to clean for herself or as a result of increasing frailty. She reported that she simply disliked cooking and cleaning. Helen usually went out of the house when the cleaners came so she rarely had *direct* encounters with them (they also brought their own cleaning products and materials) though she, like others who employed cleaners, said she could tell they had been as the house looked and smelled clean. The situation was more complex for Harry McDonald, who also left the house when the cleaner came – but this cleaner was sent round by his daughter, who lived close by (see Box 5.4). Despite no longer being alive, Harry's late wife, Janet, continued to play an important role in shaping Harry's practices.

Box 5.4 Harry McDonald (aged 80+)

Harry lived in social housing, originally intended as a home for him and his late wife, Janet, who died before she could move into the property. The couple were moving from their own home in order to be closer to their daughter, Catriona, with the intention that she would

help care for Janet during her illness. As well as dedicating a whole kitchen wall to photographs of his wife and their family, Harry kept a framed photograph of Janet on the kitchen table (see picture, left; this has been intentionally blurred to protect the identity of the household). Harry had daily encounters with Janet - she 'oversees' his cooking and kept him company. He reported regularly staying up late into the night talking to her and was observed in his own video footage cheerfully wishing her a *"good morning"* while he made his breakfast. Although Janet did all the cooking prior to becoming ill, the onset of her illness meant that this responsibility shifted to Harry. Unlike his wife, who was an *"instinctive cook"* and would advise him to cook something until it was *"ready"*, Harry described himself as an *"academic cook"* who relied on specific guidance from recipe books or the internet, regarding *"what temperature and how long".* He had a system for cooking, which involved batch cooking and freezing portions of mince/vegetables and mashed potatoes which he defrosted in his microwave, as required.

Harry reported that his daughter, Catriona, was dismissive of his culinary efforts and that she tried to tell him what to do. Harry acknowledged, however, that: *"while I argue with her all the time I know… I appreciate that… Catriona just would move mountains if I wanted, she'd be the first there if I was in difficulty"*. Because of this, he conceded to Catriona sending round her cleaner: *"I don't think I need help, but I let it go… it keeps Catriona happy… She thinks I'm an old dodderer, three-quarters of the way to senility* [laughs]. *I might be three-quarters, but I'm not there yet!"*

Whilst Harry reported a harmonious relationship with Janet and, often, a more tense one with Catriona, he also said that he and Janet used to *"knock spots off each other"* during the daily arguments throughout their marriage, and that – to some degree – this dynamic had been replicated in his relationship with his daughter. Catriona further intervened in her father's practices by insisting that he installed a washing machine rather than a dishwasher (she now does his laundry) and by telling him not to "*reinvent the wheel*" with regard to him freezing batches of homemade food rather than buying frozen, pre-prepared food. Practices with potential implications for food safety and hygiene cannot, when seen in this context, be a matter of individual behaviour or choice. This is further highlighted with reference to Joe Murphy. His daily carer was seen as trying to intervene in the way he made his 'speciality' stew, but Joe also described how he had observed her washing up and adapted his own practices accordingly: *"I've got Amina's way now".*

Box 5.5 Charles May

Charles lived alone. He never referred to any visitors and he did not have pets. In one piece of self-recorded footage – which focused on the worktop and hob – Charles was preparing food. His hands were seen lifting lids on pans and stirring something, but his body remained out of shot. It was only when he did something very specific that we realised that he was listening to someone talking on the phone and that this hand was, therefore, not free. Charles did not interrupt what he was doing, but continued with the meal preparation, single handed. When it came to an activity which required two hands, he improvised: there was a tub of spread on the worktop and, realising that he needed to steady the tub with one hand while using a knife to scrape some of the spread out with the other, he continued to hold the phone to his ear and used the elbow of this left arm to steady the tub, thereby managing to integrate an encounter with the person on the phone into the flow of his kitchen practice.

Conclusion

In all study households, including those where people lived alone, encounters with other people were an integral part of kitchen life. Food safety practices were, therefore, never isolated from the social element of everyday life. As we point out in the previous chapter, practices were not fixed and immutable, but relational and responsive to changing household circumstances and a range of other factors. In this chapter we have brought to the fore the ways in which practices were in a state of constant negotiation when there were other household members 'present', or 'absent' in the case of 'outside influence'. In the context of food safety and hygiene, these issues were generally subordinate to, or subsumed within, broader concerns about learning how to 'be' in the kitchen, either in a safe or responsible manner (for children), or in a harmonious or a contested way. Indeed, it was through kitchen life and the negotiation of foodwork that individuals – regardless of their age – often learnt to 'do' family. But doing family was not just about rules and learning, it was also about having fun, sharing time together and performing care, which involved differing degrees of negotiation and compromise, even among adults. It was this reality that provides the context wherein 'behaviours' and decisions cannot be seen as the product of individual action, but as practices which are affected by both the requirements and restrictions of the specific social encounters in which they are embedded. Moreover, as socially produced phenomena, practices can never solely be informed by 'expert' sources of information, but are also based on other stocks of knowledge, experiences and beliefs, which can have even greater motivational weight, as discussed in the next chapter.

CHAPTER 6 Household logics and principles

Summary of key points in Chapter 6

'Expert' knowledge existed alongside other logics and principles – expert knowledge was not seen by study households as *better than* knowledge based on experience.

The logics and principles observed and reported often related to 'rules of thumb'; they were unevenly applied and drawn on by the participating households, particularly in relation to washing meat, poultry and fish; and salad and vegetables.

The household principle that food should be '*clean'* might explain why food, even meat, is *washed*.

Sensory logics (smelling or looking at food or assessing fridge temperature through touch) were used by households to assess whether refrigerators were working at the 'right' temperature or whether food was 'past its best'.

Doubt concerning 'expert' advice can lead households to resort to more 'tried and tested' logics and principles, based on experience.

In the preceding chapters we explored findings relating to the where, how and who of household kitchen practices. Here, in the final chapter reporting on the study's findings, we focus on the why, which is of immense value in understanding how people engage with matters which are potentially related to food safety. The findings relate to participants' accounts – their explanations of why they did what they did, rather than to the research team's own explanations.

Decisions about how to handle, store and eat food did not occur in a social vacuum and, while people were likely to be exposed to an array of 'best-practice' guidance about how to (or how not to) handle food, official or 'expert' knowledge existed alongside other sources of information. In this study, such knowledge was obtained via the television, the internet, mobile phone 'apps' and from newspapers or magazines. Also incorporated were beliefs and experience that had been 'absorbed' and taken on board over a period of years from observing and interacting with family and friends. We are referring to these bodies of knowledge and experience in this chapter as 'logics and principles'; a term relating to the rules-of-thumb drawn on by participants, incorporating the common sense values and 'ways of doing things', as told to us by household members.

The accounts in this chapter *must* be considered alongside the other insights we have presented, to preserve the context and meaning that shape household logics and principles. As many of the insights presented here were generated from what households told us rather than being directly observed, fewer case-studies are presented in boxes in this chapter as we are unable to 'flesh out' the stories in the same way. The 'told' nature of these accounts also requires the reader to recall the caveats presented in chapter 2, regarding how difficult it can be for people to recall and articulate what they 'know' and why they do what they do when it is taken out of the context of actually 'doing' something.

The media can play a powerful role in both communicating information as well as fuelling consumer anxieties about the safety of food, particularly in the production and supply chain and some of these anxieties appeared to manifest themselves in how our participants spoke about particular foods. Participants sometimes considered food safety *prior* to purchasing food and not just as an issue of what happens to it in the context of their own kitchens. The data suggest a range of knowledge and beliefs were mobilised in which particular food items were conceptualised as being 'risky' at the point of purchase and this affected the ways in which particular food items were subsequently stored, handled and cooked.

Trust in production and retail processes

The approach taken during this study meant that we did not often ask study households to talk about food 'safety' directly, not unless they raised the issue. Quite often, rather than being articulated in terms of safety, participants' practices were simply presented as 'what I do', with qualifications as to 'why I do it'. Dimensions of trust – or lack thereof – in relation to processes and packaging emerged as salient issues in participants' explanations for why they did certain things (or not) and these were particularly apparent in the context of meat, poultry and fish, as well as in relation to vegetables and salad, therefore these are the findings presented, below.

Meat, poultry and fish

There was a view from a number of participating households that particular care was required when using pork and chicken, which should be *"totally cooked"* (Carol Stockwell). Certain participants reported avoiding buying particular types of meat, for example Harry McDonald (aged 80+) would not buy pork, while Joe Murphy (aged 60-79 years) had a stated wariness regarding frozen chicken. He reported that because he does not have *"one of those skewers* [a meat thermometer] *…I don't trust it"*. This lack of 'trust' also extended to the reheating of chicken. Joe reported:

> *"I never reheat chicken. I don't know where I've got it from, but it seems to be stuck in my head - 'you don't reheat chicken'"*.

For a number of participants, concerns were exacerbated by the perceptions of the retailer from which meat was purchased. A number conveyed a sense of 'unease', or mistrust, concerning meat purchased from the supermarket, preferring, instead, to buy meat from a butcher. Bernie Green, for example, argued that meat from the butcher tended to *"taste nicer"*, adding that *"I know where it's come from"*. Liz Sargent expressed similar confidence in meat from the butchers, suggesting they are a more trustworthy source since she believed that meat has come direct from the farm. Highlighting how fresh foods like meat are often perceived to have a 'story', Fiona Gilmour explained that although she would generally never buy from a supermarket that did not have a butcher on the premises, one supermarket chain had recently started to include a photograph of the 'farmer' on the packaging, prompting a shift in practice. Fiona said:

> *"Since they've actually started putting on the packets where the meat's coming from, and normally now they use a lot of local farmers… and as long as I can pick up that packet and see this chap's face and where he comes from, I'll take that chance then"*.

In this context, personalised, face-to-face transactions either with a butcher, or a 'representation' of the individual farmer, were regarded as a marker of trust. Other participants were less swayed by the alleged benefits of buying from a butcher. Jim North (aged 60-79 years), who reported that his father had been a butcher, was one of these (see box 6.1), as was his wife, Shirley.

Box 6.1 The North household (aged 60-79 years)

Jim North expressed strong views on handling meat. He said: *"I know some of the things that go on, perhaps not these days- that used to go on in butchers' shops. Perhaps not now because we have better protection, but meat can be handled by someone else before you"*. He continued "*It would seem wrong… not to wash out the carcass of* [a chicken] *before you cook it because you do get some residue of, sometimes there's still a bit of blood in there, and sometimes a bit of residue from the prep"*.

Jim's wife, Shirley, added her own views regarding what goes on 'behind the scenes'. She said: *"I've witnessed, in our local high street…"* going on to report an occasion when she saw a driver carry a carcass – slung over his shoulder - across the street to the rear entrance of the butchers. She said: *"To my mind I thought that was wrong… that meat should be covered going out into the atmosphere of a high street"*.

Like the Norths, Vera Jones (aged 60-79 years) who – at some time in the past – had completed a food hygiene course, mobilised similar ideas in explaining why she washed the meat that she bought:

> *"You don't know how long it's been hanging round the butchers in the open air; it could get something on it not right".*

While a number of participants did not see any value in washing meat, Charles May, when asked if he did so, laughed, and then asked the researcher: *"is it dirty?"* The idea of food being potentially 'clean' or 'dirty' was raised by Geoffrey Smith (aged 80+), who emphasised that he liked to be *"clean with food"*; washing raw meat in a sieve was one of his practices which facilitated this. However, he did not translate that sense of being 'clean' to other activities. For example, he was observed using a pair of scissors that he had used to slice raw sausage skins to open a packet of cakes without washing them first. Similarly, Joe Murphy responded to a question about why he washed meat from the butcher (see Box 6.2):

> *"To wash the excess blood off it. You're supposed to wash all meat anyway… You're supposed to rinse it"*

Here and in the Green household, it was implied that it is the blood which is somehow 'unclean' and needed to be washed away. Others suggested that – particularly with meat bought from a butcher – dust and bone fragments needed to be washed off. Joe Murphy's insistence that *"you're supposed to"* in the quote above, indicates a belief, perhaps premised upon 'expert' guidance originating from a previous historical moment, that these are the rules 'as I understand them', therefore 'what I am doing is correct'. In these participants' minds, the risks perceived from others' handling of meat they purchased perhaps overshadowed any perceived risk from splashing bacteria around their kitchens.

Box 6.2 Washing meat and bagged salad leaves

Joe Murphy washing beef (picture left); Bernie Green washing prewashed bagged salad leaves (picture right)

Salad and vegetables

There was far more unevenness in participants' practices concerning when salad and vegetables 'should' be washed than with regard to other foods. Study households that grew their own fruit and vegetables were more likely to wash their own produce than produce they bought. The presence of soil, grit and insects were visible reminders that home-grown produce needed to be washed (strawberries were an exception and often eaten off the plant). Shirley North and Leah Osman (both aged 60-79 years) both reported soaking lettuce they grew themselves in salted water to draw out the *"creepy crawlies".*

While Hakan Osman indicated that he believed that producers washed things quite well in water, his wife, Leah, pointed out that *"this doesn't mean that it's hygienic"*. She went on to talk about a reported food scare years previously which had prompted her to wash things in *"acidulated water"* (with lemon juice). When it came to shop-bought salad, Shirley North said she would tend to believe the packaging if something said that it had been prewashed. Others were also less trusting of the manufacturers' labelling. Bernie Green, for example, washed 'prewashed' salad. In addition to the fact that it has been *"hanging round"* in the bag, she asked: *"have they really washed it?* [It's] *peace of mind for myself"* (see Box 6.3)*.* Similarly, Charles May said that he did not want to eat dirt and, since he was *"unconvinced"* about producers' washing processes, would always wash vegetables that were not going to be peeled. However, while Bernie Green did not trust the labelling on bagged salad, at the same time she did not wash whole cucumbers because she said that they are *"wrapped".* While she did not expand on this, one could speculate that she believed that it will have been protected from being handled by other customers because of its plastic wrapping. If so, this ignores the possibility that the cucumber will have been handled by someone prior to being shrink-wrapped. Elements of practices such as these are not consciously deliberated over or interrogated. They are simply premised upon the presence or absence of 'doubt', and where there is doubt or an absence of certainty, the decision is to 'wash it' because – at least at the level of household logic – washing equals 'clean'. Further, it is the

unconscious nature of these decisions that perhaps leads to unevenness in the performance of the practice.

Gilly Windsor and her partner, Dave, spontaneously started to 'think out loud' about such unevenness in their own practices when talking to the researcher. Gilly and Dave speculated about the science involved in production processes, elsewhere (see Chapter 4) discussing the risks involved in cooling leftover rice. They had *some* information, but it was partial and subject to interpretation, the gaps being filled with *"you'd think…"* and *"I'm not quite up…"* (see Box 6.3). Liz Sargent was another participant who reported an awareness of the risks from bagged salad leaves. She reported that a dietitian friend had informed her that *"the worst thing for food poisoning, the bacteria, is those bagged lettuce"*. While Liz did not explain how she interpreted and understood the meaning of this risk, she went on to speculate that a case of food poisoning she had experienced was attributable to the lettuce in a shop-bought sandwich. Here, risk became an anxiety which manifested itself at the level of practice. For example, Liz reported that if she was ever served salad, in a restaurant, that included wet or brown lettuce, she would always send it back to the kitchen. Likewise, she would always inspect any salad that she had in her own fridge, but her concerns did not extend to washing it as she believed that it had been prewashed. She also reported that she always washed salad and tomatoes, but her own video footage did not support this; sometimes she did, sometimes she did not; it was logic that was unevenly applied.

Box 6.3 Gilly Windsor and Dave Faulkner

Gilly and Dave were expecting their second child. They reported that they were aware of the risk of listeriosis from bagged salad leaves and reported that they washed these as they tended to mix it with salad grown on their allotment, which they always washed, they said, because it was often 'dirty'. The couple went on to discuss bags of stir-fried vegetables and the researcher asked if they washed these, to which they responded "*No*". Gilly then mused: *"Although it's exactly the same things as salad…"* She continued:

Gilly: *…there's various inconsistencies. Funny, isn't it, what you do and don't do? It's got so many small pieces in, I think it would take ages to dry, but…*

Dave: *…Yeah, I never thought of that, really.*

Gilly: *No. You'd think it'd be the same as salad, wouldn't it, in terms of listeria?*

Dave: *I guess you'd think because it's chopped up it must have been washed. And it's not… in a lot of the bagged salads, the actual air in them is… they vacuum all the air that's got in there, sort of … I don't know.*

Gilly: *I didn't know that.*

Dave: *It's to prolong the shelf life. Which is why you have to wash it afterwards, or something like that anyway. I'm not quite up on that one.*

Harry McDonald (aged 80+) provided another example of how accumulated knowledge was interpreted and adapted into practice. He said that he had heard that pesticides were concentrated in the tips of vegetables, in carrots for example, which he consequently cut off. He had extended this practice to strawberries, cutting off both the top and bottom. In

this case, 'expert' knowledge was remade and applied to a different context – from the carrot to the strawberry. However, after going to this trouble, he was never observed washing any vegetables or fruit.

Labelling: dates on food

So far, we have illustrated the ways in which participants interpreted product labelling in relation to only one aspect of food storage in which safety is implicated, producing a range of uncertainties about whether food 'needs' washing prior to consumption. Another, which has specific resonance in the context of food safety, was the issue of dates on food packaging, in particular, use-by dates. Household attitudes to use-by dates ranged from ambivalence to uncertainty to cynicism and no-one in the study reported consistent adherence to them.

The Green household were a good example of uncertainty. Bernie Green reported that she was confused by 'use-by' and 'best-before' dates, looking to the researcher for guidance. Although her husband, Pete, was more relaxed in his attitude, believing that you can tell if something had gone off from the smell and, even though Bernie reported having been told that *"tins never go off"* and her anxieties about being ill from out-of-date food generally held sway in this household. Rachel Jenner described her brother as being *"obsessed"* by use-by dates, which had rubbed off on her husband, Stuart, who would check the dates on potatoes. She noted that he had since become more relaxed about checking dates although we are not told why. Several participants, while being less overtly anxious about dates, acknowledged that they were more careful with the use-by date on some foods more than others – meat, for example. Carol Stockwell said*:*

> *"Use-by is for the people who produce food… to make sure they've done their bit basically, that they're not poisoning you… I think a lot of stuff has an extended date on because they have to be careful"*.

Carol's reference to how *"they"* have to demonstrate that they have *"done their bit"* and how *"they have to be careful"* implies a belief that date labelling enables producers and retailers to both conform with regulatory requirements and avoid potential litigation in the event of customers becoming ill through food poisoning. While demonstrating an awareness of the differences between the various types of date labels, Leah Osman simultaneously reported a lack of confidence in how products were dated, apparently suggesting that some foods were not dated correctly. Because she lacked trust in the production process, she said:

> *"I smell everything whether I've bought it fresh or not… because I don't trust the dates. I don't care who knows, I don't trust the dating. I think they alter the dates and times of things… I don't know who does it, but there's some tinkering about with the dates, so I always smell everything".*

Carol Stockwell was one of very few participants to discuss an awareness that the use-by date becomes redundant after a product is opened. She stated:

> *"I can look at a date on something, but if I've opened it two days earlier and it says 'use within three days' then that date's not going to be relevant anyway, so it depends on when you've opened it and things".*

In other households, a patchy understanding of the storage and spoilage properties of some products was entangled with the efficacy of their own practices. Greg Fisher, for example, was convinced that UHT milk retained its extended 'long-life' properties after opening but that *"it doesn't last that long anyway"* as they drink it *"before it goes off"*, thereby overriding his need to know more about the milk itself. Similarly, when asked about the opened jar of pesto that was frequently used for his young son's dinner, Dave Faulkner suggested that it had a high oil content and therefore it did not go off. However, he reported that he sometimes topped up the jar with oil to ensure a barrier was formed, to stop it from going off, thereby demonstrating that he did not fully rely on his interpreted knowledge about the properties of this product.

Sensory logics

Leah Osman's practice of smelling everything before she used it introduces the issue of 'sensory logics' and how these were drawn upon in study household's food practices, particularly where it was felt that there was some doubt about either the reliability of the science behind date labelling, or the trustworthiness of its application by manufacturers or retailers. A number of participants argued that having 'knowledge' of food enabled them to make their own judgements about whether or not food was safe to eat. Aside from smell, a range of other senses were relied upon to assess food for freshness. Participants reported judging food by taste or the presence of mould. For example, while being more wary of meat, fish and poultry, Carol Stockwell reported that with a two-week out of date yogurt, she will look to see if the top is *"puffed up",* before deciding whether she will eat it. A secondary test is if, when she tastes it, it is *"fizzy on your tongue, it goes in the bin".* Her teenage son, on the other hand, reported that if a loaf of bread had been around for a while, he would inspect it for green spots and, if there were only a few, would pick them off. While it was not uncommon for participants to report slicing mouldy bits off cheese there was an acknowledgement – among some – that where mould was present, the fungus goes through the food therefore it should not be eaten. Consequently, Harry McDonald said that he will always throw mouldy food away. Claire Thorpe reported being cautioned against using mouldy home-made jam when she was a student. Her mother told her that the *"toxins go deep".* Eggs were another item that could produce uncertainty, particularly in the absence of a good sense of smell, as was the case for Joe Murphy. Unable to rely on his senses, Joe referred to the 'flotation test'. Although this method is premised upon 'science', to Joe it is simply *"common sense"* knowledge which, he speculated, originated in childhood experiences working on a small-holding.

In the presence of doubt, a number of participants developed a range of specific practices, as seen in the examples presented by Julia Jacobs and Leah Osman. Julia showed the researcher a jar of home-made chutney, dated 2008, which, she believed, would be safe to eat. She reported that although she was a little wary of eating things that had gone mouldy, she would scoop the mould off preserves and *"put it in the microwave for a couple of minutes and that would kill anything that was there"*. Here, doubt is ameliorated by a practice which, possibly, had some foundation in a belief that microwaves will kill anything. Leah Osman, who said she did not trust date labelling, described what she did if – on sniffing meat - she finds that it was *"past its best":*

> Leah: I'm not above wiping it with vinegar if I think that it smells, because that's the old fashioned way.

> Researcher: What does that do?

> Leah: Well it's a moot point isn't it? It takes the, erm, it takes the smell away. If you have a piece of lamb and it's probably gone past it's best, if you wipe it with vinegar it removes that unpleasant smell before you cook it.

But what do phrases such as *"past its best"* actually mean? One suggestion is that, for Leah and possibly others within the study, it had more to do with taste and quality than it did with safety; there was certainly little indication that food safety was a priority for Leah, as can be seen in Box 6.4.

Refrigeration of food

While the introduction of domestic refrigeration has perhaps made it easier for consumers to store food, safely, for longer, they are not unproblematic appliances. Only two households in the study – the Spencers and the Jenners – reported that they had self-regulating fridges with built-in thermometers which perhaps enabled them to 'defer' responsibility for ensuring that their contents were being stored at a safe temperature. In the absence of certainty about the correct temperature at which fridges should be kept, a number of participants developed their own practices which enabled them to feel more confident about whether their fridge was working correctly or not. Often, these were based on sensory logics, such as assessing the temperature based upon how cold their food or milk felt. Vera Jones (among others) suggested that *"you can feel the difference, can't you",* and explained how she knew there was a problem with her old fridge from the jug of water she stored in there: *"it was cold, but it wasn't 'cold' cold'"*. Conversely, however, experiential knowledge led Jim North to point out fridges can also be *too* cold, resulting in food spoilage.

There was also confusion – both reported and observed - concerning where different products should be stored within the fridge. Claire Thorpe, for example, said*: "I don't understand this so maybe you can tell me…"* – regarding why 'they' tell people to store meat at the bottom of the fridge, which is directly above the salad and vegetable drawer. Claire managed her unease with this apparent contradiction by negotiating a practice which enabled her to feel more comfortable: she ensured that uncooked meat was stored above vegetables that would be peeled, as that would remove anything that may have dripped on to them. Marion Scargill (aged 80+) explained that she stored meat on the top shelf, believing this to be the coldest part of the fridge – an example of the logic underpinning reasons for contravening recommended guidance. In the Osman household, there was disagreement between Leah and Hakan over their respective practices concerning the storage of meat in the fridge, but Leah said that she tended to store meat at the bottom of the fridge as there is most room there: "*I put them at the bottom... I appreciate that it's warmest at the bottom".* On this occasion, Leah thinks she is doing the 'wrong' thing from a food safety perspective.

Box 6.4 Leah and Hakan Osman (60-79 years)

During the kitchen tour, Leah showed the researcher the contents of their fridge. Unsolicited, she pointed at some uncovered food, including leftover salmon and said: *"I'm naughty because I don't cover them up"*. Throughout the fieldwork, Leah made a number of comments through which she pointed out awareness of her own 'bad' practices in relation to refrigerating food. At one point, she turned to her husband and said: *"Shall we tell her about the turkey?"* before going on to describe how they wrap their frozen Christmas turkey in newspaper and store it in a bucket in the garage for a week, to defrost, before cooking it. Leah argued that the garage is just as cold as the fridge is, in December. However, she also explained that the couple did not like the taste of meat which is cooked straight from the fridge, perhaps indicating that the principle about refrigerating food is more complex than the example regarding the turkey might suggest: *"I know you shouldn't, but I prefer meat to be left to breathe. If I'm cooking a joint, it sits out for eight hours* [before cooking], *you know, an unhealthy time"*.

Leah also rejected the recommendation that condiments she has used all her life should now be stored in the fridge and used within a few weeks, saying: *"I've used salad cream for donkey's years… I'm still alive and it's never gone mouldy"*. Leah was defiant in maintaining her own, trusted kitchen practices.

Pushing the limits of food safety: waste

Although study households gave accounts which perhaps pushed the boundaries of food safety on some occasions, such accounts were particularly evident among a number of participants who were either experienced with, or believed they had a good understanding of, food. For example, Joe Murphy, who stated that he knew *"what's right and what's not right",* told the researcher that he would freeze leftover stew which had sat on the hob for three days after the researcher had watched him cook it on a warm day in August. Asked if he thought that it would still be safe to eat, he replied: *"you can leave it on the stove for four or five days and it's still alright".* Likewise, although she acknowledged that this was an unusual event, Marion Scargill was observed using leftover gammon which had been cooked five days earlier. While older participants were more likely to indicate that they did not like to waste food, for reasons of thrift, as well as experiences of hunger in childhood and wartime rationing, for example, Charles May spoke of the way that his parents had instilled in him an awareness that food is *"a precious commodity",* leading him to comment *"I hate throwing food away"*. Practices to avoid this included ensuring that meat was consumed before its use-by date, or cooked and then frozen. During one visit, the researcher spotted some unused egg whites in Charles' fridge. He explained that he had used the yolks and that his intention had been to make a meringue with the whites. While he admitted that he would probably end up throwing them away, he revealed: *"after several weeks I think it's probably too old now, I'll end up throwing that away, but for the moment, good intentions, it's in the fridge"*.

Another example of someone pushing the boundaries of safety in the spirit of avoiding food waste was Julia Jacobs. Neither Julia, nor her husband, James, liked to waste food. We have already illustrated the logics that Julia applied to avoid throwing old, mouldy preserves away (by heating them in the microwave) and, during another visit, the researcher observed her preparing a spinach and potato curry. Julia suggested that some people might regard the spinach, which was draining in a colander, as too old to use and although she thought it would not be fresh enough to use in a salad, she believed that it would be fine if cooked. As Julia casually picked over the contents of the colander, the researcher observed that some leaves showed signs of rotting. Julia said that it was unlikely that she would use it all in the curry and would, therefore, return what was left to the fridge, clearly determined to use as much of the spinach as possible on another day.

Conclusion

The findings presented in this chapter highlight the complex terrain in which kitchen practices and food safety were negotiated in our study households. The ethnographic approach brought to the fore both a number of uncertainties and confusions regarding production processes and current best-practice advice as well as a range of personal beliefs, values and logics which perhaps rubbed alongside 'expert' guidance. It is in these gaps - where conflict and ambivalence sometimes arise between expert and lay knowledge – that food safety practices were often negotiated at the level of individual study households. Importantly, where there was doubt concerning the perceived efficacy of guidance concerning recommended practice, which was perceived as shifting, this appeared to open up the potential to rely on 'tried and tested' logics based on the personal experience of study participants.

CHAPTER 7 Discussion and conclusions

Summary of key points in Chapter 7

This study provides an in-depth report of kitchen practices to inform the Agency's understanding of what people do and why in their kitchens.

The findings suggest that 'pulling apart' practices to isolate and examine specific elements is unwise – it is instead important to consider practices with their meaning and context intact.

Potential pathways to foodborne illness have been highlighted by revealing the way that non-food actions and 'things' interact with food-related activities.

The findings point towards new ways to consider how vulnerability and risk are identified and defined.

Older people (aged 60+ but particularly those aged 80+) seem to have more 'working against them' in the home, which might increase their risk of foodborne illness.

This final chapter discusses the findings in some detail, in relation to the study's objectives and also considers the findings about the space and design of kitchens. It is outside the scope of this study to comprehensively review and consider ways for the Agency to make use of the findings from *Kitchen Life*. This chapter therefore draws on the research team's reflections to offer some initial suggestions for the Agency to consider, in terms of future work, communications or interventions. It might be useful to investigate other approaches alongside these suggestions. This study complements and adds to findings from other work commissioned through the Agency's Social Science Research Unit, such as the evidence review (Greenstreet Berman 2011) and the biennial *Food and You* survey (Prior et al. 2011; Prior et al. 2013). Our findings should be considered alongside this earlier work.

What constitutes everyday 'kitchen life' in contemporary UK households?

While a kitchen is defined as a 'room or area where food is prepared and cooked' as well as a 'set of fitments and units that are sold together and fixed in place in a kitchen' (Oxford English Dictionary 2002: 416), the findings presented in the previous four chapters highlight how kitchen life constitutes a great deal more than food preparation or 'cooking'; they also highlight that kitchen life overspills the kitchen space into other parts of a dwelling or its associated outdoor spaces. From the outset, study households seemed relieved that the *Kitchen Life* team were not interested in *assessing* their practices and that we were eager to see and hear about the non-food (as well as food) related parts of their kitchen lives. Households were often keen that the FSA were made aware of these different aspects.

Yet the universal notion tends to be that kitchens are a self-contained space for foodwork (with laundry and recycling 'tasks' perhaps implicitly seen as part of the space too). For example, companies sell kitchens on the basis that they will be 'fully-fitted' to store food and the concomitant appliances and other paraphernalia for the preparation, cooking, consumption and disposal of food. The FSA's 4 Cs campaign focuses on the chilling and cooking aspects of foodwork, plus associated hand washing and the prevention of cross-contamination (this is discussed further later in this chapter). Retailers sell a myriad of items

to make kitchens 'look nice' but rarely promote items for the kitchen that would facilitate the flow of the non-food elements of kitchen life. Advertisements sometimes show a pot plant or a pet in the kitchen, but few have studied or given meaning to such things 'living' in the kitchen. Our findings show that it is the non-food items and activities *combined* with the food-related actions and paraphernalia *and* the layout and design of the kitchen and *where* it is located within a dwelling in relation to other rooms and outdoor spaces that 'make' and give meaning to the kitchen. The kitchen was revealed as the 'hub' of the home *because* of these intersections – these are what 'make up' the practice (Halkier and Jensen 2011). Seen from this perspective the people who live in a dwelling can much more clearly be understood as just one element of the jigsaw puzzle. In turn, this perspective provides a potentially important conceptual shift in terms of the way the Agency can use these insights to shape future policy and intervention, alongside existing approaches, to help reduce the burden of foodborne illness.

One way the Agency could draw on the conceptualisations of kitchen practices revealed through this study would be to carefully craft information which takes account of the *context* of everyday life, to provide households with a different, enhanced, mode of communication about kitchen practices within the home. One suggestion would be to consider using illustrative 'real life' case studies. Utilising case studies could help develop an evidence-based narrative – one that resonates with UK households. Rather than information being potentially dismissed as irrelevant, imposed or uninteresting, narrative-based communication is seen as 'real' and therefore more difficult to ignore (Dahlstrom and Ho 2012). Fictionalised stories, based on 'real life' case studies, using words, pictures, film or animation could offer a method of communication about food safety that is both meaningful and persuasive (Busselle and Bilandzic 2008). Illustrative case studies could be utilised and targeted at the points at which households might consider changing aspects of their kitchen practice – so-called 'points of leverage'[29] – when food safety could potentially be enhanced. Pregnancy, moving home or changes in household composition are some suggestions for potential leverage points to consider. Illustrative case studies could be used not just to communicate with the general public but also, for example, to communicate with providers of ready prepared foods for older people, to enhance the guidance they are able to give to customers.

Such an approach may help to avoid an over-reliance on expecting kitchens and their users to be perfectly aligned with recommended food safety practice, which is not based on what households actually 'do' (a so-called deficit approach). Using evidence-based 'real life' case studies could help policy and communication to add an assets-based approach to its armoury - an approach which is increasingly advocated within public health policy and practice because it examines the reasons 'people do what they do', at different points in the life course, thereby not ignoring social context (Morgan and Ziglio 2007; Morgan et al. 2010; Brooks and Kendall 2013)[30]. Other approaches are also, no doubt, applicable and this is offered as one suggestion, drawing on the experience of the report's authors. Taking into account the assets that people draw on at different times of their lives is an issue returned to later in the chapter.

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[29] This term arose from a workshop organised by the FSA to discuss the findings of this study, held at Aviation House on 9th May 2013.
[30] See also http://www.scdc.org.uk/what/assets-scotland/newsandresources/

What relationships exist, and why, between what people do and say and the kitchen space/place?

The value of the approach we have taken to exploring kitchen life is that the intersection of study participants' actions, accounts and kitchens - and more besides, were 'laid bare'. Study households were neither aware of some of their actions, nor of the contradictions in their accounts about what they were doing, because households operate through having a 'feel for the game' (Bourdieu 1990). When accounting for their actions, that flow is disrupted and the reasons recalled or articulated may or may not relate to the 'actual' reason for something being undertaken in a particular way (Garfinkel 1964). The benefit of observing *as well as* asking people to report on their everyday life, however, means that we were able to consider the **entangled** web of **encounters** – to reveal the flow of kitchen life, underpinned by 'rules of thumb' about 'how things are done', which revealed that 'food safety' is, often, not a priority. What *was* revealed included:

- The room (space) of the kitchen itself and its **boundaries** with other rooms/spaces
- The way the kitchen is transformed or displayed as a 'place' – a room with meaning
  - The 'things' that turn the room into a place with meaning
- The people within a household (and important others from outside the household)
  - The **logics and principles** people in a household draw on to *recall*, *talk, perform*[31] and *'know'* about their kitchen life

The household logics and principles highlighted in Chapter 6 reveal unevenness in the way study households accounted for what they did. Logics were developed over time from 'bits of information' gleaned from a range of almost indiscernible sources -'it's just how things are done' (Warde 2005) - but which included friends, family, the internet, packaging on food, or mobile phone 'apps'. Some information was acted upon; some was 'mis'-interpreted and partially acted upon; and other information was acted upon, but only some of the time. Households in the study demonstrated what Giddens calls discursive and practical consciousness (Giddens 1984) – they can only account for or explain the origin or relevance of *some* of the things that they *know* that they do. So 'information' is 'known' in various ways but only ever acted upon *within the realms of the current practice in which it exists* (Reckwitz 2002; Warde 2005). This highlights the difficulty with providing households with 'more information' – it is not clear how such information will be interpreted or assimilated into everyday practice. The case study approach suggested in the previous section may help to address this though other approaches also need to be considered.

While some research has been conducted on the logics of, for example, use of food labelling, this has tended to remove the *context* – showing front of pack labelling to individuals and asking them to talk through their use of such information (Draper et al. 2011) does not relate to how they go about the complex, entangled business of using (or forgetting or ignoring) labelling in 'real life'. This may point the way to commissioning further ethnographic or qualitative studies, based on the study design of *Kitchen Life,* if the Agency wishes to try to generate further insights about topics difficult for individuals to articulate, such as use of food labels.

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[31] We agree with Halkier and Jensen (2011) that the idea of the performance of practices requires more thought.

The meanings behind what study households viewed as 'cleaning' are worthy of attention as this has potential implications for how the FSA might understand (or communicate messages about) 'hygiene'. All households in the study undertook 'cleaning' tasks but often this was not connected to making an object or practice 'hygienic' or 'safe'. The spectrum of cleaning we outlined in Chapter 4 illustrates that participating households frequently 'cleaned' to make things tidy, or look nice, or simply as part of the entangled way that 'things were done' as part of a routine (whilst waiting for the kettle to boil, for example). Such meanings can have emotional dimensions, in producing a sense of 'satisfaction', for example (Pink 2004). The Agency could use the findings presented to consider cleaning as part and parcel of other aspects of kitchen life when developing policies and interventions.

The inherent social nature of kitchen life was highlighted by our findings. Being with others occurred within the flow of kitchen life – a boy doing his homework or watching television in the kitchen whilst his mother cooked; a woman preparing food for consumption later whilst her husband prepared his own breakfast; a man who lived alone speaking to his deceased wife's photograph whilst he chopped vegetables; or a younger man with a phone pressed to his ear whilst continuing with other tasks in the kitchen. Such encounters were important in shaping the meaning of the kitchen and remind us that homes are socially constructed – what people say and do in and about their kitchen is shaped by their interactions and feelings about those other people they care about or spend time with (Murcott 2000; Wright-St Clair et al. 2005); these findings also show that people can display their family relationships (Finch 2007) through their kitchen lives. So kitchens are often not under the control of one person and therefore it is important to consider the actions of each member of a household – from the very young to the oldest old – as influencing 'what goes on'. Communicating with children, for example, through school-based campaigns or other initiatives could be important as children and young people cannot simply be targeted in relation to food safety via their parents; our findings suggest they often start to develop differentiated practices from a very young age.

The social nature of the kitchens we studied was also illustrated through the personal artefacts found there (Percival 2002). These included photographs of loved ones, pets and cherished family moments; 'kitchen items' that were 'held on to' long past their useful function; soft toys, potted plants, ornaments, children's drawings and magnets attached to the refrigerator. All of these had *symbolic* importance, even if not 'used' (Hand and Shove 2007). Rupturing the social links between kitchens, objects and people, through expecting households to stop – think –and consider if something is clean, safe or should be stored or displayed in the kitchen would, therefore, not be an effective way to address food safety.

What potential pathways exist between practices and food safety within domestic kitchens?

A key finding to emerge from this study is the extent and ways that kitchen practices are entangled and impossible to 'pull apart'. Simply being in the kitchen represents part of a practice that can incorporate a constant flow or sequence of 'small events'. 'Cleaning', for example, whether of hands, surfaces, floors or food, was part of this flow, an 'action' often unconsciously enacted by households within a sequence of activity (Schatzki 2006) and *not considered to be 'cleaning'* by many participants. A 'pulling apart' of something that is entangled *would* reveal the instances when, for example, hands were not washed, but this would also remove the context and therefore the insight would be lost or limited. We do

not, therefore, encourage the Agency to isolate 'events' when examining potential pathways between practices and food safety. Reflecting on the 'continuous unfolding' (Schatzki, 2006: 163) of the whole practice and potential pathway would be a more valuable approach to take when developing actions to support households. Data from this study clearly show the *complexity* of practices that might influence, for example, cross-contamination. Using the chopping board to illustrate, as this is considered a key resource in preventing cross-contamination, our findings show that:

- Some participants avoided chopping boards when handling (some kinds of) meat
    - They used a plate, or would tip meat straight from its packaging into a cooking pot
- Other study households were scrupulous about scrubbing a chopping board with a scourer and washing up detergent if they used the board to prepare meat – but they might 'clean' knives or other utensils which have touched the same raw meat by rinsing them under a running tap *without* using detergent or a scourer.
- Other study households had a range of chopping boards in their kitchen, yet they were observed using only one of these, despite perceiving, when asked, that they used a different board for certain tasks, such as the chopping of raw meat.

By focusing on the isolation of behaviours in campaigns like the 4 Cs, specific 'actions' - like preventing cross-contamination through careful use of chopping boards – could be perceived by consumers as the *only* activity they need concern themselves with. This could help to explain why a number of participants in *Kitchen Life* applied a different logic to the washing of chopping boards compared with the washing of a knife or other utensil used with raw meat or fish.

The insights offered in this report present some new potential avenues of enquiry, particularly relating to the interaction between the non-foodwork and foodwork elements of kitchen practice and the blurring of the boundaries with spaces outside the kitchen. This could have implications for food safety, in terms of the number of 'things' touched – food or otherwise. Such 'things' are not 'out of place' in the kitchen – electronic tablet devices, laptops and mobiles phones were used for entertainment or to keep in touch with others as well as to look for recipes or to phone other household members to ask them to buy ingredients for a cake. 'Things' can mould what households 'do' thereby helping to shape kitchen practices (Latour 2000). Such things were not just used in the home, however, they were repeatedly taken away and returned to the house and the kitchen; other items used in this way included keys, hand bags, shopping bags and lunch bags. The extent to which this movement represents a potential pathway to foodborne illness is not clear but may benefit from further thought.

The kitchen was revealed as a 'work hub' so it might be worth exploring further how having paraphernalia associated with gardening, DIY, bicycle maintenance, arts and crafts and the preparation of food for wildlife in the kitchen influences food safety. Are individuals *more* likely to wash their hands after completing 'dirty', non-food 'work' thereby *reducing* the risk of such practices taking place in the kitchen? We found that households stored food in spaces outside the kitchen - in the garage, porch, under-stair cupboards, bedrooms and bathrooms, for example, plus a number of study households grew their own food in a

garden or allotment, so does this further blurring of inside/outside kitchen work positively or negatively influence food safety?

Households with pets tended to integrate their animals into kitchen life on an almost equal basis with the human occupants. Dog and cat bowls were moved from the floor to the worktop to ensure the animals were fed alongside other family members, with apparently little conscious thought about potential pathways to foodborne illness. However, simply telling households to treat their pets as *non*-family members is unlikely to have an effect given the way they are valued. Any guidance needs to take this into account, though this could prove challenging. However, incorporating pets and pet care in any communications, targeted at potential 'points of leverage' when pets might be acquired (such as when children reach an age that they typically ask for a pet), might be one way to help address this challenge.

How can the most 'at risk' households be identified and defined in terms of their kitchen practices?

All of the households studied could be seen to take risks, in terms of not following FSA recommended practice, at least on some occasions. However, these individuals did not set out, usually, to act in a risky manner nor did they perceive their actions to be risky, so it is worth examining the gap between the Agency's definition of risk versus possible household-level definitions of risk, as well as the reasons why this gap might exist. We can think of three such reasons. First, the findings in the preceding chapters clearly show the range of logics and principles that households draw on and apply when accounting for their kitchen practices. These common sense rules of thumb are often on an equal footing with other, perhaps 'expert', principles that households are aware of. On occasion, as was revealed in Chapter 6, expert principles were seen as being worth *less* than the lay logics being applied. A number of households, for example, did not trust use-by dates and were therefore wary of applying the 'logic' provided on food packaging. It is important to reiterate this point, as it directly affects the terms by which the Agency can shape its thinking about whether, when and how to provide households with more information about 'food safety' (rather than kitchen practices).

Second, it is easy and perhaps understandable for individuals working in the world of food safety to think that others will prioritise this matter to the same extent that they do. The findings highlight that what goes on in the kitchen is about an entangled web of food and non-food work, encounters with others and getting life to flow smoothly – 'food safety' and 'risk' are rarely the main priority, even when study households have personal experience of foodborne illness. Elements of kitchen practices might have a significant *social* meaning. As discussed in Chapter 5, for example, encouraging a young child to help prepare breakfast or make a cake, is an important part of incorporating children into kitchen life which, by definition, means they become integrated into family life. The 'risk' (if it is consciously perceived as a risk at all) of letting a child lick a chocolate-covered spoon which has been in contact with raw eggs might therefore be perceived to be much lower than the risk to family life of not rewarding a patient, helpful child with a lick of the spoon.

Third, the insights reported in the preceding chapters show that practices are not fixed; they are subject to change as the flow of elements which make up a practice shift. 'New knowledge' (such as 'finding out' that cooked rice needs cooling quickly), pregnancy, the

birth of a child and children getting older, illness, frailty, bereavement, becoming the lone occupier of a household, media reports on 'food scares', experiences of food poisoning, and so on, were implicated in shifts in our households' practices. Over time, if we returned to see these households in one, or five years' from now, for example, we might find that some of these shifts had become permanent. Other changes may have been temporary, lasting only for the duration of contact with the household. Whether the reason for the reported shift involved an assessment of 'risk' is impossible to determine, but the point to consider is that the households who might be identified by the Agency to be 'at risk' change frequently and regularly therefore the FSA could consider engaging with a more dynamic perception of risk, taking into account a household's 'status' (as pregnant, for example) as well as other potentially shifting aspects of practice (preparing food for one person rather than several, for example, or needing to find out how to use a microwave). Adopting a generic risk framework tends to ignore most of the meanings and bodies of knowledge which are inherent in everyday life and instead puts an emphasis on how institutions view individuals and their 'failing' behaviour. This tends to foreground an institution's own knowledge as being 'right' and this approach, if used in isolation, often proves to be neither helpful nor effective (Green 2009). Considering other frameworks could prove beneficial. For example, an assets framework could complement a risk approach. An assets framework tries to consider what people do 'right', at a given life stage, in a given situation thereby incorporating individuals, households and the wider socio-environmental context (Brooks and Kendall 2013). This is considered further in the final section, below.

How, if at all, do households encompassing older and younger people and pregnant women differ?

The previous section highlights the challenges associated with trying to identify or define households that might be at risk of foodborne illness. Households with individuals aged 60+ and pregnant women are considered by the Agency to be *vulnerable* or predisposed to harm from contracting foodborne illness because of their 'status' of being older or pregnant. Our findings suggest that being older or pregnant does not <u>automatically</u>, however, entail a greater *risk* of foodborne illness due to the practices such groups undertake in the kitchen. Being pregnant or getting older might, though, be linked with *shifts* in practices which increase the risk of illness to these populations. As we have already discussed, this study shows that shifts *do* occur, but they may not be permanent and may not be evenly applied across a practice. In households with pregnant women, awareness of, or knowledge about, guidance regarding 'eating safely' in pregnancy was apparent from what participating women said; such guidance was very often reported to be inconsistently applied, however. In order to help the Agency review this study's findings on older people and pregnant women and to assess the potential risks to such groups, we have compiled a table highlighting the potential pathways to foodborne illness for different household-types, based on findings from the study. The contents of the table come with a caveat – they should not be read or interpreted without full consideration of the context and meaning of kitchen practices provided throughout this report. The table could, however, be useful when considering the points of discussion in this section; the table is available as Appendix I.

Our findings suggest that older people, in particular, might be at risk of harm from foodborne illness because there is an accumulation of factors working against them compared to households with adults of working age (see Appendix I). A cohort (or

generation) effect might help to explain this (Keyes et al. 2010). Older people who grew up in a time when, for example, there was a shorter production-supply chain, fewer processed foods were prepared or eaten, date-labelling was not widespread and foods were often not refrigerated might be more likely to have a perception that they are 'safe' from contemporary 'dangers' in the kitchen. Our findings seem to support this and, coupled with age-related deterioration of the senses (being less able to smell whether food is 'off', for example), could point to older people being more at risk of foodborne illness.

The risks to older people are not straight-forward, however, because changes in practice that occur, for example, as a result of bereavement, frailty, failing health or illness, might result in greater *or* fewer pathways to a risk of contracting foodborne illness (as we go on to show, in Table 2). This suggests further attention is needed to consider *how* risk might operate for older people or pregnant women. One useful framework is that proposed by Schroder-Butterfill and Marianti (2006). While these authors use their framework in relation to older people such a framework could usefully be applied to consider the vulnerability of pregnant women too. The framework acknowledges that vulnerability is socially constructed and everyone does not, therefore, have an equal likelihood of harm as all socially constructed phenomena are inherently unequal – due to factors such as gender, socio-economic status and ethnicity. Shroder-Butterfill and Marianti's framework breaks down vulnerability into four domains - *threats, exposure, coping capacity* and *outcomes*. The possibility *and* magnitude of the threat, exposure and capacity to cope, individually and in combination, relate to the degree to which a household is at risk of harm from, or vulnerable to, the outcomes of foodborne illness. The framework is not overly deterministic and is intended as a guide – there are multiple ways it could be applied to vulnerability to risks associated with foodborne illness; Table 2 provides an example of how such a framework could be used, drawing on the example of the potential 'threats' arising from eating frozen ready meals.

Using a framework such as the one described (as well as investigating others) could contribute to an asset-based approach, as discussed earlier in this chapter. Considering the potential range of coping capacities of different household types could help to identify potential assets and identify further 'points of leverage' for action or intervention – that is, ways of building on the assets people already have, rather than what they do not have or cannot achieve.

Table 2. Assessing vulnerability using a risk framework

Threat	Exposure	Coping capacity (assets)	Outcomes
Use of frozen ready meals	• Loss of spouse who formerly provided all meals. • Illness results in frailty and inability to stand and prepare meals. • Delivery of meals by external company. • Meals stored at incorrect	• Company (or delivery driver) provides after-sales support regarding storage and reheating. • Individual (or another family member or carer) aware of risks of poor storage or reheating of	Mild to severe episode of foodborne illness

	frozen food.
temperature.	• Individual (or another family member or carer) can read and understand back of pack instructions.
• Poor rotation of meals in the freezer.	
• Meals defrosted at room temperature prior to reheating.	• Individual (or another family member or carer) is used to reheating food from frozen in microwave.
• Back of pack instructions not followed to reheat food.	
• Food not heated thoroughly.	
• Food not eaten immediately.	• Individual (or another family member or carer) assesses whether the food is safe to eat.
• Leftovers stored in fridge and eaten later in the week.	

Space and design

Our findings suggest that some study households desired a bigger kitchen but that, particularly for older people with increasing health and care needs, smaller kitchens can facilitate a better experience for their occupants. However, kitchens still have to provide sufficient space to enable easy access to cupboards and appliances (Peace et al. 2012). A number of kitchens we observed were poorly designed and laid out, particularly those in social housing or ex-local authority housing stock, which negatively impacted on what some of our participants felt able to do or change in their kitchens, particularly as they got older or the needs of their household changed. Whether and how this impacted on food safety is unclear. Others have reported, however, that being able to maintain a regular routine in one's own home is an essential element of older people retaining a sense of control thus also preserving wellbeing in the longer term (Percival 2002; Peace et al. 2012). It is possible that if people get older and lose a sense of control in the kitchen, because it no longer meets their needs, that bringing in external agencies to provide food or undertake care tasks could mean a change in risk of foodborne illness. This is perhaps a particular problem for those living in local authority housing given the real and perceived constraints of making changes and therefore staying in control (Miller 1988). In addition, access to spaces such as the backs of cupboards and fridges, including for cleaning and 'stock' management purposes, was hindered in some dwellings in our study and this particularly affected households with older people. Peace et al (2012) argue that although some kitchens could be improved through making small adjustments, older people may lack the information or capacity to do this. If people generally refit their kitchens for their imagined futures (Hand and Shove 2007), then how do older people relate to having kitchens (and therefore futures) that they do not perceive they can change? One solution might be through encouraging the design of kitchens to suit people throughout life, better enabling effective practices to support food safety as a household's needs change. This might entail individuals, retailers and kitchen designers more fully considering the type and location of fittings and appliances at *whatever point of the life course* a kitchen is refitted or an appliance replaced – we might call this another potential 'point of leverage' in terms of

improving food safety practices. Whilst some parts of a 'work triangle' might be fixed, others can more easily be moved as (or preferably *before)* needs change. For example whilst cookers and sinks are often located at fixed points, refrigerators could be relocated to a more accessible position or an old appliance changed to a freestanding fridge/freezer rather than an under-the-counter fridge *at the point that such changes are being considered*. Further helpful suggestions have been developed from the findings of the Transitions in Kitchen Living project[32].

Future research on domestic kitchen practices

Whilst this study has provided extensive insights about kitchen practices, there are some notable gaps with regard to some 'missing' household types within the study sample. There was little ethnic variation and no households were recruited with non-related individuals living together (such as students or other types of house-sharers). There were few households with extensive health or care needs (including households with compromised immune systems), those who needed attention from a multitude of care agencies or health professionals, including individuals living in sheltered and 'extra-care' housing and those receiving services such as 'meals on wheels'. As the Agency has an interest in understanding the vulnerability of older people, it may be worthwhile designing a study to look more closely at households in these latter groups in particular.

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[32] http://www.lifelongkitchens.org/uploads/4/3/8/8/4388906/tikl_publication_12-12_email_fina_print_version.pdf

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