Successful Breastfeeding?
Investigating Mothers' Experiences of Infant Feeding Policies in the United Kingdom

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Alice Carrington-Windo
Kellogg College

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For my grandparents, Margaret, Günter, Peggy and Bruce, with whom I would have loved to share this thesis.

And for my parents, Katrin and Tristam, whose love, support, enthusiasm and confidence have empowered me on my educational journey and in life.

Declaration of Authorship

I hereby confirm that this work is my own, except where otherwise specified.

Abstract

This research investigates how women in the UK experience and navigate infant feeding policies which frame specific infant feeding practices as 'optimal' for maternal health and infant health and development. At the centre of the research are policies focussed on practices of exclusive breastfeeding for six months followed by the introduction of complementary foods alongside continued breastfeeding. Execution of these practices is termed 'successful breastfeeding' in health education. The thesis examines these policies as a contemporary example of biopolitical governance, aiming to advance understanding of how the attempted regulation of health behaviours such as infant feeding plays out in the daily lives of its subjects. This provides insights into the divergence between policy and practice as well as the potentially adverse effects of infant feeding policy. Ethnographic research was conducted in a community network of breastfeeding support services in Oxford, UK, over a period of twelve months, foregrounding the lived reality of mothers as the subjects of infant feeding governance. The findings indicate that mothers are held responsible for achieving successful breastfeeding according to 'optimal' practices, with limited acknowledgement in policy of the multiple factors – both within and beyond a mother's control – that might prevent them from achieving this standard. Conflicts were identified in what constitutes 'optimal' infant feeding, and in how breastfeeding 'success' is and can be achieved. Mothers navigate these divergent and often conflicting ontologies of success through pragmatic strategies that enable them to negotiate the discrepant demands of early motherhood. These findings contribute to research that highlights the complexities involved in infant feeding decisions and practices, as well as to research that calls for a more 'mother-centred' approach to the promotion of breastfeeding.

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List of Abbreviations

AFASS	Acceptable, Feasible, Affordable, Sustainable and Safe
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Treatment
ARV	Antiretroviral
BFHI	Baby Friendly Hospital Initiative
BFI	Baby Friendly Initiative
CCG	Clinical Commissioning Group
COMA	Committee on Medical Aspects of Food and Nutrition Policy
CUREC	Central University Research Ethics Committee
DH	Department of Health
DHSS	Department of Health and Social Security
DOHaD	Developmental Origins of Health and Disease
EU	European Union
FAO	Food and Agriculture Organization
GER	Gastroesophageal Reflux
GP	General Practitioner
HCP	Healthy Child Programme
HIV	Human Immunodeficiency Virus
IBFAN	International Baby Food Action Network
ICCR	Interfaith Centre for Corporate Responsibility
IFS	Infant Feeding Survey
Igf2	Insulin-like Growth Factor 2
IGF2R	Insulin-like Growth Factor 2 Receptors
IGO	Intergovernmental Organization
INFACT	Infant Formula Action Coalition
JR	John Radcliffe Hospital
LLL	La Leche League
LLLI	La Leche League International Inc.
NCT	National Childbirth Trust
NCU	Neonatal Care Unit
NGO	Non-Governmental Organization
NHS	National Health Service

NICE	National Institute for Health and Clinical Excellence
OECD	Organization for Economic Co-operation and Development
OUHT	Oxford University Hospitals Trust
PAG	Protein Advisory Group
PCHR	Personal Child Health Record
PCT	Primary Care Trust
PHE	Public Health England
PMTCT	Prevention of Mother to Child Transmission
RCM	Royal College of Midwives
RCT	Randomized Controlled Trial
REC	Research Ethics Committee
SACN	Scientific Advisory Committee on Nutrition
SIDS	Sudden Infant Death Syndrome
SMA	Synthetic Milk Adaptation
STS	Science and Technology Studies
UK	United Kingdom
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
UNIFEM	United Nations Development Fund for Women
USA	United States of America
WBTi	World Breastfeeding Trends Initiative
WHA	World Health Assembly
WHO	World Health Organization

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Chapter One:
Introduction

This thesis is about the biopolitics of breastfeeding in the United Kingdom (UK): it examines the attempted regulation of infant feeding practices that emerges through policy efforts to normalize breastfeeding as the 'optimal' and 'successful' method of infant feeding. Using data collected over a period of twelve months in and around Baby Café, a community network of breastfeeding support services, the research interrogates how infant feeding governance manifests in the lives of its subjects. Focussing on mothers as the agents who enact infant feeding practices day-to-day, the thesis will investigate how women experience and negotiate policy guidelines, a line of enquiry that has received scant attention thus far. The thesis thereby seeks to provide an insight into how women's infant feeding practices are shaped and/or constrained by the policy landscape in which they are situated. The intention is to contribute new academic understandings of the nuances and tensions between state and individual in relation to infant feeding, the efficacy of health governance, and the potentially invasive and detrimental effects of that governance.

The biopolitical governance of infant feeding has a particular history and is as much a global assemblage[1] (Ong and Collier 2008) as it is a local process. Infant feeding practices became the subject of intensified political and public debate during the 1970s, when the intensive marketing of infant formula in low-income communities by multinational corporations (with the Nestlé corporation targeted as a focal point for grassroots activism) captured global public attention (cf. Palmer 2009). Since then, public health efforts have sought to reverse trends towards declining breastfeeding rates by mobilizing scientific discourse to frame certain practices – specifically that infants

[1] The concept of global assemblage is defined as 'the actual configurations through which global forms of

'should be exclusively breastfed for the first six months of life' – as the 'successful' or 'optimal' method of infant feeding (Department of Health 2010; WHO 2003a). This schema – referred to in the thesis as the 'policy optimal' – exemplifies a wider public health approach that employs behaviour change strategies as a mode of improving population health. The practices endorsed by infant feeding policy are framed in the thesis as 'prescriptive norms': that is to say, they illustrate an ideal, describing practices that women ought to engage in rather than the practices that are statistically average. These norms are produced globally, adopted nationally, and communicated locally through public health campaigns, clinical encounters, health education and media attention.

In examining infant feeding policy and practice through the lens of biopolitics, it is hoped that the thesis will shed light on two central issues that have been identified and explored in existing literature. First, scholars have focussed on identifying the reasons behind the low number of women who feed their infants according to the policy optimal. This is particularly relevant to the UK context where the disparity between policy and practice is acutely apparent, with just 1% of women complying with recommended practice (McAndrew et al. 2012). This divergence has been discussed widely both in academic research (cf. Hoddinott et al. 2011; Pokhrel et al. 2015) and within mainstream media (cf. Gallagher 2016; Hosie 2018), where a strong emphasis has been placed on the role of culture as a 'barrier' to breastfeeding (Ortner 2006). Second, research highlights the potentially negative impact of breastfeeding advocacy movements on the experiences of women, particularly in populations – such as the UK – where infants are primarily fed with artificial formula milk. This body of literature focuses on the link between breastfeeding and 'good' motherhood, highlighting feelings of guilt and failure among mothers who are unable or unwilling to breastfeed.

Compliance with infant feeding norms is presented in policy and health education as a choice that can be achieved by all mothers with adequate information, determination and self-regulation (NHS England 2014). The thesis seeks to question this approach, arguing that clarifying the issues identified in existing literature requires an approach that takes the biopolitical landscape of infant feeding policy into account. Three questions emerge from this line of enquiry. First, do infant feeding norms place undue responsibility upon mothers with respect to achieving successful breastfeeding according to the policy optimal? Second, might alternative conceptions of optimality exist that do not accord – or that directly conflict – with the policy optimal, thereby leading to alternative conceptions of what 'successful breastfeeding' comprises? And third, does the prevailing concept of 'culture', which is used in both policy and academic literature to explain the divergence between policy and practice, provide an adequate explanatory model for this issue?

Three concomitant features of infant feeding policy will be identified as central to providing a theoretical basis for these questions before turning to the data collected as part of the study for empirical evidence. Several areas of research will be examined to problematize these features. First, parallels will be drawn with literature that engages with the Developmental Origins of Health and Disease (DOHaD) paradigm and behaviour change strategies targeting obesity. The purpose hereby is to suggest that infant feeding policy may place undue responsibility on mothers to achieve successful breastfeeding according to the policy optimal. Second, the notion of optimality itself will be considered. The aim here is to engage with concepts developed within the field of evolutionary biology that highlight phenotypic plasticity[2] as opposed to optimality, in order to provide an alternative framing that challenges the use of the concept of optimality within policy.

[2] Phenotypic or developmental plasticity is defined as 'a property of individual genotypes to produce different phenotypes when exposed to different environmental conditions' (Pigliucci et al. 2006:2363).

Finally, the concept of 'culture' will be interrogated in its use as an explanatory model both for low rates of compliance with the policy optimal and for negative experiences of breastfeeding advocacy. Literature that problematizes the concept of culture more generally will be examined to suggest that the term's use over-simplifies the constraints that women face and fails to acknowledge maternal agency in enacting infant feeding practices.

By considering practices of infant feeding alongside and often in opposition to the biopolitical governance of infant feeding, the thesis aims to shed new light on each of these issues. Three primary bodies of literature from the wider anthropological discipline contribute to a theoretical framework designed to inform analysis of women's narratives. First the concept of ontological conflict – that is, the collision of different 'realities' – is considered in order to provide a framework which foregrounds maternal experience. Second, two biopolitical technologies will be examined: risk and measurement. Risk serves to encourage conformity with the policy optimal through self-regulation while measurement constitutes day-to-day surveillance of the infant body, functioning as a clinical measure of breastfeeding success that mothers must negotiate alongside the policy optimal. Finally, the concept of agency will serve to incorporate the capacity of women to subvert and navigate the normative structures that define breastfeeding success.

While the thesis intersects with policy in order to investigate how it is mediated and negotiated by mothers, the research presented in the thesis will not be framed as an anthropology of policy *per se*. This would entail detailed empirical, ethnographic investigation of the bureaucracies, power structures and institutions involved in the formulation of infant feeding policies, and while this offers a fertile opportunity for future research, it is beyond the scope of the present study. The findings may nonetheless inform policy in addition to academic research by emphasizing the experiences of breastfeeding

mothers, arguing that these experiences must be acknowledged if infant feeding policy is to influence individuals and populations in positive and effective ways.

1.1 Examining the Biopolitical Governance of Infant Feeding

The framing of breastfeeding as a biocultural[3] process has been central to anthropological understandings of infant feeding practices (cf. Fouts et al. 2012; Gussler and Briesemeister 1980; Moffat 2001; Stuart-Macadam and Dettwyler 1995), but fewer studies have examined infant feeding policy and practice from a biopolitical perspective (for an exception see Lee (2018), who engages with the concept of biopower to inform her work on the ethics and poetics of breastfeeding). While infant feeding practices undoubtedly constitute a process through which biology and culture meet, they equally exemplify a synthesis of biology and politics: specifically a site in which politics are brought to work on biology in an effort to shape the health of individuals and populations. Examining the role biopolitical governance plays in the lives of its targeted subjects (in this case, mothers) is key to understanding the nuances and tensions between state and body, the efficacy of health governance, and the potentially invasive effects of that governance.

The term 'biopolitics' has repeatedly been the subject of analysis throughout the twentieth century,[4] but most relevant to this thesis is the interpretation that emerged in the

[3] Biocultural approaches are defined as 'those that explicitly recognize the dynamic interactions between humans as biological beings and the social, cultural and physical environments they inhabit' (Ulijaszek 2007:21).

[4] The notion of biopolitics emerged at the beginning of the twentieth century, with political scientist Rudolf Kjellén (1920) often being credited with coining the term as part of his conception of the state as a 'living organism'. The term was later employed by the National Socialist Party, this time theorized as a biologically grounded conception of people and state, which provided the ideological basis for the hegemonic expansion of the Nazi Reich (Lemke et al. 2011:12-13). During the course of the 1960s a new reading of biopolitics emerged, this time within political science, which advanced a 'naturalistic study of politics' that used biological concepts and methods to investigate political behaviour (Blank and Hines 2001:2). Utilisation of the term shifted once again towards the end of the 1960s and in the early 1970s to describe policies and regulatory efforts directed towards resolving the global environmental crisis (Lemke et al. 2011:23). This was soon augmented by a further concern, aligned roughly with the considerations of bioethics in its focus on considering the social acceptability of biotechnological

1970s within social theory, introduced by Michel Foucault in his lectures at the Collège de France (2003[1976]) and in *The History of Sexuality, Vol. 1* (1980). Foucault utilized the notion to highlight a shift in the political system, marking 'the entry of phenomena peculiar to the life of the human species into the order of knowledge and power, into the sphere of political techniques' (1980:141-142). The related concept of 'biopower', which is not consistently separated from biopolitics in Foucault's work, can be used to describe the 'more or less rationalized attempts to intervene upon the vital characteristics of human existence' (Rabinow and Rose 2006:196-197) that are associated with biopolitics. The concept of 'population' is critical here: biopolitics is the mechanism by which life processes are subject to collective, regulatory modification, designed to secure an optimal biological stability in populations: 'to optimize a state of life' (Foucault 2003[1976]:246).

Within public health, the rise of 'nudging' (Thaler and Sunstein 2008) and further behaviour change strategies that focus on altering risky behaviour directly through social marketing and other means (Alvaro et al. 2011; Glass and McAtee 2006)) exemplify the transformation from disciplinary power to biopower in modes of health governance. Behaviour change strategies target breastfeeding as a means of optimizing the present and future health of infants, and it is in this capacity that infant feeding policy serves as a contemporary example of biopower.

Two elements of Foucault's analysis of biopolitics emerge as particularly relevant in understanding the governance of infant feeding in the UK and globally: optimization and normalization. According to Foucault, biopower consists of two interlinked axes: 'anatomo-politics of the human body' and a 'biopolitics of the population'. The former gives rise to the concept of optimization, focussing on 'the body as a machine; its disciplining, the optimization of its capabilities, and the extortion of its forces, the parallel

innovation (Lemke et al. 2011:26). Foucault's interpretation of the term diverges from the naturalist and politicist analyses outlined above.

increase of its usefulness and its docility' (Foucault 1980:139). The concept of optimization highlights the political-economic motivations for promoting breastfeeding as a beneficial health behaviour, focussing on scientific authority and health as human capital. The latter ('biopolitics of the population') targets the biological processes of the population: births, deaths, health, longevity, and reproduction. These processes are subject to regulatory control through modes of governmentality – that is, 'the conduct of conduct' (Foucault 1982:220-222). Normalization is a key technology of biopolitics and governmentality, identified through Foucault's investigation of prisons and his interpretation of Georges Canguilhem's (1978) work on the normal and the pathological. In relation to infant feeding, the concept of normalization draws attention to the strategies that aim to regulate infant feeding practices according to the policy optimal.

Sections 1.1b) and 1.1c) will examine optimization and normalization in turn. However, in order to enable a grounded analysis it is first necessary to establish the historical context that made contemporary infant feeding policy possible.

a) A History of Infant Feeding Policy and Practice

Current policy approaches to infant feeding have arisen in response to changing practices as breastfeeding has gradually ceased to be the exclusive or primary means of feeding infants. Investigating the process by which current practices and policies came into existence reveals how and why breastfeeding features in the public and political consciousness, and how infant feeding practices became a matter of global and UK national governance. Examining the involvement of different governments, Intergovernmental Organizations (IGOs), Non-Governmental Organizations (NGOs) and individuals in shaping contemporary infant feeding policy sets the scene for subsequent

sections by introducing the key documents, precedents and actors that have shaped the biopolitical governance of infant feeding practices.

Concerns over infant feeding practices other than breastfeeding by the infant's own mother have a lengthy history. At the latest by the medieval period, it was generally recognized in western Europe that an infant breastfed by its own mother was, in addition to possessing general good health, more likely to avoid certain illnesses (for example rickets), stunted growth and death (Fildes 1995:106). Before the widespread availability of commercial formula milk, concerns over infant feeding practices related primarily to the practice (and profession) of wet-nursing[5] (cf. Stevens et al. 2009) and the use of animal milks[6] to feed infants; with the rise of commercial dairy farms having precipitated the decline of wet-nursing in the late nineteenth century (Osborn 1979). New technologies enabling more advanced milk processing were developed as part of a widespread process of food industrialization in the late nineteenth and early twentieth century (Bentley 2014), with condensed tinned milk (1853), evaporated milk (1885), surpluses of whey, and novel materials and production methods for feeding bottles and teats forming the basis of an emerging infant food industry (Palmer 2009:203). Enhanced understanding of the link between milk contaminants and infant mortality underpinned the scientific drive to formulate non-human milk to resemble the composition of human milk, and in 1865 the first infant food was developed, patented and marketed by German

[5] Wet-nursing, i.e. 'a woman who breastfeeds another's child' (Davis 1993:2111), provided a prolific alternative to breastfeeding before the widespread use of animal milks to feed infants, with written records of the practice existing as early as 2000 BCE (Fildes 1986; Wickes 1953a). Wet-nursing as an adaptive behaviour is characteristic of humankind's evolutionary reliance on co-operative breeding behaviours; indeed humans are by no means the only animal to provision offspring other than their own (Hrdy 2009:180-181). It was well-known in ancient civilizations (Fildes 1988).

[6] Much of the animal milk used to feed infants was heavily contaminated, causing tuberculosis and diarrhoea (Atkins 2003). In several industrializing countries, concern about high infant mortality (accompanied in some places by falling birth rates) during the late nineteenth and early twentieth centuries led many physicians and administrators to carry out surveys to determine exactly how infants were being fed (Brandstrom et al. 1984; Public Record Office 1904; Woods et al. 1988). In Britain, local surveys were carried out mainly by Health Visitors and Infant Welfare Clinics (Newman 1906; Public Record Office 1904; Vincent 1904).

chemist Justus von Liebig and, at a similar time, Nestlé (Radbill 1981). By the late 1880s several brands of these 'patent' or 'proprietary foods' had appeared on the market, sold primarily in pharmacies. Along with canned and dried milks and unlike unprocessed animal milks, these new forms of infant foods could be stored safely even in hot temperatures (Bentley 2014:39). By the 1920s, food corporations and pharmaceutical companies that still exist, such as Nestlé and Synthetic Milk Adaptation (SMA)), were developing and marketing a second generation of commercial infant formulas that became widely available to ordinary mothers as a substitute for breastmilk rather than a supplement (Bentley 2014:46).

As with contemporary infant feeding practices, the extent of breastfeeding between and within populations appears to have varied widely. Infant feeding practices are heavily dependent on the ability and willingness of individual women to breastfeed, and it would be misleading to simplify breastfeeding trends in terms of a global decline or a uniform trend in response solely to the popularization of commercial formula milks.[7] It is clear, however, that by the 1920s infant feeding practices in Europe, the United States of America (USA) and Australia had altered radically from those 100 years prior as a result of the developments described above (Fildes 1991). Available evidence indicates that rates of breastfeeding declined steadily until the 1970s (Fomon 2001). In the USA for example, data from the National Fertility Study (Hirschman and Butler 1981; Hirschman and Hendershot 1979) suggest that from 1931-1935 >70% of first-borns were initially

[7] For a comprehensive history of infant feeding practices in Western Europe, see Fildes (1995). In certain parts of Europe, for example, where populations inhabited a cold, dry climate (e.g. Germany, Sweden, Finland), the practice of artificially feeding all or most infants existed at least from the fifteenth century (Knodel and van der Waale 1967). 'Dry nursing' (referring to the use of substances such as flour, bread or cereal cooked in broth or water to feed infants) became customary among the upper classes in the last two decades of the seventeenth century (Trumbach 1978), and in the same period parish and foundling infants were dry nursed as a result of necessity as well as the comparatively greater cost of employing a wet nurse (Fildes 1995:108). Statistics on infant feeding were first compiled in the UK in the 1890s and 1900s, from which it is clear that considerable variation existed in different towns and also within towns (Drake 1908; Newman 1906; Thompson 1984; Woods et al. 1988). These differences appear primarily to have arisen from the different types of work in which women were employed (Fildes 1995).

breastfed and 40% were breastfeed for at least six months. By 1946-1950, initial breastfeeding of first-born infants had decreased to 50% and only 20% were breastfed for at least six months. By the 1970s, 25% of infants were breastfed at the age of one week and 14% at 2 and 3 months of age (Greer and Apple 1991; Ross Products Division of Abbott 2007). In the UK, 80% of infants in 1945 were leaving hospital wholly breastfed (Ministry of Health 1943) with the initiation rate declining to 51% in 1975 (Martin 1978). In Sweden, 88% of infants had been breastfed at two months in 1944, and by 1970 that figure had plunged to 30% (Cone 1981).

The increasing popularity of artificial infant formulas and commercially produced baby foods as well as the consequent decline in breastfeeding were precipitated and facilitated by several societal changes. Wolf (2001) argues that as romantic love and sexual partnership became increasingly valued, the breast gained an enhanced sexual role while its perceived value for rearing children diminished. A further factor contributing to the decline in breastfeeding was the growing number of women entering the labour force, particularly in factory settings that did not accommodate children (Tomori 2018:116). An accompanying increase in migration to urban areas led to the disintegration of community-based systems of expertise and support which childbearing women had relied upon previously (ibid.). This, and the advent of what Rima Apple (1995) has termed 'scientific motherhood', increased maternal reliance on experts and engendered changed attitudes towards childrearing. New notions of time associated with the role of the clock in factory labour (Thompson 1967), soon spread to other areas of life including childrearing, promoting regularity and measurability in everyday life (Tomori 2018:116). Infant feeding became subject to strict schedules, and responding to infant cues such as crying was discouraged (Bentley 2014:68). Along with rising hospital births that separated mother and infant for long periods of time, these practices undermined the

physiological 'supply and demand' mechanisms that enable breastfeeding. Doubt was increasingly cast on women's ability to breastfeed and, as artificial formula milks began to pose less of a threat to infant mortality, lay and medical communities concluded that pasteurization negated the differences between human and cows' milk (Wolf 2003:2004). By the early 1930s, physicians and infant food companies had established a close reciprocal relationship (Richter 2001:49), and by the 1940s and 1950s, consumers and physicians alike viewed commercially-produced formula milk as an approved and safe alternative to breastmilk (Apple 1987; Stevens et al. 2009); it was seen as a 'scientific' product with a known chemical content, which allowed measurement of milk intake when being fed to the infant (Kukla 2005:175). The increasing use of mass advertising facilitated the adoption and spread of these new products (Bentley 2014:48).

The downward trend of breastfeeding rates was noted by the World Health Organization (WHO) in a 1965 report: 'In many affluent countries the proportion of women who breast-feed their infant does not exceed 20% and lactation is often of short duration' (WHO 1965:28). At this point, the decline was not viewed as a matter of public health concern, as is evident from the same report: 'Though this situation is regretted by some people, it does not seem to have had undesirable results' (WHO 1965). In the context of NGOs however, grass-roots movements were beginning to gather momentum in response, with concerns at this point relating largely to the medicalization[8] of childbirth (cf. Davis-Floyd 1992; Inhorn 2006; Mitchell 2001). Alongside increasing rates

[8] Medicalization refers to the 'biomedical tendency to pathologize otherwise normal bodily processes and states. Such pathologization leads to incumbent medical management' (Inhorn 2006:354).

of hospital births[9] and medical interventions during childbirth, such intervention was increasingly attracting criticism.

Prunella Briance, whose own infant had died after childbirth in hospital, launched the Natural Childbirth Association in 1956 (which became the National Childbirth Trust (NCT) in 1961), promoting the approach of a physician named Grantly Dick-Read, who had argued against unnecessary medical intervention as early as the 1930s (Davis 2012:86). The original purpose of the NCT was to advocate for natural childbirth, and in the 1960s it began to lobby the UK government calling for 'the rigorous assessment of new technology and an end to the overuse of 'interventionist techniques' (NCT 2018b). It expanded its remit to provide courses for parents-to-be, and by the early 1970s there were 37 branches and over 8000 women / couples attending antenatal classes (NCT 2018b). In the same year (1956) La Leche League (LLL) was founded in the USA by seven Catholic mothers who wished to bring more adequate information to mothers wanting to breastfeed, through a network of Leaders operating in informal mother-to-mother support groups (DeJager Ward 2000:3-4). In 1964 LLL became La Leche League International Inc. (LLLI) with groups in Canada, Mexico and New Zealand, and in 1981 it was granted consultative status with the United Nations International Children's Emergency Fund (UNICEF) (Idler 2014:321).

In low-income economies, the use of commercial artificial formulas was similarly becoming increasingly widespread. Here, their increasing availability and promotion was associated both with decreasing prevalence of breastfeeding and with increasing infant mortality (Greer and Apple 1991:285; McCann et al. 1981). Dr Cicely Williams' 'Milk

[9] After a shift in the UK from the home to the hospital for childbirth in the 1950s, by 1975 95% of births were taking place in hospital (Christie and Tansey 2001:74; Oakley 1984:215). Other changes taking place during the 1970s resulted from the introduction of new technologies, and during the 1970s intervention also became a feature of birth itself (e.g. in 1965 only an estimated 15% of labours were induced; in 1974 it was around 41%) (Cartwright 1979). In the latter decades of the twentieth century women's choices in relation to childbirth were being constrained as a result, with home births being discouraged in favour of the perceived safer alternative of hospital births (Davis 2012:85).

and Murder' speech in 1939 highlighted the effects of bottle-feeding in Asia (Williams 1986 [1939]), and the link was confirmed throughout the 1950s and 1960s (Jelliffe 1955; Jelliffe 1962). Following a significant increase in knowledge about the benefits of breastfeeding in the 1970s (Wright 2001), research conducted in low-income economies (particularly in Gambia) from 1975 began to converge with research on immunology and child psychology to endorse the value of breastmilk (Crowther et al. 2009). Growing understanding of physiology, reproductive and developmental biology concurrently altered the focus of research from the composition of artificial milks to the biology of infant feeding (Crowther et al. 2009).

In 1970, paediatricians Dr Derrick Jelliffe and Dr Bo Vahlquist requested a meeting of the United Nations (UN) Protein Advisory Group (PAG) to address the impact of the commercial marketing of infant feeding products (Nathoo and Ostry 2009:116). Paediatricians and representatives from the formula milk industry and several UN agencies (including UNICEF and the Food and Agriculture Organization (FAO)) met in November 1970 in Bogotá, Colombia, with discussions taking place in a closed meeting in order to ensure industry participation (Richter 2001:52). The PAG did not publish a comprehensive report of the meeting, but it is known that the formula milk industry representatives in attendance denied the relationship between the availability and promotion of infant formula and the decline in breastfeeding in low-income economies (Richter 2001). The group continued to meet throughout the early 1970s in order to address problems related to the increasing use of infant formula (Newton 1999), but it was not until 1973 that a public statement was made. This statement proved to be ambiguous (Richter 2001:52). Although reference was made to the benefits of breast-feeding, it simultaneously called for closer collaboration between governments to extend

the use of commercial infant foods further: 'In any country lacking breastmilk substitutes, it is urgent that infant formulas be developed and introduced' (PAG 1973:18).

With limited progress being made, it was not until the mid-1970s that a critical turning point was reached in the global political approach towards infant feeding, and between 1973 and 1974 the impact of the rise in use of artificial formulas moved beyond the PAG to capture global public and legislative attention (Nathoo and Ostry 2009:116). In 1972 Jelliffe castigated the PAG's efforts to address infant morbidity and mortality in relation to breastfeeding and the concomitant role of multinational infant formula corporations in perpetuating the problem, which he termed 'commerciogenic malnutrition' (Jelliffe 1972). Jelliffe's speech sparked the interest of investigative journalists and, in August 1973, a British periodical concerned with 'Third World' issues called the *New Internationalist* published the first of several social justice articles on the infant formula issue, entitled 'The Baby Food Tragedy' (Geach et al. 1973). In 1974 a further report entitled 'The Baby Killer', authored by Mike Müller (1974) for the organization War on Want,[10] brought the scandal to international recognition. These and other publications revealed that formula companies were intensively marketing infant formula in impoverished communities that had neither the cash resources nor the sanitary infrastructure to make formula milk a safe and viable infant-feeding option (Boyd 2012:283; Jelliffe 1972; Law 2000:437). Activists argued that by persuading mothers to feed their infants with formula milk instead of breastmilk, infant lives were being endangered in three ways: 1) deprivation of the antibodies contained in breastmilk; 2) ingestion of contaminated water as a consequence of failures to equip mothers with the necessary information and resources for correct, safe preparation of formula milk; 3)

[10] The London-based NGO War on Want, formed in 1951, uses the slogan 'poverty is political' to foreground the causal structures that perpetuate poverty. The exposure of the baby milk scandal was the first major 'victory' for the organization (War on Want n.d.).

potential malnutrition resulting from a dilution of formula in each feed due to the promotion of a product mothers ultimately could not afford (Boyd 2012:285).

Activist orientated organizations such as New Internationalist, War on Want, Interfaith Centre for Corporate Responsibility (ICCR), and Infant Formula Action Coalition (INFACT) succeeded in transforming the concerns about formula milk use from a little-known public health crisis to a moral, economic and human rights movement, creating pressure on multinational corporations, international organizations and national governments. The report resulting from the twenty-seventh World Health Assembly (WHA), held in 1974, highlights the general decline of breastfeeding in many parts of the world, now noting this as a matter of significant global concern (WHO 1974). It relates this trend to 'sociocultural and environmental factors, including the mistaken idea caused by misleading sales promotion that breast feeding is inferior to feeding with manufactured breastmilk substitutes' (WHO 1974).

The same year in the UK, a Working Party set up by the Committee on Medical Aspects of Food and Nutrition Policy (COMA – replaced in 2000 by the Scientific Advisory Committee on Nutrition (SACN)) – considered infant feeding practices and recommended breastfeeding for a minimum of two weeks, preferably for the first four to six months of life (Department of Health and Social Security 1974). In response to these recommendations, the Department of Health and Social Security (DHSS) commissioned a nationally representative survey (the 'Infant Feeding Survey' (IFS)) comprising 2304 infants born in England and Wales between 26th September and 23rd October 1975 (Martin 1978). The purpose of the survey was twofold: first, to provide a baseline for continuous review of the success of infant feeding policy, and second, to gather information about the reasons mothers choose to breast- or bottle feed and factors affecting duration of breastfeeding in order to aid the DHSS in the implementation of its

policy to promote breastfeeding (Martin 1978:1). This survey was conducted every five years (with Scotland included in the survey from 1980 onwards) until it was discontinued in 2010 (NHS Digital 2012).

Starting on 4th July 1977, INFACT coordinated a boycott against all products manufactured by Nestlé, which was a rational target due to its influential presence in economic markets of both industrialized and less developed countries (McComas et al. 1985:3). The boycott lasted for eight years, until 1984. Launched in the USA, it soon spread to Australia, Canada, New Zealand and Europe and engaged the media and many NGOs. According to sociologist Linda Blum, '[T]he feminist health movement, the 'hippies', and the Nestlé boycott together added a subversive, anti-capitalist interpretation to 'natural mothering', when joining cause with LLLI as well as Christian church groups to press for corporate responsibility' (1999:44). Blum's analysis establishes a connection between the grassroots response to the infant formula scandal and other simultaneous social justice campaigns, including the natural mothering movement that had been gathering momentum since the 1950s with the NCT and LLLI (see also Baumslag and Michels 1995; Palmer 2009).

A joint meeting between WHO and UNICEF on infant and young child feeding in 1979 had the objective of harnessing the public interest generated by the Baby Milk Scandal. For the first time, an NGO (INFACT) contributed directly to deliberations at WHO and UNICEF. The meeting in Geneva in 1979 was attended by approximately 150 representatives of governments, organizations within the UN and other IGOs, NGOs, the infant food industry, and experts in a variety of related fields. The International Baby Food Action Network (IBFAN) was founded at this meeting by six of the campaigning groups, with the aim of working towards 'an enabling environment for all women to establish breastfeeding as a societal norm in the best interest of both mother and child'

(IBFAN n.d.). As a result of the joint meeting, the early 1980s saw the publication of the *International Code of Marketing of Breast-Milk Substitutes* (often known simply as *The Code*) (WHO 1981), an advisory document concerning the marketing of formula milks. *The Code* emphasizes the right of every child and mother to be adequately nourished; the superiority of breastfeeding as 'an unequalled way of providing ideal food for the healthy growth and development of infants'; and the contribution of 'inappropriate feeding practices' to major public health problems (WHO 1981). *The Code* remains a significant driver in infant feeding policy today, promoting human milk as fundamentally superior to artificial formula milks in terms of health and other benefits to mother and infant.

Within three years of *The Code's* adoption by the WHA, 130 countries had passed legislation or formulated policies to restrict advertising (Baumslag and Michels 1995). The UK adopted parts of *The Code* in 1983, supported by a Code Monitoring Committee on infant formulae, and in 1987 the Joint Breastfeeding Initiative was introduced. The third report by the COMA Working Party expressed concern at the stasis of breastfeeding rates documented between the 1980 and 1985 surveys, stating 'there are warning signs that breastfeeding rates may not be maintained in the future. All these reports have endorsed breastfeeding as the best means of infant nutrition yet the rates remain unsatisfactory' (Department of Health and Social Security 1988). The same report attributes the renewed interest in infant feeding to 'a surge of scientific interest in and public concern about the relationship of diet and health' (Department of Health and Social Security 1988). This comment situates the emerging political emphasis on infant feeding practices within a wider context of public and scientific health consciousness, coinciding with a shift in nutrition science and policy guidelines in high-income countries to tackle the increasing burden of chronic disease associated with an aging population (Mozaffarian et al. 2018:3).

The next major event in global infant feeding policy occurred in 1990 following a conference held at the Innocenti Centre in Florence, co-hosted and supported primarily by the WHO and UNICEF: 'The Policymakers' Meeting: Breastfeeding in the 1990s: A Global Initiative'. The conference drew together thirty governments and other key stakeholders, and culminated in the formulation and adoption of the globally influential international public health declaration referred to as the *Innocenti Declaration* (WHO/UNICEF 1990). It established breastfeeding as part of a global goal to achieve 'optimal maternal and child health', stating that exclusive breastfeeding until 4-6 months was a 'child-feeding ideal' (WHO/UNICEF 1990:2) – thereby representing an initial attempt to normalize specific infant feeding practices. The *Innocenti Declaration* also formally launched global efforts to 'protect' mothers from emerging influences that might deter them from breastfeeding (Liamputtong 2011b:232). This was described in the document as a human rights issue for mothers and children in both developing and industrialized countries (WHO/UNICEF 1990). The 40 participant nations were called upon to attain specific operational targets (such as appointing national breastfeeding coordinators and the promotion of breastfeeding more generally) through 'reinforcement of a "breastfeeding culture" and its vigorous defence against incursions of a "bottle-feeding culture"' (WHO/UNICEF 1990:2) (conceptions of which are discussed further in section 1.3(c)).

A significant consequence of the *Innocenti Declaration* was the launch of the Baby Friendly Hospital Initiative (BFHI), also known as the Baby Friendly Initiative (BFI) in 1991. The global initiative promotes maternity services as a means of enabling mothers to breastfeed their babies, and offers clinics the opportunity to be awarded official 'baby friendly' status (UNICEF 2017b). Functioning as an accreditation programme, it provides a framework for implementing best practice through the *Ten*

Steps to Successful Breastfeeding (WHO/UNICEF 1991; WHO/UNICEF 2018 (updated version)). They include factors such as staff training, breastfeeding policies, dissemination of information to pregnant women, and the eschewal of formula milk unless medically indicated. The BFI follows the *Innocenti Declaration* in promoting exclusive breastfeeding as 'the norm for the first 4-6 months of life' (WHO/UNICEF 1989). The ultimate purpose of the BFI is to increase the number of women breastfeeding according to this norm.

Following these trends in global policy, the 1990s and early 2000s saw a focus in UK policy on promoting breastfeeding. In 1992 the Health of the Nation white paper was produced by the UK Department of Health (DH),[11] which outlined a framework for health policy between 1992 and 1997 and applied a strategic approach to population-wide health improvements (Department of Health 1992). The paper acknowledged the importance of breastfeeding in safeguarding and improving the health of infants and children, setting two targets: first, to increase the proportion of infants who are breastfed at birth from 64% in 1985 to 75% by 2000, and second to increase the proportion of wholly or partially breastfed infants aged six weeks from 39% in 1985 to 50% by 2000 (Department of Health 1992). The BFI was launched in the UK in 1994, and a National Breastfeeding Working Group was established in 1995 by the DH in England that produced guidance on infant feeding for the National Health Service (NHS) (National Breastfeeding Working Group 1995). Under the Blair Labour Government, the public health minister at the time, Tessa Jowell, launched the 1999 'Breast is Best' campaign in conjunction with the inaugural National Breastfeeding Awareness Week. The Breast is Best campaign arose out of on-going concerns about the low breastfeeding rates among British mothers by comparison with their European counterparts. Two National Infant Feeding Advisors

[11] The DH was renamed the Department of Health and Social Care in January 2018. To maintain consistency with policy documents, however, the department will be referred to as 'DH' in this thesis.

were appointed – one a practising midwife and the other a practising Health Visitor – and a budget of nearly £3m was allocated from the Public Health Development Fund to the Infant Feeding Initiative (Hamlyn et al. 2002:1). This funded national and local initiatives (including Baby Café, the site of fieldwork for this thesis) to increase breastfeeding rates, with a particular focus on women from disadvantaged groups, over a period of three years.

From the nadir of breastfeeding rates in the 1970s, the percentage of breastfed infants in the Global North increased over the next thirty years, as did the duration of breastfeeding (Fomon 2001). This appears to have been a trend arising from the general public rather than health professionals, in part due to the negative publicity directed towards the formula industry (Fomon 2001:417S) and in part also as a reaction against the scientific trend in child-rearing and corresponding turn towards natural childbirth (Liestøl et al. 1988). In Norway for example, which saw one of the most dramatic shifts, only 30% of mothers were still breastfeeding their infants two months after delivery in the 1960s (Norwegian Directorate for Health 2008). Statistics show 99% of Norwegian women initiate breastfeeding, with 80% continuing until 6 months. Rates of exclusive breastfeeding are lower, but nonetheless 46% of infants are breastfeeding exclusively at four months, dropping to 9% at six months (Norwegian Directorate for Health 2008). The high initiation and continuation rates have been attributed to Norway's generous parental leave entitlement as well as the strict control of advertising by formula companies (UNICEF 2007:7).[12] Furthermore, more than 90% of infants in Norway are born at BFI-accredited hospitals (Norwegian National Advisory Unit on Breastfeeding 2015).

[12] In Norway, parental leave is either 46 weeks with full pay or 56 weeks with 80% pay. This leave is composed of nine weeks of maternity leave and 10 weeks of leave reserved for fathers, and parental leave of either 27 weeks at 100% compensation or 37 weeks at 80% compensation. Women who do not qualify for parental leave receive a lump sum grant. In addition to paid leave, each parent in Norway is entitled to an additional year of unpaid leave before the child's third birthday. Norwegian mothers are also entitled to half an hour twice a day to breastfeed (The Norwegian Labour and Welfare Administration 2009). There is

In the UK the first IFS, conducted in 1975, reveals that at that point 51% of women initiated breastfeeding (Martin 1978), a higher rate than either Norway or the USA. The increase in breastfeeding initiation rates has correspondingly been slower, rising to 64% in 1990 (White et al. 1992), 77% in 2005 (Bolling et al. 2007) and 81% in 2010 (McAndrew et al. 2012). Standardized for maternal age and education level, initiation rates rose only slightly between 1985 (65%) and 2005 (67%) (Bolling et al. 2007). The rapid decline in breastfeeding rates during the early days and weeks after birth is also noticeably similar across the decades (Crowther et al. 2009:9), with the latest statistics showing that 34% of mothers continue to breastfeed until six months, with just 1% of those mothers breastfeeding exclusively (McAndrew et al. 2012). The most recent data in the UK indicates that a third of women stop breastfeeding by six weeks (Public Health England 2017a). In the USA, from a low point of 22% in 1972, initiation rates rose to 34% in 1975 and 59.7% in 1984 (Eckhardt and Hendershot 1984). In 2015, 83% of women initiated breastfeeding, with 58% still breastfeeding at six months, 25% of whom were breastfeeding exclusively (Centers for Disease Control and Prevention 2017). These rates are higher than those for the UK, despite having significantly worse maternity provisions (the USA does not mandate paid maternity leave for any employee (Eichner 2008)) and being the only country in the Organization for Economic Co-operation and Development (OECD) not to have adopted any legal measures to implement *The Code* (WHO/UNICEF/IBFAN 2016).

The history of infant feeding policy and practice presented here, both in the UK and globally, has established the backdrop to the biopolitics of breastfeeding. Examining infant feeding policies and practices over the last five decades illustrates the growing scientific understanding of the benefits of breastfeeding and the concomitant risks of

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no advertising of any formula milks in parenting magazines and Norwegian health services carry no promotional materials (UNICEF 2007:7).

formula feeding as well as the increasing politicization of breastfeeding prompted by the Baby Milk Scandal. The former provides a basis for appreciating the significance of contemporary biopolitical regulation of infant feeding practices, while the latter provides the political and social background to contemporary infant feeding governance. The historical involvement of international organizations, meanwhile, helps to frame infant feeding as a global issue. The importance of NGOs in shaping the political and social context of infant feeding both globally and in the UK is particularly relevant to this thesis given its focus on one particular grass-roots organization – Baby Café – for much of the data that informs the study.

b) Successful Breastfeeding: Pursuing the Optimal

The history of infant feeding policy charts, in essence, the fluctuating value placed on breastfeeding and breastmilk within the domain of policy and public health, where the predominant focus has been on infants rather than on mothers. Reflecting increasing emphasis since the Baby Milk Scandal on the value (for both health and economy) of breastfeeding contra the risks of artificial formula milks, current infant feeding policy mobilizes scientific discourse to frame specific infant feeding practices as 'optimal' and their execution as 'successful'. Contemporary global and UK national infant feeding policies focus on three principles: the status of breastmilk as an *optimum* source of infant nutrition for all mother-infant dyads; and the importance of *exclusivity* of breastfeeding and *duration* of exclusive breastfeeding in attaining this optimum. This section examines the concepts of optimality and success as central to understanding the biopolitics of breastfeeding, and the following section will examine the normalization of practices that are defined as optimal / successful.

The Logic of Optimality: Health and Economy

The concept of optimality fulfils two functions in infant feeding policy. The first is in describing how the health of individuals and populations can be enhanced and determined by modifying and improving infant feeding practices. The second is to delineate the specific practices that enable the optimal growth and development of an infant. Both of these functions relate to long- and short-term health outcomes that are underpinned by scientific discourse in public health policy. The function of biopolitical governance lies in 'administering and optimizing the vital characteristics of human life' (Greenhalgh 2012:473) and, examined in this way, the purpose of infant feeding policy is to enhance the health and future productivity of infants, the mothers who feed them and, by extension, the population as a whole.

The *Global Strategy for Infant and Young Child Feeding* (henceforth *Global Strategy*) coordinated by the WHO and UNICEF in response to the scientific and epidemiological evidence outlined above, incorporates the targets delineated in the *Innocenti Declaration* and underpins these with a more comprehensive understanding of breastfeeding and infant feeding in relation to other global interventions.[13] The document encourages countries to develop or strengthen widespread national strategies for young child feeding. Implementation of the BFI by individual member states of the WHO, for example, forms a benchmark for commitment (or lack of commitment) to the national promotion of breastfeeding. The *Global Strategy* seeks 'to improve – through optimal feeding – the nutritional status, growth and development, health, and thus the survival of infants and young children' (WHO 2003a). 'Optimal' here refers to the recommendation

[13] As part of the process of developing the *Global Strategy,* early in 2000 a WHO/UNICEF expert panel arrived at an informal consensus that exclusive breastfeeding until six months of age was a more appropriate recommendation than the four – six month mark detailed in the *Innocenti Declaration*, prompting a systematic review of evidence regarding the optimal duration of breastfeeding (WHO 2001b). The current global recommendation that mothers should breastfeed exclusively for six months postpartum before introducing complementary foods rests largely on this systematic review, based on sixteen independent studies from both developed and developing countries (Kramer and Kakuma 2002).

that infants should be 'exclusively breastfed for the first six months of life, receiving thereafter nutritionally adequate and safe complementary foods with breastfeeding continuing until 2 years of age and beyond' (WHO 2003a). In 2003, the WHO recommendations on optimal breastfeeding practices (six-month exclusivity) were adopted in full by the UK government (SACN 2003), and these guidelines have remained in place since then.

Contemporary infant feeding policy (globally and in the UK) is predicated on the assertion that breastmilk, as opposed to artificially-produced milk, is optimal for infants due to its nutritional value (providing safe, easily digestible nutrients necessary for growth and development (Lönnerdal 2004:510)); immunological properties (Asensi et al. 2006; Chirico et al. 2008); and long-term health 'programming' (Plagemann et al. 2012; Ralevski and Horvath 2015), particularly in relation to protective effects with respect to obesity prevention (Gillman 2011; Grube et al. 2015; Owen et al. 2005; Yan et al. 2014). Further propositions assert that children who are breastfed demonstrate a higher aptitude in intelligence tests (Horta et al. 2007:39), and that breastfeeding improves the maternal-infant bond (Zetterstrom 1999). In addition to the different nutrients required for survival, human milk contains biologically active proteins which have anti-infective, immunological (Lönnerdal 2004), neuroendocrine (Ahima et al. 2000; Gainsford et al. 1996; Vidal et al. 2004), and neuronal-behavioural (Mortensen et al. 2002) properties. Benefits to maternal health are also alluded to: breastfeeding is thought to protect against breast and ovarian cancer and osteoporosis (Key et al. 2001), and evidence suggests that it aids postpartum weight loss (Jarlenski et al. 2014). Breastfeeding also provides an effective form of contraception through lactational amenorrhea, ensuring adequate birth spacing to balance the maternal energy costs of lactation and gestation (Kennedy et al. 1996:56).

From the perspective of biopolitics, the motive behind increasing rates of breastfeeding is to mobilize this biological dimension of human existence in order to achieve improved health outcomes across the range of determinants described above. The logic of optimization provides a rationale for the governance of infant feeding practices and renders breastmilk an object of biovalue, that is, a substance which is valued for its capacity to improve human health. The term 'biovalue' was introduced by Catherine Waldby to characterize the ways in which bodies and tissues derived from the dead are redeployed to enhance the health and vitality of the living. Waldby defined biovalue as 'the yield of vitality produced by the biotechnical reformulation of living process' (2000:310). Breastmilk, in the context of this thesis, is not subject to biotechnical reformulation in the same way as the bodily products in Waldby's research; rather, infant feeding policy attempts to leverage the benefits of breastmilk as is, in its 'natural' state. 'Biovalue' in the context of breastfeeding thus reflects a more general recognition of the capacity of bodily products to 'generate a value accorded to the enhancement of health' (Ong and Collier 2008:455).

Recent emphasis on the potential economic benefits of breastfeeding to populations (by reducing, for example, hospital admissions for acute infections in infants (cf. Pokhrel et al. 2015; Weimer 2001)) exemplifies the increasing attention to breastmilk as a product of biovalue – a cost-saving measure, rather than site of wealth production through biotechnological enhancement. Global policy objectives emphasize the value to nation states of investing in breastfeeding both in terms of population health and economics, particularly in relation to long-term return on investment. The World Bank's *Investment Framework for Nutrition* draws on the WHA target for exclusive breastfeeding to highlight that meeting these objectives would result in almost $300 billion in additional economic gains across lower- and middle-income countries as a

result of improved cognitive development and child survival rates (Shekar et al. 2017:xxiii). The subsequent document produced by the Global Breastfeeding Collective (led by UNICEF and the WHO), *Nurturing the Health and Wealth of Nations*, states that 'breastfeeding is not only an investment in improving children's health and saving lives, but also an investment in human capital development that can benefit a country's economy' (UNICEF et al. 2017). A report published by UNICEF the same year, *Early Moments Matter for Every Child*, states: 'For nations, the loss of individual potential can turn into an unhealthy and ill-equipped workforce. It hampers economic growth and strains education, health and welfare systems. It leads to cycles of deprivation and dependence that can continue for generations' (UNICEF 2017a:3).

Breastfeeding is thus construed within policy as a process by which individual potential can be optimized and future health can be determined (both issues that will be discussed further throughout this chapter) through factors as varying as levels of intelligence, metabolic disease risk, programming of gut microbiota, and the provision of immunological protection at birth. In recent years, the benefits of breastfeeding and the risks of bottle-feeding have been framed increasingly in relation to the long-term protective effects of breastfeeding against non-communicable diseases, with an emphasis on the importance of infant feeding in early years as a contributing factor to the prevention (or proliferation) of obesity and type 2 diabetes. The early years of a child's life are presented in contemporary epidemiology and public media as a critical period that determines future health and potential. This framing is shaped by new knowledge in neuroscience, epigenetics and DOHaD research.

The increasing attention towards the early years of a child's life as a significant determining factor in programming future adult disease was originally prompted by Barker's foetal origins hypothesis (Barker 1995). Following Barker's Hypothesis, the

'thrifty phenotype hypothesis' contends that reduced foetal growth is associated with the development of chronic disease later in life, which results from adaptations made in utero which cause either an adaptive or a maladaptive response depending on the environment into which the infant is born. If the foetal environment predicts a context in which food is limited, the infant is well prepared. However, if the programmed adaptation to restricted nutrition is met by a calorie-rich environment after birth, the risk of future non-communicable disease is increased (Hales and Barker 1992:599). This finding led to a widespread recognition that the aetiology of many chronic diseases, such as coronary heart disease (Barker and Osmond 1986), type 2 diabetes (Ravelli et al. 1998), and osteoporosis (Cooper et al. 2002) lay not only in genetic predisposition or in adult lifestyle, but also in the ways in which early life events could affect subsequent biology.

The field of DOHaD research builds on Barker's hypothesis to expand into early childhood. This research contends that the early life events which determine in part the risk of later disease occur not only in the foetal period specifically, but throughout the plastic phase of development (i.e. the first few years of a child's life) (Gluckman and Hanson 2006). Recognition of the importance of the postnatal developmental phase in setting an individual on the path to health or disease (Eriksson et al. 2003; Eriksson et al. 1999; Singhal et al. 2002; Singhal et al. 2003) has contributed to the emphasis on both prenatal and postnatal environments on future disease burdens. This approach represents a fundamental shift in thinking about the way in which early life processes affect later health and disease in humans (Gluckman and Hanson 2006:1), which has had profound effects not only on epidemiological research, but on public health interventions and lay conceptions of individual disease futures.

Current UK infant feeding policy emphasizes in utero development and the first years of life collectively as a critical stage of human development. Drawing on concepts

outlined within DOHaD research, the *Healthy Child Programme* (HCP), which was launched by the DH and remains a key document in infant feeding policy, describes the early years of a child's life as the 'foundation on which all future health is laid down' (Shribman and Billingham 2009), and 'ensuring every child has the best start in life' is listed as one of Public Health England's (PHE) key priorities. The aim of the HCP is to 'ensure that every child gets the good start they need to lay the foundations of a healthy life' (Public Health England 2018). In July 2018 PHE published the *Feeding in the First Year of Life* report, which was the first comprehensive UK government scientific review on infant feeding since the COMA published *Weaning and the Weaning Diet* in 1994. The report focuses on the relationship between patterns of early growth and nutrition in the first year of life and health risks in later life, stating 'Breastfeeding makes an important contribution to infant and lifelong health and is the physiological norm' (SACN 2018:xii).

The focus in policy on the early stages of an infant's life reflects the burgeoning 'First 1,000 Days' discourse, a transnational movement coordinated by the WHO, the UN, eighty NGOs, donor and private sector partners, and endorsed by fifty nation-states (Pentecost 2017:270). The 1,000 Days discourse was prompted by a series of reviews in the *Lancet* in 2008, which centred on maternal and child undernutrition and outlined the basis for the thousand-day period as a productive (and engaging) point of focus. The data was based on WHO indices for child growth standards, which suggested that 'future human capital' – reflected in 'height, school achievement, economic productivity and birth weight of offspring' – is most accurately forecast by height for age at two years (Victora et al. 2008). A follow-up series in 2013 highlighted the relevance of the first 1,000 days on future burdens of obesity and chronic disease (Black et al. 2013). In the UK, a House of Commons Select Committee inquiry into the 'First 1,000 days of life'

was announced on 31st July 2018, stating: 'The bulk of public spending during a child's life comes in their teenage years, but there is a strong case for investing public money much earlier. What's more there is strong evidence showing how we can spend such resources to good effect' (Health and Social Care Committee 2018). The Committee's remit is to examine 'national strategy, current spending and barriers to investment and local provision' rather than the evidence base or the economic case for investing in the first 1,000 days.

Challenges to the science underpinning the attention given to infant feeding practices have surfaced repeatedly within academic and popular domains (Colen and Ramey 2014; Johnson 2016; Wolf 2010). These challenges question the validity of the evidence for the benefits of breastfeeding described above – for example, quality of the methodology, the interpretations and theorizing from the data – and point to studies that provide alternative understandings. Methodological difficulties in tracking the long-term health benefits of breastfeeding raise questions about the scale of some of those benefits, and many studies fail to provide adequate controls for confounding factors such as maternal education and wealth. Furthermore, the emphasis on exclusivity has been challenged, with one Randomized Controlled Trial (RCT) suggesting that early formula milk use might help to extend breastfeeding later on in the infant's life (Flaherman et al. 2013).

It is not within the scope of this thesis to engage fully with the evidence for or against the scientific claims that underpin policy (except where this relates directly to the experiences of participants); rather it is to demonstrate how these claims become normalized in order to educate and influence mothers on how they should use their bodies and how they should enact motherhood, with policy legitimated through science as a form of authority. Intervening in early life promises short- and long-term gains via

developmental programming mechanisms, and infant feeding and very early child development are now presented as national priorities. These have been emphasized as key areas of focus for the NHS and, particularly since the devolution of healthcare functions, to local authorities. Targeting infant feeding practices as modifiable behaviours appeals to a perceived dual impact on present and future disease burdens, as well as its cost-effectiveness, reflecting 'the capitalization of life' (Sunder Rajan 2012:1).

Reassessing the Policy Optimal: HIV/AIDs

The discovery that the Human Immunodeficiency Virus (HIV) could be transmitted through breastfeeding presented a challenge to the policy optimal (exclusive breastfeeding), prompting a major global public health dilemma which proved highly controversial. This discovery, and the process of reconfiguring policy approaches to infant feeding that followed, represents the most substantial renegotiation of what 'optimal' means within policy. It reflects the only instance in which the possible existence of multiple optimalities is acknowledged in infant feeding policy, in contrast to the overriding (and, after multiple policy reformulations, prevailing) notion of one optimal that applies universally.

The dilemma was associated with the fact that the global burden of HIV and Acquired Immune Deficiency Syndrome (AIDS) lay in sub-Saharan Africa, where malnutrition and infectious disease is a major cause of infant mortality (Coutsoudis et al. 2002). While breastfeeding involves a considerable risk of HIV transmission, *not* breastfeeding is also known to pose significant risk to infant survival in populations where safe preparation of formula milk is difficult or impossible (Black et al. 2003). The WHO issued a consecutive series of guidelines between 1998 and 2016 in an attempt to balance the two risks. Guidelines published in 1998 advised that all HIV-infected mothers should be counselled about different feeding options in order to make independent

decisions about infant feeding (Moland et al. 2010:3). This was interpreted as a significant shift in policy towards the endorsement of formula milk use in place of breastfeeding in these circumstances, based on which the distribution of free infant formula to HIV positive women enrolled in Prevention of Mother to Child Transmission (PMTCT) programmes was initiated in some countries (Coutsoudis et al. 2002).[14]

In 2001, the guidelines were updated again to state 'when replacement feeding is acceptable, feasible, affordable, sustainable and safe [the so-called 'AFASS criteria'], avoidance of all breastfeeding by HIV-infected mothers is recommended. Otherwise exclusive breastfeeding is recommended during the first months of life' (WHO 2001a:12). The guidelines also recommended rapid cessation of breastfeeding at six months (WHO 2003b:12). The AFASS criteria were introduced in an attempt to formalize the inclusion of individual circumstances and local context into decision-making processes.

On the basis of subsequent findings (Coovadia et al. 2007), the WHO concluded that exclusive breastfeeding involved a 2- to 4-fold lower risk of HIV transmission than mixed feeding, and updated the recommendation on HIV and infant feeding accordingly. In 2006 recommendations changed once more in response, shifting the focus back onto exclusive breastfeeding while still including the AFASS criteria: 'Exclusive breastfeeding is recommended for HIV-infected women for the first 6 months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time' (WHO 2006a:4).

The 2000 and 2006 recommendations reflected an individualized approach in which women living with HIV would be counselled on feeding options according to their

[14] Before these recommendations were published, a WHO consultation in 1992 had resolved that 'where infectious diseases and malnutrition are the main cause of infant deaths and the infant mortality rate is high, breastfeeding should be the usual advice given to pregnant women including those who are HIV-infected' (WHO/UNICEF 1992).

household circumstances (WHO/UNICEF 2016:10). Implementing these guidelines posed significant challenges, with both exclusive breastfeeding and replacement feeding identified as being extremely difficult to maintain for the majority of HIV-infected mothers (Leshabari et al. 2007; Moland and Blystad 2009; Rollins 2007). Furthermore, the AFASS criteria proved difficult to apply to local circumstances (Sellen et al. 2007). In 2010, the WHO adopted a public health approach, recommending that national authorities promote and support one feeding practice for all women living with HIV accessing care in public health facilities in order to 'protect, promote and support breastfeeding in the general population to avoid undermining optimal infant feeding practices in women and mothers affected by HIV' (WHO/UNICEF 2016:10). The 2010 guidelines included, for the first time, the recommended use of antiretroviral (ARV) drug interventions to prevent postnatal transmission of HIV through breastfeeding (WHO 2010a). Mothers were recommended to exclusively breastfeed their infants for the first six months of life, to introduce appropriate complementary foods thereafter and to continue breastfeeding for the first 12 months of life, considering cessation at this point if a nutritionally adequate and safe diet was available without breastmilk (WHO 2010b).

The recommendations were updated once more in 2016 to read: 'mothers living with HIV should breastfeed for at least 12 months and may continue breastfeeding for up to 24 months or beyond (similar to the general population) while being fully supported for ART [antiretroviral treatment] adherence' (WHO/UNICEF 2016:19). These guidelines represented a return to the status quo, while also relaxing the emphasis on exclusivity for HIV-infected mothers with access to ART: 'although exclusive breastfeeding is recommended, practising mixed feeding is not a reason to stop breastfeeding in the presence of AIDS associated ARV drugs' (WHO/UNICEF 2016:31).

While the 2001 recommendations emphasized individual informed choice, the 2010 and 2016 recommendations represented a shift towards national-level choice (Moland et al. 2010:4). The incidence of vertical HIV transmission in the UK is very low (fewer than five incidences per year (Public Health England 2017b)) and UK guidelines state, 'In the UK and other high-income settings, the safest way to feed infants born to women with HIV is with formula milk, as there is on-going risk of HIV exposure after birth. We therefore continue to recommend that women living with HIV feed their babies with formula milk' (British HIV Association 2018:84). The UK guidelines clarify their divergence from WHO recommendations by stating, 'Current WHO advice on breastfeeding for women with HIV is aimed at low- and middle-income countries where there is a high risk of infant mortality from diarrhoea, pneumonia and other infections, and where formula feeding is not safe or affordable for many families' (British HIV Association 2018:84). The recommendations for mothers living with HIV represent the only example in UK infant feeding guidelines where the standards of the policy optimal are loosened in favour of artificial formula milk use, allowing for individual circumstance to override the prevailing emphasis on exclusivity. This approach is justified by the low incidence of vertical transmission in the UK and the general feasibility of safe formula milk preparation. There is therefore little danger of 'undermining optimal infant feeding practices' (WHO/UNICEF 2016:10) in the general population.

The shift towards national-level choice in WHO guidelines similarly represents an acknowledgement that the rationale of optimality may vary according to local context. The example of HIV meanwhile demonstrates the dilemmas and problematic consequences that can be brought about by global policy guidelines which are far removed from local circumstances and lives.

Achieving the Policy Optimal: Successful Breastfeeding

While the term 'optimal' is used at the policy level to describe desirable outcomes for behaviour change, this is translated into health education as 'successful breastfeeding'. The two terms refer to the same set of practices, and must therefore be presented as a duality. The term 'successful breastfeeding' refers to a (morally charged) aspiration of behaviour, whereas the term 'optimal' is used as a rationale for promoting this definition of success, derived from and legitimized by scientific authority as described above. One of the aims of the thesis is to investigate how this duality plays out in practice – whether women identify with policy conceptions of successful breastfeeding and to what extent they attempt to comply with it. In order to avoid confusion therefore, the term 'successful breastfeeding' will henceforth be used specifically in reference to the policy optimal, while the term 'breastfeeding success' will be used in reference to maternal constructions of success in relation to breastfeeding.

The two most prominent, wide-reaching and relevant documents referring explicitly to 'successful breastfeeding' are produced by UNICEF and the Oxford University Hospitals Trust (OUHT), which provided maternity care for the majority of mothers in the study. UNICEF outlines the *Ten Steps to Successful Breastfeeding* (Fig. 1, left), part of a statement on the role of maternity services in promoting breastfeeding (WHO/UNICEF 1989 (revised 2018)), a key document in the BFI. 'Successful' here refers to 'successful initiation and establishment' of breastfeeding; an increase in the population-wide prevalence of breastfeeding; and, similarly to the WHO *Global Strategy*, a standard of duration and exclusivity (six months with nothing but breastmilk). The *Ten Steps* focus on practices occurring within institutional settings – primarily midwifery units and hospital delivery wards – which inhibit the achievement of successful

breastfeeding in terms of initiation and establishment, prevalence, exclusivity, and duration.

The second document, *Successful Breastfeeding: A Guide for Breastfeeding Mothers* (Fig. 1, right), is distributed to mothers seeking maternity care in clinics that form part of the OUHT. This document is targeted directly towards mothers, indicating a standard of infant feeding that refers both to exclusivity and duration, detailing the necessary steps a mother should take in order to ensure she provides sufficient milk to sustain her baby throughout the first six months with breastmilk alone. The document is based on the Royal College of Midwives (RCM) Handbook *Successful Breastfeeding*, which serves as a manual for midwives. It provides them with information to assist in helping women to 'make an informed choice' regarding the method of infant feeding

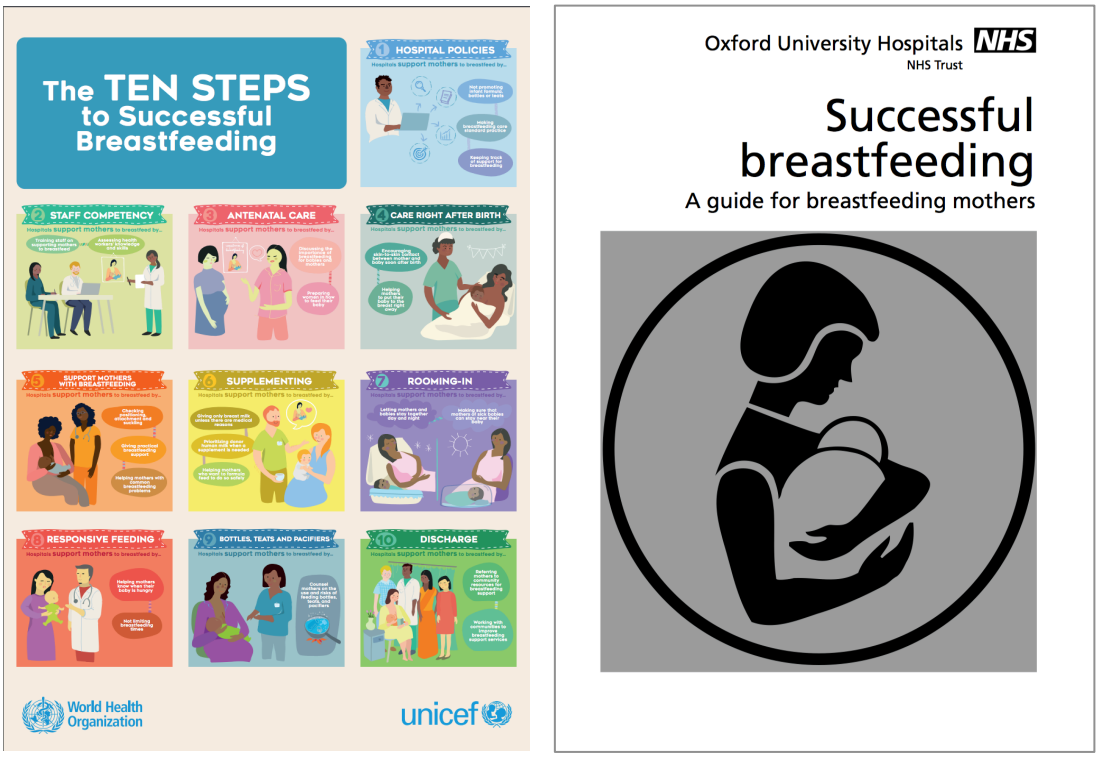

Fig 1:
Left: WHO/UNICEF 2018. *Ten Steps to Successful Breastfeeding*. Available at https://www.who.int/nutrition/bfhi/ten-steps/en/
Right: Oxford Branch of the Royal College of Midwives, 2013. *Successful Breastfeeding: A Guide for Breastfeeding Mothers*.

(with the implication that mothers able to make an informed choice will choose to breastfeed), as well as outlining the skills involved in breastfeeding and how to manage any problems that may arise (RCM 2002:xv). The introduction to the manual states that 'all babies should be exclusively breastfed until they are four, and preferably six months old' (RCM 2002:xiii), demonstrating a focus similar to the documents described above on exclusivity and duration that underpins the manual as a whole.

'Successful breastfeeding' comprises infant feeding practices which mirror standards of optimality set by the UK government and international health organizations, which are communicated via public health campaigns, popular parenting literature, and lay discourse. Optimal and successful breastfeeding both consist of exclusive breastfeeding for six months or more, regardless of the circumstances of individual mother-infant dyads. Unsuccessful breastfeeding is simultaneously constructed as a risky behaviour, and formula-fed infants are presented as 'at risk' as a result. Successful breastfeeding is thus presented as a catchall cure for a multiplicity of modern ailments, marketed both as a literal cure for a variety of childhood illnesses and as a symbolic one whereby an infant receiving 'mother's milk' will by extension be ensured a healthier, slimmer, more intelligent, less risky existence than one who receives 'suboptimal' food.

c) Normalizing the Policy Optimal

Given the framing of six-month exclusive breastfeeding as optimal, public health efforts targeting infant feeding practices aim to normalize the policy optimal. The concept of normalization, in the case of this thesis, refers to the regulation of practices through norms that aim to harness the biological potential of breastfeeding. This form of regulation is reliant upon 'modes of subjectification through which individuals can be brought to work on themselves [and, in this context, their offspring] in the name of

individual or collective life or health' (Rabinow and Rose 2003:4). In this way, biopolitical governance operates not by punitive imposition of the state's agenda, but by creating individuals who self-regulate according to certain ideals or 'norms'.

Bohannan defines a norm as 'a rule, more or less overt, which expresses 'ought' aspects of relationships between human beings' (1965:34). For Canguilhem, a norm is 'a possible mode of unifying diversity, resolving a difference, settling a disagreement' (1978:239). The function of a norm, according to Canguilhem, is to order society; but it does so in a different way to that of a state law. Mol observes that while deviance from a law results in punishment, a norm instead confers a series of advantages on individuals who meet it (1998:279). Each of these three definitions offers an insight which assists in framing infant feeding policy as the production of norms that aim to govern maternal practices. 'Norm' in this sense refers not to a representation of what is statistically average, but rather the perception of what is prescriptively ideal (Bear and Knobe 2017).

Like those apparent in many other policies, infant feeding norms appeal to ostensibly neutral scientific reasoning or rational, absolute assertions about human nature and biology in order to limit the range of reasonable choices one can make by 'normalizing' particular kinds of action or behaviour (Wedel et al. 2005:38). They function not by dictating the behaviour of their target population but rather by imposing an ideal type of what a 'normal' citizen should be (Wedel et al. 2005). Policy-makers are, in this sense, norm-makers, creating standards of child-care to which women then aspire: in the case of infant feeding the aspiration becomes to achieve successful breastfeeding. The policy optimal thereby acts as a prescriptive norm – that is, it describes practices women ought to engage in. Policies simultaneously function as proscriptive norms (which outline what one should *not* do) by emphasizing the associated risks of formula milk.

Infant feeding norms encourage self-regulation not through overt castigation but rather via an emphasis on associated benefits for the mothers – and, perhaps more compellingly, their infants – who enact policy recommendations. They employ persuasive 'ought' rhetoric through strategies that emphasize individual choice and the potential for change. 'Behaviour change' strategies have become ubiquitous among governments' health promotion policy in many OECD countries, including the UK. Their prevalence echoes a historical focus on chronic diseases as outcomes of poor 'lifestyle' choices, as well as reflecting the political shift in the 1980s from welfare liberalism to a neoliberal stance (Baum and Fisher 2014:217). In the UK context this shift occurred under the Margaret Thatcher administration (1979-1990), where the political focus became 'not society, whose common good was pursued, but the individual' (Loughlin 2000:19). UK government policies since then have been overwhelmingly framed around the construct of the individual consumer as the target for policy-based intervention, focussing on individual choice and corresponding policies that target behaviour change with little recognition of the underlying structures that affecting human health (Ulijaszek and McLennan 2016).

Behaviour change strategies have certain practical advantages: they are inherently logical, do not require legislative change and are deemed to be more cost effective than other methods (Jones et al. 2013:40). The most well-known and increasingly widely used strategy is referred to as 'nudging', a phenomenon that rose to popularity following the publication of Thaler and Sunstein's 2008 book entitled *Nudge. Improving Decisions About Health, Wealth and Happiness*. Its central tenet, 'libertarian paternalism', contends that policymakers should not deny individuals options but that certain behavioural options can be made more attractive than others through what Thaler and Sunstein (2008) have

termed ‘choice architectures’. This allows individuals to be ‘governed at a distance’ (Miller and Rose 2008).

The most recent public health campaign targeting infant feeding practices, Start4Life, launched in 2010 and spearheaded by the DH, provides an example of ‘nudging’ or behaviour change strategies. The campaign targets pregnant women and new mothers through social marketing, encouraging them to implement a healthy diet for their infants. The impetus for the Start4Life campaign arose through rising numbers of children starting school at a weight categorized as obese, and the campaign focuses on six clear areas of feeding an infant. Three of them refer specifically to breastfeeding, each relating to one of the three primary directives of infant feeding policy: ‘mum’s milk’ (encouraging mothers to breastfeed rather than formula feed); ‘no rush to mush’ (discouraging the introduction of solid foods before the six-month mark in order to promote continued exclusive breastfeeding); and ‘every day counts’ (encouraging mothers to continue as well as initiate breastfeeding).

Start4Life is part of the nationwide campaign Change4Life, which aims to help adults and families to eat well and exercise more. The programme resulted from Foresight Obesities and the Cross-Government Obesity Unit, with the aim of focussing on modifying individual behaviour in order to address population-level obesity. While Foresight Obesities focused on the complexities and relationality involved in obesity-related health, the Change4Life ignores this discourse in favour of individual consumer behaviour as the primary target for change (Ulijaszek and McLennan 2016:405). Jane Ellison (Minister for Public Health until July 2016) described the Change4Life campaign as ‘trying to talk to people in language that makes it straightforward and easy for them to understand the good choices they can make for the health of both themselves and their

family.'[15] This approach over-simplifies the complex circumstances individuals have to navigate in making 'good choices' and fails to respond to the growing evidence base that frames health and health outcomes rather as 'products of interconnectedness' rather than individual choice (Frenk et al. 2014; Holt-Lunstad et al. 2010; McLennan and Ulijaszek 2015). While the Start4Life campaign attempts to 'nudge' mothers towards breastfeeding through 'framing' – that is, presenting information in a certain way at a certain time – a recent cluster-randomized controlled trial, part-funded by PHE, claimed to have successfully incentivized mothers to breastfeed for up to six months through shopping voucher rewards (Relton et al. 2018), paving the way for more direct behavioural interventions.

No longer defined by nation states, health has become a globally regulated commodity,[16] influenced by, according to WHO Director-General Margaret Chan 'truly stunning increases in the number of actors, agencies, and initiatives funding or implementing programmes for health development' (Chan 2011). Like many other health policies, infant feeding policy is thus constructed within a system of global health governance, that is, health governance which reaches beyond a single state by entities outside the state (Davis et al. 2012:12). Rather than a top-down structure of authority, global governance refers to 'the multi-level collection of governance-related activities, rules and mechanisms, formal and informal, public and private, existing in the world today' (Karns and Mingst 2009:4).

[15] See https://www.parliament.uk/get-involved/have-your-say/westminster-hall-digital-debates/melbourne-declaration-on-diabetes/jane-ellison-mp/

[16] Political economists argue that health became a commodity during the industrial revolution, when workers became dependent on the market for survival (Esping-Andersen 1990). Under capitalism, functional health is a necessity (at least during periods of prosperity and expansion) in order to maintain an efficient labour force, and experiential health becomes part of the productive process rather than a desirable outcome in itself (Baer 1982:13). While health became 'decommodified' to a certain extent under the welfare state (Bambra et al. 2005), the increasing marketization of the NHS reflects a return to commodification, where individuals as opposed to society are seen as the basis of health.

Although resolutions, recommendations and guidelines set forth by IGOs such as the UN and the WHO are generally nonbinding, they are part of a process of 'new governance'[17] and act as normative standards (sometimes referred to as 'soft law') (Karns and Mingst 2009:4). Under new governance, 'the decision whether to comply is no longer motivated by the simple fear of retribution or by a calculation of self-interest, but instead by an internal sense of rightness and obligation' (Hurd 2008:30). In this sense, the process of regulation characterizing modern global governance mirrors the self-regulation of individual health behaviour through norms. The persuasive powers of IGOs often lie in moral obligation, based on the broad principles and values which IGOs have often been created to protect – such as, in the case of the WHO, health. Peer pressure from other states and domestic or transnational pressures from NGOs may also encourage adoption of and/or compliance with IGO norms (Barnett and Finnemore 2004:21), while their status as expert authorities serves a similar purpose (Karns and Mingst 2009:17). Barnett and Finnemore (2004:21) conclude that the authority of IGOs lies in 'their ability to present themselves as impersonal and neutral – as not exercising power but instead serving others'. Hurd also identifies the concept of legitimacy as key to compliance with guidance, norms and soft law as 'the belief by an actor that a rule or institution ought to be obeyed' (2008:30).

These processes of global governance result in the development of health 'indicators' and resultant targets (in this case primarily relating to rates of breastfeeding), providing an incentive that is clear and measurable for nation-states to regulate infant feeding practices. The use of indicators promotes the transnational applicability of norms outlined in global governance, giving meaning to those that move across national boundaries and disciplinary lines in a process which has been referred to as 'normative

[17] The concept of new governance refers to 'a shift in emphasis away from command-and-control in favour of 'regulatory' approaches, which are less rigid, less prescriptive, less committed to uniform approaches, and less hierarchical in nature' (de Búrca and Scott 2006:2).

settling' (Halliday and Shaffer 2015; Merry 2015:374). In 2012 the WHA endorsed the *Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition*, outlining a number of global nutrition targets for member states to meet by 2025. The targets focus on six areas of which breastfeeding is one, aiming to 'boost investments in cost-effective interventions, spearhead better implementation practices, and catalyse process toward decreasing malnutrition' (Shekar et al. 2017). The monitoring framework outlined by the Plan includes a core set of indicators, to be reported by all member states. Three indicators are used to monitor the success of each member state in meeting breastfeeding targets, which call for a 50% increase in rates of exclusive breastfeeding in the first six months: early initiation of breastfeeding (the proportion of children put to the breast within one hour of birth); the proportion of infants under six months who are fed exclusively with breastmilk; and the age at which infants transition from exclusive breastmilk to complementary foods (WHO 2014).

The *Blueprint for Action* adopted by European Union (EU) member states, including the UK in 2004, demonstrates a similar focus on increasing the number of women who conform to the policy optimal. It refers explicitly to the low rates of breastfeeding in European countries, describing breastfeeding as 'the natural way to feed infants and young children' and condemns a lack of promotion and support of breastfeeding in Europe, the result of which is that 'not all children in Europe get this ideal start to life' (EU Project on Promotion of Breastfeeding in Europe 2004:9). Further targets for breastfeeding rates were set in the DH document *Improvement, Expansion and Reforms: The Next Three Years Priority and Planning Framework 2003 – 2006* (Department of Health 2002), requiring all Primary Care Trusts (PCTs) to increase breastfeeding initiation rates by two percentage points per year with particular focus on women from disadvantaged groups. The Chief Medical Officer's report in 2012 re-

emphasized the health and economic benefits of breastfeeding, classifying the reduction of breastfeeding rates as one of 'three worrying trends with respect to very early life' (Davies 2012:7). One of the nine primary aims of the HCP is to achieve 'good breastfeeding rates' (Blair and Macaulay 2013), described as one of the measurable factors in early child health (though a specific target is not referred to). The impetus behind the objective of increasing breastfeeding rates is 'to reduce illness in young children, which will in turn reduce hospital admissions of the under 1s (and the costs to the NHS that are associated with this)' (Blair and Macaulay 2013). Longer-term consequences are also emphasized – 'Infants who are not breastfeeding are more likely to become obese in later childhood, develop Type 2 diabetes, and tend to have slightly high levels of blood pressure and blood cholesterol in adulthood' (Blair and Macaulay 2013).

The formulation of such targets and indicators results in both a need and an incentive for nation states to engage in active surveillance of health indicators – quantifiable measures used to describe the health of a population. Such processes of surveillance which quantify, measure, record and amalgamate individual bodies are an essential component of biopolitical governance (Youde 2010:18), enabling 'regulatory frameworks that assure a substantial degree of technical standardization within and between countries' (Scholte 2000:100). A consequent reliance on numbers, with their apparently simple and straightforward meanings, produces an unambiguous and easily replicated field for judgement (Merry 2011:S88): compliance with the norms outlined in policy thus becomes far more open to inspection and assessment.

1.2 From Policy to Practice: Existing Research

This thesis is based upon the premise that examining infant feeding policy as a contemporary example of biopolitical governance could provide insight into two

significant issues which have been identified in existing literature on infant feeding practices. The first refers to the divergence between policy and practice that has been observed in many populations but is particularly evident in the UK. The second refers to the increasing recognition that, while breastfeeding is a reproductive right which can positively affect maternal and child health, the pro-breastfeeding discourse apparent in the strategies described above may have adverse consequences on its target audience.

a) The Divergence between Policy and Practice

Despite efforts to modify infant feeding practices, exclusive breastfeeding rates in the UK are now considered to be among the lowest in the world, with 1% of infants in the UK receiving only breastmilk at six months of age (McAndrew et al. 2012). The corresponding figure of exclusively breastfed infants globally lies at 36% (WHO 2016), while the highest rates of exclusive breastfeeding in Europe during the period 2008 – 2012 (49%) were found in Slovakia, according to a 2010 survey (Bosi et al. 2016).[18] Initiation rates in the UK are high (81%), but the drop off rate is sharp.[19] At one week, the prevalence of breastfeeding (inclusive and exclusive) falls to 69%, and to 55% at six weeks (McAndrew et al. 2012). Rates of exclusive breastfeeding are much lower: at birth, 69% of mothers breastfeed exclusively, falling to 46% at one week, 23% at six weeks, and 1%, as discussed above, at six months (McAndrew et al. 2012). This disjuncture between norm and practice comprises a focus for much of the academic literature concerning infant feeding practices, which will be examined in this section.

[18] There are limitations to the European statistics: they do not cover every constituent country (some countries, for instance Germany, do not collect statistics on infant feeding); sample sizes varied between countries; and the measures of breastfeeding incidence varied across the surveys conducted. While giving due caution to these limitations, the data nevertheless indicate a notable difference in breastfeeding rates between the UK and other countries in Europe.

[19] This figure includes all babies who were put to the breast at all, even if only on one occasion. The figure also includes giving expressed milk from a bottle.

The physiology of lactation, according to the relevant literature in physiology, is a biological mechanism that occurs virtually universally among women who are approaching childbirth. The ability to produce milk develops during pregnancy when the mammary gland (the milk-producing gland in the breast) undergoes a hormonally regulated transformation which enables the secretion of milk (McManaman and Neville 2003:534). During the latter part of pregnancy, the breasts begin to secrete a thick, yellowish fluid known as colostrum. Produced in small quantities, colostrum is a liquid low in fat and high in carbohydrates, protein and antibodies. Roughly 36 hours after birth, increased levels of the hormones prolactin (which is thought to stimulate production of milk), insulin and cortisol prompt a 10-fold increase in milk volume – often referred to as the 'coming in' of milk (Pang and Hartmann 2007). Breastfeeding is enabled by a feedback mechanism between mother and infant: as the infant suckles, impulses from stimulation of the nerves in the areola travel to the central nervous system where they promote the release of oxytocin and prolactin from the pituitary gland. The oxytocin is carried through the blood stream to the mammary gland where it triggers contraction of the myoepithelial cells (which form a basket-like network around the alveoli where milk is stored) and the consequent expulsion of milk. This process is called the 'milk ejection reflex': if inhibited, milk cannot be removed from the breast and local mechanisms bring about an inhibition in milk secretion (Jones and Spencer 2007:245).

The literature indicates that there are very few physiological reasons for low or absent milk supply (Lawrence 2013). This supports a central tenet of breastfeeding policy and clinical approaches to breastfeeding, that 'almost all women are physically able to breastfeed' (NHS England 2014). There are nonetheless significant variations in infant feeding practices globally, with multiple factors affecting an individual woman's ability to breastfeed her infant according to the norms outlined in infant feeding policy.

Postpartum depression, for example, negatively affects breastfeeding initiation and duration (though breastfeeding in turn alleviates and has a preventive effect on postpartum depression (Akman et al. 2008; Dennis and McQueen 2007; Dennis and McQueen 2009)). Concrete factors such as complications during birth have also been shown to affect the initiation of breastfeeding in a more direct way (Brown and Jordan 2012). For example, pain relief medications administered to the mother during labour enter the maternal bloodstream and cross the placenta into the foetal circulation, which has been shown to diminish the early suckling ability of a newborn and impede early breastfeeding ability (Riordan et al. 2000). Equally, the presence – or lack – of familial support has been highlighted as a major predictive factor in women's' ability to breastfeed (Bernie 2014; Earle 2000). More recently, a research emphasis within the medical domain has emerged on 'maternal commitment', 'maternal confidence', or 'self-efficacy' (Avery et al. 2009; Blyth et al. 2002; Brown 2014; de Jager et al. 2014; Loke and Chan 2013; Meedya et al. 2010). These authors have collectively argued that maternal personality and attitude towards breastfeeding are significant factors in predicting breastfeeding success. The concept of self-efficacy (Bandura 1977) originates in psychological theory and is thought to be predictive of the amount of effort an individual will expend in initiating and maintaining a behavioural change: the more confident an individual is of performing a behaviour successfully, the more likely he or she is to instigate the change effectively (Bandura 1977).

While the above factors can affect any individual mother, ethnographic studies have focussed rather on emphasizing the societal factors that shape infant feeding practices and affect women's chances of breastfeeding success. Margaret Mead played an early and significant role in highlighting cross-cultural variations in childrearing, including in relation to infant feeding practices (Mead 1930). Mead paid particular

attention to the widespread practice of breastfeeding in response to infant cues in Samoa, contrasting it with the dominant feeding schedules characterizing infant feeding in the USA at the time.

Research since the 1990s (and particularly in the last decade) reflects a growing focus on breastfeeding within the social sciences and humanities. This research demonstrates that breastfeeding practices throughout history and across different cultures do not simply involve a straightforward nutritional exchange: instead, they involve a complex psychosocial cultural behaviour which is often highly specific to local contexts (cf. Cassidy and El Tom 2015; Maher 1992b; Stuart-Macadam and Dettwyler 1995). Ethnographies that engage with breastfeeding as part of a broader research focus include accounts of infant feeding practices in order to shed light on issues such as poverty (Scheper-Hughes 1992) and childrearing (Kwiatkowski 1999). Ethnographies that address breastfeeding directly have provided an insight into forms of feeding which are considered culturally appropriate, identifying reasons for engaging in certain practices and not others. The rejection of colostrum among mothers in Guinea-Bissau, for example, is considered beneficial on the grounds that it is 'bad quality' and harmful to infants (Gunnlaugsson and Einarsdottir 1993), while not breastfeeding among the Chagga of Tanzania has been interpreted as a way for a mother to distance herself from a baby who is likely to die (Howard and Millard 1997). The ways in which women use their bodies to nurture their children are framed by attitudes towards their bodies and their breasts that highlight the highly gendered nature of breastfeeding (Beasley 1998; Carter 1995; Schmied and Lupton 2001). Whether or not it is deemed appropriate for women to breastfeed in public similarly varies across different groups of people and is governed by factors such as the emotion of embarrassment discussed by mothers in Ireland (Cassidy 2015).

Research in countries where bottle-feeding is the predominant mode of infant feeding reveals valuable insights into the way in which women in these settings approach breastfeeding. Studies in Euro-American populations reveal how breastfeeding has been medicalized through increasing reliance on expert knowledge, with the breastfeeding body becoming a site of conflict and struggle. For example in France, so-called 'cultural resistance' to breastfeeding has been identified as a barrier to technical and emotional support for breastfeeding (Castro and Marchand-Lucas 2010:234). The scientific interest in breastfeeding (specifically the benefits of breastfeeding to mother and infant), argues Van Esterik (1988), has led to an emphasis on the product of breastfeeding – human milk – over the process of breastfeeding. This, she argues, has resulted in the development of policies and practices which prioritize the delivery of that product but fail to facilitate breastfeeding itself. Schmied and Lupton, conducting research in Sydney, Australia, also explore ambiguity and resistance to the imperative to breastfeed, noting that while some women found the experience pleasurable and intimate, others found it unpleasant and disruptive (2001:239). The sexualization and objectification of women's breasts, in part attributed to the influence of media attention, has similarly been recognized as a factor that shapes attitudes to infant feeding (Bartlett 2005; Blum 1999; Boyer 2018; Dowling et al. 2012; Faircloth 2015), alongside research that identifies a related desire for privacy and embarrassment among women when breastfeeding (Davis-Floyd and Sargent 1997; Earle 2000). The consequent risk of opprobrium both in public and sometimes even within the home – the 'spatial politics of breastfeeding' – has been investigated in framing breastfeeding women as marginalized (Boyer 2011; Boyer 2018), particularly in relation to the perception of human bodily fluids as being 'matter out of place' in public spaces (Dowling and Pontin 2017). These findings are corroborated by Stearns' work in Sonoma, California, where mothers approach breastfeeding in public 'with constant

vigilance to location, situation and observer' (1999:323). Factors such as these, it has been argued, contribute to negative societal constructions of breastmilk (Bramwell 2001; Henderson et al. 2000) and a widespread 'predominant bottle-feeding culture' (Bonia et al. 2013; Scott and Mostyn 2003) in the UK. A '"give it a go" culture' (a phrase the authors use to describe initial attempts at breastfeeding that are subsequently obstructed by insufficient commitment on the part of mothers) has also been identified among breastfeeding mothers in the UK (Bailey et al. 2004).

Patterns of labour (with corresponding inadequate provision for breastfeeding women within employment structures) also emerge as contributory factors to low rates of breastfeeding. Gjerdingen and Froberg found, among participants across eight sites in Minneapolis and Minnesota, that women's desire to be ready for work postpartum contributed to a reluctance to breastfeed (1991:1401). The decline in breastfeeding in China has been related to the fact that 90% of urban women of working age are in the labour force (Gottschang 2007). Several scholars have determined that the introduction of complementary food forms part of a strategy many mothers employ to integrate child-care with other forms of labour (Moffat 2001; Pasternak and Ching 1985).

Anthropological and sociological research has also provided valuable insights into the variable infant feeding practices within populations, with socio-demographic variables (including area of residence, maternal age, socioeconomic status, maternal education, ethnicity, smoking behaviour and maternal obesity) having been identified as predictive factors in breastfeeding initiation and duration (Brown et al. 2010; Dennis 2002; Griffiths and Tate 2007; Machado et al. 2014; Skafida 2009; Turcksin et al. 2012). Carter's subjects for example, working-class female immigrants in the north of England, reveal negative perceptions of breastfeeding as associated with exhaustion, poverty, discomfort, embarrassment, restriction, and authoritarian hospital practices (Carter

1995:90). Shortcomings of the healthcare system such as limited support (Chantry 2011) and flawed or inconsistent support practices (Biro et al. 2011; Chien et al. 2007; Cloherty et al. 2004; Darwent and Kempenaar 2014), as well as the failure of society in general to support breastfeeding (Brown 2016) are also recognized as perennial hindrances to breastfeeding.

Studies which engage with the anxiety some mothers experience as to whether or not their milk is sufficient for a baby's growth provide further insight into the variations in infant feeding practices within a population; indeed, this explanatory model has been adopted within the field of biomedicine, termed the 'insufficient milk syndrome' (Dykes and Williams 1999; Gatti 2008; Gussler and Briesemeister 1980; Scavenius et al. 2007). Inadequate milk supply (or, more often in the literature, 'perceived insufficient milk') is one of the most commonly cited reasons globally for the introduction of supplementary foods or indeed complete cessation of breastfeeding (Gatti 2008; Scheper-Hughes 1992; Segura-Millán et al. 1994), and has been described as a barrier to successful breastfeeding (Dykes 2002; Dykes and Williams 1999; Hackett et al. 2012; Obermeyer and Castle 1996; Segura-Millán et al. 1994).[20] It is defined as 'the mother's perception of a failure to produce an adequate supply of milk to sustain her baby, sometimes evidenced by insufficient infant weight gain' (Henly et al. 1995:87). While not fully understood, it has nevertheless become apparent that the phenomenon is caused by a complex interaction of physiological, psychological and sociocultural factors. Attempts have been made to associate the syndrome with medical predictors such as anaemia (Henly et al. 1995), and hospital procedures which undermine maternal confidence in breastfeeding have been identified (Dykes 2006; Rudzik 2015). Research has also highlighted the influence of a

[20] Based on the IFS, 28% of UK mothers who stopped breastfeeding in the second week stated that they did so because they thought they had insufficient milk or because the baby was 'too demanding' or 'always hungry' (McAndrew et al. 2012:81). This proportion increased to a peak of 39% at six weeks to four months. At eight months after birth, insufficient milk was overall the most frequently mentioned reason for stopping breastfeeding (McAndrew et al. 2012:106).

variety of cultural factors that result in ineffective milk uptake by the infant (Dykes 2002:494). These include the mothers' perceptions of infant hunger (Gussler and Briesemeister 1980; Heinig et al. 2009); under-confidence in breastfeeding ability or 'self-efficacy' (Blyth et al. 2002); the influences of the formula milk industry (Dykes 2002; Obermeyer and Castle 1996); the medicalization of motherhood (Obermeyer and Castle 1996); a perception of the body as prone to failure and a preoccupation with breastfeeding 'aids' (Dykes 2002:499). It has been argued that insufficient milk syndrome primarily occurs in contexts where the appropriateness of breastfeeding is questioned, and where breastfeeding is not adequately supported (Hill 1992; Obermeyer and Castle 1996; Zeitlyn and Rowshan 1997). Insufficient milk production may also be precipitated by delayed onset of lactation and consequent introduction of breastmilk substitutes, leading to reduced breastfeeding frequency and a resultant interruption to the supply-and-demand mechanism of milk production (Safon et al. 2017:5). Psychosomatic mechanisms appear also to be at play in the production of insufficient milk (Dykes 2002:499). Whether the result of physiological or psychological barriers, a lack of confidence in the ability to breastfeed adequately can in itself lead to interruptions in milk flow through a psychobiological progression, becoming a self-fulfilling prophecy (Dykes 2002:495).

Research that emphasizes this complex interplay between cultural approaches and nature, or biology, has consistently contested ideologies which associate breastfeeding with 'nature', thereby reinforcing gender inequalities and unequal power relations (Faircloth 2013; Haraway 2013; Hausman 2003; Maher 1992b; Stearns 1999; Tomori 2016). This notion of breastfeeding as a biocultural phenomenon informs much of the research on breastfeeding within the social science and humanities, providing a significant contribution to academic understandings of infant feeding practices as well as policy approaches.

b) Adverse Effects of the Pro-breastfeeding Discourse

The promotion of breastfeeding in public health and biomedical discourse has prompted significant developments in educating parents about the benefits of breastfeeding to infant and mother, and has doubtless been influential in increasing the prevalence of breastfeeding worldwide (Apple 1987; Apple 1997; Wolf 2007; Wright 2001). These are positive developments for infant and maternal health that have emerged alongside an equally constructive increase in recognition of breastfeeding as a basic reproductive right (Blum 1999; Maher 1992a; Palmer 2009; Van Esterik 1989; Van Esterik 2002). There is also, however, a significant body of literature which draws attention to the potentially adverse consequences of breastfeeding advocacy.

This line of research provides an insight into tensions that shape maternal experiences of infant feeding, linking contemporary breastfeeding advocacy with moral ideologies of mothering and motherhood. According to the most recent IFS, 80% of women stop breastfeeding earlier than they wish to (McAndrew et al. 2012),[21] and feelings of failure, inadequacy or self-blame have been documented in the accounts of women who experience breastfeeding difficulties, particularly when these compel the use of supplementary formula or cessation of breastfeeding entirely (cf. Guyer et al. 2013; Larsen et al. 2008; Mozingo et al. 2000; Smyth 2018; Thomson et al. 2015; Williamson et al. 2012). The impact of this sense of failure, described as 'moral collapse' by Ellie Lee (2008), has formed a central focus of anthropological research on breastfeeding.

Broader societal approaches, or 'cultures of parenting' have been identified in which infant feeding is strongly linked to ideologies of what it means to be a 'good' mother (Knaak 2010; Lee 2007; Lee 2008), where breastfeeding constitutes a marked

[21] Faircloth points out that these statistics must be read in the context of infant feeding discourse, since 'the fact that so many women "want" to breastfeed, and to breastfeed for particular lengths of time, is an outcome of these very policies advocating breast is best' (Faircloth 2013:35).

statement about values, mothering skills and commitment, and care. The notion of a 'good mother', argue some, has its basis in a number of idealized characteristics: patience, care generosity, self-sacrifice, nurture, tenderness and gentleness (Barlow and Chapin 2010:327; Forna 1998:3). Forna (1998) argues that the 'good mother' ideal allows for only one correct method of mothering: exclusive, intimate and full-time, summarized by Forna as 'the motherhood myth'. Hays (1998) contends that characteristics such as these typify 'intensive' motherhood in contemporary ('western') society, which demands an overwhelmingly child-centric mode of mothering. This approach has been developed by others, similarly labelled 'total motherhood' (Wolf 2007) and 'overzealous motherhood' (Badinter 2012). Building on Wolf's notion of total motherhood, Taylor and Wallace (2012a) suggest that the onus of optimizing children's wellbeing in this context may prompt shame and fear of judgement among mothers whose own needs are not acknowledged, particularly when they are unwilling or unable to adopt the ideals of 'good' motherhood (Arendell 2000; Christopher 2012). Mothers who work are presented with dual – and conflicting – demands: productivity and efficiency in their professional lives, and intensive mothering in their personal lives (Hays 1998).

It has been argued that the link between breastfeeding and 'good motherhood' is particularly prevalent in an Anglo-American context, where the principle 'Breast is Best' is so strongly ingrained in maternal conceptions of what it is to be a good mother that failure to breastfeed elicits feelings of guilt, insecurity and inadequacy (Crossley 2009:73). Several scholars have pointed towards the undue pressure placed on mothers to breastfeed in this context (Badinter 2012; Jung 2015; Wolf 2010). Efforts to promote breastfeeding have been linked to stigmatization of mothers who do not, or cannot, breastfeed (Faircloth 2013; Liamputtong and Kitisriworapan 2011; Ryan et al. 2010; Tomori 2016). 'Bad' mothers (i.e. those who do not breastfeed) are at the centre of what

has been described as a 'culture of blame' that directs culpability for birth outcome and infant development explicitly towards women (Ladd-Taylor and Umansky 1998). Crossley (2009:71) has suggested that in sharp contrast to previous conceptions of formula milk as scientific, breastmilk is now legitimated by science as both superior to formula milk and 'natural', resulting in an ethical imperative to breastfeed in order to avoid moral deviance. Mothers who formula feed must therefore engage in 'moral repair work' in order to mitigate their 'culturally deviant' behaviour (Blum 1999; Lee 2007; Lee 2008; Murphy 1999; Murphy 2000; Murphy 2003). Several studies have also raised concerns about the undue responsibility placed on individual mothers to breastfeed (Faircloth 2013; Gottschang 2007; Liamputtong 2011a; Tomori 2016).

A further body of research highlights the discrepancies between the public health discourse – which tends to present breastfeeding as inherently pleasurable and convenient in order to encourage initiation – and the actual experiences of breastfeeding mothers, which are likely to involve more nuanced feelings of disruption or displeasure as well as varying degrees of physical labour, emotional ramifications, and/or ambivalence (Avishai 2007; Blum 1999; Carter 1995; Schmied and Lupton 2001; Stearns 1999; Wallace and Chason 2007). This has been linked to inadequate prenatal discussion of potential difficulties in the process of learning to breastfeed (Burns et al. 2010; Hoddinott et al. 2012; Larsen et al. 2008), where the benefits of breastfeeding are exaggerated and other features of the infant feeding process are ignored (Faircloth 2013:36).

Public health breastfeeding messages have further been shown to contribute to a dominant, medicalized dialogue focusing on fear and risk (cf. Knaak 2010), which promotes an ideology of 'intensive mothering' (Hays 1998) and unlimited self-sacrifice, ultimately adding a considerable burden of guilt, stress and regret to decisions about feeding infants (Lee 2007; Lee 2008; Murphy 1999; Sheehan et al. 2009). Observing

encounters between new mothers and British community nurses, Heritage and Lindstrom described these as 'drenched with implicit moral judgements, claims, and obligations' (1998:398), demonstrating the role of the medical profession in precipitating the emotions described above.

The literature described in this and the previous section addresses the central question posed in public health literature: why do the majority of women not breastfeed their infants according to public health recommendations, despite the health benefits demonstrated in medical and scientific discourse? It sheds light on the multiplicity of factors that determine variations in infant feeding practices across the world and, particularly relevant to this study, in populations where the overwhelming majority of mothers feed their infants primarily with formula- rather than breastmilk. The literature also highlights negative outcomes of breastfeeding advocacy, attributing these to medicalization and moral discourses relating to motherhood. Missing within the body of literature described above, however, is an in-depth examination of how the norms described in earlier sections frame the practices and experiences of mothers in the UK. The data presented in this thesis, an examination of mothers' negotiation of those norms, will address this gap.

1.3 Problematizing Infant Feeding Norms

Problematizing infant feeding norms and investigating the application of infant feeding policy at the grassroots level has, this thesis argues, a central role to play in addressing the issues raised in existing literature. Three central theoretical questions emerge from a critical analysis of infant feeding policy, with the data presented in the thesis aiming to shed empirical light on these questions. First, do infant feeding norms place undue responsibility upon mothers with respect to achieving successful breastfeeding in order to

ensure optimal infant outcomes? Second, might alternative conceptions of optimality exist that do not accord – or that directly conflict – with the policy optimal, thereby leading to alternative conceptions of what 'successful breastfeeding' comprises? And third, does the prevailing concept of 'cultural barriers', used in both policy and infant feeding research, provide an adequate explanatory model for the lack of conformity with norms and the negative experiences of breastfeeding that have been described in previous literature? Drawing attention to these contentions clarifies the need for investigation into how mothers negotiate infant feeding policies and norms in order to shed further light on the issues raised in existing literature as described in the previous section.

a) Maternal Responsibility

The transfer of responsibility from the state to the individual has been identified as a key component to biopolitical systems of governance, a shift that has been termed 'responsibilization'. Nikolas Rose identifies responsibilization as a technology of governance deployed increasingly in advanced liberal democracies whereby 'the problems of problematic persons are reformulated as moral problems in the way such persons conduct themselves and their existence' (Rose 2000:334). Individuals thus become engaged in governing themselves in terms of standards set by others (Merry 2011:S90): in the case of infant feeding, these standards are set by policymakers and the individuals in question are mothers. This phenomenon has been explored among researchers investigating the responsibilization of mothers in relation to childhood obesity. This section will engage with this literature in order to draw parallels with the responsibilization of mothers that arises through infant feeding policies.

The proposed association between infant feeding method and future disease burdens, (as discussed in section 1.1b, *Successful Breastfeeding: Pursuing the Optimal*),

provides a compelling argument for policymakers to promote in order to encourage women to breastfeed. The WHO describes breastfeeding, for example, as 'an important component of strategies to reduce the risk of overweight and obesity in children' (WHO 2012), while the HCP states that 'infants who are not breastfeeding are more likely to become obese in later childhood, develop type 2 diabetes and tend to have slightly high levels of blood pressure and blood cholesterol in adulthood' (Shribman and Billingham 2009). Translated into the information women receive about breastfeeding, the 'Sure Start' leaflet, which is given to mothers during antenatal appointments, states similarly that 'babies who are NOT breastfed have an increased chance of becoming obese, which means they are more likely to develop type 2 diabetes and other illnesses later in life' [original emphasis] (Sure Start 2015). The extent to which breastfeeding mitigates the risk of obesity is not made explicit, and the contradictions in evidence for and against the link between breastfeeding and obesity risk are also omitted.

Interventions like Start4Life, which focus on the early years of development, continue to target mothers as the agents predominantly responsible for infant health. Current policy approaches to infant feeding, which promote static, normative infant feeding practices and frame these in terms of success, imply that individual mothers are in control of the breastfeeding process. Rhetoric of choice implies that breastfeeding is a matter of personal preference and under individual control, rather than a process influenced by structural constraints, circumstance, and multiple agents (Knaak 2010). Simultaneously, very little structural and social support is available in many contexts, disempowering the individuals involved (Inhorn 2006:363). Normalizing breastfeeding to constitute a specific, static practice which must be enacted in a certain way for a certain length of time may undermine the self-confidence of a mother who decides to breastfeed in different ways, or for a shorter amount of time (Leff et al. 1994:99). Normative

definitions of how breastfeeding ought to be practised, based as they are on assertions of what is optimal or best for multiple populations, inevitably cannot take account of individual contexts, needs, and expectations.

Mishler and colleagues, echoing George Canguilhem, criticize the application of biological norms that fail to make reference to specific populations and their sociocultural characteristics (Mishler et al. 1981:4). The same authors cite Redlich, who asserts that with respect to norms it is necessary to ask 'normal for what?' and 'normal for whom?' (Redlich 1957). Assertions about normal biological functioning, then, and normative bodily practices, must be based on the relationship between the functioning in question and its distribution in a specific population (Mol 1998:279). Within any specified norm there is an implicit set of assumed standard conditions with regard to when, how, and on whom measurements are made (Mol 1998:280). It is therefore important to question the validity of norms based on population targets to individual mothers, and to ask the same thing of breastfeeding success as of norms: successful for what, and for whom?

The paradigm shift in the field of biology prompted by DOHaD research has elicited a reconfiguration of social perceptions of motherhood, risk, and responsibility concerning maternal behaviours and foetal development (Warin et al. 2012:361). The portrayal of DOHaD and epigenetic research in the media and public health policy has been described as a 'regenerated articulation of a pre-existing, established pattern which blames mothers for the conditions, abnormalities or defects found in their children' (Lamoreaux 2016:204). Martyn Pickersgill et al. observe that 'in effect women are framed through some kinds of epigenetic research *as* the first environment for children, potentially activating and augmenting a range of moral discourses and subjecting them to (increased) scrutiny' (2013:437). The portrayal of epigenetic theories of disease causality strengthens patterns of maternal blame by presenting individual maternal behaviours or

choices as toxic exposures to foetal and child health (Mansfield and Guthman 2014; Warin et al. 2012). An inevitable consequence of this framing is to place the responsibility for achieving child health solely on individual mothers, an approach which, again, fails to acknowledge the myriad of other factors involved in creating a healthy environment for infants and children to thrive.

Some have argued that the principle of epigenetics challenges the notions of the individual, as well as biomedical individualism, that are so central to the gene-centric modus operandi. Marilyn Strathern explores the person-environment collapse occurring in some epigenetic studies as a means to challenge this notion of the individual: 'The idea of the individual person doubly defined by genetic programming and by environmental factors seems a solution to the old nature/nurture debate: we have, so to speak, put the individual back into its "environment", in much the same way as social scientists are perpetually putting individuals back into "society"' (1991:585-586). Similarly, in her research in a laboratory in Nanjing, China, Lamoreaux demonstrates an alternative perception of epigenetics, formulated as 'an effort to reemphasize connections between inner and outer environments, ancestors and future generations' (2016:206). In this context, physicians encourage parents not to blame themselves for their children's conditions – 'Here, to understand the environment as a person is to understand the person as always in relation to other environments and people' – and they are therefore only able to take partial responsibility for the health of present and future generations (Lamoreaux 2016).

Ingrained notions of biomedical individualism, while able to extend one person prior in the genetic line, an obvious and clear-cut connection, fail to account for further extension to previous generations or, indeed, across to fathers. Jonathan Wells (2007) has disputed the Predictive Adaptive Response hypothesis, arguing that the lack of ecological

stability within individual life-spans runs counter to the idea that developing humans make long-term predictions about the external environment, since in-utero existence is brief. Instead, he argues that offspring adopt coherent and adaptive growth strategies, integrating various components of phenotype, which are initially guided by maternal phenotype and reflect the scope of maternal capital (Wells 2010). This early growth plasticity is sensitive to maternal *and grandmaternal* phenotype, reflecting the transfer of somatic capital across generations. Maternal effects on the early growth of infants are thus heavily dependent on a mother's own developmental experience, and hence grand-maternal phenotype (Wells 2003b). Furthermore, increasing evidence is emerging that paternal epigenetic influences also cause diabetes, obesity, cancer, and other diseases in offspring of fathers exposed to environmental factors such as diet, smoking, and irradiation (Marczylo et al. 2012; Rodgers et al. 2013; Soubry et al. 2015; Soubry et al. 2013).

Problematizing policy approaches to health behaviours through the relatively unexplored lens of success in public health policy and practice is of importance: the criteria communicated by the construct of successful breastfeeding have a significant impact on individuals, all of whom are situated within particular societal and cultural environments, the values of which have an impact on day-to-day realities. Much like the concerns raised by scholars focussing on obesity, infant feeding policies imply individual control and generally disregard or underestimate structural constraints and inequalities. The data presented in the thesis will question whether the effect of this approach, ultimately, is to shift responsibility for future health in the context of infant feeding from society as a whole to individual mothers. In attempting to comply with the norms outlined in infant feeding policy, mothers must operate within a binary of success and failure: the thesis will investigate whether this binary adequately accounts for maternal perceptions of

the breastfeeding process and the interplay between their needs and capabilities and those of their infant.

b) Questioning Optimality

As outlined previously, the physiology of lactation is described as a process which occurs via the same processes in virtually all female bodies. This principle underlies global and UK policy-making on breastfeeding in emphasizing the capability of all women to enact successful breastfeeding. Furthermore, the infant feeding norms outlined in public health policy (exclusive breastfeeding for six months) are described as physiologically and biomedically 'optimal', maximizing the health and development potential of the infant. And yet, a wide diversity exists in infant feeding practices between individuals and cross-culturally that do not correspond with practices which are defined as optimal: complementary foods are introduced prior to the six-month mark, infants are fed with formula- rather than breastmilk, and so forth. This section will draw upon evolutionary and anthropological theories to provide an alternative perspective to the notions of optimality and universality that underpin the norms in infant feeding policy.

The framing of lactation physiology within public health policy as universal – i.e. that there is a biological norm which remains constant across female bodies – results in the general assertion that *all* women can breastfeed according to the norm of successful breastfeeding. The concomitant public health quandary is that the overwhelming majority of women do not feed their infants in accordance with this norm, made all the more perplexing by the scientific evidence that supports the norm of successful breastfeeding as optimal for infant and maternal health. Examination of the concept of 'local biologies' serves here to provide a counter-argument to the idea of biological universality and, at the same time, a starting point for problematizing the concept of successful breastfeeding.

Established by Margaret Lock (1993) in her comparative study of menopause in the USA and Japan, the term local biologies 'poses a challenge to the first principle of biomedicine: that bodies are everywhere biologically the same' (Brotherton and Nguyen 2013:288). The increasing attention to epigenetic development has given force to the idea that biological form varies locally (Landecker and Panofsky 2013; Meloni and Testa 2014) by demonstrating that gene expression changes in response to environmental cues.[22] Recent studies have demonstrated that lactation is an epigenetically regulated process, and that the extent to which lactation is successful is therefore variable (Daniels et al. 2013; Lemay et al. 2013; Rijnkels et al. 2013). This, and the extent to which women's ability to breastfeed varies, suggests that the biology of breastfeeding may be as locally variable as Lock discovered menopause was: the process of lactation occurs in a different way from one body to the next.

In a process as complex as lactation, which produces such varied outcomes in practice, the concept of local biologies thus provides an explanatory model for low rates of compliance with successful breastfeeding, as well as for the experience of insufficient milk described in the previous section. Contrary to the notion promulgated in infant feeding policy that all women are able to conform to the successful breastfeeding norm, it is clear that a woman's ability to conform is dependent upon her biology. In conceptualizing the biocultural differences in the way in which women in each field site felt towards aging, Lock demonstrated that the treatment of the human body as a universal object 'was a serious error leading to inappropriate practices of standardization' (Lock 2015:174). This thesis argues that similarly inappropriate practices of standardization occur in relation to infant feeding policy. Multiple environmental factors affect breastfeeding success and, if it is possible to say that these factors alter the

[22] Epigenetics is defined as 'the study of heritable changes in gene expression that are not due to changes in DNA sequence' (Eccleston et al. 2007:395).

physiological process of breastfeeding, it is not accurate to assert that all women everywhere are able to enact successful breastfeeding or that the ability to do so is universal. Bearing in mind these environmental factors, it is necessary therefore to add a caveat: *almost* all women have the physiological *potential* to enact successful breastfeeding but the ability to do so is *not* universal, dependent as it is upon local biology.

The assertion that all women are capable of enacting successful breastfeeding is underpinned by the assertion that conformity with the successful breastfeeding norm is universally optimal for infant and maternal health. Just as the concept of universality has been problematized, biomedical conceptions of optimality can also be called into question by drawing on theories in the field of evolutionary biology. David Haig (2014:33) defines the concept of optimality and highlights the difference in perspective between evolutionary biology and medicine in the following statement: 'Something is optimal if it maximizes the value of a 'desired' quantity. In evolutionary biology, this quantity is fitness but, in medicine, it is health'. Evolutionary perspectives on lactation and maternal resource allocation thereby serve to present an opposing standpoint on biomedical conceptions of optimality that enter public policy as objectives and norms to be adhered to.

An evolutionary perspective also sheds light on the wide range of infant feeding practices among human populations. Examination of the nonhuman primate data on life history variables indicates that, if humans were to follow a physiological (and, importantly, acultural) pattern, they would be weaned somewhere between 2.5 and 7 years of age (Dettwyler 2004:719). In fact, the process of weaning in humans is unusually flexible, a characteristic unique to humans: if suckling is initiated, duration of lactation ranges from a few hours to more than five years, spanning the entire range observed for

other mammals (Hartmann and Arthur 1986). While in non-human primates weaning occurs relatively abruptly once juveniles are able to forage independently, human infants undergo a protracted process of transitional feeding consisting of maternal (or conspecific) provisioning of processed 'complementary' foods alongside human milk. Furthermore, infant survival is much greater among foraging communities than among apes, and greater still among farming communities. Humans therefore seem to have evolved the capacity for a reduced length in exclusive and transitional feeding, without compromising infant survival (Sellen 2009:263-264) (see also Galdikas and Wood 1990; Humphrey 2010; Sellen 2007).

On the basis of the differences between human infant feeding patterns and those of non-human primates, Daniel Sellen has suggested an evolutionary explanation for a) the low numbers of exclusively breastfed infants globally, and b) the early weaning of human infants as compared with other apes (Sellen 2007:124). Human use of complementary foods allows the provisioning of specially prepared foods that can be acquired by adult humans other than the mother, enabling flexible provisioning within human social units to provide a substantial proportion of the energetic needs of each offspring (Kaplan et al. 2000). Sellen argues further that the use of complementary foods evolved to facilitate physiologically appropriate early weaning (in comparison to other species), but that it therefore also enables physiologically inappropriate early weaning in modern contexts (2007:132). The literature on breastfeeding, weaning, postpartum ovulation and mortality all point to the broad range of variability in infant feeding practices among human groups and among individuals within human groups (Katzenberg et al. 1996). Melanie Martin contends that while the unique flexibility of human weaning patterns does not provide an evolutionary justification for the divergence between policy and practice, it does cast doubt on the principle that all instances of complementary

feeding before six months are necessarily 'suboptimal' (Martin 2018:148). Martin points out that some researchers (cf. Cattaneo et al. 2011) have suggested that cues of 'developmental readiness' between four and ten months of age may be more relevant in making infant feeding decisions than the rigid recommendations invoked in infant feeding policy (Martin 2018).

Within public health, discussions of breastfeeding emphasize benefits to infant health and development, as well as pinpointing certain maternal behaviours as major risk factors for foetal and infant development. Mothers are presented as rational decision-makers who prioritize allocation of resources to their infant. Evolutionary understandings present this exchange in a more complex way, conceptualizing the maternal body as an active participant in allocation rather than merely as a passive distributor. Resource allocation between mothers and their offspring has been shaped by natural selection, and is mediated by internal physiological conflict as well as external behaviour. The idea of conflict is pervasive in evolutionary theory, specifically in relation to parental investment (Trivers 1974) and genomic imprinting.[23] The theory of parent-offspring conflict (Trivers 1974) emphasizes differences in optimal resource allocation from the (genetic) point of view of the mother and infant. The basic source of this conflict is that an offspring who extracts more resources than its parent is selected to provide (because a parent may have more than one offspring) will increase its own chances of survival. Conflict between both actors during the process of reproduction thus becomes inevitable.

An extension of the theory of parent-offspring conflict is Haig's (1993) theory of genomic imprinting. This hypothesis argues that conflict over resource allocation is not restricted to a mother and her offspring, but extends also to the father of the offspring.

[23] Parental investment is defined as any investment by the parent in an individual offspring that increases the offspring's chance of surviving (and hence reproductive success) at the cost of a parent's ability to invest in other offspring (Trivers 1972). Genomic imprinting refers to the parent-of-origin expression of genes.

Since humans are diploid organisms, offspring inherit one maternal and one paternal allele, which are expressed (i.e. 'switched on') simultaneously in the majority of genes. In mammals, however, a small percentage of genes are imprinted. This means that genes are expressed from *either* the paternal *or* the maternal allele (Wilkinson et al. 2007). Genes derived paternally have different 'interests' as opposed to maternally derived genes. While paternal genes are selected to 'extract' increased resources in comparison to maternal genes, the maternal costs relevant to infant resources have more of an effect on the success of maternal genes than on the success of paternal genes. The evolution of genomic imprinting has occurred in mammals (and plants) because their offspring are sustained straight from maternal tissues. Until the infant reaches independence, mothers are therefore in control of the amount of energy the infant receives (Haig 2002:53).

The principle of genetic conflict has been demonstrated empirically in mice by the insulin-like growth factor 2 (Igf2) gene, which is imprinted and encodes the protein IGF2. This protein plays an essential role in foetal growth and development. When the paternal allele of Igf2 is experimentally inactivated, offspring are 60% their normal size at birth; inactivation of the maternal allele, meanwhile, has no effect on birthweight (Haig 1997). Counteracting the effects of IGF2 is the IGF2 receptor (IGF2R). IGF2 binds to IGF2R, and is therefore removed from the bloodstream. This reduces the influence of IGF2 on resource transfer from mother to offspring (Haig and Graham 1991). In a similar experiment, when the maternal allele of Igf2r is inactivated offspring are 20-30% larger than normal at birth, while inactivation of the paternal allele has no effect (Haig 1997). The alleles of Igf2 and Igf2r thereby offset the resources allocated to the offspring against the resources retained by the mother and potentially given to other young (Haig and Graham 1991). The paternally imprinted Igf2 gene favours the offspring, while the

maternally imprinted Igf2r gene favours the mother at the expense of offspring resources (Kilner and Hinde 2012:122).

The concept of parent-offspring conflict contrasts with social perceptions of symbiosis, which present the maternal body as existing in order to sustain the foetus. As Sellen observes, 'assumptions that the interest of the mother usually coincide with those of the child remain untested' (2002:226). Rather than a unidirectional provision of unrestricted resources from the maternal to the infant body, mother and infant are conceived as being in direct competition over resources, with maternal genes programmed to minimize the costs to the maternal body. In relation to lactation, these are considerable – in terms of energy (Kilner and Hinde 2012:122; Prentice and Prentice 1988), labour, and time (Smith and Forrester 2013). The biomedical notion of optimizing infant feeding outcomes is thus rendered problematic, given that maternal genes are programmed to remain in competition with infant resource extraction in order to minimize costs. Maternal social responsibility for optimizing infant outcomes is also misplaced, given that optimality from the point of view of the maternal body does not always correspond to optimality from the point of view of the infant.

For the purposes of the current study, the above findings are significant especially for the light they shed on the capacity of humans to adapt infant feeding practices to different cultural and individual contexts. Although physiological flexibility which provided an evolutionary advantage has created infant feeding patterns that are do not match recommendations for optimal infant feeding, the variation in infant feeding patterns suggests a flexible maternal response to constraints of various kinds. The use of the term 'optimal' in public health policy, referring to successful breastfeeding practices, may therefore be counter-productive since according to these flexible responses 'optimal' for one woman and her child may not be optimal for another. Furthermore, these

perspectives indicate that notions of optimal infant feeding practices in policy, biologically derived, may be skewed too far in favour of the infant given that maternal resource allocation may exert an equivalent or greater pressure on individual breastfeeding decisions (Martin 2018:147).

c) 'Culture' as a Barrier to Successful Breastfeeding

Public health policies that have attempted to increase the rates of breastfeeding among women have failed to bring about significant change; the low rate of conformity with the stringent delineation of successful breastfeeding among UK women is statistically clear. The concept of 'culture' has entered the domain of public policy as an explanatory mechanism for the low rates of breastfeeding in the UK and elsewhere. Invoked in this context, the concept carries negative connotations as an 'obstacle' to recommended health behaviours such as breastfeeding (Stellmach et al. 2018:4).

The use of the term 'culture' is ubiquitous across policy documents that concern infant feeding. The EU *Blueprint for Action* calls for the 're-establishment of a breastfeeding culture in countries where artificial feeding has been considered the norm for several years / generations' (EU Project on Promotion of Breastfeeding in Europe 2004:7). The *Innocenti Declaration* requests 'reinforcement of a "breastfeeding culture" and its vigorous defence against incursions of a "bottle-feeding culture"' (WHO/UNICEF 1990:2). A manifesto on formula feeding produced by the NCT states 'the UK has a predominantly bottle-feeding culture […] the use of formula is a result of cultural beliefs' (NCT 2008). A recent report produced by World Breastfeeding Trends Initiative (WBTi: a collaborative national assessment of the implementation of the WHO's *Global Strategy*) states that 'Despite promotional campaigns over the last 40 years, the cultural message remains that formula feeding is the "normal" way to feed babies in the UK' (World

Breastfeeding Trends Initiative 2016), and it attributes higher breastfeeding rates among certain ethnic minorities within the UK as reflective of 'immigration from countries with a stronger breastfeeding culture' (World Breastfeeding Trends Initiative 2016:7). A report produced by the DH as part of the Start4Life campaign refers to a 'bottle-feeding culture' as one of the major 'barriers' to breastfeeding in the UK (Department of Health 2010:18).

It is not within the scope of this thesis to engage in an extensive critique of the concept of culture itself:[24] in fact, its contemporary and emerging uses within anthropology as unbounded, contested, and highly politicized (Ortner 2006:13) may be useful in strengthening policy conceptions of culture. What is at issue, rather, is the usage of the concept in the context of infant feeding policy (Brumann 1999), which resembles anachronistic theories of culture that portrayed groups of people as 'having "a culture", as being in the grip of that culture, and as acting in ways that could be explained largely by reference to that culture' (Ortner 2006:12). 'Culture' used in this sense closely resembles stereotype, with groups being labelled as inherently culturally disposed towards enacting certain patterns of behaviour (Ortner 2006).

This is apparent in conceptions of culture in infant feeding policy, where bottle- and breastfeeding are framed as two opposing 'cultures'; 'breastfeeding culture' is presented as the desirable outcome and a 'bottle-feeding culture' is presented as a constraint. The term 'culture' is mobilized to infer a set of circumstances that inhibit successful breastfeeding, which is conceived of as 'natural'. The universal biological nature of breastfeeding is emphasized, with culture represented as a somewhat perfunctory (and undefined) 'overlay', where 'cultural practices' are acknowledged only in the sense that they inhibit both 'nature' and 'good practice' as legitimated by scientific

[24] It is useful nonetheless to draw on the perspectives of anthropologists who have problematized the concept of culture within the discipline, many of whom advocate rejecting the idea entirely (cf. Abu-Lughod (1991); for an overview see Ortner (2006) and Fox (1999)).

discourse (Zeitlyn and Rowshan 1997:66). This approach perpetuates the outdated 'nature-culture' divide that so many scholars in the field of infant feeding have rejected.

The concept of culture is used in infant feeding policy to explain lack of conformity with public health directives, attributing deviations from the policy optimal to 'cultural' factors that are randomly distributed across societies (i.e. arbitrary), and fixed within societies (i.e. difficult to modify) (Sellen 2009:254). Panter-Brick's (1991) longitudinal, observational studies of breastfeeding behaviour among women belonging to two different castes in rural Nepal demonstrates clearly that 'breastfeeding' is not *one* behaviour, even in one population: breastfeeding practices in the two groups studies were heavily dependent on labour patterns and convenience, serving different purposes for women in each group. 'Culture' with reference to 'bottle-feeding culture' in policy is instead presented as a static belief system, shared across society, without recognition that members of a group or nation encompass numerous different cultures and practices.

Attributing low rates of breastfeeding to a bottle-feeding culture conflates a diverse set of practices with a pre-determined set of 'beliefs' versus (objective, scientific) 'fact', failing to acknowledge the inevitable heterogeneity of, and structural influences on, infant feeding practice within any given population. While a relatively recent shift in anthropology has moved the discipline away from approaching culture as a concept that implies homogeneity (see Cohen 1993; Fox 1991; Gupta and Ferguson 1992), in this context and in many others cultural theories continue to overemphasize coherence between and among people who are conceived as being 'of the same culture' (Abu-Lughod 1990). Culture itself becomes, asserts Cohen, 'a political commodity batted around the political playing field in a game which is as hugely complex and ramified to its participants as it is simple and one-dimensional to outside observers' (1993:201). Wikan further contends that the use of the term 'culture', in some instances at least,

'covers up the complexity of human existence, the fact that we are both children of 'our culture' and unique individuals' (2002:88).

Cohen further argues against the conception of 'culture' as a given set of values which are simply instilled without active participation: 'we have come […] to see people as active in the *creation* of culture, rather than passive in receiving it' (1993:196). This is significant in understanding conceptions of culture in infant feeding policy wherein mothers are portrayed as passive victims of bottle-feeding cultures, which prevent them from engaging in the more desirable breastfeeding culture. In this context the breastfeeding culture becomes one that is espoused by policy makers more than by breastfeeding women themselves.

The use of 'culture' as a catchall expression to explain variations in infant feeding is problematic. While it may serve as a useful shorthand to point to a constellation of issues to which policy-makers should pay greater attention, it ultimately masks more than it reveals, at least when the purpose is to understand a specific phenomenon, such as why certain groups of women breastfeed less than others. Above all it overlooks individual agency in relation to infant feeding practices. Research which refers to concepts such as a 'bottle-feeding culture' (cf. Bonia et al. 2013; Scott and Mostyn 2003) contributes to the deployment of a concept of 'culture' that arguably impedes appreciation of the complexity of the factors involved in infant feeding practices. One objective of the thesis is therefore to call into question the use of culture as an explanatory model for the multifarious practices enacted by mothers in this study by emphasizing the complexities and practicalities of infant feeding decisions. In order to signal a move away from these assumptions this thesis will follow Abu-Lughod's (1991:472) suggestion of utilizing the concepts of practice (cf. Bourdieu 1977; Ortner 1984) and discourse (Abu-Lughod 1989; Abu-Lughod and Lutz 1990) to 'allow for the possibility of recognizing within a social

group the play of multiple, shifting and competing statements with practical effects' (Abu-Lughod 1991:472). It is hoped that this will guard against the 'boundedness' and ideological connotations the concept of culture evokes in policy.

1.4 Theoretical Approach

Several lines of research within anthropological literature are valuable in providing a theoretical framework with which to interpret the data examined in the thesis. First, the concept of ontology (specifically ontological conflict) provokes discussion of maternal experiences as having the same degree of validity as policy discourse. This helps to counter notions of 'belief' or 'perception' that undermine the lived realities of breastfeeding women. Second, research on 'technologies of surveillance' (specifically risk and measurement) informs analysis of the way in which biopolitical governance is experienced day-to-day by parents, particularly with respect to the vulnerable infant body. Third, engaging with literature which examines agency and resistance avoids the mistaken assumption that subjects of biopolitical governance are passive recipients or inhabitants of power structures.

a) Conflicting Ontologies: Enacting Infant Feeding Practices.

Breastfeeding is a practice that is enacted through multiple different ontologies (maternal, policy and clinical), and the concept of successful breastfeeding as presented in public policy serves to highlight the ontological conflicts (different assumptions about 'what exists' in relation to infant feeding) that women negotiate in enacting infant feeding practices. Rather than acknowledging these ontologies, infant feeding policy foregrounds a dominant ontology – successful breastfeeding – that is communicated through authoritative knowledge systems which shape infant feeding practices.

The ‘ontological turn’ in anthropology originated in response to the use of the term ‘culture’ as a key analytical category within the discipline, advocating its replacement with an alternative category – ontology (Argyrou 2017:51). In light of the concerns explored in the previous section, the anthropological appropriation of the philosophical concept of ontology is worth exploring, both in order to provide an alternative term to the use of culture and in order to highlight the multiple different realities involved in infant feeding practices. Ontology is a deliberately fluid category; adoption of the term in Science and Technology Studies (STS) was intended to destabilize apparently robust designations of reality (Woolgar and Lezaun 2015). As a result of its intentional fluidity, the meaning of the term is thus not entirely transparent; as one anthropologist observed, it is possible ‘that some ontologists themselves are unclear about what it is they are advocating’ (Salmond 2014:159). Nonetheless, in general terms the principle of ontology in anthropology suggests the existence of different worlds for different people, each as ‘real’ as the other. The concepts of culture, perspective or perception can thus be replaced with the existence of different ‘ontologies’ which exist in the world – that is, different truths about reality as opposed simply to representations of it (Salmond 2014). Whereas in the past anthropological analyses would have identified different sets of ‘beliefs’, ‘cultures’ or ‘representations’, these can now be described as ‘ontologies’ in order to imply multiple realities (Woolgar and Lezaun 2015:464).

Successful breastfeeding as a political ontology is communicated through what Brigitte Jordan has termed ‘authoritative knowledge systems’ (for an in-depth analysis of authoritative knowledge systems see Davis-Floyd and Sargent 1997; Jordan 1993[1978]). In a city like Oxford, where a third of all the live births in 2016 were to mothers who were not born in the UK (Office for National Statistics 2017), mothers lack nearby support from family members; a situation reflected by many participants in this study.

Furthermore, inter-generational knowledge transmission surrounding the practicalities of breastfeeding an infant is limited, given the low rates of breastfeeding in earlier generations. The parents in this study thus relied upon non-kin-based support through clinical encounters with health professionals. Davis-Floyd and Sargent explored the influence of authoritative knowledge in relation to childbirth, arguing the significance of 'the knowledge that participants agree counts in a particular situation, that *they* see as consequential, on the basis of which *they* make decisions and provide justifications for courses of action' (original emphasis) in shaping women's approaches to childbirth (1997:58). The influence of authoritative knowledge on infant feeding practices is similarly apparent among mothers in this study, with approaches to infant feeding on the part of most expectant first-time mothers largely being shaped by health professionals specializing in infant care. Irwin and Jordan (1987:319) explain that authoritative knowledge is accepted 'not only because it seems natural and reasonable' but also because it is often 'associated with a stronger power base', reflecting the predominance of biomedicine in shaping the infant feeding decisions and experiences of the women in this study.

The concept of authoritative knowledge systems is equally relevant after childbirth: the participants in this study attended routine appointments with health professionals for many months after the birth of their children, often relying on these experts for advice about early motherhood. The health professionals – midwives, doctors, lactation consultants – fall under the term 'expert', that is, 'a person who is very knowledgeable about or skilful in a particular area' (Oxford English Dictionary 2016). Similarly to the concept of ontology, the concept of 'expert' is often left undefined within anthropological literature. Actors described as experts in this thesis will be defined as those who have 'developed skills, in semiotic-epistemic competence for, and attentional

concern with, some sphere of practical activity' (Boyer 2008:39).[25] In the lives of women in this study, the sphere of practical activity – infant feeding – occupied by experts is enacted largely within clinical settings through biomedical ontologies: doctors, midwives, Health Visitors and lactation consultants. While expectant mothers in the study also drew upon other non-kin-based support (such as friends), the biomedical approaches taken by experts emerged as authoritative through maternal expectations of breastfeeding support from routine consultations with midwives, educational materials distributed in clinical settings or through associated communication channels, and preparatory courses run by a number of organizations nationwide.

The tensions that characterize the infant feeding process for many women, as well as the significance of experts in negotiating them, will be exemplified by the experiences of women in the study whose infants were diagnosed with 'tongue-tie', or 'ankyloglossia'. These terms refer to a shortened or thickened lingual frenulum (the section of connective tissue that attaches the bottom of the tongue to the floor of the mouth), which causes restricted movement of the individual's tongue (Wallace and Clarke 2006). The lingual frenulum does not stretch with use and therefore does not lengthen or loosen over time. In some (but not all) mother-infant dyads, tongue-tie causes a variety of difficulties with breastfeeding including inefficient extraction of milk from the breast by the infant due to poor latch (Griffiths 2004; Hillan 2008), obstruction of milk flow (Geddes et al. 2008; Ricke et al. 2005), damage to the mother's nipple through increased friction (Griffiths 2004), and the inability of an infant to take in sufficient milk for continued growth (Amir et al. 2005; Blenkinsop 2003; Dollberg et al. 2006; Wallace and Clarke 2006). Ultrasound imaging has demonstrated that the infant's tongue is a vital

[25] The term 'practical' in this context may be a misnomer; a male paediatrician or midwife, while perhaps a knowledge specialist in infant care, will not be an expert in practical terms of the physical skill of breastfeeding, and nor will a female practitioner who has never experienced breastfeeding. Nonetheless, the term 'expert' serves to delineate the agents responsible for knowledge production in relation to breastfeeding from the mothers who seek to become expert.

component of the suckling process during breastfeeding: these problems therefore occur when the tongue movement, restricted by the tightened frenulum, causes the mother's nipple to become trapped between the baby's tongue and hard palate when the infant feeds (Geddes et al. 2008; Woolridge 2013). The cause for tongue-tie has not been established: evidence of ankyloglossia being a genetically transmissible pathology exists, but it is limited and the pathways are unclear (Dezio et al. 2015:7). The clinical solution to tongue-tie is a simple surgical procedure known as a 'frenotomy' or tongue-tie 'divide' (also referred to as a frenulectomy or frenectomy), which several infants in this study underwent in order to relieve symptoms of the condition. The procedure is generally performed without anaesthesia, and consists of a clinician using scissors (or, in some cases, a laser) to release or 'divide' the tightened lingual frenulum. Frenotomy is recognized by The National Institute for Health and Clinical Excellence (NICE) (2005) as an acceptable solution to feeding difficulties caused by tongue-tie and has been shown to be largely safe with the majority of infants experiencing no complications (Francis et al. 2015; Mettias et al. 2013; Power and Murphy 2015).

The efficacy of frenotomy in resolving breastfeeding difficulties has been disputed in medical circles; in part due to controversies in assessing the extent to which tongue-tie inhibits breastfeeding. Five randomized controlled trials have been conducted (Berry et al. 2012; Buryk et al. 2011; Dollberg et al. 2006; Emond et al. 2014; Hogan et al. 2005) that report varying degrees of improvement in breastfeeding efficacy and maternal pain scores after frenotomy. A number of case-control studies (Ballard et al. 2002; Messner et al. 2000; Ricke et al. 2005) have shown consistent improvement after frenotomy alongside other methods of research which produce similar results (Amir et al. 2006; Geddes et al. 2008; Griffiths 2004; Wallace and Clarke 2006). However, methodological difficulties in these studies and in others undermine the conclusions

drawn by studies claiming correlation between frenotomy and improvements in breastfeeding. These include ethical and practical difficulties implementing a blinded experimental procedure in randomized trials, and poorly defined outcome measures. The efficacy of the procedure in extending the duration of breastfeeding has also been questioned, since in most of the studies the control group was offered frenotomy within a matter of days.

The complex and fluid diagnostic boundaries of the condition further complicate the clinical landscape for women who believe their problems stem from tongue-tie, as well as for the clinicians involved in its diagnosis and treatment. The reported incidence of the condition ranges in worldwide studies from 3% to 16% (Ballard et al. 2002; Messner et al. 2000; Ngerncham et al. 2013; Segal et al. 2007) – a substantial variation which may be due, in part, to a lack of standardized diagnostic criteria (Ingram et al. 2015). Research indicates that approximately 25% of children with tongue-tie will have difficulty breastfeeding (Dezio et al. 2015:7), though higher percentages have also been reported with 44% of tongue-tied infants in one study having problems with breastfeeding (Hogan et al. 2005); again, a substantial variation. Ankyloglossia is asymptomatic in many individuals (Dezio et al. 2015:7), with the impact varying between mother-baby dyads (Segal et al. 2007); there does not seem to be a clear correlation between the grade of tongue-tie and the symptomatic severity experienced by mothers and infants. This means that the mother of an infant with an apparently negligible tongue-tie may experience profound difficulties breastfeeding, while an infant with a pronounced tongue-tie may have no difficulty feeding at all. Furthermore the multifactorial nature of breastfeeding means that it is difficult to attribute pain during breastfeeding to tongue-tie, since pain is a common problem that can result from several other causes including

attachment problems unconnected with tongue-tie, and infection (Hall and Renfrew 2005:1214).

One survey in particular demonstrated significant differences in opinion between lactation consultants and paediatricians. The majority of lactation consultants surveyed believed that tongue-tie frequently causes feeding difficulties and that frenotomy is helpful, while in marked contrast 90% of paediatricians believed ankyloglossia never or rarely causes feeding problems (Messner and Lalakea 2000:129). Finigan (2009) experienced strong resistance to the development of a frenotomy service, and concluded similarly that controversy continues to exist among clinicians in the UK over division of tongue-tie. The relative paucity of contemporary literature on tongue-tie, alongside the methodological difficulties evident in that literature, may in part account both for the lack in consensus and for the difficulties with diagnosis described above. The lack of a universal classification system and the mismatch between the scaling of existing systems and the severity of symptoms women experience result in a scepticism of both the high incidence of tongue-tie diagnosis among women who have difficulty breastfeeding, as well as the credibility of tongue-tie as a cause for those difficulties.

There is thus the potential for ontological conflict between a mother who is experiencing pain while feeding her infant and has determined through trial and error or through pursuing other treatments to no avail that her difficulties stem from tongue-tie, and the medical professional who informs her that there is too little evidence supporting the treatment, that tongue-tie does not cause problems with breastfeeding, or simply that the condition does not exist. Ontologies, suggests Annemarie Mol in her seminal exploration of the medical ontologies of atherosclerosis, 'inform and are informed by our bodies, the organization of our health care systems, the rhythms and pains of our diseases, and the shape of our technologies. All of these, all at once, all intertwined, all in tension.

If reality is multiple, it is also political' (2002:7). Breastfeeding is shaped by multiple ontologies – political, clinical and maternal – and, by examining the tensions between these ontologies rather than conceptualizing each as 'real' or 'not real', it is possible to begin making sense of the complexities in maternal experiences of breastfeeding. Variations in infant feeding practices are conceived as the result of alternate maternal ontologies of breastfeeding success, rather than aberrant 'cultures' that prevent conformity with biological fact. Experiences of insufficient milk become a reality, rather than a perception on the part of the mother. And negative emotions in relation to 'failure' to breastfeed become a response to the prioritization of one ontology – the biopolitical – over another – the maternal.

Rather than discussing differing perceptions or cultures of infant feeding, this thesis will follow Mol's lead in investigating how breastfeeding is done, using her term of enactment to examine the ontological conflicts involved in infant feeding practices. The concept of successful breastfeeding as presented in public policy thus serves to highlight the ontological politics and tensions women negotiate in enacting infant feeding practices. The model of successful breastfeeding presents normative standards of optimality as biological fact, and maternal practices as 'cultures', implying beliefs or perceptions that stand in opposition to those facts. Framing policy directives and maternal experiences as ontologies allows both problematization of successful breastfeeding as a biopolitical construct and examination of the difficulties in the maternal experience of infant feeding which have previously been identified in anthropological literature.

b) Biopolitical Technologies: Examining Risk and Measurement

Central to the biopolitics of successful breastfeeding are two technologies – risk and measurement – that serve to encourage conformity with the normative standards outlined

in public policy. The language of risk frames certain practices as prescribed norms (exclusive breastfeeding for six months) and others as deviances (feeding with artificial milk), serving as a mechanism for transferring responsibility for infant health to the individual mother. Technologies of measurement, meanwhile, are utilized to systematically monitor infant bodies – conceived as vulnerable to risk – in order to ensure that mothers approach this responsibility in the correct way.

The UK is an example of what sociologists Giddens and Beck have termed a 'risk society': that is, 'a society increasingly preoccupied with the future (and also with safety), which generates the notion of risk' (Giddens 1999). Insecurities and ambiguities of human existence are imagined as risks that affect environments, populations or individual people, and 'risk' as an explanatory model provides a form of reasoning and discourse (Dean 1996-178; Ewald 1990:141-143). Moreover, mothers form a specific subgroup which are particularly affected by this: advice on child-rearing is given from a particularly 'moral stance' (Ochs and Capps 2001) given the importance placed on infants and children as entities with specific ethical concerns and a separate moral identity. In response to calls from advocates of breastfeeding, formula feeding is presented increasingly explicitly in public health messages as a threat or 'risk' in order to *discourage* mothers from using formula milk, rather than framing human milk in terms of benefit in order to *encourage* mothers to breastfeed (Heinig 2009). As one author remarked, 'a single early exposure to infant formula may initiate a series of immune responses leading to Type 1 diabetes and infants who are not breastfed are much more likely to become adults who are overweight, obese, hypertensive and suffer from elevated cholesterol' (Berry and Gribble 2008). As well as a risk to infant health, the use of formula milk is presented as a risk to the physiological process of lactation, and breastfeeding is conversely presented as a catchall mechanism for reducing risk (both

short-term and long-term) to infant health. This context of risk – specifically the drive towards avoidance of risk – holds mothers responsible for protecting infant bodies against potential external risk, prompting burgeoning surveillance and policy advice (Furedi 2002; Lee et al. 2010) that defines the parameters through which mothers are instructed to enact breastfeeding. Conceptualizing behaviours and bodily practices, like breastfeeding, in terms of risk thus serves as a mechanism to individualize health and illness.

Three basic features characterize the rationale and anthropology of risk, all of which are particularly relevant to this thesis. First, through the notion of risk, the relationship between the individual and society has become one of potentiality and probability, and is now conceptualized in terms of quantifiable 'risk factors' (Ewald 1990:141-147; Helén 2010; Porter 1998-303). Enacting correspondingly healthful behaviours can mitigate these risk factors. Second, and related, the concept of risk implies the potential for changes in practice, because it allows for the transformation of hazards into definable 'objects', upon which it is possible to act. The idea of risk thereby remoulds perspectives on the future, from a state of anticipation without action to a motivation for decision and behavioural change (Luhmann 1993). Finally, risk as a feature of rational thought is multifaceted, given that its definition, use, and implication vary according to context (Dean 1999:181-182, 188-191). Conceptions of risk therefore vary both cross-culturally and individually and, ultimately, are socio-culturally constructed (Douglas 1992). Similarly to the concepts of normality outlined in the previous section, it is therefore important to question 'risky for what?' and 'risky for whom?' since, like the parental responses Shaw observes in her examination of risk and genetic counselling, risks associated with infant feeding '[are] likely to be negotiated not in isolation but in relation to other risks, including those of which actors may not be consciously aware' (2011:111).

Within the late twentieth-century 'new public health' paradigm (Petersen and Lupton 1996; 1997), risks to health are no longer simply conceptualized as existing in places or spaces, nor in terms of personal hygiene. Instead, risk is conceived as an all-encompassing and pervasive feature of existence in a risk society (Beck 1992). This shift can be seen as constituting a new form of surveillance – one that seeks to reconfigure individuals through their 'constant and pervasive observation' (Bendelow and Williams 2002). Public health campaigns provide norms, beneficial for the population as a whole, against which individuals are monitored and classified. The goal of these campaigns is to encourage individuals to conform voluntarily to the goals of the state and other agencies (Petersen and Lupton 1997:12). As observed by Giddens (1999) and Shilling (1993), the body has thus become the target of many health risk-management strategies: through public health, risks are inevitably generalized and mapped onto entire populations, translated into goals and strategies for nation-states and individuals to aspire to. These goals and strategies are therefore, by definition, based on universalizing concepts of what a body should be – a healthy body – and how it should operate to produce a healthy society in order to counteract the risks designated as most important in particular contexts.

Scheper-Hughes and Lock point to the frequently encountered symbolic equivalence between conceptions of the healthy body and the healthy society, as well as the diseased body and the malfunctioning society, highlighting these as central foci for medical anthropologists (1987:20). 'In cultures lacking a highly individualized or articulated conception of the body-self', they contend, 'it should not be surprising that sickness is often explained or attributed to malevolent social relations (i.e. sorcery), or to the breaking of social and moral codes, or to disharmony within the family or the village community' (Scheper-Hughes and Lock 1987:15). It follows, therefore, in a society with

a highly individualized world-view and an emphasis on personal autonomy such as the UK, that the same sicknesses would be attributed to the individual body and that individual bodies would therefore be targeted as centres of control. A central feature of public health in a risk society, the concept of citizenship emphasizes both the rights and the obligations of individuals to take up and conform to the imperatives of expert public health knowledge.

Excepted from this onus of responsibility are vulnerable bodies, which for specific reasons are judged to be both lacking in individual control, and simultaneously more susceptible to risk. A review of the anthropological literature engaging with the status of infants and children across different cultures indicates that the infant body is an example of one such vulnerable body. Infant bodies are, across different populations, conceived as being particularly vulnerable to outside threats, but also particularly malleable to change and thus the subject of various performances of protection. Children are often construed as an intermediary, a messenger between the living and the dead, originating from the after-life and occupying a tenuous place in the living world. Haxaire (2002) describes the position of infants among the Gouro in the Ivory Coast, who are believed to have defected from the world of the ancestors and are not regarded as fully human before the age of two. Blanchy (2007) recounts the ritual baths given to Madagascan children, which enable them to maintain contact to their paternal ancestors. Gottlieb (2000a), in her portrayal of Beng infancy, explains that Beng babies are reincarnations of ancestors, and describes the processes which must be undertaken to ensure that babies remain in the world of the living rather than returning to the *wrugbe* (world of the ancestors).

In the West newborn babies (and, as demonstrated by controversies over foetal rights, even pre-birth foetuses (cf. Daniels 1993; Whitner v. South Carolina 1997) are generally conceptualized as persons firmly anchored in the living world. That said, a

strong perception of the infant body as malleable – for example in relation to the evolutionary concept of phenotypic or developmental plasticity – still exists. The period of life defined in the West as 'childhood' became increasingly refined during the nineteenth century: progressed and popularized through contemporary physiology, the child's body was seen as one characterized by change and growth, a process of biological development which was increasingly in need of measurement and monitoring (Armstrong 1983). Furthermore, the health of children is inherently bound with the health of society: the linking of the welfare of children's bodies to the future welfare of the nation was a consistent feature of nineteenth century social and political thought (Armstrong 1983) and it remains so today, for example through increasing concerns over the impact of early life developments on future morbidity and the concurrent burden of disease on society. The child's body is regarded as a temporary, plastic body: an 'unfinished biological and social phenomenon' (Shilling 1993:12) that needs to be nurtured in the present, its changes and development monitored, to ensure the well-being of the future adult it will become (Prout 1999:25). Like childhood, the boundary between infancy and the rest of childhood is not fixed or given. Infancy is, in effect, an embodied socio-historical construct; but in practice it is also characterized by a distinctive corporeality. Typified by periods of rapid growth, development and change as the child moves from being a pre-vocal (although not pre-social) baby, infants move from a position of dependency on others for almost every physical and emotional aspect of their lives, to the status of 'toddler', generally (although not always) able to talk to some extent, walk, etcetera (Holt 2016:5). Infants are often seen as adults' becoming, and this is regarded as providing specific insight and interest into how to change and transform inequalities in society (Holt 2016:6). The period of infancy is thus regarded as a temporal window during which future societal morbidity can potentially be corrected.

The fundamentally rudimentary nature of risk assessment – in the sense that its basis lies in attempts to predict future occurrences (Bendelow and Williams 2002:69) – causes infants to be conceived as particularly risky bodies. They are developmentally plastic and they have the most prolonged future – and therefore a prolonged potential for risk – ahead of them. Since infants, especially newborn infants, are conceived of as entirely helpless and unable to undertake any health-management behaviours themselves, parents (and particularly mothers) are viewed as responsible for avoiding risks. In this context, responsibility ordinarily placed on the individual is transferred on to the parents of the child who are charged with the task ultimately of shaping the infant body. Although of course individual practices vary, this burden of responsibility tends to fall in greater proportion to mothers than fathers. Mothers are framed as 'risk managers' (of infant bodies) (Knaak 2010:345), who are responsible for ensuring that the developmental environment (both immediate and future) of infants carries as little risk as possible. Since formula feeding is conceived as a risky behaviour, a mother must breastfeed in order to maximize the chances of her child developing healthily. Ensuring what is 'best for baby' becomes 'best for society', and breastfeeding constitutes a way in which female bodies are expected to reproduce and maintain healthy, 'good' citizens.

Central to managing the vulnerable infant body are technologies of measurement that serve to monitor infant health. Growth rates emerged as a key measure of infant health in this study, which is reflected in the importance of growth rates in monitoring infant health worldwide. Given the importance of infant health in predicting future disease burdens, infant growth is a significant predictor of future population health. The first growth reference was introduced in England in 1906 (Tanner 1981) and, as part of the Infant Welfare Movement, by the mid-1920s there was a UK-wide network of welfare centres that were organized around child weighing. The use of growth charts was

recommended by a joint committee of the FAO and WHO in 1961 (WHO 1962), and the first standard weight chart was developed by WHO in 1978 (Dibley et al. 1987).

In countries with high incidences of infant malnutrition growth monitoring is primarily aimed at detecting malnutrition. In countries like the UK where the incidence of malnutrition is low, growth monitoring[26] serves five major functions. First, early detection of growth disorders such as Turner syndrome (Grote et al. 2008:212); second, to facilitate the accurate calculation of drug doses; third, to facilitate accurate nutrition assessment; fourth, to provide the opportunity for nurses to observe the child's general health; and fifth, to assist in the management of obesity (RCN 2017). The growth charts currently used in the UK (UK-WHO 0-4 years growth charts) were adopted in 2009 and constructed using the WHO Child Growth Standards, which were developed in 2006. Because the WHO dataset did not include preterm infants, the Child Growth Standards were combined with birth data for gestations 23 to 42 weeks from the UK1990 (or UK90) growth reference. The WHO growth charts used a cohort of healthy, breastfed children to develop standards of optimal growth for infants (WHO Multicentre Growth Reference Study Group 2006). The DH states that 'for the first time, [the growth charts] provide a description of optimal growth which will help to establish breastfeeding as the norm' (Department of Health 2009).

The term 'optimal' in the WHO and DH standards means the growth of children who were following the best feeding regimes in environments free from any socio-economic constraint to their growth, where 'best feeding regime' is defined as exclusive or predominant breastfeeding until at least four months of age (Cameron and Hawley 2009). The current UK charts thus represent a growth pattern of children growing in an environment free from potential growth constraints, thereby providing a standard on how

[26] Though there are many measures of infant growth (length/height, tricep skinfold thickness, head circumference), in the UK growth monitoring largely refers to weight as the primary measure of infant growth.

children *should* grow in *all* countries rather than a reference to how they *are* growing, permitting 'value judgements about the adequacy of growth' (WHO Multicentre Growth Reference Study Group 2006:77). It should be noted that growth standards are different from growth references, which instead show how children are actually growing in a given place and time.

Evolutionary concepts again challenge the notion of 'optimal' growth as presented in growth standards. It is the biology of individual growth, which is plastic and sensitive to environmental cues, that is under selection in a particular ecology: successful 'growth patterns' in local ecologies are those which are compatible with the survival of the foetus to successful reproduction (Ulijaszek 2006). 'Optimal growth' Mummert et al (2018) observe, should therefore be conceived as a property reflecting flexibility under a variety of challenges, and not a particular size or pattern of change under theoretical conditions as is presented in the WHO growth standards. Since growth in different populations may therefore diverge significantly from the WHO standards, it has been posited that data derived from local samples may be more useful than international standards in assessing the growth of infants (Hui et al. 2008; Juliusson et al. 2011). Mummert et al conclude that 'it remains unclear what 'optimal' growth patterns mean or if, indeed, such universals are appropriate goals' (2018:419).

The WHO notes that any deviations from its standards should be considered as evidence of 'abnormal growth' (WHO 2006b). The direction of the child's growth line is emphasized, that is, whether rising in parallel to the reference curve (good), exhibiting a flat line across the graph (early warning), or falling across several centile lines (danger sign). The assumption made in the growth charts is that infants will 'track' along a particular centile line unless there is an underlying medical issue or nutrition is inadequate.

Researchers are increasingly challenging the validity of weight as a reliable marker of infant health, questioning the applicability of a pooled sample of growth patterns, upon which the WHO growth charts are based, to the growth processes of individual infants (Davies 2000; Elliman et al. 2002; Hall and Elliman 2003; Wright 2002). Current clinical approaches to infant growth are rooted in the historical rise of the growth curve-based chart as an essential tool for assessing health and wellbeing among children (Cole 2012), which underpins the assumption that the graphical form represents the process of growth itself. A substantial body of research challenges the concept of slow and continuous size acquisition: though infrequent measurements result in the appearance of a steady growth, more regular measurements reveal an irregular process with multiple accelerations and decelerations (cf. Cole 1998; Hermanussen and Burmeister 1993; Hermanussen et al. 1998; Lampl and Thompson 2007; Lampl et al. 1992). Unlike the patterns depicted on the growth charts therefore, individual timing of growth events and amounts are highly variable, potentially explaining growth rate variance that has no obvious medical cause. These approaches challenge the relevance of population growth patterns to individuals, since percentile positions depend on the timing of the measurement assessment relative to the timing of growth biology (Cole 2012; Lampl and Thompson 2007). Growth charts amalgamate the two entities of population and individual growth: 'the concept of *growth* as a movement of an individual's stature in space-time, and the concept of producing a *chart*, in order to describe the static field of "probability density"' (Hermanussen et al. 1998:379). The result is a mathematically 'smoothed' statistical construct (Wales and Gibson 1994:84), whereby the centiles at either end of the chart rely on the fewest data points and have thus been subject to the most 'smoothing' (Sachs 2005:69).

Variable processes in weight monitoring execution have also been shown to undermine its utility in practice: in fact, evidence shows that actual growth monitoring practices are often inconsistent even in highly industrialized countries (RCN 2017; Scherdel et al. 2016:447; Stoner and Walker 2006). Even when measurements are taken correctly, mistakes in recording the resulting figures on growth charts often occur, resulting in a distorted representation of the infant's growth curve (Hall and Elliman 2003; Wright 2002).

Significant ambiguity also exists in relation to what exactly constitutes 'normal' infant weight loss, with limited evidence for its efficacy in determining the health status of infants (Grote et al. 2007:212; Noel-Weiss et al. 2008). The evidence for the efficacy of failure to thrive as a diagnostic category is slim, and furthermore the potential risks to an infant placed in that category are questionable (Rudolf and Logan 2005; Spencer 2007). Controversy also exists about when interventions, such as formula supplementation, should be initiated: at the time of fieldwork there was no low-weight-gain protocol for Health Visitors and midwives to follow, so the parameters surrounding the risks of early infant weight loss and its management were unclear.

Growth monitoring is recognized as having made a key contribution to improving the nutritional status of children in the Global South, but even in these contexts the effects of growth monitoring are not uncomplicated (Ashworth et al. 2008). In the Global North where malnutrition is significantly less prevalent, it has been suggested that a focus on infant weight may lead to a loss of confidence in breastfeeding (Dykes and Williams 1999; Panpanich and Garner 2003) or prompt health professionals to suggest supplementary formula to mitigate even small aberrations from a centile line (Mahon-Daly and Andrews 2002). Mothers who experience anxiety about infant growth are more likely to stop breastfeeding (Kools et al. 2006). This anxiety may be exacerbated by

frequent weighing if the individual variability of infant weight is not taken into account: although women are advised to weigh infants no more than once a month up until six months of age,[27] more frequent practices of weighing have been identified among mothers (Davies 2000:201; Sachs 2005:93; Sanderson et al. 2001).

Quantification – in this case, quantification of infant health – is fundamentally about creating units that can be counted and described numerically with the aim of putting them in some order. Measurements enable the world to become 'knowable without distracting details, neatly compartmentalized and ordered, and comprehensible from a distance' (Rottenburg and Merry 2015:7). In applying these systems of measurement to infant bodies, growth charts 'produce the very bodies that populate the accounts, which are then illustrated by the graphs' (de Laet and Dumit 2014:73). While growth charts and other forms of quantification are designed to reflect scientific objectivity, they are products of interpretation and decisions about what to measure and how to classify and identify it (Rottenburg and Merry 2015:11). Growth charts thus serve a dual purpose: monitoring of the healthy (or unhealthy) infant body, and normalizing breastfeeding by constructing growth standards according to the policy optimal, thereby rendering formula-fed infants (who grow differently to breastfed infants) invisible in statistical constructs of infant growth.[28]

Technologies of risk and surveillance both serve to encourage conformity with conceptions of successful breastfeeding, emphasizing the vulnerability of the infant body and promoting self-regulation in order to avoid risk to the infant. The next section will outline the significance of the concept of agency in understanding how women negotiate infant feeding norms.

[27] See https://www.nhs.uk/conditions/pregnancy-and-baby/baby-weight-and-height/

[28] Weight patterns of formula- and breastfed infants are similar during the first three months, but breastfed infants gain weight less rapidly during the remainder of the first year (Dewey et al. 1992). This formed part of the impetus for developing the new WHO standards, since previous growth references were based on formula-fed infants and therefore did not accurately reflect the growth trajectory of breastfed infants.

c) Acknowledging Agency

Viewed only through the lenses of biopolitics, risk and responsibility, breastfeeding mothers might mistakenly be perceived as passive actors. An unquestioning acceptance of biomedical individualism, state control, surveillance and power might further obscure the agency of individual bodies within this framework, omitting the capacity of women to subvert and navigate the normative structures that define breastfeeding success, and potentially their capacity for identifying and implementing patterns of infant feeding which are successful for them even where they diverge from public policy advice. It is important, therefore, to consider the agency women have, and to call into question the actual power of the disciplinary structures of biomedical approaches that focus primarily on the health-related benefits of breastfeeding.

Researchers have used the concept of agency to stress the status of individuals as subjects rather than objects, suggesting that people employ strategies and individual agency despite the constraints of societal structures (Samuelsen and Steffen 2004). As Bourdieu explains in his principle of habitus, 'Social agents, in archaic societies as well as in ours, are not automaton regulated like clocks, in accordance with laws which they do not understand' (Bourdieu 1990:9). Kockelman points to several ideas that are central to anthropological notions of agency. First, agency is understood to be inherent in human action, articulated either as an instinct of rebellion or hope, or as a capacity for free will or choice. Second, agency is often conceptualized as a form of resistance, which assumes both a force against which the agent is reacting, and an active desire to resist against it. Third, agency is thought of as a 'mediating relationality': i.e. individuals operate within structural constraints they have no control over, but within which there are certain choices available (Kockelman 2007:375-376).

Motherhood in general, and breastfeeding in particular, constitute a site within which the notions of agency and autonomy are fruitfully explored. The question of whether breastfeeding inherently undermines the agency and autonomy of women has been debated extensively within feminist research. Catriona Mackenzie describes bodily autonomy as a lack of intrusion on one's body and personal space, either implicitly or explicitly, and without permission; and that a state of autonomy necessitates the ability of the individual to decide what happens to or with her body (2010:241). The distinction between breastfeeding 'on demand' and breastfeeding 'on schedule' is, here, important. Breastfeeding on demand involves constant responsiveness from a mother to her child, willingness to breastfeed effectively whenever the child wishes; in keeping with this approach, mothers offer their breast regularly to the child or every time the child demands. Breastfeeding on schedule, by contrast – a fashionable approach until the 1980s, and still propagated by many popular parenting books, particularly in the USA – involves spacing feeds regularly throughout the day, withholding the breast from the child according to this schedule. Virtually all mothers in this study took an 'on demand' approach to breastfeeding – indeed, this is the approach now recommended by UK midwives and lactation consultants, contrary to the scheduled approach.

This approach is, in practice, undoubtedly incompatible with Mackenzie's definition of bodily autonomy. Simone de Beauvoir contended that breastfeeding is therefore fundamentally at odds with women's agency, arguing that, for some women at least, the infant 'inflicts a harsh slavery upon her and it is no longer a part of her: it seems a tyrant, she feels hostile to this little stranger, this individual who menaces her flesh, her freedom, her whole ego' (1949:508). Similarly, Rebecca Kukla asserts that 'a woman who feels that she cannot leave her infant, or even reasonably deny her infant any form of access to her body, cannot do the concrete things that normal humans need to do in order

to have a meaningful, distinct identity that is comprehensible to themselves and others' (2005:178).

The individualistic conception of autonomy as employed by de Beauvoir and Kukla has been criticized by other scholars as an intrinsically masculinist definition, because it requires acceptance of the assumption that living autonomously in this way is possible and/or desirable (Lee 2012:99). Nonetheless, understandings of autonomy as individualistic and free of physical attachment to others, as well as conceiving of these states as desirable, appears to be a factor which undermines breastfeeding. Sarah Earle (2000), for instance, demonstrated that one reason mothers gave for 'giving up' breastfeeding in favour of formula feeding was a desire to re-establish both their identities and their bodies as separate to those of their infant.

Unlike autonomy, the notion of agency is often understood as freely choosing one's own actions against the backdrop of various social forces. The agency of breastfeeding women has been questioned in relation to this understanding, since women's infant feeding choices are often severely constrained by their circumstances. Stephanie Knaak observes that the structure of infant feeding choice has become one of 'non-choice' because of the rigidity of the expert advice women now receive (Knaak 2010).

The concept of resistance is therefore equally as important to understanding the agency of mothers since, as Foucault observed in relation to biopolitics, 'Where there is power, there is resistance' (1979:93). Anthropological studies of resistance encompass large scale, long-term group opposition to dominant forces (cf. Comaroff 1985; Guha 1994; Taussig 1980), as well as smaller-scale 'everyday forms of resistance' (cf. Abu-Lughod 1990; Scott 1985; Scott 1990). Margaret Lock & and Patricia Kaufert's collection of essays *Pragmatic Women and Body Politics*, which concern women's relationship with

technology and medicalization, emerge as particularly useful to examining the experiences and actions of mothers in this thesis. The collection begins with the claim that women are not 'passive vessels simply acting in culturally determined ways', nor are they 'inherently suspicious of and resistant to technological interventions'; instead, they are 'grounded in existing habits of pragmatism' (Lock and Kaufert 1998:2). The notion of resistance is questioned, 'involving as it does the question of consciousness of the motives for one's own behaviour […], and also the assumption that resistance is the only form of active (as opposed to passive) behaviour available to women' (Lock and Kaufert 1998:11). The concept of pragmatism has been invoked by Lisa Smyth, who argues in her examination of the strategies that women adopt as they enter motherhood that 'women who inhabit a pragmatist role are guided […] by the demands of the particular situations they find themselves in as they go about mothering' (2012:115). Smyth's use of pragmatism indicates that it may be specifically relevant to breastfeeding; particularly given the conflicts women must negotiate in enacting infant feeding practices. Rather than (or perhaps in addition to) using traditional notions of agency that foreground conscious and active resistance, it may therefore be more applicable to conceptualize the agency of women in this study as the result of pragmatism rather than resistance.

The infants in this study are also approached as active agents in the breastfeeding process, having a direct effect on experiences of mothers and their day-to-day lived realities. There is a need to recognize how mothers conceptualize infants and take account of their agency in anthropological understandings of breastfeeding, infancy and childhood. Despite the establishment of an 'anthropology of childhood' in the late 1980s and 1990s, infants and babies continue to be omitted from anthropological discussions of childhood and reproduction. While children are discussed and the agency of children is a subject of anthropological research, the absence of babies and infants from anthropology

and sociology more generally is striking. Heather Montgomery points out that infants and babies make challenging subjects, attributing their absence in anthropological research to the impossibility of interviewing them or participating in their lives to any great extent (2000:18). Certainly, this informs the general picture; however, the lack of theoretical engagement with the infant body goes deeper than this. Alma Gottlieb observes that 'at a theoretical level babies constitute for most of us a non-subject, occupying negative space that is virtually impervious to the anthropological gaze' (2004:121). Brownlie and Leith point to the absence of babies from the sociology of childhood, attributing this absence to the 'conflation of babies with their bodies' (2011:197). Gottlieb articulates this conflation as a perception of babies as 'biobundles', stating that 'babies, with their overwhelming involvement in the body, get defined as precultural' (2004:57). More generally, infant opinions appear extraneous to the adult decision-making processes; and yet, from the very beginning of their lives, infants 'demand to be accounted for […] though adults may not interpret those demands accurately' (Gottlieb 2000b:124).

Breastfeeding is not something mothers can do on their own: it is fundamentally co-operative in nature, involving a minimum of two bodies acting in conjunction in order to achieve a specific function. Particularly in the months immediately after birth, the act of breastfeeding requires a mother to physically manoeuvre her baby onto or near her breast; but the baby must equally engage in certain movements in order to feed effectively. Its mouth must be wide open, its head tipped back, and the nipple at the back of the mouth. If a baby does not 'want' to breastfeed, the act of attempting to breastfeed can be a frustrating and demoralizing experience. The physiological mechanisms that enable milk production are equally two-way. Breastfeeding is physiologically dependent on the baby suckling on the breast: as the baby suckles, the level of prolactin in the mother's blood increases, and stimulates production of milk by the alveoli. Equally,

emotional responses to severe pain or upset may inhibit maternal oxytocin reflex or 'let-down reflex', which stimulates the flow of milk already in the breast. Even the protective effects of breastfeeding have been shown to be a two-way process, with long-held understandings of 'passive' immunity being challenged by research that points to infants taking an active role in negotiating maternal-infant immunity via breastfeeding (Miller 2017). Furthermore, studies have shown that infants are in control of the feed itself: Ramsay et al. (2004) found that more than one third of breastfeeds were terminated by the infant during a milk ejection, suggesting that he or she is largely in control of milk intake. Breastfeeding is thus dependent on both mother and infant being in a state of readiness and willingness to breastfeed. As Bartlett and Shaw point out: it is not mothers who breastfeed at all, but children who perform the act of breastfeeding itself (Bartlett and Shaw 2010:64). The fact that 'to breastfeed' means both (of a mother) feeding a child with milk from the breast, and (of a child) feeding from the breast is indicative of the extent to which breastfeeding is a collaborative and reciprocal activity; and it is significant that the agency of the infant in this context seems to have dropped from academic discussions.

The question of agency in this context ultimately relates to the relationship between parents, infants, and the state. Breastfeeding mothers are assumed to be rational agents in the public health framework: which, indeed, they are. However, what is rational at a certain point in time for an individual parent may be at odds with state conceptions of what is rational on a population level. Though infants have largely been absent from discussions concerning the relationship between parents and the state, they play a critical role in the process of breastfeeding. Mothers are agents who must negotiate a variety of risks and demands, including infant agency, and therefore when they face challenges they

may seek to overcome them in ways that highlight their agency and/or resistance, and which may not concur with structural prescriptions of 'correct' behaviour.

1.5 Chapter Outline

Building on the context, literature and theoretical framework outlined in this chapter, this thesis will investigate how infant feeding policy recommendations come to be negotiated by new mothers. It will explore how the norms associated with the biopolitical governance of infant feeding shape and constrain maternal experiences of infant feeding. The norms that characterize infant feeding policy will be problematized in relation to the narratives of breastfeeding women in this study. This will shed light both on the current low rates of breastfeeding across the UK population, and on the impact of nonconformity with the policy optimal on individual mothers.

The next chapter (*Methods and Methodology*) describes in detail the methodology used to conduct the ethnographic study that was undertaken to provide answers to the questions outlined in this chapter. The field site, ethical considerations and safeguarding precautions are outlined. The research techniques employed to carry out the investigation are described alongside reflections on the methodology.

Drawing on data gathered during fieldwork, Chapter Three (*Becoming Successful at Breastfeeding*) explores the way in which mothers interpret and internalize policy norms. The narratives of individual women are first situated within a context in which the intergenerational transmission of knowledge is either absent or interrupted, whereby the dominant source of knowledge is through expert figures. The premises underlying breastfeeding policy in the UK are re-examined from the perspective of individual women in this study, followed by an examination of the ways in which women enact breastfeeding in the early stages after birth. Preparations women undertook for the

process of learning to breastfeed are outlined, before turning to the way in which women enacted the enskilment required in becoming proficient at breastfeeding. The experiences of mothers who were not able to breastfeed according to normative standards are outlined, focussing particularly on their own agency and that of their infants.

Measurement of breastfeeding success – and, closely related, infant health – constituted a key concern in women's narratives, forming the central focus of Chapter Four (*Measuring Breastfeeding Success and Nutrition-Related Infant Health*). It is in this respect that procedures of monitoring and bodily regulation become relevant, reinforcing mothers' reliance on expert knowledge and undermining confidence in their own ability to evaluate breastfeeding success and infant health. Experiences of insufficient milk will be explored in order to make a connection between successful breastfeeding as a biopolitical construct and the local biologies involved in maternal provision of milk.

The convergence of multiple ontologies that frame breastfeeding results in fundamental conflicts for women, exemplified particularly clearly in maternal experiences of infant tongue-tie, which will be explored further in Chapter Five (*Managing Uncertainty, Balancing Risk: Examining the Impact of Breastfeeding Standards*). Through examination of this phenomenon the impact of normative constructions of breastfeeding success becomes clear. Maternal encounters with infant tongue-tie reflect biomedical reliance on standardized measures to quantify breastfeeding success. The conflicts that arise from this approach demonstrate the inadequacy of normative standards of successful breastfeeding in accounting for individual maternal and infant needs. The nuanced notions of what breastfeeding success involves for mothers in the study indicate that the concept of 'success' in relation to breastfeeding must be re-evaluated to account for the multiple factors involved in the process of feeding an infant.

These themes will be brought together and discussed in Chapter Six (*Discussions and Conclusions*), alongside limitations relevant to the project and possibilities for future research.

Chapter Two:
Methods and Methodology

The data presented in this thesis was collected over the course of a 12-month period of fieldwork, consisting of participant observation at a charity-run drop-in breastfeeding support clinic – 'Baby Café' – and in-depth interviews with breastfeeding mothers in Oxford. Through interaction with individuals directly impacted by infant feeding policies, it is possible to unmask the political and highlight the everyday realities that are lost in the language of neutrality that characterizes policy. While public health policy is by necessity simplified, a representation of the ideal that is designed to communicate messages to the general public, the methods employed in this study allow a re-emphasis on everyday lives, which, I argue, is currently missing in breastfeeding policy. Long-term engagement with subjects during fieldwork allowed an insight into individual breastfeeding practices, which are otherwise presented in universalized, simplified terms.

In contrast to the focus in public policy on population-wide data and statistical analysis, anthropological methods foreground humanistic and multifaceted research (Scheper-Hughes 1992:292): this study is anchored in everyday lives, and the strength of the methodological process lies in its capacity to uncover the diversity in the breastfeeding practices of participants. By focussing on individual experience rather than populations, it is possible to begin to understand the relationship between individual and society that is crucial to understanding the effect of societal frameworks on breastfeeding practices. Further to this, the study engages with the fact that breastfeeding is enacted in an increasingly medicalized context in which reliance on expert knowledge has become more and more commonplace and accepted as the universally applicable benchmark. A focus on ordinary people and their lives questions this reliance, approaching the knowledge and practice of 'experts' as locally variable alongside those of lay people

(Lambert and McKevitt 2002). In part because of the cultural context that surrounds breastfeeding, reported breastfeeding behaviour often differs from practice (Li et al. 2005): participant observation therefore provides a way of clarifying the 'lived reality' of infant feeding behaviour by observing breastfeeding mothers and associated actors in the everyday contexts which typically constitute the environment in which breastfeeding takes place.

2.1 Initial Methodological Approach

The initial objective of the project was to investigate the interaction between the health of women and their infants with a specific focus on nutrition. This project centred on the way in which women formulate perceptions of food during pregnancy, and how nutritional decisions were made during this period. The focal point of the proposed project was the way in which norms and moral discourse during pregnancy shaped eating behaviours and conceptions of pregnancy.

As the initial stages of research began to take shape, difficulties in gaining access to the intended research context presented methodological challenges. Organizations engaged in antenatal education proved unwilling to provide research access, and the timing of antenatal services presented certain methodological quandaries: clinical appointments generally take place towards the end of the first trimester, during which time nutrition is most relevant, so accessing participants early enough in their pregnancies proved challenging. Furthermore, after initial interviews and discussions with women it appeared that food choices were not perceived as an area of particular concern, and perceptions of food and eating did not change significantly during pregnancy: eating behaviours remained largely the same. Simply maintaining a healthy diet, while cutting

out foods such as soft cheese and raw fish (as recommended by many sources of pregnancy advice (NHS 2015)), was regarded as sufficient.

This prompted a re-evaluation of the project aims and methodological approach. After two months of initial research, interviews and repeated attempts to access antenatal groups, I decided to explore the possibility of an additional sample of breastfeeding women. Similar ontological conflicts existed in relation to food choice, but pressures of 'doing what is best for baby' were experienced if anything as amplified, given that women were now feeding their children in a direct sense rather than the more abstract, intangible process during pregnancy. The same concept of moral values and appropriate behaviour applied after birth just as strongly (if not more so) as during pregnancy. By examining the concrete process of feeding an infant, including constraints and difficulties, a focus on breastfeeding allowed an insight into women's attitudes towards nutrition as well as the way in which society responds to their approaches and solutions. Furthermore, there was a far more established infrastructure within which I could conduct research, enabling a greater sample size and a concrete basis for investigation.

I therefore contacted the two primary UK breastfeeding support services outside the NHS – LLL and Baby Café – to explore the possibility of research access. LLL were reluctant, because it was felt that the organization's primary function was that of a support group, and that having a regular observer would impede that function. Furthermore, LLL meetings occur only twice a month, and would therefore not have provided regular interaction with participants. Baby Café on the other hand immediately agreed, and proved a much more suitable research site: regular sessions allowed frequent contact with participants, and the drop-in style of service provided a more varied group of subjects.

Having established a positive relationship with an organization that was willing to allow research access, I therefore decided to shift the focus of the project. My research site moved from antenatal classes to breastfeeding clinics; the population of women I was researching shifted from pregnant women to women who are breastfeeding; and the focus of the project consequently moved from an examination of nutritional decision-making of pregnant women, to an examination of feeding choices relating to their infant after birth.

2.2 Ethical Considerations

The project received ethical clearance from the Central University Research Ethics Committee (CUREC), and there were no substantial ethical concerns. Below, I outline the ethical considerations that I identified, and describe the precautions that were taken in order to ensure respondents' wellbeing during their participation in the study.

There was no tangible benefit, or material compensation, to taking part in the study – nor were there any inherent risks. In fact, many mothers commented that it had been helpful to talk about their experiences with an individual outside their day-to-day social network. Every effort was made to conduct research at the participant's convenience, and participants were not expected to travel. If participation in the study became inconvenient, participants were free to withdraw at any point. For some new mothers, particularly first-time mothers, the period after birth can cause feelings of vulnerability, helplessness or depression. Studies have found that mothers are a group at risk of experiencing situational loneliness (Jopling and Sserwanja 2016; Kantar Public 2016), and a recent survey indicated that 28% of new mothers in the UK experience loneliness after giving birth to their first child (AXA Healthcare 2015). In cases where I encountered such instances during the interviewing process, I had details of appropriate sources of help, and encouraged participants to seek advice from those sources. Due to

concerns about respondent wellbeing, and in order to create an environment in which respondents felt able to talk freely about personal experiences, respondents were guaranteed anonymity, and names have therefore been replaced with pseudonyms.

It was agreed before I initiated research that I would not provide any advice to mothers, given that I had not undergone appropriate training and had not ever experienced breastfeeding (which is a prerequisite to becoming a volunteer at the organization). Both the facilitators and I recognized that individuals attending the sessions would be the foremost priority, and that I would fit my research around their needs. I therefore used my discretion when approaching mothers, seeking advice from facilitators at all times, especially in the case of talking to mothers who were visibly upset or struggling with acute feeding problems. However, I did not encounter any mothers who were anxious about my presence at the sessions.

In Baby Café sessions, all attendees were made aware (either by the researcher or by facilitators) of the purpose of my presence. Initially, my intention was to ask for written consent from all attendees: however, it quickly became apparent that a) attendees had a number of forms of various lengths to fill in on arrival and would not welcome a further one, and b) mothers, especially first-time mothers and those who had very young babies ordinarily attended without accompaniment, and were therefore physically preoccupied with holding their babies and learning how to feed them. I therefore decided that asking for written consent was inappropriate. The needs of the mothers had to have absolute priority, and they had to be given the space to concentrate on the physical act of breastfeeding which requires a hands-on approach: asking for completion of a written consent form in these circumstances would have proved challenging, and more invasive than verbal consent. An application to CUREC was made to alter the ethical clearance to allow for verbal consent. This was granted, and instead of asking for written consent, I

therefore introduced myself to each potential participant; gave a verbal explanation of the project and the reason for my presence; and asked individuals if they would be happy to talk to me about their experiences.

Participants who agreed to an interview were provided with a digital Participant Information Sheet that outlined the purpose of the project; the nature of potential involvement; confidentiality protocol, possible benefits and risks, and details of eventual research dissemination. It also clearly outlined that participation would be undertaken on a voluntary basis; that participants had the freedom to withdraw from the study at any point, without giving a reason; and that any quotations used in research disseminations would be reported under pseudonym. When I met each participant for the interview, I provided them with a further paper copy of the Participant Information Sheet, and asked if they had any questions about the project. All participants were satisfied that they had received enough information. I then asked them to sign a written consent form, through a participant dated signature and dated signature of the researcher. The consent form confirmed that participants understood the ethics procedure; how personal data would be used; that participation was voluntary; and that they had received the relevant information about the project. Consent forms also asked for permission for the use of quotations, as well as the audio recording of interviews and discussions. None of the participants withheld their consent to either of these measures.

2.3 Organizations Relevant to the Study

NGOs continue to play an important role in promoting and supporting breastfeeding through activism and provision of support. Four organizations are particularly relevant to the ethnography: Baby Café, the breastfeeding clinic at the local John Radcliffe Hospital (or JR), the NCT, and Children's Centres. These formed the predominant sources of

support for participants, and thus held a significant presence in breastfeeding narratives and processes. While LLL is relevant as a further important independent source of breastfeeding support in Oxford, it did not play a significant part in the research, which focussed on mothers with young babies; LLL groups are generally attended by mothers of older babies and toddlers.[29] However, there was some overlap between LLL and Baby Café, since several Baby Café facilitators and volunteers were also engaged in work for LLL.

Baby Café is a charity that provides a network of breastfeeding drop-in centres and other services to support breastfeeding mothers across the UK and other parts of the world. In December 2014, there were 148 active Baby Cafés – 97 in the UK, 45 in the USA, 4 in Mexico, 1 in Singapore and 1 in New Zealand (Fox et al. 2015). The charity was set up in 2000, and in 2005 the Baby Café initiative became the Baby Café Charitable Trust, with an established licensing and support structure. A merger with the NCT in 2012 was designed to grow the network of Baby Café drop-ins more effectively, and the two organizations are now fully integrated.

The service provides both social support and expert advice to mothers with questions or concerns relating to breastfeeding or care of an infant, free of charge. Each session is run by a facilitator, who provides professional advice to women and is often assisted by a peer supporter. Facilitators are trained to help breastfeeding families, and come from a range of professional backgrounds: midwifery, health visiting, lactation consulting, nursery nursing, or breastfeeding counselling. Peer supporters must take a six to eight-week training course in basic breastfeeding knowledge and listening skills. They are often mothers with experience of attending Baby Café for sustained periods of time. Sessions held in informal environments offer refreshments, comfortable seating and play

[29]Across the UK there are roughly 70 active groups led by LLL leaders, who supported approximately 12000 mothers in 2015 (LLL 2015).

areas for older children. Effective breastfeeding support requires a one-to-one approach that is sensitive to the infant's mood, and this is often time-consuming. Each session theoretically runs for two hours, but most of those I attended in the course of research overran by at least half hour, and often by several hours.

Funding for Baby Cafés is provided by various sources, including NHS trusts, local authorities, Children's Centres, branches of the NCT, and community funds or grants. During 2014, Baby Cafés provided a service to 8,861 women in the UK and over 20,000 women worldwide. The majority of Baby Café users worldwide attended with babies who were roughly six weeks old, and just over half attended more than one session. The most common reasons for attendance across the UK were for social support, help with positioning and attachment, concerns about sleep and night feeds, and pain associated with breastfeeding. Although antenatal support is offered, very few women attend the sessions antenatally. Mothers most commonly attend Baby Café for the first time when their baby is aged between two and six weeks.

The JR has an in-patient clinic, as well as an outpatient Breastfeeding Clinic, which operates twice weekly. These clinics are run by the 'Infant Feeding Team' at the JR which, at the time of research, was made up of three midwives who specialize in infant feeding. The Breastfeeding Clinic sessions were extremely busy (women often wait up to four hours to be seen), and understaffed, with sessions regularly being cancelled due to staff illness or unavailability. Mothers were often advised to see their GPs (General Practitioners) with their difficulties. However, many of the women I spoke to found the GP help considerably inferior to the support they had received from specialist centres. Many of the specialist practitioners did not regard GPs as a reliable source of information concerning breastfeeding owing to a perceived lack of nuanced understanding and a tendency to give only generic advice.

The NCT coordinates Baby Café drop-in sessions, and provides a franchise under which Baby Cafés operate. Many of the parents in this study attended antenatal courses run by the NCT, and much of their knowledge of breastfeeding prior to giving birth was informed by these courses. NCT courses have become ubiquitous across the UK: in 2015/16 (the year in which fieldwork took place), 98,778 people attended antenatal courses (NCT 2016) while in 2017/18 the figure was 95,662 (NCT 2018a).

Baby Café sessions, which I attended from January 2015 until January 2016, were all funded by Children's Centres. Children's Centres were announced in 1998 by the then Labour government as part of the Sure Start Initiative, which aimed to 'give children the best start in life'. Initially targeted at disadvantaged families, in 2004 control was handed to local governments, and universal services were incorporated with the remit that Children's Centres should offer resources for families from all backgrounds. Children's Centres were cited by NHS websites and postnatal support services as a key point of contact for parents who need social support and support with caring for their baby or with breastfeeding. The Children's Centres strongly valued the work of Baby Café, providing an established infrastructure for Baby Café facilitators. They offered a wide range of services aimed at families with children aged 0-5: for example early learning opportunities, parenting courses, services from other providers, and targeted services for families who require a greater level of assistance. The women who attended the Children's Centres were largely local to the area.

The Oxfordshire Baby Café Group was subject to considerable funding uncertainty during the period when I conducted my observation. The government's austerity programme introduced in 2010 had threatened the continuation of funding for the Children's Centres but many centres (including those in Oxfordshire) had succeeded in evading cuts largely due to public outcry, protests, and government petitions. In late

2015, the recently elected government announced cuts to Early Intervention budgets, and consequent plans to close all 44 Children's centres in Oxfordshire. Many informants were involved in efforts to campaign against cuts and maintain services in some form or other. Despite this, many of the Children's Centres in Oxfordshire closed in September 2016, and the remaining ones ceased to operate on a universal basis, instead becoming referral-only services.

2.4 Description of Research Sites

I began conducting participant observation initially in East Oxford Baby Café (East Oxford Children's Centre) and North Oxford Baby Café (North Oxford Children's Centre) in January 2015. I judged these two sites to be sufficient given their location – the former was located in one of the most ethnically and socio-economically diverse areas of Oxford, while the latter was located in a particularly wealthy area of Oxford. Six months into data collection, it became apparent that I would gain a more varied perspective by visiting additional Baby Cafés, since each had different attendees and each facilitator adopted distinctive approaches and methods in fulfilling their role. I therefore initiated fieldwork in the Rose Hill Baby Café (Rose Hill Children's Centre) and Jericho Baby Café (Jericho Health Centre) in addition to the two initial Baby Cafés.

East Oxford Baby Café took place on a Thursday afternoon from 13:00 until 15:00, in East Oxford Children's Centre. This was located just off Cowley Road, an arterial road that runs from the city centre to the industrial conurbation of Cowley through East Oxford. It has an ethnically and economically diverse populace, as well as being home to much of the city's student and academic population, and the area is regarded as particularly politically and socially active. When I began, the drop-in service was situated in a small alcove lined with chairs: women crowded into the narrow space, waiting for

facilitators and peer supporters to kneel down next to them and observe their babies feeding. Several months into observation, the service was moved to a larger area. In its subsequent constellation, the Health Visitors' clinic occupied the narrow alcove, and Baby Café operated in a larger, open area bordered by comfortable chairs, with a play area set up alongside it. Concurrently to Baby Café sessions, a drop-in Health Visitors clinic took place, as well as a 'stay-and-play' session intended for babies and toddlers. Thus, three inter-linked services ran concurrently, in loosely demarcated spaces, which mothers moved freely between to access different modes of support. This session was attended by Karen, an International Board Certified Lactation Consultant (IBCLC), Baby Café facilitator and LLL leader. Three peer supporters – Emma, Katherine and Katrina – also attended the session.

North Oxford Baby Café took place on a Friday morning from 10:30 until 12:30, in North Oxford Children's Centre. The Children's Centre was located in Cutteslowe, a suburb of North Oxford bordered by the affluent area of Summertown, and the Cutteslowe and Templar Road Estates. Families served by this Children's Centre were particularly disparate in terms of socio-economic status: many families suffered multiple disadvantages in an area of North Oxford that is otherwise very affluent. The Children's Centre was split over two large rooms, and staffed by three Children Centre Workers, a Senior Outreach Worker, and a Centre Manager. At the same time as Baby Café, a singing session for older babies and toddlers ran in an adjacent room. Mothers, fathers and their older babies often stayed for the singing session before coming over to Baby Café for advice or just to socialize. A community midwife, Bridget, ran a clinic in a small back-room concurrently. She often came out to ask about more specific breastfeeding difficulties, and her patients (both antenatal and postnatal) sat with Baby Café mothers while waiting for their appointments. This session, like the session in East Oxford, was

facilitated by Karen, with long-standing volunteer Rosie (who led another Oxford Baby Café and was also an LLL Leader).

Rose Hill Baby Café took place on a Tuesday afternoon from 12:30 until 14:30, in Rose Hill & Littlemore Children's Centre. Rose Hill is a city council estate located on the southern outskirts of Oxford. At the centre of the estate is 'The Oval', a large expanse of grass in the centre of a turning circle around which community services are located, acting as the focal point of the estate and to a considerable extent the area's social hub. These included Rose Hill & Littlemore Children's Centre alongside Rose Hill Community Centre and Rose Hill Primary School. Larger than both the East Oxford and North Oxford Children's Centres, Rose Hill & Littlemore Children's Centre was comprised of two multi-purpose rooms and a café, and offered a broader range of services including employment assistance as well as early intervention services. Baby Café took place in a room at the front of the Children's Centre, backing onto an outdoor play area used by the attached nursery. Here there was no concurrent session for older babies and toddlers: but each week a couple of regular mothers brought their older babies and toddlers to play in the same room, having attended Baby Café previously with those children. This session was facilitated by Lauren, an IBCLC, with volunteer Vera.

Jericho Baby Café took place on a Wednesday afternoon from 12:00-14:00, in Jericho Health Centre. Jericho is a suburb of Oxford, which has become one of the city's most sought-after districts in recent decades and is now a bustling area with a strong community spirit. The Jericho Baby Café was located in a room set next to the main waiting area. A noticeably more clinical space, this session was attended less by mothers seeking social interaction than by those seeking advice. Health Visitors present in the practice occasionally referred people to Baby Café, or discussed concerns relating to a specific parent with the facilitator. This Baby Café session was run by Camilla, with

periodic attendance by volunteer Bea. Given the lack of a consistent peer supporter, my role as a volunteer in this session was more pronounced.

2.5 Data Collection

Data was collected through two primary research methods: participant observation, and in-depth interviewing. The former allowed access to a large and varied group of breastfeeding women, while the latter provided an opportunity to explore narratives in greater depth. The ethnography centres on women who were breastfeeding, or attempting to breastfeed, at the time of research, and who participated in the study either by their presence at one (or more) of the field sites described above, or by their participation in an in-depth interview.

Through participant observation, I gained an insight into the way in which messages about breastfeeding are conveyed to women through personal contact with experts. Interactions with women attending individual sessions provided a snapshot of particular moments in their breastfeeding journeys, while interactions with regular attendees contributed a long-term overview of different approaches to breastfeeding and its associated challenges. Recruitment was based upon convenience sampling (making the characterization of the drop-in support service important), and any mother present at the groups was therefore eligible to participate: the sample size was determined by availability of participants, with some Baby Cafés attracting a larger number of mothers than others. At the end of the data collection period I felt that theoretical saturation had been reached. I used my judgement in not approaching women who were very obviously upset or struggling with acute breastfeeding difficulties; but I had no other restrictions in approaching individuals. Field observations made during the 12-month period of

participant observation were recorded with pen and paper, and quotations or conversations in the field were recorded verbatim where possible.

I did not undergo any formal process in order to be accepted as a researcher: Children's Centres were informed of my on-going presence, and I was introduced to the staff when I began attending sessions. The three Baby Café facilitators permitted the research largely on the basis of their commitment to breastfeeding support, and their conviction that further research in this area was needed.

My role at Baby Café sessions was primarily that of a researcher, and it was agreed that this was the principal purpose of my attendance. However, I expressed readiness to provide assistance with anything facilitators deemed helpful, particularly in busier sessions and in sessions lacking peer supporters. I therefore often performed tasks that would ordinarily have been undertaken by peer supporters: for instance, completing paperwork, gathering attendance data, and providing drinks for attendees. I also attended volunteer supervision sessions designed to provide reflexive guidance for peer supporters.

The focal point of each Baby Café clinic was a circle of chairs: I always sat within the circle, talking to people independently of facilitators or observing their interaction with individuals. Each facilitator had a distinctive approach to my presence: Lauren often introduced me to attendees herself or indicated people she thought I might find it interesting to talk to, Camilla made most use of me in my capacity as a low-level volunteer, and Karen largely left me to my own devices. The informal nature of the sessions allowed me to talk to respondents relatively effortlessly, and I was accepted without question – attendees were generally very happy to talk about their experiences, and often showed an active interest in my research. One facilitator attributed this to women's need to discuss events that had been traumatic or difficult during the course of their pregnancy and labour. Interview respondents often said they appreciated the 'adult

contact' gained as a result of interviews or observation, and frequently pointed to the need for research, citing aspects of their own experiences as proof of a lack of understanding of negative experiences of motherhood and breastfeeding.

I conducted in-depth interviews with 25 women, who were recruited initially through advertising on Baby Café social media pages and subsequently through snowball sampling. The inclusion criteria were that the participant was willing and able to give informed consent for participation in the study; that they were aged 18 or above; and that their baby was under eight months of age. Interviews provided an opportunity to explore individual narratives more thoroughly, and offered a useful context in which to look more closely at issues arising from my attendance at Baby Cafés. Participants were free to choose where to conduct their interview. Generally, interviews took place in participants' homes, although some were conducted in coffee shops or children's play sessions.

Interviews were open-ended and largely unstructured, but conversations often followed similar trajectories. I generally started the dialogue by asking participants about their baby – this served to put women at ease and formed a natural starting point for a conversation about breastfeeding. I then asked participants to tell me about their experience of becoming a mother, from the point of birth onwards. Usually this led spontaneously to a description of their experiences of breastfeeding; if not, I then asked them to describe how they were finding the feeding process. Often a discussion followed about problems they were experiencing, the support they had received, and stories about clinical encounters relating to breastfeeding. If conversation faltered, I prompted participants by asking about aspects related to breastfeeding such as sleep, expressing milk, the return to work (where relevant), and the input of family members or friends.

Conversations were thus largely participant-led, and covered somewhat different ground with each participant. Interviews usually lasted between 1.5 and 2 hours: some

lasted much longer, while the shortest was just forty minutes long. The disparity in time often reflected participants' relationship with breastfeeding: those who had had no trouble often answered questions quickly, while those who had experienced difficulty with breastfeeding took more time, often describing emotionally upsetting experiences and feelings associated with the feeding process. The latter group had often devoted more time to thinking about their experiences and processing their feelings towards breastfeeding. They therefore also tended to have more to say about the political context that surrounds breastfeeding; the support structures in place for breastfeeding mothers; and topics concerning the wider social framework.

Interviews were audio-recorded and subsequently transcribed using a foot pedal and NCH ExpressScribe transcription software (NCH Software 2015) in order to facilitate the analysis of verbatim narratives. Though transcription of interviews was time-consuming, audio recording and transcription proved useful: (1) to ensure I had not misheard or misremembered parts of the conversation, and (2) to repeat the conversation with the ability to stop and start, which allowed me to develop initial ideas and identify connections before beginning analysis.

2.6 Description of Subjects

I spoke to several hundred women during the course of my participant observation. Many of these women attended Baby Cafés only once or twice, with twenty women acting as longer-term interlocutors over the course of several weeks or months. The six peer supporters and three facilitators were present every week at their respective sessions, and therefore also acted as long-term informants. Participants had differing motivations for taking part in the research: some had stories to tell about trauma they had experienced during their transition to motherhood; others felt they were contributing to research that

could inform other mothers; and others still were simply glad of 'adult company' that broke up the often-lonely existence of caring for a newborn baby.

In line with previous studies, most participants had already decided to breastfeed before giving birth. They were thus responsive to the prevailing biomedical rhetoric about the importance of breastfeeding as a health practice. Most women were well-educated professionals: many were taking advantage of favourable maternity leave and were thus secure in the knowledge that they were financially supported during the initial stages of motherhood. That said, for many of those participants who were returning to work, finding childcare was a source of emotional and financial stress; many engaged in complex strategies to ensure that their child(ren) were cared for upon their return to work. Most women were supported by a partner, although some were single parents.

Characteristics of interview participants (n=25) were similar to those present at Baby Café. Babies were as young as five weeks old: the oldest was six months old, and the majority between 22 and 25 weeks. All but one of the participating mothers were breastfeeding at the time, and most were breastfeeding exclusively; however, eight women were supplementing either with formula milk or with food. All interview participants were highly educated, with at least an undergraduate degree, with over half having completed postgraduate degrees. For 70% this was their first baby, and only one had more than two children. The majority of women were between thirty and forty years of age, and the group was split evenly as to whether or not individuals had sought advice from independent sources about breastfeeding. Those who had sought independent advice had received it from the breastfeeding clinic in the JR; LLL; Children's Centres; NCT antenatal; or Baby Café.

2.7 Data Analysis

Each respondent shared their knowledge and experiences of breastfeeding and their infant feeding decisions along with details about the wider demands experienced in their lives. The sample included people of different ages, people with different experience of breastfeeding, and different expectations following different infant feeding trajectories. While each narrative was characterized by different nuances, there were marked commonalities. I used these as a starting point from which to explore the shared concepts, behavioural practices and knowledge among breastfeeding women, and the ethnography is presented in such a way as to show these similarities.

Once transcribed and digitized, data were transferred to NVivo (QSR International 2016), a software package that assists with the categorization of data. Both the transcripts and the field notes were systematically coded in order to identify key themes. Five questions helped to guide this process: (1) What is involved in everyday experiences of breastfeeding?; 2) How do women measure breastfeeding success?; 3) How is this relevant to their everyday experiences of breastfeeding?; 4) What are the factors that influence breastfeeding success?; and 5) How are these factors negotiated? A word frequency search was initially run through NVivo in order to establish basic categories within narratives. After establishing the most frequently occurring and relevant concepts, I developed a series of 'nodes' (collections of references about a specific theme) through which to 'code' (gathering references relating to a single theme) the data. Nodes included themes such as 'weight', 'agency', and 'advice'. Each set of data was coded into nodes, some of which were pre-programmed through word frequency queries and others of which were subsequently added as patterns emerged.

Coding has been described by Charmaz as 'simply the process of *categorising* and *sorting* data', while 'codes' are described as serving to 'summarise, synthesise, and sort

many observations made out of the data' (1983:111-112). Coding the data thus provided a link between data and the process of conceptualization (Bryman and Burgess 2002:5). This process proved helpful in organizing the large quantity of qualitative data that I had collected. It allowed me to analyse the data systematically, to record this analysis, and to crosscheck across multiple data sources, as well as enabling easy and systematic data searches and link building. Using data analysis software also assisted in supporting the rigour and validity of the search: segments of data were not easily lost and it enabled easy retrieval of particular sets of data, as well as enabling a systematic 'springboard' upon which subsequent analysis could be based.

The ethnography is presented through short related quotes from different respondents, which illustrate particular themes that arose during the course of analysis. These are given verbatim, with punctuation utilized to convey the actual delivery of speech rather than necessarily to adhere to grammatical convention. Words have been added in square brackets in order to clarify the meaning where necessary. Although I aim to foreground the similarities between respondents, I have highlighted points of disparity between narratives where relevant.

2.8 Reflections on the Methodology

Oxford is a relatively affluent area where maternity provision is good and independent antenatal and breastfeeding resources were, at the time of research, abundant. This may not be representative of other areas, where access to such resources will often be financially or logistically constrained: the methodology allowed a snapshot of the lived reality of breastfeeding and the effects of conceptions of success on a particular group. However, data gathered from the sample shed light on challenges that are common across breastfeeding experiences.

I had initially intended to conduct participant observation in the JR Breastfeeding Clinic as well as Baby Café, since this was another primary source of breastfeeding support in Oxford. However, in order to do so I would have had to obtain ethical clearance through the NHS Research Ethics Committee (REC), which takes on average eight months. I initiated this procedure, and visited the JR Breastfeeding Clinic. However, the practicalities of obtaining permission from the Infant Feeding Lead to conduct long-term research at the clinic were challenging and time consuming. Given that I had a limited amount of time to conduct fieldwork and my focus was on support networks and services *outside* standardized institutional settings, I concluded that I should focus on Baby Cafés as my principal research site.

Although participant observation is widely used as a research method, researchers adopt differing degrees of participation and/or observation. Davies argues that the ethnographer 'may rely on literally being an inconspicuous bystander; or they may take the opposite approach and reduce reactivity by participating as fully as possible, trying to become invisible in their role as researcher if not as human participant' (Davies 2008:8). While my period of fieldwork was in greater proportion 'observation' than 'participant', given that I was not breastfeeding a child myself, my position was in some respects similar to that of a volunteer, which allowed me to 'participate' to a sufficient extent.

Many anthropologists and sociologists who research breastfeeding and motherhood are mothers, or fathers, themselves: they draw on their own experiences, and indeed their research is often motivated by these experiences. I have not had children, and I had anticipated that this might hinder my ability to 'grasp the native's view, [her] relation to life, to realise *[her]* vision of *[her]* world' (Malinowski 1922:25) in relation to the mothers I was interacting with. Indeed, one facilitator warned me that I might find it difficult to breach the 'them and us' divide that, she informed me, separates mothers and

'others'. On the contrary, I found that it proved useful not being a mother myself, and therefore having had no personal experience of breastfeeding. It meant that I could ask questions that might otherwise have appeared deliberately ignorant, and it enabled me to separate myself from the highly charged moral debate that surrounds breastfeeding and that is directly relevant to the research.

The drop-in clinics were not explicitly designated a female-only space, but in practice this was usually the case. As has been described in other ethnographies of female-dominated contexts (cf. Dalby 1983), my position as a young, female researcher undoubtedly assisted in my ability to interact with the groups of mothers. While the presence of a male researcher would have been conspicuous, I was often initially mistaken either for an established volunteer or a student midwife. Many women saw me as an 'apprentice' to motherhood; not only was I conducting research, I was also regarded as preparing myself for my inevitable role as a mother later on in life. Participants also expressed surprised at my interest in the subject, since their perception was that it was the sole domain of mothers. Comments such as, 'You'll be having children soon, then?' or, 'Don't worry, your time will come!' were a common feature of conversations with mothers and with staff of the Children's Centres.

Maintaining a certain 'distance' from subjects during anthropological research has been regarded as particularly important when conducting 'anthropology at home' (Ohnuki-Tierney 1984). Kuwayama observes that 'native anthropologists' are, 'at the most fundamental level, anthropologists who belong to the research community by birth' (Kuwayama 2003). 'Anthropology at home' generally refers to studying one's own culture, usually by conducting fieldwork in one's own country (Jackson 1987). While the origins of anthropology as a discipline lie in the exploration of 'remote' and 'exotic' cultures, anthropologists began conducting fieldwork in Western countries soon after

World War II, and since then 'western' anthropology has become increasingly commonplace. In Britain, the Mass Observation Project (conducted in the 1930s) is an early example of the drive by anthropologists and journal investigators towards the social investigation of everyday British life (Hubble 2006). Throughout the 1950s and 1960s, further literature emerged exploring the cultural landscape of Britain (cf. Emmett 1964; Firth 1956; Frankenberg 1957). Oxford is my hometown: I was born in the JR and grew up in Oxford. Having returned to the city for postgraduate study, I was thus conducting 'anthropology at home' in the truest sense of the term. It is instructive, then, to discuss the place of 'anthropology at home' within the discipline of anthropology in relation to the methodological implications of this mode of research.

While anthropology is increasingly also conducted 'at home', the methodological ramifications arising from this mode of research have remained under discussion. Many major collections on native anthropology (cf. Fahim 1983; Kempny 2012) have focused on the advantages and disadvantages of this mode of research. The benefits of speaking the language and the ease of establishing a rapport with participants has been documented (Kuwayama 2003), as well as the benefit to having an existing knowledge of daily routines, symbols and value systems (Van Ginkel 1998:256). Furthermore, researchers have experienced a diminished tendency for favourable treatment by the subjects of their research, and a resultant reduction in the risk of participants 'performing' for the researcher rather than articulating reality (Kempny 2012). However, Ohnuki-Tierney points out that 'if non-native anthropologists have difficulty in avoiding the superimposition of their own cultural categories and meanings, native anthropologists have the task of somehow 'distancing' themselves, both intellectually and emotively' (1984:585). The necessity for 'distance' from one's informants in order to attain objectivity arose from the concern that data collection for the anthropologist is inherently

influenced by his or her own culture. The advantage of being 'at home' is therefore mitigated somewhat by the difficulty in creating and maintaining distance between anthropologists and their informants.

Brewer states that 'a proper balance in the participant observer's dual role as part insider and part outsider gives them the opportunity to be inside and outside the setting, to be simultaneously member and non-member, and to participate while also reflecting critically on what is observed and gathered while doing so' (2000:60). My position as 'other' as opposed to 'mother' allowed me to maintain this proper balance, affording me an automatic distance from my respondents while continuing to participate nonetheless. While I retained the advantages of being 'at home', I therefore experienced sufficient 'distance' to conduct my research reflexively and avoid taking familiar cultural patterns for granted. Arguing against the need to actively create and maintain distance, several anthropologists have questioned the location of a native anthropologist as 'insider' (cf. Messerschmidt 1981; Narayan 1993). Weston argues that 'every situation carries its exoticisms, in so far as the exotic is always defined in relation to a set of assumptions held by the observer' (1991:224). As an inexperienced researcher in an unfamiliar environment confronted by scenarios that I would not normally engage with in my day-to-day life, I did not feel like an 'insider'. That said, the practical advantages to conducting my research 'at home' were significant – I was able to communicate fluently in a familiar language, I could identify with the cultural setting in which my participants operated, and I could understand intuitively many of the social structures with which they came into contact.

Conclusions

In this chapter I have outlined the methods that form the basis for the ethnography that follows. The approach taken is designed to provide answers to the question 'what is breastfeeding success in the UK?' and associated lines of enquiry as described in Chapter One. A methodological focus on the day-to-day lives of breastfeeding women demonstrates conceptions of breastfeeding success that counterbalance the view that is presented in infant feeding policies, as well as offering an understanding of the effect of these policies on everyday infant feeding practices. The next chapter introduces the process of becoming 'successful' at breastfeeding, and investigates the ways in which new and experienced mothers navigate this process.

Chapter Three:
Becoming Successful at Breastfeeding

This chapter constitutes the first stage in establishing how the individual mothers in this study endeavour to respond to infant feeding policies. The data presented will explore the diverse ways in which the women enact breastfeeding, and introduce the processes – often highly complex ones – that women negotiate during the course of their breastfeeding journey.

The majority of women in this study had little or no prior experience of observing or enacting breastfeeding. Furthermore, inter-generational knowledge of breastfeeding was limited given the decline of breastfeeding in previous generations as well as the individual circumstances of participants, many of whom no longer lived in close proximity to other female family members. In this context, 'expert' discourse comes to shape the assumptions and decisions that women make with regard to infant feeding practices. These constitute 'authoritative knowledge systems' (Davis-Floyd and Sargent 1997) that dominated the process of theoretical preparation for breastfeeding among mothers. Notions of optimality – a sense that breastfeeding was 'best' or 'better than' formula milk – were commonplace in discussions relating to women's decisions to breastfeed, and the concepts of exclusivity and six-month duration of exclusivity were also evident.

Lack of experience, combined with limited acknowledgment in antenatal education of the potential challenges of learning to breastfeed, prompted a collective sense of disillusionment among mothers who had difficulty breastfeeding in the weeks immediately after birth. While women expected infants to breastfeed 'naturally' – i.e. without difficulty, instinctively – this was often discordant with reality. Instead many mothers felt unprepared for the practical process of learning to breastfeed, despite having

undergone theoretical preparation. The co-operative nature of breastfeeding – that is, requiring the co-operation of the infant – as well as the bodily complexities of breastfeeding and limited opportunity for communal learning all presented challenges for mothers in the study. The general lack of social support and feelings of isolation exacerbated these issues, increasing maternal reliance on experts for assistance with breastfeeding.

3.1 Preparing to Breastfeed

With few exceptions, expectant mothers in this study had decided before becoming pregnant that they would breastfeed: for some this was experienced as an active decision at a critical point in time, while for others it emerged as a more gradual, less conscious resolution. The low rates of breastfeeding in the current generation of mothers, and even lower rates in the previous generation, resulted in this decision generally being made in the abstract with little practical knowledge of breastfeeding. Family members – mothers, sisters, aunts – and friends of mothers in the study generally had little or no knowledge of breastfeeding, and for the most part women did not learn from these relatives as has been demonstrated in ethnographic studies of some other populations (cf. Gottlieb 2000a). During pregnancy therefore, often in the latter stages, women began to seek out advice on breastfeeding through a process of active knowledge acquisition. Exploring this process with participants revealed understandings of breastfeeding that, prior to giving birth, were heavily influenced by sources and figures regarded by mothers as 'expert'.

None of the first-time mothers in the sample (other than a small minority who had worked in a healthcare capacity, bringing them into contact with breastfeeding women) recalled spending any significant amount of time observing or engaging with breastfeeding women before becoming mothers themselves. The mothers of many women

in this study (hereafter referred to as 'grandmothers' for the avoidance of confusion) had not attempted to breastfeed, and there was therefore often no inter-generational knowledge system that new mothers were able to rely upon. In contemporary contexts the presence of other experienced mothers has been shown to be integral to child survival and the process of recovery and adjustment to caring for a newborn, in particular in relation to infant feeding (Aubel et al. 2004; Bezner Kerr et al. 2008; Massvie 2007; Sharma and Kanani 2006; Wan et al. 2009; Yovsi 2014).

By contrast, mothers in this study were generally reliant upon expert knowledge, with limited face-to-face support that was generally provided by the state or not-for-profit organizations rather than their own families. This was attributed by some participants to a rupture in intergenerational knowledge. Alissa explained, 'There's no expertise being passed down so it is quite difficult'. Katya echoed Alissa's observation, saying 'We've completely lost the family whereby your mother, grandmother, sister, the other women in the village would all have breastfed, who would know how to help you, we've completely lost that'. Often drawing on contrasts between the UK framework and notions of 'traditional' or (pre)historical social frameworks, the sense of having 'lost' familial support structures resonated with many participants as well as facilitators at Baby Café. In this context, the significance of Baby Café as a surrogate family of sorts was evident. Paula, a mother-of-three who experienced little support from her family with regard to breastfeeding, said: 'I mean, it's really nice if you've got that experience in your family and that's part of what Baby Café is about; it's about trying to create that for people, because that's certainly not my experience in *my* family'. Like Paula, Georgia's mother and sisters had all fed their infants with formula milk. She explained that their collective lack of experience with breastfeeding negated any familial advice that she might

otherwise have adopted: ‘My family weren’t really helpful because they hadn’t been through [breastfeeding], so I just ignored them.’

Adding to this, the immediate families of almost 50% of the women I interviewed (and a similar proportion of those I encountered during participant observation) did not live in the UK, so nearby, hands-on familial support was inaccessible even for those individuals whose female relatives were experienced with breastfeeding. Beth, a mother-of-one in her late thirties described the circumstances she had faced as a new mother: ‘We’re in a slightly tricksy situation in that all our parents and family and stuff are in Australia, and my mum actually passed away many years ago, so I kind of felt like I should have my own personal breastfeeding coach by my side; but that wasn’t what was going to happen’. Beth’s comment illustrates the sense of loss she felt at not having ‘personal’ breastfeeding support, which was exacerbated by her mother’s absence but also reflected the distance between her new family and their relatives in Australia.

There was also a sense among mothers in this study that perspectives on infant feeding had moved on since the previous generation, and that familial advice on infant feeding was therefore no longer particularly relevant. Kirsten explained, ‘My mum gave us her 30-year-old advice which was mostly helpful but in part out of date’. The small number of grandmothers who visited Baby Cafés with new mothers often expressed reluctance to offer direct support due to perceived changes in approach to infant feeding. One grandmother, observing her daughter breastfeed, commented, ‘Because it’s all changed so much I’m a little bit worried to give advice!’ The irrelevance of familial advice was often related to the current emphasis on exclusive breastfeeding, a notable shift from the previous generation in which the use of formula milk had been supported as a beneficial alternative to breastmilk. Alissa had been formula fed by her parents, and although her mother was supportive of breastfeeding she ‘looked bemused at me and the

choices I was making to start with, and couldn't see why I was so insistent that I wouldn't mix feed' in terms of Alissa's wish to breastfeed exclusively. For mothers whose families placed limited value on exclusive breastfeeding, familial support was thus rendered redundant or unhelpful. Laura, whose relatives all lived abroad, explained: 'I'm from Chile and it's not that common to breastfeed for a long time in Chile, so for example my oldest sister she breastfed for like two months I think, or even less than that, with her two babies, and then she decided that it wasn't the right thing for her. And people do that kind of thing over there.' Susan's mother held a similarly divergent view of infant feeding practices that contrasted with Susan's wish to breastfeed her daughter exclusively:

> I think she just found [exclusive breastfeeding] very odd, at first, I think she's still trying to get used to the idea that it's better than the formula […] It's the whole culture thing, really, and probably she also thinks that, well, if it's all formulated and it's got everything, how can you guarantee that your own milk actually has everything the baby needs?

The description of breastfeeding as potentially inferior to 'formulated' artificial milks reflects the historical framing of formula milk as scientifically superior, exemplifying the differences of opinion that often occurred between participants and their mothers. First-time expectant mothers in this study thus entered motherhood with little familial knowledge or experience to draw upon in informing their own growing awareness of the skill involved in breastfeeding.

For mothers in this study, biomedical experts in all aspects of childrearing constituted trusted sources of information, relied upon by mothers to dispense objective, accurate, and above all scientific information on the processes that occur during and after childbirth. The first contact women had with clinicians regarding their pregnancy generally occurred soon after pregnancy was established. Expectant mothers are advised to book an appointment with their GP as soon as possible after realizing they are pregnant, guidance that most first-time mothers in this sample followed. Women were

then referred to a midwife, with whom subsequent clinical contact occurred regularly throughout pregnancy. First-time mothers attended up to ten antenatal appointments that include advisory discussions, ultrasound scans, routine screening and blood tests. According to the schedule of antenatal care described on the NHS website, women are given information on breastfeeding when they reach their thirty-sixth week of pregnancy, three weeks before reaching full term. At this appointment, women acquired a certain amount of information in the form of pamphlets issued by local hospitals, such as the Sure Start and OUHT leaflets.

Aside from this written information, women often found that engagement with the practicalities of breastfeeding during this appointment was minimal. Kirsten explained, 'I only got advice from midwives about breastfeeding *after* delivery. I didn't get any advice from a doctor or midwife *before* delivery – that was all about my pregnancy and birth plans and things like that'. A focus on the more immediate challenge of childbirth was common, and indeed welcomed by some mothers. Daniela similarly did not recall discussing infant feeding in detail with her midwife, describing a reluctance to look too far beyond birth in case any unforeseen complications arose:

> [Breastfeeding] wasn't my main concern before labour, I think labour was the most concerning thing. With breastfeeding I thought it's just going to come natural so I didn't think about it. I think they asked me what's my choice. But otherwise they didn't go into details […] During pregnancy I was…superstitious is not the word but somewhere close to being superstitious, I didn't want to know too many things about what's going to happen [after birth].

While mothers like Daniela regarded labour with apprehension and therefore wanted to focus on the process of childbirth itself rather than the subsequent process of caring for their infant, many explained that they had expected a more comprehensive approach to life after birth with their midwives. Several mothers described an emphasis during antenatal appointments on their decision of whether or not to breastfeed, as opposed to the practicalities of breastfeeding itself. Vanessa explained: 'I mean I think I spoke to the

midwife about it, but only inasmuch as her saying, 'What are you planning to do?", that kind of thing, and that was it'. The amount of time devoted to infant feeding during antenatal clinical encounters was interpreted by Vanessa as being contingent on the decision to breastfeed or to bottle feed, and this view was shared by several other mothers. Georgia described the brevity of conversations about infant feeding with her midwife, which concluded soon after establishing that Georgia intended to breastfeed: 'The midwife would sort of say, "Oh, are you planning on breastfeeding?" and you'd say, "Yes" and they'd be like, "Oh good, that's great". They're only going to talk to you about it if you say no, to try and talk you into it'. While breastfeeding is ostensibly a part (albeit small) of antenatal education on the part of midwives, women thus perceived the primary objective on the part of the health professional as being to ascertain women's intention to breastfeed, rather than to provide comprehensive advice about infant feeding.

Given the relative lack of engagement with infant feeding during clinical encounters, many women sought out information through other sources of information they considered authoritative. For the most part, women in this study acquired information about infant feeding through clinical antenatal courses: with few exceptions, individuals had attended (often with their partners) at least one antenatal workshop or course during a mother's pregnancy. Gwen explained, 'I would say the majority of my information was from those two things [NCT and Baby Café antenatal courses] and a little bit of extra research based on links they had given me. Because even the one or two things I'd heard through friends were kind of Baby Café related'. Like Gwen and her husband, the majority of couples attended courses run by either the NHS or the NCT, both of which provide a series of weekly sessions for parents-to-be that includes a workshop on infant feeding. Some participants also attended breastfeeding preparation classes run by other organizations, such as the NHS, LLL, and Baby Café. Endorsed – or

directly managed – by state health services, antenatal courses were regarded by women as bona fide sources of information, delivered by experts they could trust.

Nonetheless, mothers perceived antenatal classes as having varying degrees of utility in terms of quality and efficacy. Eleanor, for example, had already attended both NCT- and NHS-run antenatal classes. She found both informative, and considered herself well prepared for breastfeeding: 'the NCT was more relaxed and telling you how to manage a baby […] and the NHS were more- the course was more technical. Both of them were very very useful'. Vanessa, who subsequently faced difficulties with breastfeeding, attended an NCT antenatal class: 'I got a lot of practical tips about dealing with the difficult bits of breastfeeding, you know, sore nipples, and also giving you an idea of actually how physically demanding it can be, which I didn't really think about before. So I came away feeling like I had a fair idea of what I was facing'. Susan, who had moved to England from Hong Kong during her childhood, appreciated the sociality of her NCT course, contrasting this with the lack of support her mother had experienced: 'It's more the friendship, so it's the support afterwards actually I find really good'. Sonya similarly found the course useful in helping her to meet other mothers at similar stages, but explained that advice on infant feeding was limited: 'I went to the NCT ones; it was five sessions. I think that it was good for meeting people but there wasn't really any breastfeeding related stuff when we were there. It was too much focus on birth, and not much on how to look after a baby'. This emerged as a common thread among several women who experienced the antenatal courses as useful in terms of preparing for labour, but insufficient with respect to breastfeeding. Kara commented: 'NCT also talked a bit about breastfeeding – I think every class is different but in our class we had one night on breastfeeding which is, in retrospect, pretty bad'. Other women considered the classes superfluous by comparison to research they had conducted independently. Vanessa

commented: ‘I think it’s probably quite hit or miss […] I don't think there was anything that I didn’t know anyway, or couldn’t have learned from a book’. While some mothers therefore considered antenatal courses inadequate, these impressions were on the whole established retrospectively.

As well as face-to-face antenatal instruction, women generally sought to acquire knowledge independently about infant feeding; and online research mostly served to fill any theoretical knowledge gaps left by antenatal classes. Parenting websites therefore played a significant role in providing information about infant feeding. Women were careful to use sources they considered authoritative, usually ones originating through expert frameworks such as the NHS. Carly, for example, a post-doctoral researcher, explained: ‘Being a researcher myself I want to find out information, so I was reading articles – not any books – but the NHS website and stuff, so when we went to the [NHS antenatal] class […] I didn’t really *learn* anything’. Ania likewise focussed her efforts on the NHS website, describing it as a source she trusted to deliver basic, reliable information: ‘Mostly I was looking at the NHS website not because I’m a fan of the NHS it’s just because I thought it’s probably the very basic one […] With a second child I would be more brave to try something but [with the first] I wanted to go quite a standard way.’ While the NHS website was the most frequently cited parenting website, many others promise to deliver expert advice throughout pregnancy in order to help women prepare for childbirth and the subsequent weeks, often delivering information week-by-week through emails and mobile applications (apps).

Driven in part by a reduction in accessible lay knowledge, the women in this study turned to experts and online sources for advice on infant feeding and parenting more generally as they approached the end of their pregnancy. Given the dominance of biomedical expertise in relation to infant feeding in the UK, sources of information were

primarily situated within biomedical frameworks (though women also consulted sources of information in which peer expertise played a role). Women described sources originating from authoritative knowledge systems as trustworthy and legitimate in contrast with familial advice, which was often regarded as obsolete, unhelpful or inaccurate. Framed by public health guidelines, the expert knowledge that formed the preponderance of women's expectations and insights into infant feeding inevitably communicated messages that were in keeping with the directives outlined in these guidelines.

3.2 Maternal Understandings of Successful Breastfeeding

Despite – or likely in response to – limited visual or experiential exposure to breastfeeding, participants generally felt they had a sound theoretical understanding of breastfeeding as a process by the time they reached the latter stages of pregnancy. As described in the previous section women primarily sought out advice from expert domains situated within biomedical frameworks. These communicate definitive standards of successful breastfeeding that focus on encouraging women to breastfeed exclusively for six months in order to achieve the optimum in relation to infant feeding. The concept of there being a successful or optimal way to breastfeed – in other words, an approach that women ought to take in feeding their infants – was consequently clearly evident in the narratives of the women in this study. This section will explore the efficacy of antenatal education and public health campaigns in communicating ideas of breastfeeding success – i.e. breastfeeding exclusively for six month – that shape women's approaches to infant feeding.

The significance of exclusivity in women's conceptions of successful breastfeeding was most evident during the course of conversations concerning their

determination not to give their infants formula milk, which was perceived as a safe but ultimately deficient alternative to breastmilk. Naomi, a mother-of-two, had breastfed her first child exclusively for six months and was in the process of breastfeeding her second child, also exclusively. Although Naomi was one of two mothers in the study who experienced breastfeeding as consistently and actively unpleasant, she believed strongly in the importance of exclusive breastfeeding and was determined to continue with both children. Naomi explained her own motivation and that of other mothers she had encountered in her capacity as an NCT volunteer: 'Mothers are so proud, when they exclusively breastfeed, of the fact that this baby is made just from them'. Katherine provides an example of one such mother, whose daughter was three months old at the point of this exchange: 'I won't let her have *any* formula, any water, anything; she's exclusively breastfed'. Paula, a mother of three (two older children and one 6-month-old), was similarly determined throughout early motherhood to breastfeeding exclusively. Paula had entered labour prematurely, and her daughter had been admitted to the Neonatal Care Unit (NCU) immediately after birth, and recalled one particular conversation with her husband just after she had given birth. The NCU nurses had offered Paula's husband, John, a choice of formula brands to administer to their daughter while she was in the NCU. John relayed the information to Paula, who remembered her outraged response: 'I don't want her to have any formula, why are we even having this conversation?'

For several women, the importance of exclusivity was bound up with a sense that substances other than breastmilk would have been a source of contamination entering their infants' bodies. A month after I had started fieldwork, Jemima and her wife Leah introduced me to their five-month old daughter Ellie, who was on the cusp of being introduced to solid foods. Jemima, Ellie's birth mother, explained, 'It's like some kind of

purity that gets polluted. I really like the fact that nothing has passed her lips apart from breastmilk. Formula was just never an option, it just wasn't going to happen'. This was a point of contention between Leah and Jemima, who explained, 'Leah's been really desperate to feed her solid food, because then she can feed her. And I totally understand that. But I've been like *no*; it's just like a massive ego problem, like, stop making her lick apples! She can only have my breastmilk! It's ridiculous, but I've been feeling really strongly about it'. Naomi, who likewise felt a huge sense of pride in the fact that her baby was exclusively breastfed, said, 'You built them in your womb just from you, and then you just fed them your milk, it's just mother's milk an oxygen that makes this *whole* baby, and that's *amazing*. As soon as you start introducing something else that's not the case anymore'.

The idea of non-breastmilk substances as contaminants introducing harmful bacteria to the pure or 'sterile' infant gut is evocative of anthropological discourse on pollution and taboo. In her seminal analysis of societal perceptions of pollution, Mary Douglas argues that communities respond to threat by expanding the number of social controls regulating the group's boundaries; areas where outside threats might penetrate and pollute the inside become the focal points of regulation and surveillance (Douglas 1966). Nancy Scheper-Hughes and Margaret Lock, drawing on this assertion, argue that 'the three bodies – individual, social, and body politic – may be closed off, protected by a nervous vigilance about exits and entrances' (1987:24). The infant body is perceived as exceptionally vulnerable to external pollutants, and participants expressed a strong concern to protect it from infiltration by substances other than 'pure', 'natural' breastmilk from within their own bodies. Furthermore, the infant body in this context is conceived as an 'entrance' to the community; a body that has the potential to become polluted, with a

concomitant risk (particularly with reference to biomedical concern with the developmental origins of disease) of threatening society as a site of disease potential.

Neither Jemima nor Naomi identified when or how this aversion to non-breastmilk substances as 'pollutants' had originated. A third mother, though – Erika – traced her own similar thought process to a specific source: 'I'd read a couple of scare stories that said her gut bacteria will *completely* change as soon as you give her formula. It [a newspaper article] kept talking about your baby's virgin gut, and that was somehow polluted by formula, and so that *really* stuck with me. They basically imply that you're polluting your baby's body, by giving them formula'. The idea of an infant's 'virgin gut' has arisen recently and is particularly prominent on pro-breastfeeding parenting blogs. An excerpt from the popular blog 'The Alpha Parent' states 'If you're a combined feeder, look away now: here comes the killer fact. Only small amounts of solid foods cause a shift that destroys the virgin gut environment' (The Alpha Parent 2011).

Though not a term used in scientific literature, the idea of the 'virgin gut' is based on research in the emerging field of microbiomics – the study of the catalogue of microbial taxa associated with humans – in this case specifically the infant microbiome. In the first year of life, the infant intestinal tract progresses from sterility (inside the womb) to extremely dense colonization, ending with a mixture of microbes that is broadly very similar to that found in the adult intestine (Palmer et al. 2007:1556). It has been suggested that the composition of the gastrointestinal microbiota is altered by infant diet, with infant formula promoting 'bad' bacteria and breastmilk promoting 'good' bacteria (Reinhardt et al. 2009:254). It has been hypothesized that the differences in gut flora of formula-fed infants could have long-lasting negative effects, including an increased risk of obesity. A number of studies confirm these differences between the gut flora of formula-fed and breastfed infants (cf. Favier et al. 2002; Harmsen et al. 2000;

Hopkins et al. 2005). And yet, other reports have found no such difference (cf. Penders et al. 2005). Furthermore, a host of other factors influence the infant gut microbiota, for example mode of delivery, hospitalization, prematurity and antibiotic use (Bettelheim et al. 1974; Brook et al. 1979; Hallstrom et al. 2004; Mändar and Mikelsaar 1996; Penders et al. 2006). Nevertheless, the concept of the 'virgin gut', and with it scientific reinforcement of non-breastmilk substances as pollutants, has become a powerful image in lay interpretations of the importance of exclusive breastfeeding, as Erika's analysis demonstrates. The mouth of the infant, envisioned as the key entrance to the infant body, becomes a site of regulation through which pollution of its inside, its 'gut', is avoided by emphasis on maintaining its pure state of being for as long as possible through exclusive breastfeeding. Formula feeding, by contrast, presents a risk to the infant's gut health and the associated consequences by threatening the purity of the vulnerable infant body.

Of course, an infant cannot be sustained indefinitely through breastmilk alone. Global and national infant feeding policies assume a clearly defined period during which exclusive breastfeeding should be practised – from birth until six months of age – after which parents are instructed to begin introducing solid foods alongside continued breastfeeding. Women were equally cognizant of this timeframe as they were of directives of exclusivity. Kara, a Spanish mother of two, had fed her first son – now two years old – with formula milk and had then decided to breastfeed her second child. Although Kara did not consider herself particularly well informed about breastfeeding in general before the birth of her second child, she recalled that six months of breastfeeding was considered to be beneficial. Before birth she therefore set herself this timeframe as a target: 'I thought I'd breastfeed as long as I could, I'd look toward doing six months, and I thought that was amazing. So at that point that was sort of my big goal.' Carol, a first-time mother from Australia, was keen to avoid introducing solids until she had reached

the six-month mark: ‘They advise very strongly not to start weaning until six months’. ‘They’ in this context referred to clinicians: although some women were vague about the origins of their conviction in the importance of six-month exclusivity, the majority of women were clear that this originated from ‘recommendations’, ‘evidence’, or information that they had been given during clinical encounters.

Celia, herself a GP, explained that ‘from a *medical* perspective there’s all the recommendations about six months so I knew that was good’. For Celia, ‘medical’ meant ‘good’ and above all reliable, and consequently it was the recommendations that originated from medical sources that formed the basis of her decision to breastfeed exclusively for six months. Although initially sceptical about feeding her baby only breastmilk for the initial months of his life another mother, (Ginny), who continually received compliments on her son’s size, had taken a decision on the basis of advice to continue breastfeeding exclusively after she had been doing so for two months: ‘I’ve looked a little bit into the current recommendations and as long as he’s seeming happy and growing as well as he is on milk then I don’t see why I shouldn’t continue firstly exclusively feeding until six months’. Several women made explicit reference to WHO guidelines, which feature prominently in clinical discussions of breastfeeding duration as a basis on which to encourage breastfeeding until the six-month mark. Erika invoked the guidelines to justify her decision to breastfeed until six months, saying ‘The WHO guidelines say six months of nothing but breastmilk’, while Laura explained, ‘The WHO organization recommends exclusive breastfeeding for the first six months’ before stating, ‘Since I didn’t do it exclusively, I would like to continue just to make up for those months when I wasn’t exclusively breastfeeding’. Laura was firmly convinced of the benefits of breastfeeding when her son Pablo was born and planned to breastfeed exclusively for six

months, however she began to experience difficulties when he developed jaundice[30]. Pablo started to lose weight, while Laura found breastfeeding increasingly painful; after continuing to breastfeed exclusively for two months, Laura therefore began introducing formula milk. Despite feeling comfortable with this decision, Laura nonetheless felt she was 'in debt' after not having been able to comply with the WHO recommendations, and had therefore decided to continue breastfeeding beyond six months concurrent with the addition of solid food to Pablo's diet.

As the critical time point at which breastfeeding could become non-exclusive, six months was consequently also regarded as the pivotal moment for the introduction of solid foods, often perceived as an exciting event in an infant's development. Georgia, mother of five-month-old Will, was looking forward to stopping breastfeeding, since she considered the benefits of breastfeeding to be greatest during the initial six-month period: 'I was only ever planning on doing it until he was six months anyway, just because that's the time I had in my head to where it would be most beneficial for him. I'm sure that there's benefits beyond that but it seemed to me that that was the most important time.' Naomi, despite having planned not to introduce her daughter to other foods until she reached exactly six months of age, had decided to make an exception: 'I am planning to put Christmas dinner in front of her, eight days before she's six months, just for the photo opportunity … it would be a pity to miss that opportunity to make it a big event when she does it!' Ania, a Polish national who had been living in the UK for three years while her husband pursued a career at the local university, spent the best part of an hour encouraging her daughter to eat slices of apple while we talked over her kitchen table one morning, stating that, 'At the moment I'm purely breastfeeding her, but I'm trying to

[30] Jaundice, or hyperbilirubinemia, is caused by the build-up of bilirubin in the blood and is a common condition among newborn infants, affecting approximately 80% of term and 80% of preterm infants (NICE 2010:20).

wean her because she's six months now'. The introduction of solid foods to an infant's diet and the consequent cessation of exclusive breastfeeding were thus experienced by women as a milestone, indicating the significance of the six-month standard in their conceptions of how breastfeeding ought to be practised.

Exploration of mothers' intentions in relation to infant feeding demonstrates two factors significant to this thesis. First, the concept of successful breastfeeding provided a compelling imaginary to the women in this study, profoundly influencing their approach to infant feeding. Second, the efficacy with which this imaginary is communicated resulted in the majority of mothers beginning the feeding process highly invested in their intentions to comply with the standards of successful breastfeeding outlined in infant feeding policy. The data examined in this section confirms that women in this study were highly aware of the normative standards associated with breastfeeding recommendations, specifically those relating to breastmilk as 'best', exclusivity, and duration. By and large, they intended to follow these standards; and those who did follow them often took great pride in doing so. Successful breastfeeding became an important factor in the measures that women took to prepare for motherhood because it was communicated as providing an optimal start to early life for the infant. The next section will explore maternal responses to the active promotion of successful breastfeeding that women experience during this process of preparation.

3.3 'It's all just trying to sell it to you': Raising Rates and Expectations

Educational efforts, driven ultimately by the objective of increasing the number of women who breastfeed in the UK, emphatically communicate the choices that women ought to make in relation to infant feeding and the optimality of successful breastfeeding in contrast to other variants of infant feeding practices. A key objective of infant feeding

policy is to increase the rates of women who initiate breastfeeding in the UK, in response to the comparatively low rates in relation to the rest of Europe and, indeed, the world. A significant method by which this target is pursued is through behaviour change strategies that focus on promotion of breastfeeding and its benefits (and the concurrent risks of formula milk), with the intention of encouraging women to take an active, informed decision to initiate breastfeeding as well as to follow the directives of successful breastfeeding. As a result, mothers in this study were acutely aware of the widely communicated conceptions of breastmilk as 'better' than formula milk. This section explores the resultant expectations that women formed during pregnancy of breastfeeding.

The preponderance of viewpoints that women encountered during pregnancy strongly promoted successful breastfeeding as the correct method of infant feeding. While women were aware of bottle-feeding as an alternative to breastfeeding, with several women mentioning opposing perspectives (for example newspaper articles criticizing 'lactivism' (i.e. lactation or breastfeeding activism) and parenting blogs that encourage women to pursue individual infant feeding choices), the imaginary underpinning the concept of successful breastfeeding is ubiquitous, communicated persuasively, and

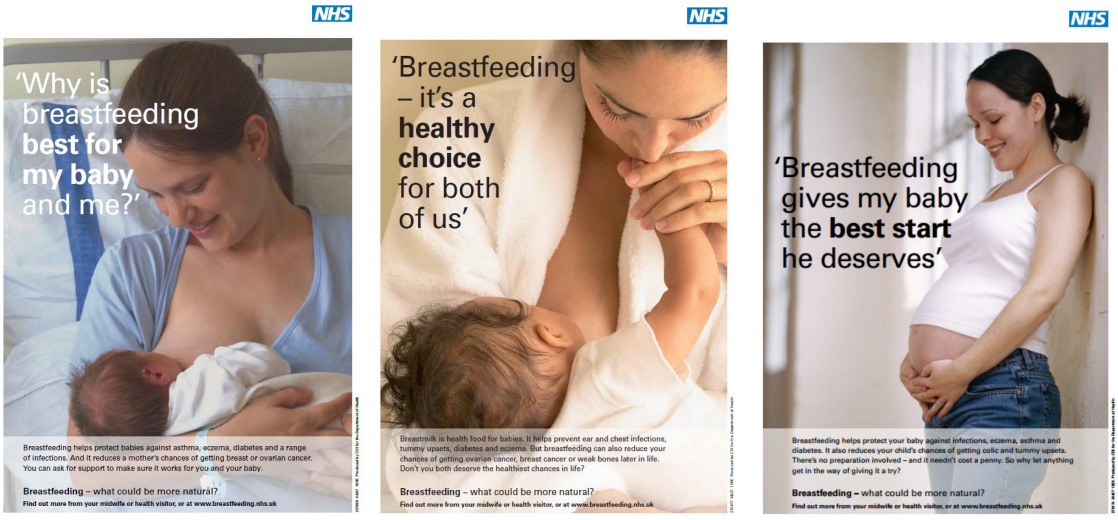

Fig 2:
Examples of posters produced by the DH as part of breastfeeding campaigns.
(Department of Health 2007)

experienced as highly convincing. The three posters depicted above (Fig. 2) serve to illustrate the image of breastfeeding that is communicated to mothers and expectant mothers. In all three posters depicted, breastfeeding is presented explicitly or implicitly as a 'choice' made by the mother. Women are shown in a sterile environment, smiling and gazing at their baby feeding calmly and contentedly at a discreetly covered breast. Mother and infant both appear serene, with neither individual displaying any signs of distress or discomfort. Breastfeeding is above all presented as 'best' and as 'healthy' for the baby, though in two of the posters the message indicates that breastfeeding is beneficial for the mother as well for the baby. Moreover, breastfeeding is portrayed as something that the baby 'deserves', implying a moral obligation (as opposed to a choice) on the part of the mother to comply with the directives of successful breastfeeding.

The efficacy of this approach was reflected in the language that many women used to describe their perceptions of breastmilk as 'better' (than formula milk), 'the best thing', 'beneficial' and 'best'; particularly among mothers expecting, or just having given birth to, their first child. Carol, who had moved to Oxford from Australia in order to pursue a career in academic research before becoming a mother for the first time, described her convictions surrounding infant feeding as having originated from her own mother, who had breastfed Carol and her siblings. The antenatal classes that Carol had attended in the UK reinforced these convictions:

> It was something I always assumed I would do because I've been brought up hearing that it's beneficial for the health of the baby, for the immune system of the baby, and that it's kind of good for bonding between the mother and the baby and so on […] I'd done NCT classes before I had him so there was a strong message about the benefits of breastfeeding, and then also I went […] to some sort of parenting classes at the JR hospital and again, the message was very strong about the benefits of breastfeeding there too.

With long-standing familial support of breastfeeding and subsequent equally persuasive messages during her antenatal education, Carol's intentions to breastfeed eventuated in

six-month-long exclusive breastfeeding with her son, with the intention of continuing indefinitely in conjunction with solid foods.

Other women referred specifically to public health campaigns as the source of their convictions. For example, Chrissie, a second-time mother who spoke passionately about her desire to breastfeed, said 'The breast is best campaign had done its work, on my psyche, and I was more like why *wouldn't* you breastfeed?' 'Breast is Best', the memorable slogan of the 1994 UK pro-breastfeeding campaign, had formed the basis of Chrissie's perceptions of breastfeeding and she, alongside the majority of women in this study, was firmly convinced of the benefits of breastfeeding. Unlike Carol, none of Laura's family had breastfed; despite this, she explained that 'from before getting pregnant I was familiar with the idea of the benefits of breastfeeding and how it can help you with bonding and also the health benefits for the baby'. Although Laura's mother had cautioned her against breastfeeding, having decided herself to use formula milk to combat sleepless nights with a newborn infant, Laura had read about its associated benefits before pregnancy as well as attending antenatal classes during pregnancy. She consequently believed that breastfeeding was beneficial both in terms of concrete 'health benefits' and more abstract notions of 'bonding': two factors that are ubiquitous across pro-breastfeeding materials.

The assertion that breastfeeding assists with 'bonding' between mother and infant serves as a particularly powerful motivator to mothers. 'Bonding' in the context of infant feeding refers to the complex process of attachment between a mother and her newborn. Breastfeeding is presented as providing a unique relationship, and being better bonded with one's child is declared one of the major benefits of breastfeeding over bottle-feeding. In line with previous studies (cf. Aguayo 2001; Leung and Sauve 2005; Misri et al. 2000) several mothers referred to maternal-infant attachment as a benefit of

breastfeeding that had encouraged them to breastfeed rather than bottle-feed. Carol explained, 'It's good for bonding between the mother and baby', while Sonya echoed 'It's a good bit of bonding with them I think. It's quite calming, and I guess there's a load of hormones being released when you do it, so there's obviously that kind of benefit'. The 'Sure Start' leaflet distributed to all parents after birth states that 'breastfeeding helps you and your baby to get closer – physically and emotionally. So while you are feeding your baby, the bond between you grows stronger'. One section of the NHS website, detailing the benefits of breastfeeding, echoed 'as well as the health benefits, breastfeeding also builds a stronger physical and emotional bond between mum and baby, helping to create a calmer atmosphere and a more content family'. The comparative adjectives used in relation to breastfeeding and bonding provide an implicit contrast between the superior bond between breastfeeding mothers and infants, and the correspondingly inferior relationship between bottle-feeding mothers and infants. Expectant mothers are thus presented with a choice: to conform to the expectation of what a good mother ought to do, or to knowingly deviate from the method of infant feeding that will facilitate a strong future relationship with their child.

Underpinning the idea of breastfeeding as best – and better than artificial alternatives – is the specificity of breastmilk to humans, a product conceived of as indubitably 'natural', which has been honed through evolutionary processes to produce a substance designed to meet the needs of a human infant. A discourse of 'nature' or 'naturalness' related to breastfeeding in biomedical and policy ontologies has been identified in previous literature (Blum 1993; Faircloth 2015; Larsen et al. 2008). The *International Code of Marketing of Breast-milk Substitutes* states, 'Breast-feeding is the only natural method of infant feeding and it must be actively protected and promoted in all countries'. 'Natural' in this context means both 'existing or derived from nature; not

made or caused by humankind' and 'in accordance with the nature of, or circumstances surrounding, someone or something' (Oxford English Dictionary 2016). The invocation of the concept of naturalness to promote breastfeeding serves a twofold purpose: first, it highlights the benefits of breastfeeding that are not present in artificial alternatives, and second it reassures mothers with little prior experience or knowledge of breastfeeding that it is a natural – i.e. normal, straightforward – process. The emphasis on the naturalness of breastfeeding and breastmilk within antenatal education was demonstrated particularly clearly during discussions with women concerning the reasons behind their decision to breastfeed:

> Sonya: I wanted to do it because I thought it would be better for him just because human milk is better for humans.
>
> Alissa: [Breastfeeding] is obviously a more natural form of feeding.
>
> Eleanor: [Breastfeeding] was just…nature. A natural thing.
>
> Naomi: I'm trying to do the normal, natural, healthiest, best thing.
>
> Ania: [Breastfeeding] is natural, it's normal, and that's the way it should be. And formula would be going off the main path. I would have to have had a great reason to do that.

Ania expressed her ideas about breastfeeding in opposition to formula milk – she, and many other women, presented infant feeding as a binary opposition between breastfeeding as 'natural' and therefore superior, and formula milk as 'unnatural' and therefore inferior. The 'artificialness' of formula was not simply conceptualized as 'crafted by humans'; it was conceived as 'less good than natural', with the man-made product falling short of the quality of the substance produced by the human body itself.

The function, in public health terms, of framing breastfeeding as better than bottle-feeding – both in terms of tangible health benefits and more abstract notions of naturalness and bonding – is to encourage women to make a decision during pregnancy (or before) to initiate breastfeeding after birth. As the narratives of the women described

above demonstrate, promotion of breastfeeding as the optimal method of infant feeding was highly effective: women were, by and large, convinced that breastfeeding was a better practice to adopt than bottle-feeding.

Conversations with women about their experiences immediately after birth, however, revealed a sense that the benefits of breastfeeding had been overemphasized which, with a concurrent trivialization of the potential difficulties involved in the early stages of breastfeeding, often resulted in feelings of disillusionment in the weeks immediately following birth. Eleanor, who moved to Oxford from Italy before having her first child, explained that while she considered breastfeeding important (and had exclusively breastfed her daughter) she was one of a minority in her antenatal class to react ambivalently towards the prospect of formula milk. She contrasted her own experiences with those of her friends in Italy where, she said, there was not the same emphasis on encouraging women to breastfeed. Acknowledging her own intentions to breastfeed, she observed:

> So many people are pushing a mum to breastfeed because it's – not [because it's] the only way, but it's the most important way. I think these [antenatal] courses are talking just about breastfeeding and not about giving formula because they think that breastfeeding is the best. But people have problems, you know? Or *could* have problems.

Several women felt that the presentation of breastfeeding in antenatal education as 'natural' exacerbated the issue described by Eleanor; particularly for mothers unfamiliar with the practice of breastfeeding and therefore reliant on antenatal education to give them a reliable account of the process. As an adjective the word 'natural' denotes 'existing in or derived from nature', while as a noun it denotes 'coming instinctively to a person' or 'relaxed and unaffected; spontaneous' (Oxford English Dictionary 2016). This ambiguity in meaning resulted in a sense that breastfeeding had been presented – in some instances explicitly and in others implicitly – as 'easy'; women therefore felt unprepared

for the difficulties that many encountered after birth. Harriet, mother to five-month-old Jenny, expressed frustration at the emphasis on the benefits of breastfeeding in educational materials and the simultaneous omission of common difficulties that women experience while learning to breastfeed:

> I'm actually quite angry, the antenatal course I went to just talked about how easy it would make things, that it would be cheaper and easier and all of that, when actually you're sitting there for hours an it's frustrating and there are bits of breastfeeding which are really shitty. […] I feel like we don't really need to hear any more about the benefits of breastfeeding, everyone knows that already. We need more realistic advice about what it's actually like.

Harriet's statement reflects a common protest among participants that information about the importance of breastfeeding to infant health is no longer necessary, with women instead requiring more information about the reality of breastfeeding. Erika, who encountered multiple difficulties breastfeeding her daughter, similarly stated: 'I do think that the way breastfeeding is sold – and for really good reasons – that it does leave us a bit unprepared for problems. Because you're encouraged to think that this is totally natural, totally straightforward, by far the best thing to do and the easiest thing to do, and it's not necessarily.' Erika refers to 'the way breastfeeding is sold' in relation to the impetus to encourage breastfeeding as a form of straightforward behaviour change. One NHS website states 'It is much easier to breastfeed than formula feed. There's no sterilizing, the milk is always a perfect temperature, and you don't need to carry lots of bottles with you every time you go out' (NHS n.d.). While feeding with formula does involve all of these complicating factors, there is little mention of the manifold difficulties many women experience through breastfeeding.

The same website goes on to acknowledge that 'some mothers may have a difficult few days when extra help and support are needed.' While some women *did* find learning to breastfeed straightforward, they comprised a minority of the sample; many women struggled for weeks or months rather than days. Some questioned whether

information on the problems that many women face had been withheld intentionally in order to avoid deterring expectant mothers from initiating breastfeeding. Claudia, a young mother of one, complained, 'They deliberately don't tell you how hard breastfeeding is. It's planned. My antenatal leader said, "I don't want to scare you so I don't want to tell you about it." It all comes out of the woodwork afterwards. Even if you're not in pain, you just don't know what to do.' Like Claudia, other women perceived an active process of promoting breastfeeding in order to encourage increasing numbers of women to breastfeed, to the ultimate detriment of the women undergoing the process of learning to breastfeed. Recognizing the importance of breastfeeding to infant health, mothers simultaneously felt that their expectations of the actual process of breastfeeding had been raised, with negative consequences if these expectations were not matched in practice. Georgia explained:

> I feel like before you have your baby nobody tells you what the potential issues are, like it's all just trying to sell it to you, and not actually, like, this could go wrong that could go wrong. It's all very much just selling it to you. And I suppose in a way, if they told you everything, all the problems, people might just think oh I can't be bothered. But then actually it's really difficult when you're just being told that you should do it and then you have your baby, and then you sort of feel like a bit of a failure when it doesn't work.

Georgia felt that encouraging women to breastfeed was ultimately a positive step, but she was also critical of the way in which breastfeeding was promoted or 'sold', in a way that resulted in avoidably negative self-perception if women faced difficulties during the process of learning to breastfeed. Chrissie, a mother-of-two, said:

> Maybe breastfeeding's easy for some women, maybe I had a particularly miserable time, but I don't feel they dwelt enough on how miserable and relentless it was going to be. They had done a bit of work on how you can support your wife or partner breastfeeding, which was good, but yeah I hadn't anticipated how awful it was going to be, or how difficult.

The failure to acknowledge the extent of potential difficulties, as demonstrated by the NHS quote with which this paragraph began, resulted in disillusionment among women

like Georgia and Chrissie who experienced the process of learning to breastfeed as extremely challenging and often unpleasant.

The promotion of breastfeeding on the basis of enhancing the maternal-infant relationship also proved erroneous for several women, who initiated breastfeeding with high expectations of an enjoyable, fulfilling experience and ended up instead either feeling ambivalent or actively disliking the process. This is well illustrated through an exchange between Karen and Naomi, a mother who had visited Baby Café with her first child and returned seven years later with her second, 13-day-old daughter. Naomi first explained that her daughter, Maria, was having difficulty latching on; she suspected the baby was not feeding frequently enough, and was worried that Maria might start losing weight. After discussing possible causes and solutions with Karen, Naomi continued 'I just find breastfeeding really annoying. Just irritating. I don't enjoy it at all – and I don't feel like we bond.' Karen acknowledged the often idealistic portrayal of breastfeeding, responding, 'We oversell breastfeeding. Mammals don't feed because they like it, it's because they need to feed their baby'. Several weeks after this exchange, Naomi elaborated: 'I tend to think that I'm well bonded with my children *despite* breastfeeding them rather than because of it […] It does comfort them, but it definitely doesn't look much like the image of it in the books, and the telly, and all the rest of it'. Chrissie, who felt similarly to Naomi, described the promotion of breastfeeding in a sarcastic tone: 'It's the best thing for the baby! And, oh, it's a magical bonding experience!' Chrissie went on to describe her own experience of breastfeeding: 'It's not a magical bonding experience, it's painful and awful, that's why it's got such good PR'. Chrissie's reference to 'PR' provides a further link to the perceived 'selling' of breastfeeding in policy discourse and education, framing it as requiring effective and to some extent misleading promotion in order to persuade women to initiate breastfeeding.

Of course, many mothers did find enjoyment in breastfeeding and experienced an intimate connection with their infants while breastfeeding. Vanessa, for example, said 'it's a lovely feeling, to feed her, to spend that time with her […] and to have that physical closeness'. For most, however, the pleasure in breastfeeding developed later on, after a process of learning that was often fraught with difficulty; and, as one mother pointed out, 'It's obviously not the only way you can bond with your baby'. Nonetheless, promoting breastfeeding as an experience that is enjoyable for all mothers and their infants runs the risk of leaving women unprepared for the unpleasant aspects of breastfeeding that many women in this study encountered. As Naomi commented, 'I suppose if you want to promote breastfeeding maybe you shouldn't just focus on how blissful it is and how wonderfully bonding it is, because that's just not going to be the reality for everyone'. Furthermore, the advocacy of breastfed babies as better bonded to their mothers gives rise to the troublesome implication that mothers who bottle-feed are less well bonded to their children, placing a moral expectation on mothers to breastfeed. Alissa, mother-of-two, remarked, 'We have this very private sense of ourselves, and therefore breastfeeding is [presented as] a very private thing, all about bonding rather than feeding. And that puts a lot of guilt onto the person, to do it and to feel bad about not doing it'.

Guidance on breastfeeding in this context, then, is given from a particularly 'moral stance' – that is, 'a disposition towards what is good or valuable and how one ought to live in the world' (Ochs and Capps 2001:45). Alissa's experiences illustrate this concept: 'Somewhere in my brain I knew that it was meant to be the best thing for one's child to breastfeed. You meet with the antenatal midwives and they say, "Oh, are you going to breastfeed?" and it felt like a moral choice that I had, that I was going to say of course, yes, and I never really stopped at that time to think why – I just assumed it had to

be the best thing'. Erika, a mother-of-one in her late thirties, similarly made the link between breastfeeding and conceptions of 'good' motherhood: 'It had always just been something that I'd assumed good mothers do'. The powerfully distributed infant feeding discourse emphasizes breastmilk as superior, natural, and legitimated by science, resulting in a strong ethical imperative to breastfeed in order to avoid conscious moral deviance. Not only is breastfeeding marketed as good nutritional practice; it has also become a marked statement about values, mothering skills, maternal commitment and care. As biomedical advances increasingly allow the possibility of establishing a causal link between deficits sustained during the early stages of development and medical problems later in life, the incentive to identify responsibility for future good health becomes increasingly persuasive (Daniels 1993:12).

The objective of public health messages to increase rates of breastfeeding in the UK entails emphasizing the benefits of breastfeeding, communicating it as a choice that women can make which will provide the healthiest method of feeding an infant as well as the most natural and best for the relationship between mother and baby. Mothers perceived the process to have been conducted in such a way as to exaggerate the benefits while underplaying the more difficult aspects of breastfeeding. The result is that mothers who struggle to breastfeed felt disillusioned with the information they had been given before birth, regarding it as idealistic and detached from the reality of breastfeeding.

3.4 'There wasn't any of that beautiful rooting': Instinct, Infant Agency and Embodied Learning

The previous section outlined the way in which the highly effective promotion of breastfeeding during pregnancy prompts unrealistic expectations on the part of mothers relating to the practice in reality. This section will highlight three aspects of learning to

breastfeed that are not engaged with adequately in educational or promotional materials. Firstly, the embodied (or bodily) complexities of breastfeeding; secondly, the significance of infant agency in the breastfeeding dyad; and thirdly, the communal nature of learning required for women to learn how to breastfeed effectively.

The standard leaflet each mother was issued with after her discharge from hospitals within the Oxfordshire Clinical Commissioning Group (CCG) communicates a clear purpose through its title, 'Successful breastfeeding: A guide for Breastfeeding Mothers'. The leaflet outlines a series of measures that should be taken in order to achieve successful breastfeeding, including breastfeeding as soon as possible after birth, breastfeeding 'on demand' (i.e. as often as the baby wants, for as long as he or she wants), and breastfeeding exclusively (i.e. giving the baby nothing but breastmilk). Women are advised to be proactive in preparing for birth and breastfeeding, to commit themselves fully to the task of learning how to breastfeed, and to overcome any difficulties through perseverance and by actively seeking support. Many participants had thought carefully about these processes before giving birth, and had clear ideas about how they thought they would go about enacting this process. These ideas included building up their own confidence in their ability to breastfeed by engaging in theoretical learning before birth, putting the baby to the breast immediately after birth, facilitating adequate bodily contact (or 'skin-to-skin') after birth, and proactively seeking out appropriate support.

Many women felt unprepared for the reality of learning to breastfeed despite their efforts to engage in theoretical learning, which was regarded in retrospect ultimately as ineffective. First-time mother Erika explained that 'even though NCT offers breastfeeding training, to be honest, before you actually do [breastfeeding] it's kind of useless […] All those things like latch, attachment, you cannot think about it until you're doing it, it

doesn't make any sense.' Demonstrating the fundamental discrepancy between the theoretical knowledge that women acquired during pregnancy and implementing this knowledge in practice, Erika was unable to process information about breastfeeding in the abstract because she had no bodily experience of breastfeeding. Laura similarly found this process challenging, explaining that discussing breastfeeding out of context ultimately did not assist her in the practical side of learning to breastfeed 'It's really difficult to learn about [breastfeeding] – you have to be in the moment with the issues that come up to actually raise the questions that you will raise. It's really difficult to learn about it theoretically'. Annie, like Laura, found the reality of childbirth and breastfeeding to be at odds with the perceptions she had developed through abstract learning: 'The thing is, I read everything and I was like this is how it's going to be – and then from the beginning of the labour I was like, scrap everything you thought you knew!' A fourth mother, Kirsten, who like many mothers could not recall having observed another woman breastfeed for any great length of time, added that the abstract way in which antenatal demonstrations were delivered further emphasized the disparity between theory and reality: 'Even though [the course provider] sort of demonstrated on this knitted boob how to hand express, I went home, I didn't write anything down because I thought yeah that's obvious, that's fine, I can remember all of that – and I didn't think about it again'. The process seemed clear to Kirsten at the time of her antenatal breastfeeding class, but in practice she found it difficult to master.

While Annie, Laura, Kirsten and Erika had engaged fully with the process of preparation advocated by their midwives and the information contained in educational pamphlets, they experienced a fundamental incongruity between the conceptual process associated with theoretical preparation, and the bodily process of learning to breastfeed. Furthermore, a predominant focus on childbirth during antenatal education often resulted

in decreased attention to breastfeeding. Naomi, who described herself as 'a big research person' and had put considerable effort into reading about breastfeeding during pregnancy in order to prepare herself, explained: 'It's really difficult to think about when you're pregnant. [Breastfeeding] is a whole other thing you've got to do but it's difficult to engage your brain with it because you've got to get past this big thing first which is getting the baby out.' The difficulty for Naomi was that childbirth itself was the more imminent and therefore more palpable event, beside which breastfeeding seemed imponderable.

The women in the study, and I through watching them learn, discovered that breastfeeding involves practical coordination of a kind which is impossible to explain effectively or simulate, and which first-time mothers have never experienced – or in most cases, witnessed. Van Esterik and O'Connor term this process 'the dance of nurture', observing that 'No first time mother anywhere in the world has had direct experience with how to lead the dance of nurture, or how to develop a breastfeeding relationship with her newborn' (2017:21). While some mothers and their infants mastered this 'dance' quickly and easily, for the majority this was not the case. In order to enable the infant to feed effectively in the early stages of his or her life, a mother and infant must learn to follow a complex sequence of movements. Holding the infant across her body, the mother must coordinate her hands and arms to position the baby (referred to as 'he' in the following passage in order to facilitate distinction between mother and baby) correctly in relation to her nipple, wait until he realizes that food is coming his way, look for a wide, gaping mouth while simultaneously allowing his head to tip back, and then push his shoulders towards her breast in a quick, firm movement, timed perfectly. While there are positions alternative to the 'rugby ball' method described above (alternatives that mothers often only learned after visiting Baby Café), the fundamentals remain the same: mother

and infant must coordinate precise movements together in a way that relies on tactile awareness more than active thought. Errors in any of these steps can lead to potential damage to the nipple, pain, and inefficient milk intake. Movements are subtle; a matter of millimetres, often impossible to see, and mothers must therefore learn to *feel* what is right in a process of bodily experimentation.

Breastfeeding, then, is a 'technique of the body' (Mauss 1973), an embodied process that unfolds both in and using the body in a way that is not intuitive and must therefore be actively learned. The concept of embodiment is not about the physical behaviour of the body as such; it concerns itself instead with the *experience* of the body as a social construct. It refers to a paradigm shift transforming the body as an entity to the body as a process, shaped not only by biological universals but also by social interactions. The bodily processes through which we experience the world thus remain highly subjective and culturally specific (Leder 1998:120), and the body is conceived not simply as a static universal object but rather 'an embodiment of consciousness and the site where intention, meaning and practice all originate' (Lock and Farquhar 2007:6). Tim Ingold's contention that skills which use the body, such as walking, are 'literally embodied, in the sense that their development entails specific modifications in neurology, musculature, and even in basic features of anatomy' (2000:375) is strongly apparent in the process of learning to breastfeed, which not only *entails* these modifications but *requires* them: a basic feature of mammalian physiology that involves a process of skill discovery through observation, imitation, and trial-and-error. Unlike walking, breastfeeding is further complicated by the involvement of not one, but two people and their physical, embodied coordination. Furthermore, and likewise in contrast with walking, opportunities to observe mothers and infants breastfeeding are limited in the context of the UK, restricting

expectant mothers to procedures of theoretical learning that portray the bodily process of breastfeeding in universalized, rationalized and abstract ways.

The incongruity between women's theoretical knowledge and the practical skill of breastfeeding highlights the embodied nature of learning that is currently missing in constructions of breastfeeding in the UK. An extract from the leaflet discussed at the beginning of this section (*Successful breastfeeding: a guide to breastfeeding mothers*) exemplifies an emphasis on 'mind' over 'matter' in relation to the process of learning to breastfeed: 'Confidence is the key to successful breastfeeding: successful breastfeeding starts in the mind. But what gives women the confidence needed for success is knowing how'. The assertion that successful breastfeeding 'starts in the mind' is indicative of the Cartesian dualism that underpins Western science and clinical medicine, which refers to the 'fundamental opposition between spirit and matter, mind and body, and (underlying this) real and unreal' (Scheper-Hughes and Lock 1987:8). The significance of mind over matter in public health approaches to breastfeeding ties in with an academic trend towards correlating 'maternal commitment', 'maternal confidence' or 'self-efficacy' with successful (and conversely unsuccessful) breastfeeding outcomes (Avery et al. 2009; Blyth et al. 2002; Brown 2014; de Jager et al. 2014; Loke and Chan 2013; Meedya et al. 2010).

This emerged in mother's narratives as problematic for two reasons. Firstly, breastfeeding is presented in a dis-embodied way both in public health efforts to promote breastfeeding (as described in the previous section) and in antenatal education, leaving mothers unprepared for the embodied reality of breastfeeding. Secondly, emphasis on the mother's mind and her willingness to prepare for breastfeeding as the loci of breastfeeding success strongly implies individual responsibility (on the mother's part) towards breastfeeding outcomes, overlooking the importance of the co-operative nature of

learning that involves mother *and* infant, as well as the variable support structures that each individual mother is able – or unable – to access. The learning process, intended to build mothers' confidence in their ability to breastfeed, is presented in antenatal education and literature as one over which mothers have full control. At most, infants are described in breastfeeding literature as being 'instinctive': though this serves only to draw attention to their putative innate ability to breastfeed, which mothers are encouraged to channel in order to increase chances of breastfeeding success.

On this basis, mothers often expected their infants to begin breastfeeding straightaway: the Sure Start leaflet explains 'This is a great time to start your first breastfeed because your baby will be alert and will want to feed in the first hour after birth' (Start for Life 2015). After being born, mothers are told, a baby should be placed on the mother's chest in order to ensure bodily contact: in theory, this encourages the infant to perform the 'milk crawl' or 'breast crawl', first described in academic literature by Widström et al (1987). This refers to the process by which a baby initiates feeding by finding his or her way to the breast and attaching to the nipple spontaneously. Beth, an Australian mother of a lively one-year-old, described her amazement at her daughter's enactment of the milk crawl: 'It was amazing to me how instinctive it was for her – or, the idea of it – in that she did come out and latch herself on and try and feed for about an hour. […] so she clearly had an instinct early on'. While Beth did not find the act of breastfeeding intuitive herself ('I hadn't anticipated how difficult the physical coordination of it was'), she felt pleasantly surprised at the speed with which her daughter was able to begin breastfeeding after birth. Many mothers had watched online videos of 'milk crawls' either through their own research or through antenatal courses, learning how to create an environment that enabled the baby to 'do what it needed to do', for instance by maximizing 'skin-to-skin' contact. While mothers were often apprehensive

about their own ability to master the physical process of breastfeeding, they rarely anticipated that their infant might not display the instinctive behaviours that are presented as commonplace.

Although Beth's experience mirrored the description of instinctive behaviour outlined during her antenatal education, many participants found that their infants' initial attempts to breastfeed did not reflect the spontaneous process that they had expected. Carly's first experience of breastfeeding resembled Beth's, with her son enacting the behaviours she expected straight after birth:

> There was one video they showed us [in antenatal class] that was about the milk crawl that they do right after birth, and so when he was born one of the first things I said as we were still laying in the [birthing] pool was I'm going to get him to try this. And the midwife was happy to do that, and he did it really well, and while we were in hospital he was brilliant, he'd latch and everything, he was fine, and I thought this was going to be a breeze so we left the hospital.

Soon after, their experiences began to differ. Carly's milk 'came in'[31] ten hours after she was discharged from hospital, and as a result Carly experienced discomfort and changes to her breast shape: 'He was in between feeds, and asleep, and it came in. Bad. So I went from a size B to a double G. It was excruciating, and my nipples were too flat so he couldn't latch back on'. Carly's son began to have trouble feeding, repeatedly attempting to feed and then releasing Carly's breast, becoming frustrated and exhibiting signs of distress during feeds. Carly started expressing milk to enable her and her husband to 'finger feed' their son. 'Finger feeding' involves a baby receiving breastmilk or formula via a very fine feeding tube attached to a container of milk and fastened to an adult finger. When the infant sucks on the finger it creates a seal over the tube, and milk is drawn up through the tube from the container.

[31] This refers to the process by which milk begins to increase in quantity and starts to change from colostrum to mature milk.

With finger feeding established and unable now to feed her son from the breast, Carly visited the breastfeeding clinic at the JR hospital where the breastfeeding specialist explained: '"Here's what the situation is: with the finger feeding he gets a hit of milk because it just drips. But he doesn't get that from the breast. So he thinks 'Oh my God it's not coming', panics, and comes off"'. After several weeks of patient work, Carly and her son were able to transition back from finger feeding to breastfeeding. Carly explained, 'We had to teach him that [the milk] will still come […] we had to re-teach him how to do [breastfeeding]'. While Carly described her son's initial behaviour immediately after birth as synonymous with the instinctive behaviour she had expected, she subsequently perceived a regression in his ability to breastfeed, which was only rectified through a subsequent process of mutual learning. This was a common experience among mothers. Referring to the 'milk crawl' described above a further mother, Anna, commented: 'In the [antenatal course] video they said that babies know how to breastfeed and they'll just do it automatically, and that just didn't happen for me at all. He took ages'. Carly and Anna's experiences reflect common scenarios whereby mothers encountered difficulties in the initial stages of feeding due to infant behaviours that were perceived as antithetical to notions of instinctive feeding behaviour. In these instances both mother *and* infant struggled with the process of embodied learning. Several mothers experienced a mismatch straightaway between their expectation and the reality of their infant's behaviour, with infants unwilling to feed at all immediately after birth.

While Carly and Anna both described their experiences of childbirth as 'natural', a variety of external factors can also influence an infant's feeding behaviour directly after birth. Administering pain relief medication to the maternal body during labour, for example, affects the baby's initial ability to suckle (Riordan et al. 2000). Carol, a first-time mother, described problems getting her son to latch on initially after her caesarean

section: ‘Hugo was really really sleepy when he was born […] when I tried to put him to my breast he’d just fall asleep!’ Hugo’s inability to breastfeed proved problematic throughout their process of learning, and Carol ended up having to express milk to feed to her son through a bottle for several weeks before being able to transition back to feeding at the breast.

Even in theoretically optimal conditions some infants’ instincts, contrary to expectations, seemed to be lacking or absent. Jemima, who had been shown recordings of milk crawls, knew how to facilitate them, and had given birth vaginally – in her words, ‘I did everything right’ – said:

> I *tried* the whole let the baby crawl anywhere on you, ha, there’s a wonderful video of her licking my nipple, she didn’t really know what to do with it…it was really hard because of course they’ve got no muscle tone at all and I guess she was trying, kind of, to find a boob but she couldn’t really get anywhere. So I was sort of like desperate to help her a bit, so I nudged her in the right direction, but even when I placed her head she basically just suffocated herself on my boob, there wasn’t any of that beautiful rooting.

Anna, Carol and Jemima’s experiences reflected those of many other participants, for whom breastfeeding did not occur as immediately and as spontaneously as they had expected. In these cases and many others, mothers likened their infants’ feeding behaviours directly after birth to the acquisition of an unfamiliar skill rather than as instinct, a process of learning for infants as well as mothers. Another informant, Vanessa, explained: ‘Earlier on, especially when we hadn’t quite gelled, she and I, with the feeding, it wasn’t such a natural thing where she finds the boob and does what she needs to do’. For Vanessa, then, a feeling of ‘naturalness’ only materialized later on in her feeding relationship with her daughter, once the baby had *learned* to ‘do what she needs to do’ without too much input from Vanessa herself. Katya, who breastfed her daughter for eight months, confirmed that part of the difficulty with learning to breastfeed was that ‘there’s another little factor [baby] in there, which doesn’t know what it’s doing’. She

explained that it was as much a learning process for the baby as it had been for her – 'babies get better at it, they learn as well and their mouths change shape'. Here, Katya referred to the developmental changes that babies undergo which gradually make it easier for them to breastfeed – their mouths increase in size allowing them to accommodate the nipple more easily; they gain greater neck control; and any residual stiffness from the birth gradually becomes less of an inhibiting factor.

Contrary to notions of purportedly universal behaviours that allow mother-infant dyads to breastfeed spontaneously after birth, these experiences demonstrate that infants are diverse in the way they respond and react to the process of breastfeeding. Although some babies displayed recognized, theoretically universal characteristics of an innate ability to breastfeed, this was by no means ubiquitous and mothers often called the 'ability' of a baby to breastfeed into question. In fact, the willingness of an infant to feed was perceived as a significant factor in breastfeeding success, or lack thereof. By contrast with the impression given during antenatal education of infants as passive subjects, in maternal narratives infants were conceived as active agents in the breastfeeding process, and their actions were considered a central determinant in the ability of each mother-infant dyad to breastfeed effectively. While instinctive behaviours displayed by infants during feeding are communicated as advantageous to breastfeeding in antenatal education, women often expressed the baby's agency as a hindrance to breastfeeding. New mothers became frustrated with their babies' movements, which seemed to obstruct their efforts to breastfeed: small arms became trapped between mouth and nipple, backs arched away from the breast, and heads tilted too much or too little to enable a successful latch.

Kirsten, whom I met when her son was five weeks old, struggled particularly acutely with her baby's behaviour. Kirsten had had a difficult birth, and was still having

trouble breastfeeding. Tearfully, she explained to me that she hadn't been able to feed her son comfortably since the birth: 'I just thought wow, this is just such, such hard work with these babies that just *do not want* to co-operate, and won't even…uncurl, to be held in the right position, and … your breasts aren't in a fit state to give them milk in an easy way' (original emphasis). In speaking of her son as refusing to 'co-operate', Kirsten conceptualized him as an agent who was just as instrumental in her inability to feed as the state of her breasts, which, she explained, felt alternatively engorged and empty. Many other participants expressed frustration towards their babies, describing breastfeeding as a 'fight':

> Sophia: I read lots of leaflets that say they should be all relaxed and you should be able to pick up their arm. My baby seems pissed off. I just want to stop the fighting. Or not, and accept that that's just what happens.
>
> Agnes: In the last few days he's started being a bit naughty. He doesn't open his mouth wide enough, or tip his head back, and he's started pushing back. And he's very strong so I have to push my breast into his mouth.
>
> Carrie: Sam [older child] couldn't breastfeed; we could never get him to breastfeed. Even at the breastfeeding clinic they couldn't get him to breastfeed, Sally and Chloe [two midwives] used to put him on and even they couldn't get him to.
>
> Amy: I don't normally let a small person control me, normally I'm in charge!
>
> Megan: Every time, it's just like we're fighting each other.

These participants' perceptions of breastfeeding as a 'fight' emphasizes the role of the infant in inhibiting or facilitating the breastfeeding process, and above all the centrality of co-operative interaction to mother's conceptions of breastfeeding success. By contrast, education and literature that mothers encountered during pregnancy underestimates the process of learning that infants undergo, instead emphasizing the universality of instinctive behaviours that infants ought to demonstrate. Furthermore, the agency of the infant in precipitating breastfeeding success is unacknowledged in the portrayal of breastfeeding in public health campaigns.

Central to this and other difficulties that many women in the study experienced is that breastfeeding is a complex skill transmitted most effectively through a process of guided discovery led by experienced mothers, rather than theoretical preparation. It is a skill neither innate nor acquired, but rather the product of a system of development shaped by the interaction between the individual mother and her environment, concurrent with the efforts (which can be effective or ineffective) of the infant. Jean Lave and Etienne Wenger (1991) contend that learning should not be viewed as simply the transmission of abstract and decontextualized knowledge from one individual to another, but rather as a social process whereby knowledge is co-constructed: knowledge must therefore be taught through active participation in an 'authentic' setting (settings and situations that would normally involve particular kinds of knowledge), rather than in the abstract. Learners must use tools as 'practitioners' use them and become 'cognitive apprentices' in that discipline's community and its culture (Lave and Wenger 1991).

By contrast, the women in this study were removed from the social process of co-constructing breastfeeding knowledge. Knowledge transferred through experts is indicative of the medicalized nature of breastfeeding in the UK, and it is thus taught very much in the abstract: even in clinics like Baby Café, which aim to provide a structure of social learning through peer support, the clinic facilitators (or, to use Lave and Wenger's term, 'practitioners') use plastic dolls rather than real infants to demonstrate on their own, clothed, chests, and the social process is consequently inhibited by the absence of 'active participation in an authentic setting' (Lave and Wenger 1991). Neither is breastfeeding a practice that women in this study had observed throughout childhood as a matter of course, which would otherwise provide a context for imitative practise. Instead, women prepare for breastfeeding out of context, and are then expected to apply that theoretical knowledge with often-limited support. Breastfeeding success is thus framed as the

responsibility of the individual, causing an artificial split between the ability of the individual to breastfeed and the role of society in facilitating that ability. Geertz has argued that the Western conception of the person 'as a bounded, unique […] integrated motivational and cognitive universe, a dynamic centre of awareness, emotion, judgement and action […] is a rather peculiar idea within the context of the worlds cultures' (Geertz 1984 [1974]:126). Fundamental to Western and biomedical epistemology, the opposition between individual and society underpins approaches to infant feeding in the UK, with demonstrably negative impacts on women who breastfeed.

Limited acknowledgment of the importance of embodied learning in the process of learning to breastfeed goes some way towards explaining the difficulties that women experience when breastfeeding is taught predominantly in the abstract. It also provides a rationale for the dissatisfaction communicated by many participants relating to the way in which they were expected to master a process assumed to be natural or instinctive. Corroborating Sear and Coall's contention that external support may be less readily available compared to help provided by a supportive network of kin (Sear and Coall 2011:103), difficulties in accessing any support at all exacerbated the two issues described above. Participants emphasized the critical importance of the availability of good support after birth for the acquisition of the ability to breastfeed, and this accords with findings in existing literature (cf. Cross-Barnet et al. 2012; McInnes and Chambers 2008). The importance of good support is acknowledged in health education: following a list of potential difficulties that women may encounter, the standard leaflet issued to mothers at the JR states that 'the treatment for all of these problems is to find someone to help you improve the way you attach the baby to your breast' (Women's Centre Breastfeeding Clinic 2013). For many new mothers, however, access to this critical

support was perceived as limited, non-existent, or under threat by public funding cuts – a view often shared by the health professionals encountered during the study.

In hospital, women are given a buzzer, which theoretically provides them with 24-hour assistance. Chrissie experienced the support in hospital as 'really good. And they never made me feel bad for buzzing, and if they were busy they just said, "Oh we're busy", or didn't come for a while and … that's completely fine'. Chrissie was willing, knowledgeable and possessed the requisite tenacity to persist in asking for support during her stay in hospital after birth. Many women were, by contrast, unwilling to do so because they perceived midwives and maternity support workers as being 'too busy to help'. This perception is not unfounded – there is a chronic shortage of midwives in UK hospitals (Bonar 2015), maternity wards are often understaffed, and the associated staff overworked. Grace, a student midwife in her second year of training, elaborated: 'Most complaints are about postnatal care. You want to stay with the mother to help with breastfeeding, but there's a lot of pressure to move on to the next birth. If you stay too long, you feel like people [other midwives] are thinking, "Why are you still in there?"' Rachel, a first-time mother, corroborated Grace's perspective – 'I was told to press the buzzer but they're so busy, you know they don't really want to watch you; they don't say you should let them know when you feed.' Another mother, Georgia, left hospital unable to breastfeed and continued experiencing difficulty with breastfeeding her son until she began to feel more confident after four and a half months. She described her stay in hospital as follows:

> Because of the ward we were on I think we just didn't really get that much time. And when I asked for help they did help, but you could tell that they were really…in a hurry. And it wasn't their fault, but then every time someone else would come and see me as well, it wasn't always the same person, and they all had something different to say, so that made it quite difficult. And in a way because we were both fine and didn't have any complications, I sort of sometimes felt a bit dismissed, they were like, "Oh you're fine, it'll be fine". Whereas actually maybe I don't know, maybe if we'd had a bit more support in the beginning, it might not

> have got to the stage where it did, because I went home and I was in quite considerable pain.

As alluded to by Georgia, a further problem experienced by mothers in hospital was lack of continuity in support; due in part to the nature of the shift structure and in part again to understaffing, women generally do not receive consistent support from one person, but rather from a stream of different people, all of whom might give varying advice, both in content and in quality. Carol, an Australian academic who had given birth to her son five months before I met her, remembered her hospital stay as chaotic and fragmented despite having had a reasonably straightforward birth:

> In the hospital it was a bit of a disaster because there are just too many different midwives and nurses and breastfeeding helpers and there was no continuity of help, so it was sort of one person would tell me one thing and the next time I needed help it would be someone else who said "Oh I can't help you that way I'll just help you holding him in a different position" or something and then I was just totally confused and, so, I think…yeah the hospital bits of it were a disaster.

As a result of short hospital stays and erratic support, many women in the sample felt that they had been discharged from hospital without having established breastfeeding at all. Carol went on to say, 'I went home with the breastfeeding not working at all, and basically they'd just shown me how to express milk in the end and I was just feeding him from a bottle'. Carol's comments points to an emphasis on 'product' over 'process', as well as the over-stretched resources of maternity wards across the country.

After a comparatively short duration of support in hospital, women are discharged to their homes. A community midwife is then available for support until the family is discharged from midwifery care (usually at ten days). After this, care is transferred to the GP and Health Visitor. Health Visitors conduct a home visit postnatally, generally taking place in the first few days after birth. A subsequent home visit takes place at 6-8 weeks after birth. Mothers can request additional appointments, or phone their Health Visitor for advice, though the women in this study generally did not do so. Although this support

structure may appear sound, in practice it leaves women with large gaps of time in which they have no in-situ support. Recounting her own experience, Naomi commented, 'A midwife pops in for ten minutes what, 48, 72 hours later [after birth], and then a Health Visitor pops in a week later – you've missed a whole chunk of time there!'

Although Oxford had an abundance of breastfeeding support groups at the time of research, women often did not know about them – or, if they did, found it difficult to reach them. Particularly for those who recovered slowly from birth, the periods of time between scheduled support sessions proved problematic. After a protracted labour and complicated birth, Kirsten had been re-admitted to hospital because of an infection in the perineal tear that had occurred during the birth of her son (a common consequence of vaginal births, occurring in an estimated 85% of women, 60-70% of whom require stitches as a result (Kettle and Tohill 2008)). Having returned home a second time from hospital, Kirsten struggled to find a comfortable position in which to breastfeed her son. She recalled:

> I think the Health Visitor came on day ten maybe? Or day thirteen? And after that no one else has come to the house. And it's taken another week or two for me to get the confidence to go out with him. I think there's one [support group] in the Children's Centre around the corner, but I wasn't comfortable enough to *sit*. It's only just become something that is going to be possible for me to do.

What may ordinarily seem a simple car journey prevents some women from accessing the support they need; and the lack of in-situ support (that might in other contexts be provided by family members) means that women who are incapable of leaving their house or reluctant to do so become isolated and unable to receive the help with breastfeeding that they require.

Breastfeeding mothers must undergo a complex process of learning in a body that has become unfamiliar, while simultaneously comprehending the agency of their infant and the learning process that the infant undertakes. This without having had, for the

overwhelming majority of mothers, any sustained interaction with other breastfeeding mothers before giving birth. This section has discussed three aspects of learning to breastfeed (bodily complexity, infant agency and support) that are perceived by mothers as being neglected in antenatal education and public health approaches to infant nutrition. Together, they place the responsibility for successful breastfeeding on individual mothers, at the same time undermining their ability to achieve successful breastfeeding in the way in which they are instructed to. Emphasis on rational thought during antenatal education ('mind over matter', theoretical preparation, and perseverance) as opposed to the embodied process of learning to breastfeed, gives the impression of individual control over the success or lack of success of breastfeeding. The emphasis mothers placed on the agency of the infant, by contrast, challenges that notion of control; there are two bodies implicated in the process of learning to breastfeed, each (in the case of first-time mothers) equally unfamiliar with that process. This gives rise to a shared responsibility that is given little weight during antenatal education and in public health approaches to breastfeeding, again shifting the burden of responsibility onto mothers with limited recognition of the varied and complex factors involved in individual breastfeeding success. Erika, a first-time mother whose daughter struggled to feed throughout the first months after birth, summarized: 'I really think these one-size-fits-all classes are not that great. They give you *confidence*, which I suppose is nice, but in our case it was kind of unfounded confidence, and I think it would have been better for somebody to say it is quite tricky, it's quite personal, it really depends on you, your supply, what's going on; therefore you really really must get help.' While Erika was able to access the support she needed relatively easily, many women faced difficulties in accessing the kind of support she described which is, in practical terms, undervalued by the same public health body that emphasizes its necessity on paper for successful breastfeeding. Women are thus held

accountable for achieving successful breastfeeding without the requisite tools to do so effectively: in other words, to use a phrase used by Daykin and Naidoo in their feminist critique of health promotion, they are given 'responsibility without power' (1995:63).

3.5 'You need a tribe!' and Breastfeeding Without One

The mothers in the study were invariably – to a greater or lesser extent depending on their individual circumstances – launched into a difficult adjustment phase immediately after giving birth. Particularly for first-time mothers, a new baby brings with it a steep learning curve, particularly in relation to breastfeeding. Pregnancy, labour and birth are physically demanding, and mothers must recuperate while simultaneously caring for an exigent newborn. A new rhythm of everyday life must be managed, and an extended period of instability ensues that can be profoundly unsettling. New mothers often described early motherhood as a time of isolation and vulnerability; many women lacked nearby familial networks, relying instead on experts as discussed previously in this chapter. The lack of general social support that was *not* specific to breastfeeding heightened the difficulties that many women experienced while learning to breastfeed, and while several women in the study were diagnosed with postnatal depression, many more simply struggled to adjust to life with a newborn.

From an evolutionary perspective, the importance of kinship structures to the uniquely human co-operative breeding strategy is a well-established hypothesis. The presence of certain family members is known to improve child survival: grandmothers in particular play influential roles around the perinatal period and in child feeding practices by giving advice and practical support (see Sear & Coall (2011) for a review). The absence of these kinship structures – or any direct kin support at all – was identified by

women in this study as being significant in having shaped their early experiences of motherhood. As Kirsten explained:

> It's not enough to just have a partner; you've got to have more support and help of family and friends around you, to help do the other stuff. And there's this kind of portrayal that you should have this lovely baby moon with just you and your partner, and this lovely bonding time, and it's like no, you need loads of help from other people.

In commenting on the 'baby moon' that she and her husband had anticipated directly after birth, Kirsten highlights the expectation of intimate seclusion that couples often had of the weeks after birth, influenced by perceptions of the nuclear family as self-sufficient and independent. The reality that Kirsten, and many mothers, discovered, is that intimate seclusion of mother, father and child quickly develops into loneliness and isolation, particularly at the point at which one half of the parental unit returns to professional life. This was perceived to be a comparatively recent phenomenon, as evidenced by this comment from one mother: 'We're not very good at supporting young mums, and I don't think in yesteryear we would've been at home on our own – it's so lonely! It's *so* lonely'. Erika observed similarly, of her parents' generation: 'They just kind of did things, and did what they were told to do by friends and family and stuff, so we're kind of on our own more, and desperately reading every single book that's supposed to give you the answer, but actually you're not an expert in this kind of area so you're not very good at assessing what is actually legit or not'. The general loss of familial support contributed to participants' reliance on experts, and to a sense of responsibility that mothers felt in both accumulating and evaluating the legitimacy of information about breastfeeding and child-rearing more generally.

The familial circumstances of many participants meant that they lacked nearby social support that might otherwise have been provided by family members. While organizations like Baby Café provide opportunities for general support as well as

breastfeeding expertise, there was a sense among women that crucial assistance situated directly within the household was missing. Kara explained, 'You need someone who *knows* to come in and check it's okay. As well as you need someone to come and say actually, something's wrong. But you need *someone* there because you don't have that intergenerational knowledge'. Miranda, for example, had moved to the UK from Russia with her husband seven years before they had their son. She had worked as part of a local business for six of those years, and had developed close friendships through her job as well as latterly the parenting classes she had attended in the course of her pregnancy. It became clear during a discussion with another mother one afternoon that despite this, Miranda had found the solitude of life as a new mother with little external support challenging: 'I felt isolated during those first months, because it's the time that you want to be around your most trusted people'. After her husband's two-week parental leave, away from her close family and friends and missing the daily contact with her work colleagues, Miranda (along with many other participants) struggled to adjust to life with a newborn.

The difficulty of becoming a new mother far removed from any direct familial support arose again some weeks later with another regular Baby Café attendee, Esther, who grew up in Holland and now lived in Oxford with her Belgian husband, Richard. Though recent legislation gives greater flexibility to co-parents in sharing overall leave from work in the early stages of parenthood, paternity leave at the time of research was normally limited to two weeks. While Richard had used up his allotted two-week paternity leave by the time the conversation took place the couple benefited from his position at work, which allowed Richard some flexibility to spend time at home with Esther. As such, he was one of a minority of fathers who came to Baby Café on a regular basis with Esther and their daughter Diana. Although Richard was able to spend more

time with Esther on a day-to-day basis relative to many other couples in the study, Esther nevertheless found it difficult to adjust to her role as the sole caretaker of Diana after Richard had begun to work away from home more regularly.

A month after giving birth, Esther spent two weeks in Holland with her own mother and father, who provided companionship and care for Esther as well as helping her to look after Diana's needs. Returning to the UK and adjusting back to life at home alone with Diana proved difficult: 'Because Richard is at work more now I'm spending more and more time at home alone with her. It was so nice when I was in Holland not having to do the household chores but also having an adult to talk to. I have never watched the clock so much as I do now'. Richard often encouraged Esther to leave Diana at home with him after he returned each day from work in order to spend time outside the house alone or with friends, but Esther found this difficult too: 'I try to do stuff outside the house on my own, but I have a hard time enjoying myself because I'm just thinking oh God, what if she's screaming at home?' Esther felt bound to her daughter, unwilling to leave her even when her husband was at home to look after her, which heightened her sense of interdependency. Used to an independent and unrestricted lifestyle, Esther found this an unfamiliar and difficult state of being to adjust to.

A third mother, Lydia – one more of many mothers whose immediate families lived abroad – encountered similar difficulties to Esther and Miranda. Her mother had visited for two weeks from Australia following the birth of Lydia's son. After her mother had left to return to Australia, Lydia experienced difficulties in adjusting similar to those experienced by Esther following her return from Holland: 'My mother was here for a bit and she just told me all the time how well I was doing and how wonderful the baby was, and when she left that left a big gap'. The positive influence of her mother's consistent encouragement and the reassuring nature of her presence had provided Lydia with a boost

that made her feel all the more isolated upon her mother's departure. Unlike Esther and Miranda, Lydia had lived in the UK for only a short while before her son was born and had therefore not, as they had, developed many close friendships in her new hometown. Her friends were largely based in Australia, and while she was able to keep in touch with them virtually, Lydia felt isolated in her day-to-day life: 'I've become attached to my phone but it's not the same. I need people around'. Lauren, one of the facilitators at Baby Café, explained to Lydia that many mothers she had met through Baby Cafés in Oxford felt similarly: 'We get that a lot in Oxford, people move here from different countries or even just different cities, and lose their sense of community. Then they feel sad and lonely, but that doesn't necessarily mean they're unwell; it just means that they're a human being. You need a tribe!' The use of the term 'tribe' again links to notions of traditional support structures and the concordant sense that breastfeeding women required hands-on, in situ support in order to look after a young infant.

One of the other facilitators, Karen, echoed Lauren's statement a few weeks later during the course of a discussion about the local council funding cuts that threatened Children's Centres across Oxford with closure throughout the second half of fieldwork. The intention was to direct services away from universal provision of support and towards the most vulnerable subpopulations. Karen emphatically rejected this proposal, explaining her perception of all new mothers as potentially vulnerable: 'As far as we're concerned, anyone who's just had a baby is in urgent high need […] In Oxford we have a unique situation, lots of people are away from their families, social isolation is a big problem and you don't have to be poor to experience that'. While it seems that new mothers in Oxford may be particularly prone to social isolation, it is by no means a locally specific issue, and is one that can be experienced by all mothers.

The loneliness that many women experienced while caring for their infants alone was evidenced by the frequency with which women attended Baby Café for social reasons rather than (or as well as) for practical help. Beth's father and siblings lived in Australia, and before the birth of her daughter Beth worried that she and her new family would struggle without relatives who lived close by. Both she and her daughter picked up breastfeeding relatively easily, though, and after a short period of difficulty establishing a feeding pattern they no longer needed any breastfeeding advice. Nevertheless, eighteen months later they continued to visit their local Baby Café in order to catch up with friends and provide support to other mothers: in those early months, Beth explained, 'Baby Cafés were a very good pseudo family'. Another mother, Carly, similarly continued to visit Baby Café as her son got older in order to break up the day while her husband was at work. Carly had moved to Oxford from North America to do a PhD before meeting her eventual husband, Steven, and having their son. Carly didn't feel lonely as such – 'the whole time I've been with Steven I've been doing my dissertation, I'm *always* on my own' – but she found it challenging to be alone with her son at home all day. She explained 'It's the lack of adult contact. Even though we're not having problems and haven't had problems for a very long time, that's why we always go to the Baby Cafés, because you *do* have that adult contact, even if Karen and Camilla are busy helping other people you're still in a room with adults, as opposed to just you and the baby.' Much the same as Carly, Ania was sole caretaker of her 6-month-old daughter during the day, and visited her local Baby Café because it gave her an opportunity to spend time with other people: 'With a small baby you have no life so I'm glad [Baby Café] exists, because you can go to a coffee shop by yourself but you cannot do it every single day'. Ania enjoyed leaving her house with her daughter but preferred to spend time with others at the same time. For mothers like Ania, who cared for their infants alone during the day, Baby Café

provided an opportunity to meet other parents as well as seek breastfeeding support, which proved a valuable source of social interaction that mitigated the otherwise isolating experience of life with a newborn infant.

Some women found moral and emotional support in virtual rather than physical spaces, joining communities of mothers online to seek communality and advice. One such mother was Kara, who lived at the end of a cul-de-sac in South Oxford with her husband and two young children, and had no support from her immediate family, who lived in Venezuela. Unlike many of the women in the study, Kara had spent the first months after the birth of each of her children with no immediate access to conventional support groups. After the birth of her first son, Isaac, Kara suffered severe pain in her pelvis which prevented her from leaving the house: 'I couldn't get out, I couldn't walk, I couldn't stand for more than five minutes without being in agonizing pain, so I couldn't have made the trip to Baby Café much less La Leche League'. Two-and-a-half years later Kara gave birth to her second son, Alejandro. Again she found it difficult to visit conventional support groups, this time because of the complex logistics involved in shepherding two children, both under the age of three, across to the other side of town: 'It's too hard for me, from here, to get to east Oxford or west Oxford with two kids – forget it'. As a result of Kara's relative lack of contact with other mothers, Kara had developed an increasing reliance on online forums for parenting support:

> It's interesting how much mothering is happening online, and how much information – again because of lack of generational things, either migrants or just the way family's broken down with work – you get pregnant, you go online, you go on BabyCenter, you've got the monthly club, and then you realize that there's all these other bits, so you spend so much time at night reading when you're awake with babies, so I find internet forums are amazing.

For mothers like Kara who had limited access to conventional support groups or direct contact with other mothers, online communities became an important source of advice, companionship and amusement during the most isolating months of early motherhood.

These points of contact, as well as those provided by conventional support groups, went some way to countering the effects of social isolation; but mothers nonetheless experienced loneliness as having a significant impact on their emotional wellbeing in the months immediately following childbirth.

Adding to the often-isolating experience of caring for a newborn was the contrast between professional life and life with a new baby, which was an adjustment that many mothers found difficult. The overwhelming majority of participants were in full-time employment before having their baby, with most having started their maternity leave just before giving birth. Although some mothers planned not to return to work, most entered maternity leave with a view to returning to work after approximately six months. Transitioning from full-time work to full-time care of an infant proved challenging for many women. They lost the daily routine of their professional lives, which was replaced by a singular focus that required uninterrupted attention. Vanessa, who was on maternity leave from her job as a GP when I met her, described the new, all-encompassing focus on her baby as the aspect of motherhood that she found hardest: 'Spending all your time surrounded by other mums with babies, everything's about that all the time, your entire life, you've stopped doing your job, I stopped getting any perspective on anything else, it is just your entire life, and it really *is* 24 hours a day. It just makes you feel very wide open, and that's a bit challenging really'. The uncertainty of life with a newborn stood in stark contrast to the comparative stability of the often successful and well-established professional lives of the women in this study. Kirsten, addressing her son who had fallen asleep after several hours of restlessness, commented: 'See, I'd so much rather be at work right now, with spreadsheets and meetings and predictable stuff, than having to deal with you, 24 hours a day. I'm sorry. And I know that's not what people want to hear'. Kirsten went on to clarify: 'It's difficult when you go from a job that you've been very competent

at and capable of, you know, and in the end if you've used enough logic and you've persevered, you've been able to pass exams, or do a good job of things. And then suddenly you've got this completely illogical, unpredictable thing'. Another mother, Katya, expressed a similar point of view:

> I've lost my identity from having been a young professional woman who does stuff and achieves stuff and has a to-do list that I click off every day and now I have a baby, I'm struggling to feed them, and I can't, you know, even feed myself because I'm too busy. It's a very odd time, and the idea that you're failing all the time…it's really hard and I think we're not very kind to ourselves, and also it's a big taboo, you can't say you find it hard as a young mum.

The reference that both Kirsten and Katya made to the difficulty of expressing negative views of motherhood is significant; new mothers feel pressure not to admit negative emotions, particularly emotions directly associated with their infant, because of the dominant perception that early motherhood is, or ought to be, a happy time (Rokach 2004). In the case of both mothers, this intensified their sense of isolation because they felt unable to communicate negative emotions about their experiences of early motherhood to others. They also both experienced a loss in the sense of achievement that they were accustomed to from their professional lives, leaving them open to a sense of failure or incompetency in relation to caring for their newborn infants.

The often-unsettling difference between professional life and life with a newborn was particularly evident during the course of a conversation between Richard (Esther's husband) and Karen, a Baby Café facilitator. Esther had started expressing milk, and wanted Richard to be able to feed it to Diana when he was alone with her, as well as to assist with night-time feeding. Diana was proving uncooperative in this endeavour, refusing to feed from a bottle, and the couple were trying to encourage Diana to feed from a cup instead. To minimize distraction Esther had left the room in order to allow Richard and Diana to practise. Richard was openly worried about his wife, and took the opportunity to speak to Karen about his concerns. Karen explained, 'For a woman who's

been taught that she can do anything, it's like you've been plummeted back into the 1950's; it feels like you're losing everything'. Richard nodded and replied, '[Esther] was having coffee with another woman who's just had a baby as well, and they were saying that they were both well-educated and intelligent and now all they can do is talk about poo!' As Esther experienced, it was the narrowly focussed and often monotonous life with a newborn that contrasted so strongly with the varied and comparatively social nature of most women's professional lives. This heightened the challenging process of adjustment to life with a newborn, exacerbating the sense of isolation borne out of demographic change and resultant changes in societal structure, as well as the limited intergenerational knowledge of breastfeeding.

Many participants experienced the period after birth as isolating, particularly when they did not have strong familial support networks close by. This period of vulnerability and social isolation coincided with the weeks most critical to the process of learning to breastfeed and establishing confidence in an unfamiliar practice. As one mother said, 'having gone through the trauma of birth which is such an invasive procedure that can be pretty shocking and pretty full on, suddenly when you're at your most tired, most vulnerable, you're expected to learn this new motor skill'. Since vulnerability and isolation were experiences common to many mothers in the study, regardless of infant feeding outcomes, it is likely that the lack of direct general social and familial support exacerbated the challenges that many women experienced during the physical process of learning to breastfeed.

Conclusions

Policy objectives were strongly represented in women's narratives, affirming that global and national infant feeding objectives set out by public health policy are communicated in

a highly effective way to expectant mothers through information sources that target women during pregnancy. Women largely acquired information on infant feeding through a variety of antenatal courses, independent research, or clinical sources (predominantly midwives and Health Visitors). Familial support was generally either not available or was perceived as unhelpful or out-dated. Women's expectations of their own breastfeeding success matched those outlined by these information sources, and expectant mothers generally therefore felt commitment towards breastfeeding exclusively for six months. After having given birth, however, the process of theoretical preparation was perceived as inadequate and women felt that their expectations of the benefits of breastfeeding had been raised unrealistically. The benefits of breastfeeding were perceived as having been exaggerated with the objective of encouraging women to initiate breastfeeding. Women perceived several aspects of learning to breastfeed as having been overlooked or neglected during this process, all of which combine to place the burden of responsibility for achieving breastfeeding success on individual women, simultaneously absolving state and society of the responsibility towards supporting women in doing so. Women were encouraged to achieve these objectives through engaging with series of universal rules that ostensibly facilitate successful breastfeeding– to inform themselves before birth; to engage in behaviours that encourage breastfeeding immediately after birth; to persevere with breastfeeding; and to overcome barriers by seeking expert support. However, although for some women in this sample this process worked, learning to breastfeed is a process of enskilment that involves multiple factors that are often outside a woman's control and which are furthermore highly specific to individual mothers and babies. Women became disillusioned when the information they had carefully acquired before birth emerged as unrealistic, supporting previous research that identifies antenatal education as setting 'unrealistic expectations of the breastfeeding relationship' (Fox et al.

2015) and providing a basis for advocates of more realistic antenatal support (Hunter et al. 2015). The difficulties that women experienced with breastfeeding were exacerbated by a more general sense of isolation, particularly in the early stages of motherhood. Participants linked this to a loss of support structures that might be provided by close family networks elsewhere, which led to a lack of more general assistance in caring for a young infant.

Chapter Four:
Measuring Breastfeeding Success and Nutrition-Related Infant Health

The assessment of an infant's health constituted a central focus for mothers, closely observed and monitored with reference to physiological markers and developmental phases. Infant growth emerged as a key measure of infant health, in part due to the clinical emphasis placed on surveillance of growth during the early years of an infant's life in order to monitor infant health and identify potential health problems. While mothers take active control of overseeing their infant's everyday health, actual procedures of monitoring are controlled and enforced by midwives and other health professionals involved in infant care. These procedures therefore take place primarily during clinical encounters, engendering maternal reliance on experts in determining whether or not an infant is thriving.

Since the breastmilk that a woman produces directly sustains her infant, enabling him or her to grow, a steady rate of growth in accordance with standardized growth curves was perceived to be a key measure of breastfeeding success – both by mothers and by the health professionals responsible for monitoring infant health. A growth rate that did not correspond with growth curves prompted concern over the infant's health and consequently the appropriateness of continued exclusive breastfeeding. Infant weight thus became a site of conflict between two ontologies of breastfeeding success, both communicated as equally central to infant health. On the one hand, the policy model of successful breastfeeding that emphasizes the importance of exclusive breastfeeding in optimizing initial and future infant health. On the other hand, the clinical emphasis on infant weight as a definitive measure of infant health and therefore breastfeeding success, which in many cases prompted the introduction of formula milk and therefore divergence with the policy optimal.

The first section will examine procedures of health surveillance, which focus primarily on assessing and recording infant weight through processes of routine measurement during clinical encounters. The importance of infant weight in informing maternal and clinical ontologies of success will be outlined, as well as the concomitant concern for infants who did not gain weight in accordance with growth curves. The phenomenon of insufficient milk will be explored in the second section in relation to weight to suggest that the emphasis on static measurements of infant health prompted or reinforced experiences of insufficient milk by compelling women to focus on physiological markers as determinants of breastfeeding success. This, and the reliance on experts to evaluate infant growth, undermined maternal confidence in assessing infant health. The final section will examine the conflict between maternal, clinical and policy ontologies through the experiences of women whose infants were diagnosed as 'faltering' in growth.

4.1 Examining Clinical Markers of Breastfeeding Success

The on-going health of an infant and the associated procedures of monitoring infant health are experienced as a fundamental part of caring for a newborn infant. Routine measurement of infant weight constituted the most significant aspect of infant health monitoring for mothers in this study, providing a central focus for clinical encounters and a regular topic of conversation among mothers. While a steady rate of growth along standards of weight-for-age measurements confirmed breastfeeding success in clinical terms and provided reassurance of breastfeeding success for mothers, a slow or 'faltering' rate of growth proved to be a significant area of concern for many visitors to Baby Café.

a) Assessing the Infant Body: How Growth Defines Health

Infant health is situated in a wider context of clinical surveillance that characterizes modern biomedicine. The primary marker of infant health globally is growth, resulting in an emphasis on infant weight by practitioners and parents as an objective indicator of infant health. The first weeks and months of a child's life are punctuated by routine clinical encounters: health visits, physical examinations, immunizations and blood tests, the results of which are recorded methodically. While health checks are voluntary – parents can choose whether or not to consent to screening procedures – most are strongly recommended, and perceived by women in this study to be routine with none reporting refusal of any health tests.

According to NHS online,[32] health monitoring begins at birth with the newborn physical examination. This is conducted by a doctor, midwife, nurse or Health Visitor and takes place within 72 hours of giving birth, ordinarily before mother and infant are discharged from hospital. Mothers are asked about their infants' feeding habits and alertness, and infants are checked for any physical abnormalities including sight, hearing, cardiovascular and congenital hip dysplasia (abnormal development of the hips). Five days after birth, infants are given a blood spot (or 'heel prick') test, which screens for six different metabolic diseases. Between ten and fourteen days after birth, a Health Visitor conducts a review of the infant, giving advice on sleep, vaccinations, infant feeding and development. At six to eight weeks the initial newborn screening is carried out a second time, this time generally by a GP. Vaccinations are also offered at eight weeks, twelve weeks, sixteen weeks and one year of age. A further review is offered between nine months and a year, this time focussing on development, diet and behaviour. The final

[32] See https://www.nhs.uk/conditions/pregnancy-and-baby/baby-reviews/

infant health and development review is conducted between two and two-and-a-half years of age, which again focuses on development, diet and behaviour.

The emphasis during the clinical encounters described above is on the assessment of physical measures that have come to define infant health in biomedical contexts: developmental markers and growth patterns that are observed carefully in order to assess current health and future risk to the infant. Overseen by a network of experts (midwives, GPs, Health Visitors and paediatricians), mothers were encouraged to monitor their infants' health carefully and record pertinent details systematically. Directly after the birth of the infant mothers were given a Personal Child Health Record (commonly known as the PCHR or 'Red Book'), which constitutes a written record of markers designed to represent a comprehensive overview of the health of individual infants and children.[33] Parents are required to bring the book whenever they visit a hospital, GP, Health Visitor, midwife, therapist, or any other health appointment in order to provide a linear overview of an individual infants health as well as to ensure consistent completion. The level of detail recorded in the PCHR exemplifies the attention that mothers in this study – particularly first-time mothers – gave to documenting their infants' health and development, as well as demonstrating the systematic surveillance of infant bodies that dominate assessments of infant health.

The function and contents of the PCHR reveal a focus on seemingly objective and measurable tools for managing infant bodies. The most significant of these tools is infant growth, which forms the primary marker of infant health in clinical contexts. Infants are

[33] Introduced in 1991 and gradually adopted throughout the UK thereafter, the PCHR constitutes a standard health and development record that serves to document and review immunization schedules, infant growth patterns, and developmental stages. Its purpose is to 'provide a collaborative tool that encourages partnership between parents and health professionals', 'improve communication between health professionals and parents' and 'increase parents' understanding of their child's health and development' (NHS 2016). The PCHR consists of fifty pages that detail information and advice to new mothers and fathers, as well as a series of charts and tables relating to immunizations, screening, routine reviews and growth charts that are left blank for parents and health professionals to complete systematically.

weighed at regular intervals and the numbers plotted on centile charts in the PCHR. Centiles range from 0.4 to 99.6: the optimally growing child will 'track' along their particular centile line, i.e. increase steadily in weight along the centile line on which their birthweight lies. Midwifery and Health Visiting protocols state that babies are first weighed at birth; at five days old; ten days; one month; and then at 6-8 weeks. Mothers were encouraged to visit their child health clinic to have their baby weighed once a week until the infant reaches eight weeks of age, and then once a month until the infant reaches six months of age. Health professionals discouraged more regular weighing in an effort to avoid parental anxiety surrounding infant weight. However, the emphasis on weight as a fundamental marker of infant health resulted in a commonly expressed desire on the part of mothers to weigh infants more frequently in order to provide regular reassurance as to the health of the infant.

The interest that parents took in infant growth emerged through regular conversations both during the course of interviews and at Baby Cafés. Often one of the first questions posed to a new mother related to how much her baby weighed, indicating the significance that weight confers in relation to the health of an infant. During subsequent months mothers commonly knew how much their baby weighed at any given point in time and could usually relay these figures with accuracy from memory, confirming the significance placed by mothers on numerical indicators of infant health and growth.

Lay perspectives on the significance of infant weight in relation to infant health were reflected in a common desire for infants to display physical characteristics of fatness as a corporeal demonstration of good health and plentiful nourishment, both of which provided reassurance to mothers that they were breastfeeding successfully. Mothers frequently expressed this desire through comments such as 'She's becoming a proper

fatty – just what I wanted!' as well as mutual compliments like 'She's lovely, she's got two chins!' Jo, a peer supporter at the East Oxford Baby Café, frequently drew envious comments from other mothers due to her baby's fatness: 'He's got rolls of fat just everywhere, down his back, everywhere!' Jo took great pride in the size of her baby, referring to the infant's position at the high end of the centile chart and returning compliments with 'You're looking at a 99% baby!' Jo explained her desire for a big baby as a safeguard against potential weight loss: 'I think it's nice to see a fat baby, my oldest had problems with teething and didn't eat much for a couple of weeks so he flat-lined and even lost a bit, but it was okay because he had weight to lose – whereas if you've got a skinny baby already they just end up skeletal'. Baby Café facilitators similarly used observations about infant fatness to provide encouragement to new mothers, for example:

Karen:	That's the sign of a baby very well fed, a baby that has chubby cheeks!
	What a whopper!
Camilla:	He's chunking up nicely
Lauren:	He's got lovely little rolls!
	She's a big fat healthy baby.

The desire for 'big' or 'fat' infants has been described previously in anthropological research (Ritenbaugh 1991), with evolutionary perspectives suggesting that larger infant body size indicates high parental investment and reflects an adaptive mechanism that improves an infant's chances of survival during weaning (Wells 2003a). Gwen, a mother-of-one who had learned to breastfeed relatively easily, explained that the size of her 6-month-old son – and particularly the reaction that this had prompted from other people – had served to boost her confidence during the early stages of breastfeeding. She explained:

> I had family around quite a lot, my parents and Tom's parents, and they were full of sort of, "Oh isn't he lovely, look at how big and healthy he is", you know, which may have not been based on particularly much evidence but it just made me feel very confident about the whole thing, so I was never in a position where I had to worry about [weight].

Having an infant who was deemed 'chubby' or 'chunky' was thus perceived as a sign of breastfeeding success, a tangible indicator of a woman's ability to provide her infant with adequate nutrition.

With infant fatness arising in day-to-day contexts as a general indicator of infant weight, a greater emphasis was placed on numerical indicators as a more objective measure of growth. The process of weighing infants is represented as a clinical procedure: clinical guidelines emphasize the need for accuracy in determining infant weight, the use of electronic scales, and expert training in conducting growth measurement. Women were discouraged from weighing a baby without a health professional present, reinforcing maternal reliance on experts in providing a definitive assessment of infant health.

This arose as a point of contention in the North Oxford Baby Café during fieldwork. When I began fieldwork, a set of scales would be placed by the community midwife on a small table next to the kitchen area, and mothers would often weigh their babies independently as they came into Baby Café. A few months later, the scales disappeared from the table top. Soon afterwards, a mother asked Rosie, a peer supporter, whether she could weigh her infant. Rosie responded that Baby Café were no longer permitted to weigh babies, explaining that mothers instead needed to visit their local Health Visitor's Clinic in order to weigh their infants. Karen, a facilitator, added 'Health Visitors have got a bit territorial about the scales!' Molly, a first-time mother, had experienced a similar situation at a separate Health Visitor's clinic: '[Everyone] used to weigh [their babies] at Elm's Road Children's Centre on the Thursday bumps to baby

group [weekly informal get-togethers organized across the country by the NCT] And then they took [the scales] away and banned us from weighing'. While the removal of the scales was intended to prevent women from becoming anxious about infant weight and weighing their infants too frequently (Karen explained, 'It's a good thing that they don't want people to weigh too often'), women perceived this as a reduction in control over their ability to keep track of infant weight.

Routine clinical assessment of infant health played an important role during early motherhood, as evidenced by the frequency of clinical encounters during the initial months of an infant's life. The importance of infant growth was communicated to mothers through a focus on infant weight during clinical encounters as the most definitive and objective measure of infant health. Maternal perceptions of the importance of infant weight were reflected in mothers' conceptions of fatness as an immediately obvious sign of health in their own infants and in the infants of others. While this formed the basis of lay perceptions of infant growth a higher value was placed on numerical indicators of growth, prompting maternal reliance on experts to determine the health status of their infants.

b) Falling Through the Centiles: How Growth Defines Infant Feeding Practices

Corresponding to the emphasis on adequate and consistent growth as a marker of breastfeeding success, lack of growth or faltering growth constituted the predominant clinical manifestation of 'unsuccessful' breastfeeding. While infant feeding methods influence growth, it is also true that infant growth can have an effect on feeding method; mothers whose infants did not gain weight at a rate that corresponded with growth curves were more likely to feed their infant with supplementary formula milk or transition from breastmilk to formula milk entirely. Mothers commonly report insufficient breastmilk or

insufficient infant growth as a reason for introducing formula milk to supplement their own supply of breastmilk (Binns and Scott 2002) or for weaning their infants earlier than six months of age (James 2004). These findings were mirrored in this study. Anxiety about infant weight loss and actual weight loss were common reasons for seeking support among participants: a seemingly objective measure, the relationship between breastfeeding and infant weight was fraught with ambiguity and uncertainty.

Loss of weight in an infant after birth is commonly referred to as 'weight faltering', which is defined in relation to the PCHR centile charts as 'weight falling across one or more centile spaces, low weight for height or no catch-up from a low birth weight' (Webster-Gandy et al. 2012:266). Previously described as 'failure to thrive', the term describes a relatively common growth pattern that has multifactorial causes. Roughly 5% of infants and young children with weight faltering have an organic root to the problem (such as chromosomal abnormalities or Central Nervous System (CNS) pathology), and even fewer cases are associated with neglect, maternal mental health problems or addiction (Shields et al. 2012). More common, non-organic or 'functional' causes include feeding difficulties and child temperament (Rudolf and Logan 2005). It is common for infants to lose some weight during the early days of life, a phenomenon that usually relates to body fluid adjustments after immersion in amniotic fluids in the womb. This weight loss usually stops after 3-4 days of life, and most infants have returned to their birth weight by three weeks of age (NICE 2017). If infants in the early days of life lose more than 10% of their birthweight, further clinical assessments are usually undertaken (ibid.).

An exclusively breastfed infant relies wholly on his or her mother for nutrition, in order to grow in accordance with the trajectory outlined above. Maintaining exclusivity therefore relies on a mother and infant breastfeeding in such a way as to enable the infant

not only to survive but also to grow. While some mothers used milk expression as a vehicle to enable others to physically deliver milk to the baby, these mothers nonetheless needed to produce a sufficient quantity of milk in order to sustain their infant. In order to comply with both public health and clinical definitions of breastfeeding success therefore, mothers must ensure that their infant receives an adequate amount of breastmilk, without supplementing with alternative feeds, in order to remain both outside the category of weight faltering and inside the category of exclusively breastfeeding.

Exclusively breastfeeding women were profoundly aware of their position as the sole source of sustenance for their child, which provoked a strong sense of responsibility that was communicated most acutely in instances where an infant was diagnosed as weight faltering. Paula, a mother-of-three whose first two children had both been slow to regain their birthweight, explained, 'It's really upsetting to think that you are the only source of nutrition for your child, and if it's not working – it feels like you're not doing the right thing for them'. For Georgia, who was advised to introduce formula as a supplement after her son began losing weight, these feelings tied in directly with her perceptions of her ability as a parent: 'You sort of think, "Oh, I'm not very good at this parenting thing, I can't even feed my baby". And I think…especially because, like, that's the thing that you're supposed to be able to do for your child, if you can't do it it's *horrible*.' Erika who breastfed exclusively before introducing formula in response to infant weight loss, observed: 'It is just so fraught because it feels like there's so little you can do for your baby in the first few months, [breastfeeding] is the one thing that you can do, and…so when it goes wrong it's really really stressful.' Erika and Georgia's comments indicate that exclusive breastfeeding is intertwined with a feeling of responsibility stemming from a sense that providing an infant with adequate milk is a fundamental role that a mother ought to be able to fulfil.

Mothers whose infants were not growing according to their growth curve consequently experienced a loss of confidence in their ability to breastfeed exclusively. Naomi, a mother-of-two whose second child gained weight slower than her projected growth curve, explained, 'People talk about the weight thing a lot. And I got quite sensitive about it actually, when she wasn't putting on weight'. Naomi went on to describe the way in which her daughter's stagnation in weight had affected her:

> If you've got a baby who's got a little bit of a problem and you're feeling a bit insecure about it, I kind of didn't want to go [to Baby Café sessions] because I wasn't feeling like the confident mum.

Her daughter's growth, or rather lack of growth, shook Naomi's confidence not just in her ability to breastfeed but also in her perception of herself as a 'confident mum', resulting in a reluctance to socialize with other mothers. Paula, mother of six-month-old Victoria, remembered her experience with Victoria's siblings – twins – who were born prematurely and had been slow to gain weight for several weeks after birth. Paula explained 'I really wanted to fatten them up because I was so tired of everybody being like 'oh, were they early?' Experiencing similar emotions to Naomi, Paula was concerned about the way people viewed her children and wanted them to be visibly healthy. Paula contrasted her experiences with the twins to her experience with Victoria, with whom she had had no concerns about weight: 'It's much easier to feed you, you get bigger instead of being a right skinny minny!' Paula found the experience of feeding an infant who was 'fat' deeply gratifying, pinching Victoria's skin between her fingers to demonstrate how much weight she was putting on.

A third mother, Pauline, described a similarly contrasting experience between differently growing children. A single mother who had already raised three daughters, Pauline had not weighed her fourth child, Matthew, since his weight had been measured straight after birth. At five months, Pauline placed Matthew on the weighing scales for

the first time since his birth: ‘I was at bumps to babies and everyone was weighing their babies so I thought I might as well – and he’s dropped massively. He was born in the 99.6th percentile’. She commented, ‘He’s happy – I just wish that he was fatter because in an odd sort of way I feel disappointed with myself that he isn’t. He’s still got rolls of fat on his thighs and arms, not so much on his wrists any more but he’s got a layer of fat on him everywhere’. By the end of the week, Pauline had decided that she would take Matthew to see a paediatrician to rule out any underlying issues causing his slow weight gain. She was advised to start feeding him solid food earlier than the otherwise-advised six months. Though Pauline had wanted to breastfeed Matthew exclusively until he reached six months, on the advice of her paediatrician she began feeding him apple puree and pieces of fruit to supplement her own breastmilk. Two weeks later, she returned to Baby Café pleased with Matthew’s progress, presenting him proudly to the facilitators: ‘Looking at him now his legs are all juicy and his cheeks have changed and I can see that even though I see him every day.’ For Pauline, fatness was a sign of health for a baby, and she wanted her son to be as plump as her other children had been: ‘my favourite bit is when they look like they’ve got rubber bands round their wrists, so chubby’. Matthew’s smallness when she initially realized he had not been gaining weight as he should was, to Pauline, a sign of her own failure to supply adequate quantities of breastmilk; giving her son solid food achieved her perception of what Matthew should look like as a healthy baby.

A fourth mother, Laura, began supplementing with formula milk after her son stagnated in weight over four weight measurements: ‘After we started with the formula we started seeing that he was getting more chubby and gaining weight, so that was an indication of how things were going’. The immediate and, above all, tangible

improvement in her son's growth served to legitimize Laura's concerns as well as her decision to introduce formula milk.

Visible fatness and numerical weight gain were thus perceived to be key indicators of success and reassurance, particularly after an episode of growth faltering like the one described by Pauline. Sonya, a mother-of-one who was breastfeeding her son exclusively, experienced a comparable episode of weight faltering in her son, William. William developed pyloric stenosis, which occurs when the passage between the stomach and the small bowel becomes narrower, causing vomiting in infants and associated problems such as dehydration. He was admitted to hospital, where he was put on a drip for three days before an operation that corrected his condition. A level-headed and cheery individual, Sonya took his visible increase in weight following his operation as reassurance as to her ability to sustain him with breastmilk alone, saying to him during one interview, 'Now you're fine and you're fat, aren't you! A good old chunk'.

Mothers whose babies were perceived as physically slight, rather than fat, expressed concern or disappointment in their infants' size and often experienced a loss of confidence in their ability to breastfeed. Infant growth was thus conceptualized by mothers as a fundamental indication of breastfeeding success and consequently an indication of failure if the infant did not grow according to standardized rates. For mothers experiencing the latter, weight loss or stagnation represented a manifestation of their inability to feed their infant exclusively with breastmilk, often prompting the introduction of formula milk or complementary food.

4.2 Measuring Milk: Quality and Quantity in the Pursuit of Breastfeeding Success

Milk intake has a direct impact on infant growth and health: if an infant does not receive nutrition in adequate quantities, he or she will stop growing or begin to lose weight. Breastmilk is calorific and, during the first six months, is described within health education literature as all an infant needs to survive and grow. This depends, however, upon the infant feeding effectively and ingesting sufficient milk. Many women in this study worried about the quantity and quality of their milk, i.e. whether their breastmilk was adequate to ensure the health of their infant. This has been identified in previous research, both anthropological and sociological, and has been attributed to a variety of factors including the medicalization of breastfeeding. This section argues that maternal perceptions of insufficient milk are linked to the clinical emphasis on weight gain as the primary measure of infant health and breastfeeding success.

When an infant feeds at the breast, the milk transitioning from mother to infant becomes virtually invisible apart from the occasional trickle of milk appearing at the side of the infant's mouth. The lips of the infant are pressed close to the breast, and the vacuum created by this seal as well as the sucking motion used to remove milk from the breast ensures that milk travels from the nipple to the back of an infant's mouth with minimal spill. The act of breastfeeding therefore prevents mothers from seeing how much milk is entering an infant's body, adding a considerable degree of uncertainty to the process of quantifying infant health that otherwise appears to be objective and measurable. Furthermore, infants are largely in control of the process: when they no longer wish to feed they simply refuse or detach from the breast. Feeding an infant using a bottle, meanwhile, offers greater certainty to mothers over the quantity of milk that an infant ingests. Other than the (usually small) amounts of milk that infants often

regurgitate after a feed, it is relatively uncomplicated to quantify the amount of milk an infant drinks by using the measurement line found on the side of most feeding bottles to assess the quantity of milk in a bottle before and after a feed. Furthermore, tins of formula milk have specific instructions on the quantity of milk to administer to infants, varying the quantity of milk and frequency of feeds according to the infant's weight and age. While these are not rigid rules (appetite varies from infant to infant), they give parents basic guidance on how much formula to administer.

Uncertainty over the quantity of milk an infant was ingesting was a common reason for visiting Baby Cafés. Participants often expressed a desire for certainty in relation to infant milk consumption in order to provide reassurance that he or she was receiving sufficient quantities of milk. The act of breastfeeding rendered this virtually impossible. For some mothers, this presented a key challenge of breastfeeding as opposed to bottle-feeding. Kara, mother of two-year-old Jose and six-month-old Alejandro, explained that 'when you can't see what's coming out of your body you're worried that you're going to kill this child'. Kara's inability to see the amount of milk entering Alejandro's body was deeply concerning to her; she could see from the milky residue on Alejandro's tongue after a feed that he had ingested some milk at least, but was unable to tell for certain how much, and she knew that inadequate milk intake would be detrimental to his growth and therefore his survival and health. Susan, another first-time mother, similarly described the difficulty in judging how much milk her daughter was taking in while she was on the breast: 'It's hard to tell because obviously I have no idea how much she's drinking, other than the fact that she comes off and doesn't need any more'. Georgia, whose son Will had suffered from jaundice immediately after birth, had been advised by her midwives to supplement with formula milk in order to avoid hospital

admission.[34] Georgia explained that Will had subsequently had difficulty latching, resulting in a five-week period of feeding him exclusively with expressed breastmilk. This was not an unusual approach, often providing a solution to women whose infants had difficulty learning to breastfeed. Feeding in this way maintained exclusivity, preserving milk supply while affording the mother and infant more time to learn to breastfeed. At four months, Will had just mastered feeding at the breast – up until that point, Georgia had been expressing and Will had been feeding exclusively from bottles containing Georgia's expressed milk. Georgia found the transition from feeding Will expressed milk in a bottle to feeding him milk directly from her breasts challenging:

> I find it difficult now, because in the beginning he always had a bottle of expressed milk and I could always see how much milk he was getting. Whereas now obviously I have absolutely no idea, so it's quite hard to adjust to that as well […] There's always a niggle in the back of my head that says he's not getting enough milk.

The fact that Georgia had been able to measure Will's milk intake while she was expressing milk rather than breastfeeding had exacerbated her concerns about her milk supply, demonstrating the significance of processes of measurement in women's conceptions of milk sufficiency.

The prospect of having insufficient milk to sustain an infant was often one that women had become aware of through the experiences of other mothers: women frequently spoke of friends or relatives who felt they had not had enough breastmilk, or who had had to stop breastfeeding because they were not producing enough milk. Ania described the experiences of a friend in her home country, Poland, who had stopped breastfeeding after a week due to a sense that her milk was not sufficient to sustain her infant. Ania, who had not had any problems breastfeeding her daughter, spoke with

[34] Exclusively breastfed infants are at greater risk of developing jaundice, the reasons for which are not yet fully understood (NICE 2010). While jaundice usually resolves without treatment, hospital treatments such as phototherapy or exchange transfusion may be required (ibid.). Increasing the frequency of breastfeeding is known to manage jaundice in healthy infants (NICE 2010; Soldi et al. 2011), but mothers in this study were also occasionally advised to supplement with formula milk.

sympathy about her friend's situation, which she attributed partly to a lack of support at the hospital in which her friend had given birth: 'She was getting frustrated, the baby's hungry, and she was tired with the labour, and then the midwife comes and says, "Oh, you're making so much trouble, give the baby the bottle and just stop fussing about". That wouldn't happen [in the UK]. They would really try to help you, at least they would be nice'. Another mother, also from Poland, recounted a conversation with a friend who had similarly stopped breastfeeding due to insufficient milk:

> The last time we talked when she saw me breastfeeding she said, "Oh, I stopped because I didn't have enough milk". She said she stopped after about a month, a month and a half, because it was really uncomfortable – not that it was uncomfortable for her but she didn't have enough milk and the baby would cry, so she had to give a bottle so finally she just stopped.

Several women described the experiences of their own mothers who had also experienced a low milk supply. Tessa, who moved to the UK from Greece a year before having her first child, explained that low milk supply 'runs in my family': 'My mother is here, she had problems too – she fed for forty days and then her milk supply ran out. I said, maybe it's genetic?' Tessa continued to breastfeed but began supplementing with formula milk, unconvinced that her milk supply would increase substantially despite encouragement to continue from her mother. While she wanted to return to exclusive breastfeeding, Tessa explained 'I worry about my milk supply and my milk quality and everything – maybe it's not good enough'. The concern that she may have inherited a propensity for insufficient milk undermined Tessa's confidence in her supply and, although she did return to exclusive breastfeeding, she frequently expressed doubt in this regard.

The fact that women often knew other mothers who had stopped breastfeeding due to an insufficient milk supply perhaps contributed to the perception of insufficient milk as both a common phenomenon and as a physical barrier to breastfeeding that might affect any mother, regardless of her efforts to initiate or maintain exclusive breastfeeding.

While many women spoke of their *intention* to breastfeed, this was sometimes expressed instead in terms of a 'hope' that they would be able to produce sufficient quantities of milk. In these instances, mothers qualified their statements with the recognition that their milk supply might not be sufficient. An Iranian couple, who came to a Baby Café session when the expectant mother, Yasmine, was seven months pregnant, spoke with facilitator Karen at length about the benefits of breastfeeding and of Yasmine's willingness and desire to breastfeed their unborn child. Towards the end of the conversation Yasmine concluded, 'I think I'll breastfeed, if I've got enough milk'. Karen responded by asking: 'Is there any reason why you shouldn't?' to which Yasmine replied, 'No, but I've seen some women don't have enough milk after the first few months'. This exchange indicates the basis of many women's concerns about milk insufficiency, which were often rooted in the accounts of other mothers who had experienced milk 'drying up'.

Concerns regarding milk sufficiency similarly often arose through family members who had specific ideas about how a well-fed infant should behave. Sonya complained, 'You get the classic mother-in-law type stuff of "Why's he asking to feed again, you can't have enough milk"'. Susan's uncertainty in relation to her milk supply, meanwhile, had arisen in response to her own mother questioning the adequacy of her breastmilk, which she believed would be diminished because of Susan's vegetarian diet: 'My mum was concerned […] Because I'm vegetarian she said, "Oh maybe your milk isn't good enough"'. Similarly mothers were often cautioned about their milk supply if their infant was deemed a 'bad sleeper' – that is, one who slept for only short periods at a time or who was difficult to put to sleep. Kara, a confident mother-of-two when I met her, described the interventions of her parents after the birth of her first son: 'When Ivan wasn't sleeping […] they were saying, you know, "I think you don't have enough milk and that's why the baby's not sleeping, maybe you just need to supplement with

formula"'. The use of formula milk as a sleeping aid, or as a solution to difficulties in putting infants to sleep, was common – a response to sleep patterns that were perceived as problematic or abnormal due to insufficient milk.

Sleep and other infant behaviours formed a key component of maternal assessments of milk sufficiency, with some behaviours interpreted by mothers as signs of an infant being unsatiated: crying as soon as a feed finished, wriggling and grizzling during a feed, fragmented sleep, or refusal of the breast. Infants who displayed these types of behaviours were termed 'fussy', an expression used by mothers to describe infant behaviours that appeared to signal restlessness or agitation. Defined in general terms as 'fastidious about one's needs or requirements; hard to please' (Oxford English Dictionary 2016), fussiness was often a source of frustration to mothers, who frequently interpreted associated behaviours as a sign of wilful awkwardness or unwillingness to feed as well as an indicator of insufficient milk, which often exacerbated existing uncertainty about milk supply. Mia, mother of four-week-old Adam, explained, 'It feels like he wants more than I've got. It feels like he feeds and then comes off hungry, or is hungry an hour later'. Susan remarked, 'It just feels like I'm drained before she's finished, and then she ends up coming off'. Kirsten, a Baby Café regular, similarly felt that she wasn't providing her son with sufficient milk and frequently supplemented her own milk supply with formula milk for the first month after birth. Sitting in her living room after her son had fed for half an hour, she looked despairingly at him as he released her breast and immediately began to cry: 'It doesn't feel like he can get a completely full stomach just from me. Unless he has this feeding marathon that lasts three or five hours, which completely does me in. And then he goes down but then that's because he's so exhausted as well, after all that.' In addition to her own anxieties, Kirsten's husband had expressed concern that Kirsten was not producing enough milk to satisfy Ed: 'Tom gets really frustrated because he says he

still doesn't completely feed from me, he still needs topping up with a bit of expressed milk from the bottle to properly send him off to sleep'. Tom's scepticism regarding their son's milk intake thus further undermined Kirsten's confidence in her own milk supply, prompting Kirsten to consider supplementing with formula milk as well as expressing milk regularly to increase her supply.

The process of expressing milk – that is, the process of squeezing milk out of the breast – provided some women with visible reassurance as to the quantity of milk they were able to produce. Milk is expressed either by hand, squeezing milk manually from the breast, or using a breast pump. Breast pumps are either manual or electric; the breast is positioned inside a funnel that is designed to mimic the vacuum effect created by an infant's mouth, triggering the let-down reflex and stimulating milk production. The suction created by the funnel draws the nipple into the funnel and then releases it in a repetitive motion, channelling milk into an attached feeding bottle. Having transitioned to feeding her son Will predominantly from the breast, Georgia explained that, 'In some ways I really like expressing, and sometimes now I do miss it because I miss knowing exactly how much milk he's having.' Briony, a mother-of-two, described a similar appreciation of expressing milk: her son had been slow to gain weight, and she began expressing milk after being lent a 'hospital-grade' pump. She explained, 'I could see fluid going into him, and that made me very happy'. The fact that Briony could 'see' that her son was ingesting milk provided reassurance that feeding from the breast did not. Clare, whose baby was four weeks old when I met her, wanted to express milk for similar reasons. Clare's wish to start expressing milk was causing tensions with her husband, and she had come to Baby Café in order to find out more about expressing in order to convince him of its benefits: 'My husband is against expressing, he's Albanian and they don't know much about expressing and the benefits of expressing. But I really want to

express so I know what he's getting'. Women expressed milk for a variety of reasons – to relieve discomfort in the breasts in the absence of the infant for example, or to enable another person to feed the infant – but it also served to render breastmilk visible, providing tangible assurance of the quantity of milk that an individual was able to produce from her breast.

Measurement of milk supply through expression, however, is often far from accurate and individuals varied in their ability to express milk effectively. This complicated the endeavours of many mothers to measure their milk supply through expression. Kara explained: 'Some women can pump. I *can't*. I've tried', while Rebecca commented: 'I think some people probably get a really high yield from it, but I did not. I spent twenty minutes getting 30mls and I was like actually this is just ridiculous'. Women often found that they need to be in a specific frame of mind in order to 'trick' their breasts into triggering a let-down reflex in order to produce milk effectively, a learned skill that required patience and practice. Karen, a Baby Café facilitator, explained to one mother who wanted to express milk so that her husband could feed their child occasionally: 'Don't worry if you don't get much milk at first when you express – it's not because you don't have enough milk, it's because you're not good at it yet. Expressing is a skill, you'll learn it with time'. To another mother, Olivia, who was becoming increasingly frustrated with the quantities of milk that she managed to express, Karen said 'Pumping is much more dependent on how you're feeling, so it becomes a vicious cycle. With breastfeeding there are so many factors to stimulate the let-down reflex, whereas pumping is much more dependent on what's going on in your head – you have to learn to let down for the pump'. Olivia nodded in agreement, saying 'When she's on my breast the milk comes down quickly, but when I pump it doesn't'. As well as the enhanced maternal physiological response prompted by breastfeeding compared with expressing, infants are

more efficient at extracting milk than are breast pumps, creating a further discrepancy between actual supply and expressed supply.

For this research, facilitators at Baby Café cautioned women against using the quantity of milk they expressed as a benchmark for milk supply when breastfeeding for this reason, explaining that 'your baby is always going to be much more effective than a machine'. Nonetheless milk expression was used in clinical settings too in order to quantify women's milk supply. Erika, whose experience with infant weight loss was described in the previous section, was instructed during a hospital stay to express milk rather than feeding her daughter for twenty-four hours. The purpose was for clinicians to measure Erika's milk supply in order to establish whether this was the cause of her daughter's weight loss. Low milk supply was diagnosed, and Erika began supplementing her daughter's diet with additional formula milk. Some months later, having substantially decreased the quantity of formula milk versus breastmilk her daughter was receiving, Erika was dissatisfied with the diagnosis: 'Everything I see online says that when you pump you produce less than when a baby is feeding, that babies are more efficient than a pump. […] But that was that. They said, you know, you're just not producing enough. But again I just don't know…*do* they know that?' Doubting the validity of milk expression as an accurate measure of milk supply Erika queried, in hindsight, the influence that a diagnosis on that basis had had on her decision to supplement with formula milk. Having initially trusted the diagnosis, she latterly resented clinical reliance on a measure that she discovered to be unreliable in determining milk quantity accurately.

As well as milk supply, mothers also used infant feeding patterns as a measure of breastfeeding efficacy. Frequency and duration of feeds were the most common indicators of adequate feeding. Daniela, mother of 2-month-old Magda, described confidence in her own milk supply as a result of her daughter's increasingly regular and

efficient feeding pattern: 'I think there's enough milk because she's stopped eating that much, it doesn't take that long any more. Like the first few weeks it's just feeding and feeding, but now she eats faster'. Particularly lengthy or overly frequent feeding behaviours were interpreted as a sign of low milk supply or ineffective milk intake, while equally infants who fed infrequently were deemed lethargic or lazy feeders. Two women, Chrissie and Erika, placed particular emphasis on measuring the duration and frequency of feeds, tracking their infant's feeding patterns electronically using a smartphone application designed to provide an overview of various measurements related to infant care. Both women demonstrated the app to me during two separate interviews, with Chrissie explaining:

> When you do a feed you click the boob that it's on, and then you can pause or stop, switch to the other side, and so on. And then it displays here as logs, and you can plot sleep, and feeding and so on […] and then it does a little analysis chart, so it does average time between feeds in the last seven days, last month, so you can sort of see how much he feeds and that kind of thing.

Erika made similar use of the app, using it to track the frequency of her daughter's feeds:

> I had an app on my phone to measure when she was feeding […] It was really useful because I wasn't very good at keeping track [of feeding patterns] and especially when they're feeding every two hours, two hours passes really fast and you think she cannot *possibly* be hungry again and then you look and think actually, you know, she could be.

Both Chrissie and Erika fed on demand, but they were both equally keen to track the feeding patterns of their infants in order to ensure that they were feeding frequently enough; they neither trusted themselves nor their infants to feed instinctively in the way that demand feeding requires.

Part of the reason women wanted to track feeding patterns was in order to ensure that infants were receiving good quality milk. Although there are different brands of formula their ingredients are broadly the same: the benefits of breastfeeding, meanwhile, are often described in terms of the 'living' properties of breastmilk – i.e. the capacity of

breastmilk composition to fluctuate according to the time of day, antibody requirements and so forth (Bonigla et al. 2003; Gura 2014; Sánchez et al. 2009). Women were well aware of this fact, and often sought to control the 'type' of milk that an infant might receive at different times of the day. The concepts of fore milk and hind milk, which serve to describe differences in milk composition that occur during the course of a feed, were central to notions of fluctuating milk composition. 'Fore milk' was used to refer to the milk produced at the very beginning of a feed, which is normally higher in sugar, and 'hind milk' referred to the milk produced at the very end of a feed, which tends to contain a higher concentration of fat. The composition of the milk varies according to how long the milk has been collecting in the ducts and how much of the breast is drained: the longer the amount of time between feeds, the more diluted the milk becomes, with a higher lactose content and less fat than the milk stored in the cells higher up in the breast. As the time gap between feeds increases and the woman's breasts become fuller, the difference in fat content between her fore milk and hind milk becomes greater; which means that that the differences in fat content can vary greatly over the course of a day even among individual mothers.

Having learned the terms through antenatal education or from other mothers, women often expressed concern as to whether or not an infant was ingesting sufficient quantities of each type of milk, perceiving hind milk to be of a higher quality than fore milk due to its increased fat content. Kirsten explained, 'I get confused whether he's getting hind milk or fore milk – I think the fore milk is sugary and like a drink, and it kind of almost wakes him up a bit […] and the hind milk is fatty and sends him to sleep'. Kirsten's perception was that the two different types of milk served different purposes, influencing her son's behaviour in opposing ways. Another mother, Helena, was similarly concerned that her son's behaviour reflected an imbalance in quantities of fore and hind

milk that he was receiving: 'He's waking up a lot at night so I'm wondering if he's getting too much of the fore milk and digesting it too quickly'. Both mothers attempted to influence the types of milk that their infants ingested by timing the length of feeds and ensuring that they fed according to a regular pattern.

Although the two terms imply two distinct phases, in reality the process from less fatty to more fatty milk is gradual, taking place over the whole of the feed. Furthermore, research indicates that – providing a mother does not cut feedings short – infants receive roughly the same amount of fatty milk over the course of a day regardless of the breastfeeding pattern, which varies from individual to individual (Kent 2007). This shift in understanding regarding the changes in milk composition were reflected in the approach of the facilitators at Baby Cafés, one of whom explained, 'We're not allowed to use the words fore milk and hind milk anymore, because there's been a lot of research recently to show that the distinction between fore and hind milk is not that clear'. Nonetheless, mothers like Kirsten and Helena continued to regard the distinction between fore milk and hind milk as significant in determining their patterns of feeding and infants' behaviour.

The emphasis placed on measurement of infant health is reflected in women's eagerness to find ways of measuring milk quantity, quality, and infant feeding practices in order to assess breastfeeding success. For many women, the amount of milk they were producing was an unknown factor. While expressing milk for some mothers provided some reassurance that their milk supply was sufficient, many women's experiences of breastfeeding were dominated by uncertainties as to the quantity of milk they were producing, and whether their milk supply provided sufficient nutrition for their baby. First-time mother Vanessa explained, 'I've never quite been able to express enough – and we don't even really know what enough *is*'. Vanessa here sums up the difficulty of

measuring breastfeeding and milk supply; first, the difficulty in measuring the amount of milk a mother produces, and secondly being able to accurately assess what 'enough' milk means. Uncertainty in whether breastfeeding or not was 'working' was reflected in frequently expressed doubt in whether or not a child was growing as he or she should, and a self-evident need to nurture the infant's good health through providing him or her with adequate nourishment. The emphasis on the numerical measure of weight as the definitive indicator of infant health or ill health resulted in attempts to measure the quantity and quality of milk in order to ensure that mothers were breastfeeding well enough to ensure growth. But, as these attempts demonstrate, breastmilk is an inherently difficult substance to measure, and women expressed profound uncertainty in their ability to judge whether or not they were producing 'enough' milk or not. The emphasis on infant weight arguably exacerbated this uncertainty by provoking a focus on the importance of objective measures as the ultimate markers of infant health and breastfeeding success. It may be, therefore, that in the absence of a way to measure milk supply accurately the focus on infant weight as the only viable numerical measure of infant health heightens concerns about insufficient milk that have been described in this study and in existing research.

4.3 Negotiating Risk, Responsibility and Conflicting Ontologies of Success

This section explores the significance of weight loss in women's experiences of breastfeeding. While weight faltering constituted a relatively common difficulty among women at Baby Cafés the experiences of two women in particular, Erika and Naomi, illustrate the ambiguity and tensions that surround the relationship between infant weight and breastfeeding particularly well. This section first discusses their experiences before drawing on the narratives of other mothers in similar positions to illustrate two aspects of measuring infant health and breastfeeding success: first, the uncertainties that dominated

issues of infant weight for breastfeeding women, and second the conflicts that women negotiated when their infants did not follow a growth pattern that matched the standardized curve, or whose infants faltered in growth in the first months of their life.

I met Erika at the breastfeeding clinic at the JR: she had given birth to her daughter, Catherine, five days earlier and had arrived early in order to ensure she would be seen quickly by one of the three infant feeding specialists on duty that day. Erika decided early on in her pregnancy that she would breastfeed – Catherine was her first child, and Erika's mother had breastfed Erika and her two siblings. The decision to breastfeed had thus not been a conscious one; Erika had wanted to breastfeed for as long as she could remember. After strong encouragement during her antenatal classes it had become increasingly important to Erika not just to breastfeed, but also to breastfeed exclusively: Erika was convinced that breastfeeding was best for her baby, citing health benefits including reduced risk of illness and obesity as her primary reasons for breastfeeding. The birth of Erika's daughter, Catherine, went smoothly, and after they were discharged from hospital Catherine was healthy and alert. Catherine had lost some weight at her five-day check, but since any weight loss below 10% is considered normal, neither Erika nor her Health Visitor regarded this as a particular cause for concern. Erika and her daughter breastfed exclusively for several weeks, regularly visiting a Health Visitor in order to have Catherine weighed. At one of these weight checks, when Catherine was ten days old, it emerged that her weight had dropped further from the 85th percentile on the weight chart to the lower end of the 25th percentile, falling across three centile lines on her weight chart.

In her third week of life Catherine began to regain weight, but not at the rate that was expected. That weekend, Erika and Catherine visited the breastfeeding clinic at the hospital, and Erika was told that she should start considering supplementing Catherine's

diet with formula milk. Erika's description of the experience made evident her distress at the prospect, not least because there was no clear 'right' path: 'For me, constantly having Health Visitors come to the house and saying, "she's fine, *don't* give her formula, and doctors saying you don't *have* to but she's still looking a bit weird"…that kind of made it really stressful'. Erika had reached a critical juncture, which required her to decide between two norms. One had been part of her reality since she became pregnant: that of exclusive breastfeeding and the concurrent importance of providing her daughter with optimal nutrition. With this in mind, Erika's Health Visitor was encouraging her to continue exclusive breastfeeding despite the weight loss. The other norm was one that had become part of a new reality, of ensuring that her infant remained at a weight that was deemed acceptable by the clinicians who now formed her primary source of advice and guidance on the health of her infant.

Erika consulted a paediatrician for advice, who informed her that there might be a risk to Claudia's health if she continued to lose weight, but that he could not make the decision of whether or not she should continue to breastfeed exclusively. Erika's husband, Paul, was supportive but also left the choice to Erika: the responsibility for deciding between the two conflicting norms thus fell to her. Erika emphasized the false framing of choice in clinical narratives concerning her daughter's weight loss, saying: 'You have to make the decision, they keep saying, "Well it's up to you to make the decision"; even though you can *hear* that there's a clear preference of what they want you to do'. The paediatrician's preference that Erika referred to was for the introduction of formula milk to reverse her daughter's slow weight gain. Each path was framed as Erika's choice, but in practice she was being pulled in two different directions internally as well as by the experts she was reliant upon for advice: either she could continue to pursue her aim of breastfeeding exclusively, risking further weight loss for Catherine, or she could

introduce formula milk which she perceived as a failure and which furthermore was a step that she felt might be unnecessary. This represented a conflict for Erika: ought she to continue breastfeeding exclusively in line with the definition of 'optimal' that she had internalized before the birth of her daughter, or should she prioritize compliance with the clinical definition of optimal that required her to maintain a steady progression of infant growth defined as optimal by clinical metrics?

Four weeks after birth Erika and Catherine were both hospitalized for a night in order to monitor Erika's milk supply and to establish whether there was any underlying organic reason for Catherine's weight loss. Still Erika was getting conflicting advice as to whether or not the weight loss was problematic or whether it was within the bounds of normal: 'Even that week when the doctors ended up saying, "We're so worried we want you to stay overnight", the maternity support workers were coming and saying, "She's fine, she's just slow to gain weight, don't panic"'. Patterns of growth translate infant health into statistical indices, enabling standardization across individuals and populations: numerical thresholds are presented as clear-cut, markers that allow health practitioners to identify the abnormal and so diagnose organic pathology or non-organic feeding malfunction in a transparent and unequivocal way. Erika's experience, by contrast, reveals a complexity that is masked by the ostensibly straightforward, binary diagnostic criteria, which in her case was characterized by interpretive conflict and analytical ambiguity. Where no pathology is present there is a difficulty in assessing acceptable versus unacceptable risk when weight loss is present in an otherwise healthy child. Erika explained her frustration months later:

> I still haven't had a satisfactory answer about how important the baby's birthweight is. And that was *really* confusing to me, because you've got this chart you're given in the red book, and you're told they should be back to their birthweight within two weeks, ideally ten days, and when that didn't happen the Health Visitors kept saying it's fine, don't worry – she was going up, but just so slowly. Then she ended up plummeting from the 80th centile down to about the

> 10th or 9th or so, but a lot of people kept saying no, no, her birthweight is actually no indication of how big the baby should be, so they're just finding their level. She's now back to the 80th.

Erika's frustrations stemmed from the ambiguity as to the assessment of an infant's 'true' or 'genetic' weight, a process referred to as 'regression to the mean', whereby an infant's growth trajectory adjusts to the postnatal environment. This tends to apply to infants at either extremes of the growth chart, with small infants (for example infants with restricted growth *in utero*) experiencing 'catch up' in weight and larger infants (for example infants of diabetic mothers) experiencing 'catch down' (Lampl 2008). Health practitioners then interpret the new centile space inhabited by the infant as reflecting the marker at which an infant's weight ought to have been at birth rather than constituting a weight loss. This interferes with the thresholds of standardized weight gain after birth, adding further ambiguity to the interpretation of an infant's growth curve:

> I've had *completely* different responses, when she was around 30 [centile] people said well that's clearly what she's supposed to be, because she hovered around that for quite a few weeks, so they said well she was born at 80 but that's just a sign that you were very healthy during pregnancy, and then she resolves at 30. Now she's back at 80 they're like oh well it's great, she's gone back to the weight she was born at. Having told me that it isn't actually significant. I don't know! And that's why *now* we've started to worry that we're *over*feeding her with the formula and we've started giving her *far* less, she's now having very little. But I don't know, does that mean we actually didn't ever need to give her the formula at all?

The discordant information that Erika received during this period exacerbated her confusion as to which course of action to take in relation to adding formula milk to her daughter's diet. She explained, 'The more people deliver conflicting information with great confidence, the less confidence you have.' Erika thus faced two fundamental tensions: firstly, the divergence between policy ontologies of successful breastfeeding that prioritize exclusive breastfeeding, and clinical ontologies of successful breastfeeding that prioritize infant growth. Secondly, the question of which voices to trust among the

disparate experts that Erika was reliant upon to interpret the data that had come to define her daughter's health.

A few days after being discharged from hospital again, Erika decided to begin feeding Catherine formula milk: 'That night is when we kind of cracked, and thought actually…we don't want to hold out any more, she was *really* skinny, she was also quite lethargic by then, and we were getting *really* freaked out. She'd been quite a perky baby and she'd gone…she kept falling asleep on the breast'. Erika felt so strongly about 'holding out' because she desperately wanted to feed Catherine exclusively in compliance with the discourse of successful breastfeeding that had been communicated to her antenatally. But once she had recovered from her initial disappointment in supplementing her own milk with formula milk, Erika observed her daughter's weight gain with pride: 'Her weight, as soon as we started giving her formula, it was amazing. If you look on the chart, I mean it just zoomed!' Latterly, Erika questioned whether she had made the right decision, saying:

> Now I do wonder what would have happened if we hadn't given her formula, there must be mothers who feel for whatever reason that it is more important to exclusively breastfeed. And I'd love to know if we would have got to this stage anyway, but it would have just taken a bit longer, or whether the consultant was right and actually she would have been small, and actually really deficient for quite a while. And you're not going to take a risk.

Although Erika questioned her decision to supplement with formula milk in hindsight, doubting the significance that many of the clinicians involved in her daughter's care had placed on the risks of faltering weight, her concern about her daughter's growth ultimately outweighed her desire to maintain the exclusivity of breastfeeding. She explained: 'I do think you can't see a baby getting really thin when you're with them all the time, it's only now looking back at the pictures that I think wow, that…I don't know what's a healthy-looking baby but they look really scary to me now, those pictures.'

In contrast to Erika, whose issues with infant weight materialized early on in the weeks after birth, Naomi's daughter Megan's drop in weight was not identified until much later, when Megan was three and a half months old. Megan was Naomi's second child – she also had a son, Fred, who was two years older than Megan. Naomi had breastfed Fred exclusively until six months, and viewed this as an achievement that she was proud of. She considered herself an experienced and confident mother, was heavily involved in voluntary work for the NCT, and ran regular informal breastfeeding support groups from her home. She had not found breastfeeding a pleasant experience, but had persevered because she believed that that exclusive breastfeeding was the best nutritional choice for her children. During an interview when Megan was five months old, Naomi looked back on the time period during which she had started to lose weight:

> She became a really bad feeder. I didn't really pay attention to it when it started, because Fred did the same thing – it's the four-month fussy stage. But in hindsight now I can see it was much worse with her. Fred didn't drop down the percentiles anywhere nearly as bad as she did, and [Megan] started off smaller so I don't even know how far she went because she fell right off the bottom of the chart.

Naomi had decided early on not to have regular visits from a Health Visitor, because she had experienced the visits as an intrusion with her first child. She had also made a decision not to keep a close eye on Megan's weight, and had therefore not weighed Megan since her ten-day check with her midwife: 'I didn't weigh my baby from two weeks to three months because I thought feeding was going fine and I wasn't worried about it. I thought I was being a chilled mum'. When Megan began feeding erratically, Naomi decided to take her to be weighed, and quickly realized that Megan, having been a small baby at birth already, had lost an amount of weight that was considered substantial enough to categorize the infant as weight faltering.

Naomi decided to visit an independent breastfeeding counsellor, who advised her immediately to supplement her own milk supply with formula milk. Naomi came away

from the visit frustrated: ‘She told me about ten times in the space of about half an hour that, you know, what mattered was that the baby puts on weight, everything else was sort of whatever, until the point where I was saying okay, I’ve got it, I’ve got it, but what else can I do to get her back on track?’ Although Megan’s weight concerned Naomi, she wanted to continue to breastfeed exclusively, and was therefore looking for a solution that would enable her to do so without using formula milk: ‘No one ever said give up breastfeeding. They just said top up. But that to me would have felt like such an awful failing, a failing to her and a failing on my part’. While Erika’s primary concern had been to increase her daughter’s weight in line with clinical definitions of infant health, Naomi prioritized breastfeeding exclusively, unsatisfied with the emphasis on infant weight: ‘Of course, getting my baby’s weight back on track was really important. But I’m not a flipping idiot; I know that. It’s still really important to me to understand why this has gone wrong.’ Naomi’s decision to continue exclusive breastfeeding consisted of three elements: first, her firm belief that breastmilk was healthier than formula milk; second, the association Naomi had made between successful breastfeeding and exclusivity and concurrently the association between the introduction of formula milk and failure; and third, a desire to give her two children the same nutritional start in life, having breastfed her first child exclusively and therefore, by her own standards and those defined in public health communication, successfully.

Naomi decided to continue breastfeeding exclusively, and during my final interview with her two weeks before Megan reached six months – and two months after she first noticed her daughter’s slow weight gain – Megan was gaining weight, and Naomi was regaining confidence in her ability to breastfeed: ‘Now she’s putting on weight again I can go in [to Baby Café] and say yeah, she was having a problem with the weight but she’s putting weight on again now’. Although Naomi had made a concerted

effort to make sure Megan was feeding frequently, she did not feel that she had changed her behaviour drastically due to Megan's slow weight gain; but she did feel that it had undermined her confidence in breastfeeding and had ultimately found the focus on weight as an absolute marker of infant health detrimental. She explained, 'It's not helpful and it's very disempowering for mothers I think. It's easy to make them feel like they've just got it wrong, and in fact it's much more complicated than that.' She expressed her frustration at the information that is missing from clinical narratives that emphasize the importance of steady weight gain, saying:

> It is awful but I was never thinking of quitting. Never even crossed my mind. […] It would be disingenuous to say I knew we were going to get through it because I didn't; I was very, very worried. But I feel angry now, I felt like I was being pressured to give up on exclusive breastfeeding. And in fact that was wrong, because I fought against it, and she *did* come out of it. So it would have been a real shame if I'd given into that. So I mean there's obviously a very fine balance to be found there.

Naomi recognized that a continued pattern of weight loss was a cause for concern, but having persisted with exclusive breastfeeding against clinical advice with no immediately obvious negative consequences she felt that the biomedical emphasis on infant weight was communicated too forcefully, to the detriment of continued exclusive breastfeeding. Her resistance to clinical advice demonstrates the agency of mothers in developing and adhering to their own conceptions of breastfeeding success which may, as in Naomi's case, align with the policy optimal, or may conflict with it.

Having taken a decision to continue breastfeeding exclusively despite her daughter's weight loss, Naomi felt that there was a lack of information on the risks of low weight gain versus the risks of formula feeding:

> One of the things that frustrated me when she was having a weight problem was that nobody talked about why they care. What the risk is. I *know* what the risks are, and what the inconveniences are, of topping up, or quitting breastfeeding. But no one bothers to tell you what exactly the risks are of weight loss; so that you let the *mother* make an informed decision about she's going to do. (Original emphasis)

This resulted, Naomi thought, in a huge sense of responsibility towards making a choice without having sufficient or accurate information at her disposal:

> It means that you have to inform yourself, and you have to take responsibility yourself, and treat medical advice as medical advice not, you know, as instruction. Which not many people do. And it's one thing to do it for yourself, but then when it's your baby and you're feeling the new mother inexperience and everyone's undermining you all the time.

While Naomi had gone against clinical advice in her decision to continue breastfeeding exclusively, the position of authority that clinicians and other health professionals occupy meant that many mothers were not inclined to dispute information that they were given. A third mother, Georgia, who similarly introduced formula as a result of her son's weight loss, explained:

> I did feel a little bit dismissed. At the time I didn't really think about it, because I don't think you have time. But now when I look back on things like that I'm like actually, I wish this had happened, or I wish I'd done this, or I wish I'd asked that. But at the time you're just so tired and so overwhelmed by everything, you just sort of accept everything that a health professional says to you as fact. And now I've sort of realized that I suppose a lot of what I was told at the beginning was probably a load of rubbish. So now I'm a bit more picky about what information I take on.

While weight gain is emphasized as a clinical marker of breastfeeding success, there is little information for parents on why steady weight gain is important, or what the effects are on a child's health if he or she does not grow in accordance with the standard curves that are plotted on the weight charts in the PCHR.

Two pages of information preceding the weight charts provide limited information on growth monitoring, stating: 'the chart is a guide to how your child is growing. It compares you child's length and height with other children of the same age. It also shows how quickly your child is growing'. For Naomi, this represented a dearth of information that prevented her from making an informed decision on whether or not to continue to breastfeed. She wanted to compare the risks of slow weight gain with the benefits she

believed were inherent to breastfeeding, but felt that the lack of information left her unable to do so:

> Everyone says "Oh she's not putting on weight, she's not putting on weight, it's very important" – but no one bothers to tell you what exactly the risks are, so that you let the mother make an informed decision about what she's going to do. And actually, what happens if we don't worry too much about her weight and I just keep trying to breastfeed her and see what happens. People should really be telling you about the risks. Because otherwise it's like, the weight is the be all and end all, and it's not the be all and end all actually! It's so over-simplified, I kind of understand why it's like that but it's not helpful.

After seeing a breastfeeding counsellor initially, Naomi and Megan were referred to a paediatrician. Naomi's priority for the visit was to find out whether continuing to breastfeed exclusively despite Megan's low weight gain would have a negative impact on her long-term health. The paediatrician told her '"It's just brain development and things, but nothing too dramatic – she'll be fine"'. After weeks of worry, Naomi's response to this was: 'So why is everyone jumping up and down? Obviously, I really *don't* want her to have any reduced brain development, but then not breastfeeding is also known to have that effect, so that was frustrating' (original emphasis).

Given the limited risks of slow weight gain, it may be that children who are defined as 'slow to gain' are not at risk of any serious deleterious effects, and that the risk of maternal anxiety outweighs these limited risks. Indeed, the highly variable growth rates of individuals may result in deviations from the growth curves that have no obvious cause. While it is important to note that some mothers found the clinical emphasis on infant weight a helpful marker of health, many others found that it obscured their own ability to judge an infant's health independently, encouraging them to rely on numerical measures that were perceived as restrictive and ultimately counter-productive as well as inducing anxiety around feeding in instances where the infant was not growing in accordance with the curves shown on the weight chart. Erika, who recorded her daughter's feeding patterns electronically in order to try and track her milk supply as well

as her daughter's feeding patterns, said 'I did obsess about the numbers, for a long time – and the delight, actually, the day I decided to stop bothering with that [app] was a fantastic day'. Georgia, whose son gained weight slowly due to jaundice after birth, felt similarly reliant on weight measurements as a validation for her ability as a mother:

> I know that they *have* to do things like that, and measure them and weigh them and things, to make sure they're okay, but I do feel like we sort of cling to it too much […] We rely so much on weight and just silly little numbers that actually mean nothing, but you really cling to them sometimes, as a measure of how your child's doing […] it's really hard to see the full picture, to see actually you have a perfectly happy baby in front of you.

Georgia's discontent stemmed from the fact that focussing on weight as the only valid marker of infant health caused a loss of perspective in relation to other markers, for example the infant's happiness or alertness, that are less calculable or demonstrable than the numerical indicator of weight. Either the infant is 'tracking' on his or growth curve, or they are not: there is little flexibility in this measure of infant wellbeing.

In focussing on weight as the primary measure of infant health, first-time mothers took longer to develop confidence in their own ability to judge the wellbeing of their child. They were instead actively encouraged to keep track of weight as the only reliable measure of infant health, becoming accountable to and reliant upon a static measurement system and the system of health surveillance that is associated with that system. Laura explained:

> For us it was the only reference that we had on how things were going, we had the red book with the graph. I will continuously, you know, look at the chart and then every time I went and weigh him, like oh, look where the point is going – I was a bit obsessed with that chart to be honest, it might have been that that was not the only indicator that we should have followed, but the midwives and the Health Visitor were so focused on that that for us that was the main thing.

Other mothers echoed Laura's reference to the weight charts as the most important indicator of her son's health. Amber's son, John, gained weight slowly throughout the first eight weeks of his life. Despite steady progress – John never lost weight – the curve

shown on his weight chart prompted further concern from their Health Visitor, despite the fact that he was feeding regularly and seemed content. John was seen by a paediatrician at the eight-week mark to investigate his slow growth, which revealed no underlying medical cause. Amber described her frustration at the uncertainty surrounding his slow growth: 'If they weren't plotting it I'd have no idea […] He's not lost weight, he's always gained, but it's just slow. And if it wasn't for this chart…I'm like, bloody chart!' With no organic explanation for John's slow growth, and no apparent issues with feeding, Amber wanted to move on. But the divergence of John's growth curve from the norm placed them in a state of limbo, as 'patients-in-waiting' (Timmermans and Buchbinder 2010) with no clear medical cause for concern other than the somewhat abnormal nature of his growth.

Mothers thus become tied to the inflexible prognosis of their infant's charted progress, with even small deviations becoming an often-unnecessary cause for concern. Esther, whose daughter lost a small amount of weight three months after she was born, explained, '[It wasn't] even that much but they make you feel like if you're not on a particular line that's totally standard that something has to be done about it'. With 'they' in this case indicating her Health Visitor Esther felt under scrutiny as a result of her daughter's deviation from the standard growth curve despite feeling confident that her daughter was healthy. Another mother commented, 'It feels like as a parent you're being presented with a report card', echoing Esther's sentiments.

The frequency with which mothers experienced under-confidence in their ability to judge infant health without reliance on weight was evident from the staple response that Baby Café facilitators commonly gave mothers who were concerned about infant weight loss: 'Would you have been worried if you hadn't weighed him/her?' This question often prompted women to respond in the negative: even if their infant was not

squarely following the growth curve, after consideration mothers were usually able to judge whether or not there was a serious problem using less analytic measures of wellbeing, relying on inclination rather than numerical measurement. Without the question having been posed, however, mothers generally focussed on weight as a fundamentally reliable marker of breastfeeding success. Susan, a first-time mother, described the attitudes of her friends towards infant weight: 'I'm ultra-conscientious about weighing her. But then I speak to all the other mums who've had their second or third [child], saying, "Oh no, hasn't been weighed since she was born, maybe at the second birthday – she's growing so I don't care"'. As Susan observed, reduced reliance on weight as a marker of health seems partly attributable to experience, evidenced by the fact that many women with two or more children ceased to focus on weight and were more inclined to trust their intuition.

It is undoubtedly important to identify medical issues that relate to infant growth, and weight is therefore a useful general measure of health and nutrition status. Nonetheless, maternal anxiety in relation to infant weight suggests that the emphasis on weight as the primary measure of infant health may be detrimental (Garner et al. 2000; Underdown 2000). Particularly for mothers whose infants were slow to gain weight, the curve line on their infants' growth chart became the defining factor of their own breastfeeding success. While monitoring infant weight has the capacity to support breastfeeding, in many cases the emphasis on this numerical indicator actually undermined women's confidence in their ability to breastfeed, exacerbating anxieties surrounding insufficient milk. Despite its apparent simplicity as a measure, consistent and accurate weight measurement is difficult to sustain in routine child health surveillance (Scherdel et al. 2016). Jemima, one of several mothers in this study who alluded to plotting errors, observed:

> Twice now […] they've either mis-plotted or almost mis-plotted it. One time it got mis-plotted and then I realized when I looked at the red book, I was like, that isn't quite right. I mean they're tough to plot those graphs, because the scales are a bit funny. And then the second time they were just about to give me the "Oh she's slipped down to the second centile" talk and then they realised that she wasn't, they'd just put it in the wrong bit.

Added to this are the high rate of false-positive referrals (Thulier 2016), the doubtful validity of population data in determining normal growth in individuals (Cole 1998; Cole 2012; Hermanussen and Burmeister 1993; Hermanussen et al. 1998; Lampl and Thompson 2007), and the questionable actual risks posed by individual deviance from growth curves based on this data (Grote et al. 2007; Noel-Weiss et al. 2008; Thulier 2016). Given these ambiguities and the negative effect of false referrals on maternal wellbeing and breastfeeding itself, the positive potential of growth monitoring is arguably outweighed.

With infant weight emphasized as the only immediate measure of successful breastfeeding, this understandably becomes a focus for mothers who are both uncertain about their ability to breastfeed and lack the experience (both independently and in their social circles) to assess whether an infant is adequately fed. The narratives of mothers reflect the uncertainties in clinical treatment of infant weight gain and weight loss, and Naomi and Erika's experiences demonstrate two different approaches and outcomes that arose in response to slow infant weight gain. As their experiences indicate, women face fundamental conflicts between two often-opposing definitions of 'optimal': the clinical and the public health. In both cases, the presentation of weight as a clear-cut and measurable marker of infant health contrasted with the ambiguities in clinical approach to faltering weight, causing further conflicts for both women.

Conclusions

Driven by the conception of infant bodies as fundamentally vulnerable, requiring regular expert supervision, routine surveillance of infant health formed a significant part of women's early experiences of motherhood. Infant weight was perceived by participants in this study as constituting the most measurable and therefore theoretically the most objective indicator of an infant's health, and was often used by mothers as a concrete marker of progress, tangible 'feedback' that breastfeeding was working. Weight gain is one of the only objective – and in the UK, the most common – measures of infant health. Particularly for mothers who breastfed exclusively, infant growth was perceived as correlating directly with breastfeeding success. Routine monitoring by health professionals engendered the sense among women of being under surveillance, exacerbating a sense of responsibility among mothers to ensure that infant bodies conform to normative standards of growth. Clinical emphasis on weight as a marker of health prompted concern about the adequacy of milk supply, prompting attempts to regulate milk quantity and quality. Milk supply and feeding patterns are ultimately vague measures of breastfeeding efficacy; breastfeeding is an embodied process that resists measurement. Mothers therefore fell back on infant weight as the only concrete, numerical and ostensibly reliable measure of breastfeeding efficacy and success. Difficulties arose when infant weight gain was slow or limited: mothers whose infants were perceived as physically slight, rather than fat, expressed disappointed in their infants' size as well as experiencing a loss of confidence in their own ability to breastfeed. The data suggests that this may in part be due to mothers' reliance on experts to assess infant health: as Furedi (2002) has argued, the 'outsourcing of authority' might destabilize parental confidence and result in feelings of paranoia. Mothers whose infants were defined as 'weight faltering' faced a fundamental conflict. On the one hand, clinical

assessments of breastfeeding success and infant health dictate that additional nutritional supplements should be given to an infant who is gaining insufficient weight according to clinical definitions. On the other hand, definitions of breastfeeding success communicated through public health campaigns and antenatal education emphasize exclusive breastfeeding as the defining factor in infant health, giving little attention to the potential difficulties, such as infant weight loss, that can arise during the initial stages of breastfeeding. Women therefore had to choose between contravening clinical definitions of infant health, or contravening public health definitions of breastfeeding success by introducing formula milk and therefore ceasing to breastfeed exclusively. Furthermore, despite the numeric, objective reassurance of weight gain as a marker of breastfeeding success, infant growth is an ambiguous category and the concept of faltering growth is, in practice, highly uncertain. In light of this, it would perhaps be more prudent to accept the fallibility of weight as a measure of infant health and nutritional status, and communicate this to mothers, while nonetheless retaining weight as a statistical measure, among others, of infant health.

Chapter Five:
Managing Uncertainty, Balancing Risk: Examining the Impact of Breastfeeding Standards

Building on the findings outlined in the previous two chapters, this chapter examines the impact on maternal experiences of behaviour change strategies that target mothers in order to influence infant feeding practices. An examination of the ways in which mothers negotiated the associated norms that define how breastfeeding ought to be practised serves to shed light upon the heterogeneity and complexities of infant feeding practices in the UK. This contrasts with the homogeneity of the standards of optimality and success set by infant feeding guidelines, and the diversity in approach demonstrated by participants may be important to acknowledge in public health terms.

The first section focuses on the narratives of women who practised infant feeding in ways that contravened standards of successful breastfeeding by 'combination feeding', or supplementing their own milk supply with formula milk. Practising infant feeding in this way entailed abandoning exclusive breastfeeding, which is a central criterion of the policy ontology of successful breastfeeding. The association between negative emotions and the initial introduction of formula milk is examined, specifically the link between these emotions and the prescriptive nature of guidelines that specify how women ought to breastfeed. The second section investigates the hitherto under-researched issue of infant tongue-tie, which emerged during the course of this study as significant in exemplifying ways in which maternal assessments of breastfeeding success differed from the standards of successful breastfeeding outlined in public policy. Both this and the preceding section serve to demonstrate the need to redefine notions of successful breastfeeding within public policy, demonstrating the detrimental effect that these have on maternal wellbeing. The third section examines the practice of co-sleeping which, like combination feeding, is presented as a risky behaviour. Investigating this practice highlights the prominence of

balancing risk in the everyday lives of mothers in this study, enabling an examination of the process of negotiation that women undertake in navigating the successful breastfeeding model. The fourth section examines the process of 'doing what works', which describes the pragmatic approach towards infant feeding that many women developed with experience in response to balancing risk. This approach often emerged after women had ceased to view their departure from optimal feeding as negative, rather viewing it as best for their individual circumstances through a process of compromise.

5.1 'Failing' at Successful Breastfeeding: Initial Responses

Notwithstanding a higher than average number of women in this study who *did* breastfeed exclusively for six months in accordance with the policy optimal, approximately one third of women used formula milk either as a temporary solution to breastfeeding difficulties or as a long-term supplementary source of sustenance for their infants. Existing research has examined the largely negative emotions that arise when women introduce formula milk either as a result of stopping breastfeeding or as a supplemental 'top-up', attributing these emotions to societal pressure in relation to breastfeeding promotion. While this study finds similar initial emotional responses to the introduction of formula milk, pressure to breastfeed in and of itself did not materialize as the primary cause of these responses among participants. Instead, a more complex picture emerged whereby these emotions arose in response to the responsibility women feel towards achieving breastfeeding success in accordance with both clinical and health education discourses. This section will engage specifically with initial responses to the introduction of formula milk, while more long-term outcomes will be discussed in section 5.4.

Mothers and health professionals in this study used the terms 'combination feeding' or 'mixed feeding' (also referred to colloquially as 'topping up') to refer to the

concurrent use of formula milk and breastmilk to feed an infant. Women who employed this strategy usually regarded breastmilk as the primary source of sustenance for their infant, with formula milk being viewed as an additional supply of nutrition utilized to assist in overcoming or contending with varying degrees of breastfeeding difficulties. Mothers who combination fed did not, on the whole, envisage complete cessation of breastfeeding and their intention was often to return to exclusive breastfeeding after resolving their difficulties. Despite this, the introduction of formula milk was generally experienced initially as an upsetting or discouraging event, which frequently elicited distressed responses that included deleterious emotions such as guilt or failure. As expressed by one mother, 'I was distraught when I thought I was going to have to top her up with formula', while several women broke down in tears during conversations concerning the introduction of formula milk. The reasons behind reactions such as these were multifaceted, as demonstrated by the narratives of women who used formula milk to top up their own milk supply, as well as through comments made by several other women who did exclusively breastfeed but who had considered supplementation of formula milk at one point or another during the process of breastfeeding their infants.

Kirsten, a first-time mother, had given birth to her son two weeks prior to our first conversation, which took place in her living room on a warm day in early spring. She had been determined to breastfeed exclusively but had begun supplementing with formula milk several days before we met: she explained that her son seemed constantly restless and that she felt unable to satisfy him with her milk alone. Following a sleepless night after she and her son had been discharged from hospital, a midwife had arrived at their home on a routine visit to find Kirsten and her husband Tom desperately attempting to encourage their screaming son to feed from Kirsten's breast. The midwife tried,

unsuccessfully, to do the same before suggesting that they give him a bottle of formula 'to take the edge off':

> He was writhing around so much that even [the midwife] couldn't swaddle him because he was so hungry, she couldn't even swaddle him and it was taking three of us to hold him, and get him in the right position to try and latch him on, so she said, "Right, are you okay with me making up some formula?" I was so upset about it, because he hadn't had any [formula] milk before then.

For Kirsten, the introduction of formula milk was upsetting because it meant introducing something 'other' to her son, who had until that point only received breastmilk. Jemima, who breastfed her only daughter exclusively for six months, described her determination to do so as a powerful but ultimately arbitrary motivator:

> It's a source of pride. I mean I also know it's a load of bollocks because the whole "Only 1% of babies are exclusively breastfed at six months", well that's just a stupid way of counting statistics, because most of them are mostly exclusively breastfed, they just ate a mouthful of puree once, so I *know* that's a load of nonsense, but I kind of want to make it into that 1%.

Jemima's observation indicates the significance of the rigid delineation of exclusive breastfeeding in provoking perceptions of the introduction of formula milk as a negative event. Exclusive breastfeeding as defined by policy and statistical measures is absolute – once anything 'other' has been introduced a baby is no longer exclusively breastfed, and the introduction of formula milk thus marks an abrupt end to a woman's efforts to breastfeed her child according to this intransigent criterion.

In this context, formula milk became a symbol of a mother's 'failure' to comply with her own perceptions of successful breastfeeding as well as with those communicated in health education. Erika explained, 'You just feel like you've kind of failed at the one thing that you're supposed to be doing at that point, which is feeding your baby. Even though you are feeding your baby, I mean, you are going out, finding formula, bringing it back, sterilizing it, you're still feeding your baby'. Erika recognized a contradiction in her emotions. She felt that she was failing at feeding her daughter despite the fact that she

was providing sustenance in the form of formula milk, and in any case was continuing to breastfeed; just not exclusively, which proved to be a salient factor in her conception of breastfeeding success at that point.

Later in the conversation, Erika recalled the point at which she had first given her daughter formula milk: 'When we ended up staying overnight for them to monitor what was going on when she was about four weeks old, one of the nurses got quite cross with me because I was in *floods* of tears, when they said, "Look, you've got to feed your baby, if your baby's hungry you have to feed her", and she ended up having to say, "No, it's not poison for her, it's not bad for her"'. Erika's perception of formula milk as 'poison', reflects her perception of the substance as risky or 'less than' breastmilk. This too was bound up with the correlation between formula milk and failure, since the introduction of formula milk in this context was associated with an immediate and direct adverse effect on the potential of infant and maternal health. Briony, who had introduced formula milk in response to her son's slow weight gain, explained: 'To me, the box of formula signified the failure of breastfeeding, that I wasn't good enough, that I couldn't make enough milk for him, that it wasn't fatty enough'. Briony's comment reflects anxieties about inadequate milk supply as examined in the previous chapter: for her, the box of formula milk was a manifestation of her perceived inadequacy in producing a sufficient quantity and quality of milk for her son. Kirsten, having started supplementing regularly with formula milk, expressed a similar sense of failure: 'I feel like I'm letting him down, by not giving him what's best for his health. And I'm being lazy by not persevering and doing what's best for *my* health'. Kirsten's sense that she had let her son down by not continuing to feed him exclusively with breastmilk is indicative of the responsibility that mothers felt towards maintaining exclusive breastfeeding.

Mothers like Kirsten who decide or are compelled to introduce formula milk felt like they were 'giving up' on, or failing, to fulfil their responsibility towards their infants by abandoning the optimal standard of infant feeding. Distress caused by supplementation was thus caused by the realization on the part of mothers that they had 'failed' at successful breastfeeding; that they were no longer practising in accordance with the optimal; and that the expectation of success that they had developed on the basis of standards set by infant feeding guidelines was no longer achievable. In this sense, the disappointment that women experienced when they introduced formula milk was ultimately linked to the rupture of expectations: both those of the mother herself and, inextricably, those laid out in health education.

This rupture is linked to the promotion of successful breastfeeding as achievable (and desirable) for *all* women, regardless of circumstance, without adequate acknowledgement of the difficulties involved. One mother, Mia, observed:

> You feel like there's about 3% of women who can't breastfeed – it would be more valid to be told that most people find it hard, if you do find it hard here are some things you can do to help, the baby will get better at it. Otherwise you feel like you're part of this magical 3% who can't do it while all the other babies are feeding perfectly.

Mia's perception that she was one of a very small minority of mothers who could not breastfeed prompted a sense of inadequacy that was, she felt, unfounded. She identified this sense of inadequacy as being rooted in the mismatch between theory and practice (as identified in Chapter Three). Georgia, whose intention to breastfeed her son exclusively was hindered soon after birth, expressed a similar opinion: 'I'd never even considered giving him formula. Because I just assumed that I would be able to breastfeed him no problem and it would all be fine. And so I think [formula milk] just didn't fit with my ideas of how I was going to feed him and how I was going to look after him.' Since Georgia had expected and intended to feed her son exclusively with breastmilk, and had

not anticipated any difficulties in doing so, she found the prospect of introducing formula milk upsetting and demoralizing. This reflects the disillusionment, described in Chapter Three, which mothers felt when their expectations of breastfeeding did not match up with the reality.

When the difficulties often involved in breastfeeding an infant are discussed in antenatal education, women are advised to counter them with an approach of 'mind over matter' and perseverance, exacerbating the sense of failure that women experience if they are unable to feed their infant in accordance with the standard of successful breastfeeding. Kirsten explained, 'I know [exclusive breastfeeding] is good for both of you and you should persevere but when you're in such a state physically it's difficult'. On the advice of a friend, Kirsten had bought several bottles of ready-mixed formula milk while she was pregnant. She had initially been unwilling to do so due to her sense that she ought to persevere with exclusive breastfeeding: 'One of my friends said, you know, "Just buy some formula and have it in the cupboard for if you're desperate" and I thought oh, I don't know, I really don't want to take the easy route out'. As illustrated by Kirsten's comment, giving formula milk was perceived as the 'easy route' that did not live up to expectations of perseverance communicated in antenatal education. Georgia described identified similar reasons for her disappointment at having to introduce formula milk: 'It was quite hard because I felt like I was [giving formula] for selfish reasons'. Both Georgia and Kirsten experienced a sense of failure because they felt that they had given up too easily, without having persevered in accordance with expectations of how women should approach successful breastfeeding.

The often-overwhelming sense of responsibility that mothers felt towards maintaining exclusivity transformed the experiences of many into a gruelling pursuit of the optimal. Erika, who expressed night and day for several weeks in an effort to continue

breastfeeding her daughter exclusively, explained that the pursuit of successful breastfeeding had become all-consuming: 'The WHO guidelines start to become, you know, six months of nothing but breastmilk is the only way forward […] you start to fetishize the idea of exclusive breastfeeding.' Two mothers, Carol and Celia, who did in fact breastfeed their respective children exclusively for the first six months, illustrate the lengths that women went to in maintaining exclusivity particularly well. Carol reflected: 'Maybe I put too much emphasis on trying to keep giving him just breastmilk, and getting up all through the night to express milk for him and everything, when it was really difficult. It was hard to keep some perspective on it, like when do I actually just need to let myself sleep, and not set my alarm to get up and express milk for him'. Celia recalled similar efforts to continue breastfeeding exclusively, describing a critical period of three nights during which time she considered supplementing with formula milk:

> When I'd had no sleep for *ages* with my daughter because of her reflux – I mean, it took us two hours just to stop her from crying […] it was completely horrendous for a few nights, and I remember going actually, I'm pretty mentally stable. I have a pretty sensible family; I've got loads of support. Yet I feel like I'm on an absolute knife-edge. And I remember thinking that actually, breastfeeding every three hours? Probably the one thing that I could stop that would make a difference to me, because then actually someone else could take her, someone else could put up with the screaming for six hours and then disappear, and I would have had six hours sleep. But nobody would ever have suggested that. It wouldn't have been anything that was at the top of people's minds, and if I had done that I think it would have added to the disapproval of everybody.

Despite her wish to continue with exclusive breastfeeding, Celia felt at this point that feeding her son solely with breastmilk had become detrimental to her own overall wellbeing. She continued to breastfeed exclusively nevertheless, despite feeling that introducing formula milk might have alleviated some of these difficulties. It is significant that Celia had not considered stopping breastfeeding entirely, and nor had she intended to transition to the sole use of formula milk. Nonetheless, she believed that failing to

continue with exclusive breastfeeding would have incurred criticism from others, forming part of her motivation to continue.

The feeling of transgression that Celia experienced was a common consequence of the correlation between success and exclusivity, and the resultant association between formula milk and inferiority. After introducing formula milk, Georgia felt that she was contravening how she ought to be feeding her son: 'It was really hard to give him formula at night before bed because I just felt like I shouldn't be doing it. Even though formula is a perfectly fine thing to feed a baby.' Georgia's latter comment highlights the sense of responsibility that is communicated in the promotion of exclusive breastfeeding on the basis of optimal health. Despite having been advised to feed her infant formula by one authoritative body in the form of her clinician, she nonetheless felt a conflicting sense of responsibility to try and avoid doing so. In this context, it is unsurprising that women experience feelings of deviance and consequent guilt if they do supplement with formula milk – even when, as in Georgia's case, supplementation is recommended by a clinical authority on the basis of health. For Kirsten, the strong and conflicting responsibilities towards maintaining exclusive breastfeeding but also ensuring that her son continued growing resulted in a sense of subversion towards her husband: 'At one point I thought well, I'll give him a secret bottle of formula during the day, and I won't tell Tom about it. Because then he'll get bigger and he'll give me a break and I won't have to tell him that he's had to have formula. And then in front of him I'll be able to feed him from me'. In this way, Kirsten alleviated her (and her husband's) concerns about their son's growth by introducing supplementary formula milk, but she was also able to maintain the image of exclusive breastfeeding in front of her husband.

With the vast majority of women in the UK – and, in fact, across the world – not conforming to policy definitions of successful breastfeeding, it is important to investigate

and understand the experiences of women who buy into this definition of success but are unable to fulfil it. Perceptions of the introduction of formula milk as a distressing event despite concurrent continuation of breastfeeding indicates the significance of emphases on exclusivity as the cornerstone of optimality and success in relation to breastfeeding. The narratives explored in this section demonstrate that the emphasis specifically on exclusive breastfeeding, and the correlation between this and maternal success, prompt the feelings of guilt and failure that were experienced by mothers in this study when they initially introduced formula milk. The inflexible criteria used to define successful breastfeeding in health education and policy, and the alignment of success with exclusivity, caused mothers to view formula milk as a barrier to the gold standard of infant feeding: exclusive breastfeeding is absolute, so as soon as something 'other' is introduced, the infant is no longer exclusively breastfed and the mother is no longer feeding her infant in accordance with policy definitions of success. Formula thus becomes a symbol of failure with respect to optimal infant feeding practices. Furthermore, the emphasis on perseverance in the face of difficulties implies that an inability to breastfeed is the result of a lack of perseverance, which exacerbated this sense of failure.

5.2 Defining Success: Product versus Process and the Case of Tongue-tie

This section will explore maternal definitions of success, following Van Esterik's (1988) 'product versus process' paradigm to demonstrate that while public health and clinical definitions of success focus primarily on the product – breastmilk – maternal definitions of success prioritize the process – breastfeeding. In order to illustrate the maternal approach to breastfeeding success, the section will draw upon experiences of mothers with 'tongue-tied' infants, an ambiguously defined and under-researched condition that causes a variety of difficulties with breastfeeding. The narratives of mothers

breastfeeding tongue-tied infants will demonstrate that the emphasis in current approaches to successful breastfeeding focus on optimizing infant health and development, thereby overlooking maternal wellbeing. While research exists on the physiology and clinical implications of tongue-tie, few studies have been undertaken on how tongue-tie affects breastfeeding mothers in practice (with the exception of Edmunds et al (2013)). This section thus presents two significant findings. Firstly, it provides an insight into the experiences of women with tongue-tie, which is missing from current literature and is critical to understanding the contested nature of the condition. Secondly, it provides a rationale for the need for re-formulation of current approaches to infant feeding policy by demonstrating that maternal definitions of breastfeeding success are not sufficiently accounted for in clinical and public health approaches to successful breastfeeding. In demonstrating the different, often competing ontologies that define successful breastfeeding from different perspectives, the section will provide a foundation for subsequent sections in this chapter that outline the ways in which women negotiate these ontologies.

Tongue-tie was referred to regularly throughout fieldwork – by women whose infants had been diagnosed with tongue-tie, by those who suspected that their infant might have tongue-tie, and by Baby Café facilitators who occasionally suggested tongue-tie as a possible cause for breastfeeding difficulties. Beth, whose daughter was diagnosed with a tongue-tie at birth, described the appearance of a tongue-tied baby using her daughter as an example:

> Her tongue doesn't come out very far, and you can see it kind of points, and just underneath there's a little bit of fibrous material. That stops it extending very far – the furthest I've seen her get it is sort of [gesturing with her own tongue protruding just outside her lips] like that. She can get it as far as her lip, so it's not severe or anything, but some babies are unable to get it as far as their teeth.

Although insufficient milk intake on the infant's part is a clinical concern for infants with tongue-tie, maternal narratives most often centred on the difficulties that the condition presented for their own experience of breastfeeding.[35] Chrissie's son Billy, who was six months old when I met them both, was diagnosed with tongue-tie shortly after birth. Billy was born prematurely, and Chrissie remained in hospital with him for nine days in total, Billy having suffered from jaundice and an obstetric nerve disorder caused by trauma during birth. During their stay in hospital, Billy was diagnosed with tongue-tie by one of the in-hospital infant feeding experts. Chrissie described her experience of breastfeeding in the initial weeks after birth: 'It was painful, it was difficult, we weren't really getting it…and then someone went, "Oh, he's got a tongue-tie!"' Chrissie and Billy were given a referral appointment to a tongue-tie practitioner before being discharged from hospital. Chrissie continued to breastfeed Billy exclusively at home while she waited for the appointment, which was scheduled to happen six weeks after birth: 'I know everyone says, "Oh my baby feeds all the time" but when he was a couple of months old I did his first feeding log, using an app, and that was ten hours a day. It was just awful […] He was constantly feeding a bit, falling asleep, feeding bit more, or just feeding really slowly while he was asleep'. Billy's tongue-tie meant that Chrissie contended with protracted periods of breastfeeding, often for hours at a time, with concurrent nipple pain that made the process highly unpleasant.

Another mother, Tessa, visited Baby Café when her baby Natasha was three weeks old, seeking advice for the pain she was experiencing while breastfeeding as well as slow feeding on her daughter's part. After talking through her difficulties with one of the facilitators, Tessa unbuttoned her shirt and pulled down her bra in order to demonstrate how she normally breastfed. Her right nipple was marked with deep lesions,

[35] Many women were initially unaware that their difficulties stemmed from tongue-tie, so their descriptions were largely retrospective; other than those for whom tongue-tie was diagnosed partway through the study.

drawing a shocked response from the facilitator and the other four women sitting next to Tessa. She explained:

> [Natasha] started to suck straightaway [after birth]; I was surprised she was so interested. I left hospital and thought I had it all sorted. But I got home and then people were saying three or four hour feeds, that's not normal. And I thought hmmm, no it's not. […] I started supplementing at two weeks. I really want to go back to breastfeeding, because that's what I always wanted to do. But it hurts, and that makes me sad. I really want to breastfeed but I dread it because it's so painful.

Tessa had wanted to experience the physical closeness of breastfeeding as a tactile, enjoyable process, but the intense pain she endured was causing her to dread each feed: 'In my NCT class they said it would be a sensual experience but it's so hard. I don't want it to be sensual, I just want it to be pain-free'. Two weeks after this conversation took place Tessa's daughter was diagnosed with tongue-tie during an appointment at the JR Breastfeeding Clinic, providing an explanation for their difficulties and reassurance to Tessa that she did not simply lack perseverance or determination.

A third mother, Julia, a regular at Baby Café over several months during fieldwork, described symptoms similar to those of Tessa while breastfeeding her son (who would go on to be diagnosed with tongue-tie a week after this statement): 'This morning I actually yelped. It's just so unpleasant! I can't get out of the house because it's a faff and I don't want to spray all over other people's coffee!' Chrissie, Tessa and Julia's accounts serve to demonstrate the extent to which tongue-tie could impact experiences of breastfeeding. Mothers of infants with tongue-tie derived little pleasure from breastfeeding, which became an exercise in endurance, severely compromising their intention to continue. Tongue-tie thus was thus detrimental to the continuation of breastfeeding itself as well as to maternal experiences of breastfeeding, causing many of the afflicted mothers to stop breastfeeding entirely or to begin supplementing with formula milk.

Frenotomy – more often referred to informally as a 'divide' – is the medical remedy for tongue-tie, a minor surgical procedure that involves snipping through the frenulum. Mothers in this study whose infants underwent the procedure generally experienced it as successful in resolving breastfeeding difficulties and symptoms caused by tongue-tie. Sarah, for example, was experiencing pain while breastfeeding and felt that her daughter, Mary, was feeding ineffectively and therefore gaining weight more slowly than expected. Sarah came to Baby Café for advice for the first time when Mary was six weeks old. The following week she returned to Baby Café pleased with the result, her daughter's tongue-tie having been assessed and divided the day afterwards: 'It was instantly better, she's been like a hoover ever since!' Julia experienced a similar marked improvement after her son's tongue-tie division: 'He's like a different baby. He was feeding a lot [before the tongue-tie] but not actually getting anything'.

Most mothers experienced a longer process of adjustment than Julia and Sarah, with improvements taking place gradually over the course of days or weeks after the frenotomy. A Baby Café facilitator explained, 'When [infants] have their tongue-tie divided it's like having a broken arm taken out of a sling. They have to learn to use it properly and develop the muscles before things improve. Some people expect it to happen straightaway but it takes a bit of time'. This delay in improvement caused further stress for mothers, with women having invested emotionally in the medical procedure as a solution to their problems. Karen continued, 'They'll have a good feed straight after (although that might be wishful thinking) and then it gets worse again before it gets better. But this is the worst point for morale I think because you're like, I've played my trump card, what do I do next?' Clara, like many mothers breastfeeding tongue-tied infants, struggled to feed her son due to nipple pain. Four weeks after his birth, Clara decided to have his tongue assessed by a private practitioner. A tongue-tie was diagnosed

and divided, and the day afterwards Clara came into Baby Café, disappointed that her symptoms had not improved: 'I was expecting it to get better in forty-eight hours or so, but it hasn't'. Fortunately, Clara returned a week later, with the pain she felt when breastfeeding not markedly improved but nonetheless pleased with her son's progress:

> It's just sore in different ways! It is better though. He used to cluster feed all the time and now he's feeding for much longer and having lots of rest. And he used to get milk out of his nose and she [tongue-tie divider] said that was because he couldn't lift his tongue up to seal it […] He was putting on weight okay but I think that was perseverance more than anything. He had sucking blisters all over his tongue!

Chrissie similarly experienced only partial improvement after having her son's tongue-tie divided: 'He still took forever to feed, I'd hoped it would make him quicker as well, but soon he sort of changed his technique and it didn't hurt me anymore. And that's made a massive difference […] it took hardly any time at all, a matter of weeks. And I was pleased, although it's taken until about a month ago to get it to a manageable amount in my day spent breastfeeding'. Undertaking the frenotomy thus appeared, for most mothers struggling to breastfeed a tongue-tied infant, to resolve breastfeeding problems or at least provide some improvement to the symptoms that negatively impacted their experiences of breastfeeding as well as improving the outcomes breastfeeding itself, since the procedure enabled many mothers to continue breastfeeding exclusively rather than supplementing with formula or stopping entirely.

The fluid diagnostic boundaries of tongue-tie cause difficulties in the identification of tongue-tie as well as hindering the development of a universal classification system, which precludes standardized diagnosis and treatment procedures and leaves women reliant upon the perspective of their clinician. As a consequence of these ambiguities, clinical assessments of the significance of tongue-tie in causing breastfeeding difficulties and the efficacy of frenotomy in treating them varied. Awareness of the contested nature of tongue-tie among clinicians was apparent in

mothers' narratives: there was a sense among those suffering from the effects of the condition that tongue-tie was considered a trend rather than a legitimate cause of difficulties, which often discouraged them from seeking further intervention. Claudia, mother of two-month-old Chloe, explained her reluctance to mention her infant's tongue-tie (which had been diagnosed when Chloe was one month old) at the JR breastfeeding clinic: 'Eyes are rolled if you mention tongue-tie at the JR. Like it's just fashionable'. Another mother corroborated the perception of tongue-tie as a 'fashion', saying, 'I think it's just a thing now, everyone seems to have tongue-tie, like it seems to be a bit of a fashion all of a sudden'. Concerning is that clinical scepticism and the fluid diagnostic boundaries of tongue-tie perpetuated the perceptions of tongue-tie as a trend rather than a genuine problem, deterring women from seeking help for their tangible and substantive difficulties.

The perception of tongue-tie as a 'fashion' as well as scepticism of its impact on breastfeeding has a historical basis, with the prevalence of the condition appearing to rise and decline at various points in historical records. Links between tongue-tie and breastfeeding difficulties can be found as early as 1610 (Obladen 2009:84), and references from the eighteenth and nineteenth centuries when breastfeeding was practiced universally indicate that some practitioners anticipated breastfeeding difficulties by clipping every infant's frenulum (Marmet et al. 1990:117). The prevailing sceptical attitude towards the procedure arose when the practice of bottle-feeding became more ubiquitous. At this point it became clear that tongue-tied infants could generally bottle-feed without difficulty, and there was thus little impetus to correct the problem. The procedure was consequently conducted with decreasing regularity (Griffiths 2004:409). Conversely, the renewed interest in tongue-tie as a possible solution to some breastfeeding difficulties is arguably a result of the resurgence in breastfeeding advocacy

in recent decades (Messner and Lalakea 2000:129). In fact, the emphasis on successful breastfeeding and the resultant increase in women who set store by exclusive breastfeeding means that a focus on potentially easily rectifiable problems with breastfeeding is to be expected.

It is surprising, then, that the emphasis on successful breastfeeding has not led to greater efforts in understanding women's experiences of tongue-tie; instead, these experiences are dismissed as insufficient perseverance and under-confidence. Early in 2017 the tongue-tie information on the NHS website read, 'Even if it turns out your baby does have a mild case of tongue-tie, don't be put off breastfeeding. Any difficulties you're having are more likely to be due to lack of experience than the mild tongue-tie issue. With the right support, you can overcome most breastfeeding problems'. It appears that attitudes are gradually changing, since the web page was subsequently updated, and when accessed in 2018 displayed a less dismissive message: 'Tongue-tie can sometimes cause problems for a breastfeeding mother […] most breastfeeding problems, however, aren't caused by tongue-tie and can be overcome with the right support' (NHS 2017).

The resistance in clinical circles to diagnosing tongue-tie and administering frenotomies is contextualized by the principle, upheld by all paediatricians, of avoiding all but necessary operations in infants and children where possible; this principle is predicated on the conviction that many conditions improve spontaneously over time as a child grows and develops (Power and Murphy 2015:489). This meant that the small numbers of infants who were diagnosed with tongue-tie straight after birth in hospital (most infants with tongue-tie in this study were diagnosed weeks or months after returning home) were rarely treated immediately.

This fact, coupled with the lack of correlation between physical manifestation of the condition and symptomatic severity, often resulted in women of infants with a mild

physical presentation of the condition being advised to return home and attempt to breastfeed, frequently without a clear indication of how to recognize or approach symptoms should they arise. One mother arrived at a Baby Café session when her son was three weeks old, having started supplementing with formula milk due to nipple pain: 'They looked in the hospital and checked in his mouth and then said that he might not be able to suck very well', but she had not been told why this might be; neither had she been informed about any potential solutions. Another mother was informed in hospital that her daughter had a minor tongue-tie, and was still having trouble breastfeeding a month afterwards: '[Tongue-tie] was diagnosed at the JR and I was told to go away and practise. But it got to the point where I was so sore that it was either have [the frenotomy] done or give up'. A third mother, Anna, whose firstborn son had had a tongue-tie that was divided while they were in hospital following birth, returned to Baby Café when her second child was four weeks old. Given her experiences with her son, Anna was aware of tongue-tie and the problems it could cause, and was experiencing similar problems feeding her daughter – 'but with her [indicating towards her second-born child], because we were told it was slight we assumed that it wouldn't be a problem'. Anna returned home and continued attempting to breastfeed her tongue-tied daughter for several weeks before returning to hospital in order to have it divided. Like other mothers, Anna experienced no immediate improvement; after a further week, however, Anna and her daughter were breastfeeding without pain.

While infants are examined for tongue-tie as part of the newborn baby examination, the majority of affected infants in this study were diagnosed only once they had left the hospital system, resulting in long delays in diagnosis. In this context, facilitators at Baby Café often proved to be key in identifying undiagnosed tongue-tie or possible tongue-tie after mothers had left the clinical environment. Though not in a

position to make an official diagnosis (i.e. one that could lead directly to treatment), facilitators had detailed knowledge of the condition and would often advise women to seek further help if they came in to the clinics regularly showing no discernible signs of improvement or when they described on-going difficulties symptomatic of tongue-tie. Several symptoms were used as indicators of tongue-tie, including physical clues such as the ability of an infant to stick his or her tongue beyond the opening of their lip. The shape and colour of the mother's nipple after being released by the infant also provided an indication: if lighter than normal in colour, or in the shape of a 'lipstick tip' (flattened and pointed), this was attributed to a flattening of the nipple between the tongue and hard palate coupled with the vacuum effected of the sucking motion caused by the infant's limited range of tongue movement.

Certain behaviours and physical symptoms demonstrated by an infant were also interpreted as being symptomatic of a tongue-tie: difficulty attaching to the nipple, unsettled behaviour on the breast, and a clicking sound made by the tongue while breastfeeding. The sensation of the infant's tongue on the nipple provided a further indication of the condition, as illustrated by the following exchange between Karen and a new mother, Penny, who had come to Baby Café having been told just after birth that her son had a slight tongue-tie. Karen explained, 'You want a pulling but not feeling anything on the top of the nipple sensation'. Penny considered for a moment, assessing the sensations of her son feeding. She then said, 'It feels a bit like a lapping sometimes, like a cat'. Karen shook her head, saying, 'That's a classic tongue-tie feeling' before suggesting that Penny go to see a practitioner.

Official diagnosis of tongue-tie had to be made by a trained practitioner either in hospital or through a private consultant; and, given the ambiguous nature of the condition, mothers seeking conclusive diagnosis and treatment in the weeks after having left

hospital had to be pro-active in driving the assessment process. This meant that those without existing knowledge of tongue-tie, or the requisite external support to identify it, often continued to struggle with the effects of the condition for long periods of time after birth.

The significance of independent knowledge and pro-activity in obtaining a quick resolution was demonstrated particularly clearly in the case of one mother-of-two, Angie. Her first child having had tongue-tie, Angie was unconvinced after being told at the newborn check that her second child would breastfeed without problems. Arriving at Baby Café four days later, responding to incredulity from a facilitator regarding the speed of the assessment and divide, Angie explained that she had identified a tongue-tie in her second child herself based on her experience with her first child: 'My older boy had a tongue-tie as well so I remembered the feeling and went to the breastfeeding clinic to get it diagnosed and then I saw [consultant] to get it snipped. It's useful to know where everyone is now!' The experience was markedly different for mothers without existing knowledge of tongue-tie, many of whom felt that there was no clear pathway for assessment and treatment. Kirsten explained 'It just feels so complicated […] there's such a long waiting time to get it done on the NHS that most people would have given up by then, because you can't wait for four months. It's too long. And then you have to get it done privately'. Along with many other women, Kirsten opted after six weeks to avoid the NHS waiting list, taking her son infant to be assessed by a private practitioner instead. Beth clarified, 'It usually takes a month or so to get it done in the NHS, and you can get it done [privately] for about a hundred quid, so a lot of people will book and have it done'. The ability to take an infant to be privately assessed for tongue-tie, as well for a tongue-tie division if necessary, was of course restricted to those mothers with sufficient financial resources to do so; a private assessment costs approximately £100-£150 and

often required a trip outside Oxford; this was difficult for mothers with multiple children, for those without access to a car, or for mothers who were still recovering from the physical demands of labour and childbirth.

Clinical qualms regarding frenotomy, the inclination to adopt a 'wait and see' attitude once tongue-tie had been identified and the ambiguities surrounding the diagnosis of the condition resulted in a perception on the part of mothers in this study that tongue-tie was routinely overlooked as a cause of breastfeeding problems. As a consequence of delays in diagnosis and clinical reluctance to recognize the issue, the women in this study felt that the clinical approach to the condition created an overall context in which information was lacking and the condition and its effects on breastfeeding were under-recognized. One mother explained 'They say 3% [of infants have tongue-tie] but just from talking to people and my circle of friends it seems like way more people have it', while another addressed the difficulties caused by the contested nature of the condition and its treatment: 'We've found the whole thing very tricky and political, even the decision of whether or not to get it done is political […] it's all very confusing as an outsider!' Women gathered much of their knowledge through listening to the experiences of their peers or from other information sources such as blogs, as well as through non-clinical sources such as Baby Café:

Georgia: No-one even mentioned tongue-tie to me until I went to Baby Café […] I just sort of assumed someone already would've checked him. Especially since I'd seen so many people about struggling to feed him, I just thought someone would've had a look by now. But they hadn't!

Clare: My friend's baby has tongue-tie and they didn't pick it up for about a month.

Claudia: The most I've found out about tongue-tie is through bumping into people, not through the usual channels.

Teresa: I'd never heard of it, I didn't know it was an issue. So it took a long time for [tongue-tie division] to be done.

Lucy: No-one picks [tongue-tie] up.

Kirsten: It was the midwife who did the parentcraft class who came on day three, she looked and he was really crying, and I just happened to hear her say to the student midwife, "Oh it looks like he's got a slight tongue-tie".

Tilly: I wish someone had just talked to us about it – I almost gave up breastfeeding'

Tessa: Why did they not check it at the hospital? Instead they just left me for two and a half weeks.

These comments illustrate women's frustration at the consequent delays in diagnosis, which led for many to an experience of breastfeeding that was overshadowed by feelings of resentment and lack of support. Similarly to the experiences of the women above, Georgia's son's tongue-tie was not identified during his newborn check but was subsequently diagnosed months after his birth. By this point she had begun topping up with formula milk and, though Georgia was pleased to have found a reason for the problems she had experienced with breastfeeding, for her it was 'too little too late'. Georgia explained her dissatisfaction with the process:

> Actually if someone in the beginning had identified he had tongue-tie, when we were in hospital, they would have known that we would probably have problems when we got home. So then I wouldn't have got into the difficulties that we did. I really wish someone in the hospital had just had a quick look and said, "Yeah he's tongue-tied". And then I would have known. Because you get home, and you're sort of exhausted, and then the baby can't feed and you're getting so distressed, whereas if someone had warned me, you know, actually you might struggle, then you at least expect it? But when you get home you're like ugh, what am I doing wrong! And you're so tired – it's really difficult.

The delay in diagnosis led to Georgia feeling let down by the clinical system; she recalled the sense of being overwhelmed by the feeding difficulties she experienced which ended up having a negative effect on her relationship with her son as well as on her ability to breastfeed. Georgia felt that the lack of communication about tongue-tie had prevented her from seeking treatment options; while failure to identify the condition early on left

her unprepared for the difficulties she faced during the early months of breastfeeding. For mothers like Georgia, the improvement they felt in breastfeeding after a tongue-tie division made the delay in treatment all the more frustrating. This was further illustrated by one mother's (Isobel) comment post-frenotomy: 'I feel like the whole way along my supply has been questioned so as soon as I pumped for 24 hours and they said it was tongue-tie I was quite happy. It would have saved so much if they just snipped in the first week. I can feel his tummy is full now, I haven't felt that yet.' Isobel was frustrated by the fact that her supply had been questioned: she felt that the difficulties she had experienced with breastfeeding had been attributed to failures in her own body, when in fact it was a physical restriction on the part of the infant.

Mothers whose infants were diagnosed weeks or months after birth struggled for long periods of time with problems that felt insoluble. Some began supplementing with formula milk, while others chose to persist with exclusive breastfeeding despite experiencing acute difficulties. After having persevered with limited improvement in symptoms and no clear explanation, women often blamed themselves for their apparent inability to breastfeed. This was reinforced by the discourse presented in antenatal education, which emphasizes the ability of all women to achieve successful breastfeeding. Kirsten, while struggling to breastfeed her own infant with a suspected tongue-tie, described the experiences of a friend who had breastfed her second child for eight months before he was diagnosed: 'She *thought* he had a tongue-tie and she *kept on* getting pushed back and being told no, no, no, it's fine, just keep persevering, he's got colic or, you know, he's just slow. And now, after eight months of taking hours to feed him every single time, she's found that he *does* have a slight tongue-tie' (original emphasis). Like her friend, Kirsten was now struggling with symptoms of a suspected tongue-tie and was concerned that she would face the same obstacles in diagnosis and treatment. Claudia

explained, 'You just think this is how it is, it's my fault, it's not that painful, I'm just emotional. Then finally the Health Visitor said, "I think it's probably the tongue-tie" and I thought, thank you! That's what I've been saying this whole time!' For women who wanted to breastfeed exclusively and had set great store by doing so, an eventual diagnosis of tongue-tie thus offered not only a potential for resolution of the difficulties they were experiencing but also a functional explanation, serving as vindication that an inability to breastfeed could be the result of a tangible cause rather than simply a lack of effort or dedication.

The difficulties that women experienced in relation to tongue-tie draw attention to a wider issue within the discourse of successful breastfeeding. The emphasis in public health and clinical rhetoric is primarily on the needs of the infant in relation to breastfeeding outcomes. The product, breast*milk*, is rendered highly valuable due to its nutritional properties and health benefits primarily to the infant, while the mother's experience of the process, breast*feeding*, becomes a secondary concern. Reference to bonding as one of those benefits represents an attempt to include the process but this, too, generally foregrounds the infant's need for closeness over the mother's experience of the process. A risk thereby arises (in practice if not intention) of overlooking overall maternal wellbeing and focussing instead on the mother's capacity to produce milk to sustain an infant. Narratives relating to tongue-tie provide a pertinent illustration of the dichotomy between product and process in relation to breastfeeding, demonstrating a set of circumstances in which the infant may be healthy – health, in clinical terms, being represented generally in terms of weight as described in the previous chapter – but the mother's wellbeing and satisfaction with the process is compromised.

Mothers in these situations perceived an imbalance in clinical concern; that if the infant was gaining weight, tongue-tie was more likely to be overlooked even in cases

where the mother was suffering severe symptoms of the condition. In other words, so long as the product was being delivered effectively, maternal perceptions regarding the process were perceived as less critical and of more minor clinical relevance, and problems were consequently subjected to less rigorous clinical scrutiny. Chrissie, recalling the initial weeks after birth before she sought a clinical diagnosis of her son's tongue-tie, commented: '[Breastfeeding] was so painful, but he only lost 2% of his bodyweight. And I know that they'll only refer you if they're losing weight but we were spending hours and hours a day feeding.' This comment demonstrates a clear link between infant weight and clinical willingness to diagnose and treat the condition, with little regard for the experiences of the mother. Julia, who at the time of the comment that follows had not yet received a diagnosis of tongue-tie, explained: 'It's so painful, and the baby keeps falling off. But he's gaining weight well so they've told me just to carry on'. Julia's Health Visitor continued to encourage persistence with breastfeeding despite the pain that Julia was experiencing, with no clear plan for resolution of the issue: 'I kept going to see the Health Visitor and every week they said well if it hasn't picked up next week we'll do something. And in the end I just got fed up.' Indifference towards the symptoms that Julia was experiencing led ultimately two a ten-week delay in diagnosis and treatment of the infant's tongue-tie, which Julia finally funded herself through a private consultant. Georgia, whose son's tongue-tie was never formally diagnosed due to appointment delays and an initial dearth of information, commented:

> Because we had no complications and he was healthy, and he was gaining weight, they just thought ah well, they're fine, we'll just leave them to it. Instead of trying to help me make it a bit easier for me. […] And the thing is, because he was fine, I can understand because they are so busy and they've got people that aren't fine, who do need more help.

Georgia's perception was that the issue was one of prioritization; loss of weight in an infant presents a more critical, immediate risk than pain experienced by the mother,

therefore prompting a greater level of concern and attention from clinicians and Health Visitors while dyads who experience only maternal symptoms provide a less critical risk. Claudia, on the other hand, thought that the issue stemmed from the lack of credibility afforded to women for whom the only symptom of tongue-tie was pain: 'I had real issues getting anyone to take me seriously because she was putting weight on fine. But I had craters in my nipples!' Georgia and Claudia's observations were echoed in impressions given by Emma and Karen, both of who came into contact with cases of tongue-tie regularly through their professional lives. Emma, mother-of-two and a peer supporter at Baby Café as well as a GP professionally, explained: 'even if [breastfeeding] is painful, if the baby's putting on weight they won't check for [tongue-tie]'. Baby Café facilitator Karen corroborated: 'If the baby is gaining weight and the mother is coping, then a tongue-tie might not be picked up for weeks. The problem with the lack of continuity is that there is no sense of responsibility'. While several classification systems have been proposed to grade the degree of tongue-tie, all have been based on manifestations in the anatomy of the infant (amount of tongue movement, length of the frenulum), identified by physical examination, with none of the systems having been correlated to symptomatic severity (Hazelbaker 2005; Kotlow 1999; Notestine 1990). This, along with the narratives of women in this study, indicates that too little attention is paid to maternal symptomatic severity in diagnoses of tongue-tie, with emphasis instead being placed on infant weight as the primary diagnostic criterion.

The result of the contested nature of tongue-tie is a fragmented and inequitable service provision across the country (Ingram et al. 2015:F344), mirrored in the approach to the provision of breastfeeding support more generally. Cases of tongue-tie are, of course, relatively unusual among the general population, and the majority of mother-infant dyads do not undergo difficulties to the same degree as the women described in this

section. Together with the narratives described in the previous section, however, these acute scenarios serve to highlight the need to re-examine the use of successful breastfeeding standards in public policy. First, they highlight the difference in worth afforded to breastmilk as a product versus the process of breastfeeding. Examining experiences of infant tongue-tie through this lens demonstrates that emphasis on breastmilk as a product also results in the maternal experience – the process – being undervalued, with discomfort and painful symptoms experienced by mothers being overlooked or disparaged. Tongue-tie provides an example of an impediment to breastfeeding that clearly cannot be overcome by sheer perseverance; however, the clinical approach to the condition results in women feeling disbelieved. It becomes clear that not only are maternal conceptions of breastfeeding success not acknowledged in public health conceptions of the same – engagement with them is actively avoided in favour of promoting the optimal, and infant feeding education focuses on the avoidance of risky behaviour within a framework of physiological need, rather than approaching infant feeding as a complex social process that involves the mother's emotional needs. Attention must be paid to maternal wellbeing as a priority in conceptions of successful breastfeeding, both in order to facilitate the process of breastfeeding and in order to avoid a negative impact on maternal mental health. In relation to cases of tongue-tie specifically, it is undoubtedly inadmissible to administer unnecessary surgical treatments; the surgery carries some risk after all, and furthermore the potential remains for the procedure to have no positive effects. However, the current situation is equally undesirable, in which women are discouraged from seeking appropriate help from problems that they experience due to the condition. Kumar and Kalke (2012:688) observe that 'controversies in tongue-tie have arisen from attempts to find an absolute relationship between breastfeeding difficulties and tongue-tie, instead of a relative one'. And it is this

approach too that underpins the flaws in the notion of successful breastfeeding as outlined in public health approaches to infant feeding. What is required is a more relative, less absolute conception of successful breastfeeding that takes account of the wants and needs of the individual mother as well as those of the infant.

5.3 Considering Night-time Breastfeeding: A Site of Risk and Resistance

Public health in general is predicated upon advocating risk avoidance, and policy related to infant feeding is no exception. This results in a number of binary assumptions that link infant feeding policy with risk: one either breastfeeds or one feeds with formula; the latter constitutes a risk while the former reduces risk; engaging in risky behaviour is harmful under all circumstances whereas avoiding risk is always beneficial. This section will challenge the binary presentation of risk versus benefit in relation to infant feeding practices, arguing that the process is one of agile navigation rather than rational decision-making. These negotiations are rarely static, shifting temporally and according to individual circumstance, requiring active engagement and negotiation among multiple agents. An examination of night-time feeding – a site of heightened risk discourse and frequent transgression – usefully highlights both the challenges that can ensue from advice that is focussed exclusively on risk avoidance, as well as demonstrating the ways in which women navigate everyday risk in relation to infant feeding.

While sleep may, at first glance, seem a topic extraneous to that of infant feeding, the negotiation of sleep and infant feeding in fact has a central role to play in shaping women's experiences of breastfeeding. The significant body of research within biological anthropology dedicated to the relationship between breastfeeding and sleep arrangements (Ball 2006; Ball 2009; Klingaman 2009; McKenna et al. 2007) draws attention to the importance of this area of research, but ethnographic research on this relationship is

limited (see Tomori (2011; 2016) for an exception). The same author, during an ESRC Breastfeeding Seminar Series in 2015, urged scholars to consider night-time feeding practices as integral to examinations of infant feeding, while the concept of 'breastsleeping' (McKenna and Gettler 2016) was conceived in an effort to present shared sleep as an essential dimension of breastfeeding. Sleep was furthermore perceived by many mothers in this study as highly relevant to the process of breastfeeding, suggesting that it merits further exploration to inform the framework of risk and uncertainty that characterizes breastfeeding in the UK.

Sleep deprivation and fatigue were common problems among the women in this study; labour and delivery are processes that exert substantial stresses on the body, and recovery from these processes often takes weeks or even months, during which time mothers must care for an exigent newborn. For a non-parent, the ramifications and extent of sleeplessness during the initial weeks of motherhood (described by one mother as 'like having a frontal lobotomy') are seemingly inconceivable, and mothers often expressed concern about the sleep behaviour displayed by their infants. Karen explained, '[Infant sleep patterns are] what most parents worry about because they don't know about it, they don't know that irregular sleep is totally normal it's not just their baby malfunctioning'. In fact, parents in Euro-American contexts are taught to expect the negative impact of an infant on parental sleep before they have met their progeny, resulting in numerous methods purported to help parents 'train' their infants to sleep in a way that mirrors the sleep patterns of adults (cf. Schaefer and DiGeronimo 1992).

Chronic sleep deprivation was perceived by women in this study to be worse for breastfeeding mothers than for those who were bottle-feeding for two reasons. First, the physical act of feeding cannot be shared with a partner or family member in the same way as it can when the infant is bottle-fed, since only the mother is able to breastfeed. This

meant that the responsibility for feeding usually fell to mothers during the night, especially when fathers returned to work after their paternity leave. Second, formula milk was believed by many of the mothers in this study to act as a sedative that would prompt infants to sleep for longer periods of time at night. As one mother explained, 'Formula-fed babies do sleep. Because you can overfeed them so their bodies are like oh, I have to process all this, it's really hard, better just lay there for hours. Which is great, it's a bit like hibernating' (Kara). Although formula milk may not always provide quite such an immediate solution to restless infants – parents of formula-fed infants also suffer disrupted sleep and unsettled nights – it has been suggested that breastfeeding mothers spend a greater proportion of hours awake during the night than mothers who formula feed (Quillin 1997). Several studies have demonstrated that infants who are fed with formula rather than breastmilk start to 'settle' (that is, sleep for longer periods of time at night without waking) at a younger age than breastfed infants (Wright et al. 1983; Zuckerman et al. 1987). Formula-fed infants also stir less often at night (Carey 1975). The differences in sleep behaviours between formula- and breastfed infants can primarily be attributed to the comparative indigestibility of non-human milks (Raphael 1976), as alluded to by Kara. Scholars have suggested that arousal varies considerably from infant to infant (McKenna et al. 1997) and, contrary to the expectations of many parents (McKenna et al. 1990:332), frequent night-waking is an evolutionarily adaptive behaviour that protects against Sudden Infant Death Syndrome (SIDS) and other physiological challenges (Kinney et al. 2005; Mosko et al. 1997; Mosko et al. 1997b). Furthermore, infants wake for non-nutritive purposes too such as to be cuddled and to be touched (McKenna 2014:41).

The intimate connection between sleeping and breastfeeding is exemplified by a conversation between two mothers, Josephine and Madeleine, both of whom were

exclusively breastfeeding their sons. The first mother, Josephine, was anxious about rolling over onto her son, Freddie, while she was asleep. She therefore put him in a crib each evening, sitting next to the crib until he fell asleep, before lying down to sleep in the bed that she and her husband (John) shared, which was located in the same room. Freddie woke up, as most infants did, at regular intervals through the night. Sometimes he 'settled himself' – that is, he fell asleep again without any intervention from either of his parents – but more often than not Josephine had to feed him in order to send him back to sleep. Although the crib was next to her own bed, operating in this way meant that either Josephine or her husband, John, had to get up out of bed, lift Freddie out of his crib, comfort him if he had already started crying, before Josephine settled into the rocking chair that they had installed in the bedroom for the purpose of night-time breastfeeding. Throughout the feed Josephine had to ensure that she stayed awake in order to ensure that Freddie did not fall off the chair or slip into the gap between her body and the arm of the chair. At the end of the feed, Josephine got up to return Freddie to his crib; often Freddie would stir as she lowered him into the crib, which would prompt Josephine to return to the rocking chair and begin the process again. On nights that Josephine described as 'good' this process took place just four or five times, while on 'bad' nights Josephine rarely slept for more than an hour at a time. The long nights of interrupted sleep were beginning to take their toll, and Josephine explained that while John was currently at home to help look after Freddie, she wondered how she would cope after the end of his two-week paternity leave four days later. Not only would this mean that John was absent during the day, leaving Josephine to care for Freddie alone, the couple had also planned for John to sleep in a separate room during the week in order to enable him to sleep without interruption in readiness for each working day. This meant that the night-time

feeds would become lonelier for Josephine without the moral support and company of her husband, and she was concerned that she would fall asleep while feeding as a result.

The second mother, Madeleine, listened to Josephine's difficulties and sympathized with her concerns, explaining that she had been in the same position some weeks prior. Madeleine had recently altered one aspect of her night-time routine – instead of putting her son, Nicholas, into a separate crib at the beginning of the night, Madeleine had started to bring Nicholas into bed with her. Constructing a barrier of towels at the very edge of the bed, Madeleine slept on her side with her body and outstretched arm curled around Nicholas' body, the baby positioned in the middle of the bed. Madeleine's body thus formed a barrier on one side of the bed, ensuring that Nicholas would not fall out, while the pillows formed a barrier on the other. This meant that Madeleine no longer needed to leave the bed in order to feed, and could instead simply slide Nicholas over to her breast to feed him whenever he stirred. Madeleine also no longer worried about falling asleep when he fed, since she was confident that Nicholas would not fall out of the bed. Ball & Klingaman's (2007) research indicates that the physical position adopted by Madeleine is common among co-sleeping mothers and is often implemented without explicit guidance, enabling physical closeness and night-time breastfeeding while also preventing the infant from moving too close to the edge of the bed. Breastfeeding without sharing a bed with Nicholas now seemed unnecessarily difficult to Madeleine, and she described her experiences to Josephine in the hope that this might encourage her to give it a go. Madeleine ended pragmatically, 'It's just easier. Turn over, give him the boob and job done. Couldn't do it otherwise'.

Central to the relationship between breastfeeding and sleep, to the controversies surrounding public health and infant sleep, and to the consequent negotiation of everyday

risk that women engage in, is the practice of bed-sharing or 'co-sleeping'[36] that Madeleine had discovered. Cross-cultural comparisons reveal that mother-infant bed-sharing is a common practice in much of the world (cf. Barry and Paxson 1971; Jenni and O'Connor 2005; McKenna et al. 2007; Morelli et al. 1992; Wolf et al. 1996), but that it is marginalized and considered risky in Euro-American contexts (cf. Ball and Klingaman 2007; McKenna et al. 2007). Despite being widespread, the latter approach appears to be a recent development. Hardyment (1983) contends that less than two centuries ago, co-sleeping was a standard practice in Euro-American households, beginning to change with the industrial revolution that gave rise to living arrangements that enabled separated sleeping for most inhabitants of the household (Ball 2006:5). In the 1920s and 1930s popular childrearing strategies emphasized the importance of encouraging early self-reliance, independence and self-control; solitary infant sleep thus became a desirable goal in post-industrial societies, with the provision of a separate nursery becoming popular among middle-class USA and UK households (Ball 2006; Hardyment 1983). By the mid-twentieth century, solitary sleep for children and infants had become the unquestioned norm for healthy child development (Tomori 2011:67). In the latter half of the twentieth century, research increasingly established causal links between SIDS with infant sleep behaviours, establishing co-sleeping as a risk to infant health (Mitchell 2009; NICE 2014). Public health interventions focussed on the link between infant sleep behaviours and SIDS (particularly in relation to parents who smoke, drink or take drugs) leading to wide-scale 'Back to Sleep' campaigns encouraging non-prone sleep positions and

[36] Some have argued that 'co-sleeping' involves sleeping in a proximal configuration – within arm's reach – on any surface, and that the terms 'bed-sharing' and 'co-sleeping' should therefore be separated (cf. McKenna et al. 2007). Mothers in this study used the term to describe one or both parents sharing the same bed as an infant; therefore for the avoidance of confusion, and to ensure consistency with participants' quotations in the use of the terminology, 'co-sleeping' will refer in this section to bed-sharing and the terms will be used synonymously.

discouraging bed-sharing, which resulted in dramatic reductions in infant deaths (cf. Gilbert et al. 2005).

The controversial nature of co-sleeping arises through mainstream medical advice that highlights the association between SIDS and co-sleeping, as well as the benefits of extended periods of sleep for infant and adult health (cf. Bell and Zimmerman 2010; Fallone et al. 2002). These concerns are exacerbated by the ostensibly detrimental impact of co-sleeping on childhood self-reliance and disruptions to parental lifestyle (including sexual relations and sleep). The prevailing advice to mothers in the UK context is to avoid co-sleeping, and health practitioners are encouraged to outline the potential risks clearly (NICE 2014). Parents are advised that 'the safest place for your baby to sleep for the first six months is in a cot in the same room as you' (NHS 2018). Women in this study were certainly aware of the predominance of advice against co-sleeping, as evidenced by the ways in which women spoke about night-time arrangements with their infants. Eleanor, one of the few mothers in the sample who never co-slept with her daughter, explained, 'I remember very well the NCT. They said it's better not to [co-sleep]; if you want to you are free, but there are many disadvantages'. Laura commented similarly: 'At the NCT course they said more about the risks than the benefits of course, because it's still the official thing that it's risky'. Erika, like many other mothers, had received strong advice against co-sleeping from one midwife in the hospital directly after the birth of her daughter, and had decided on that basis, as well as on the basis of other information she had received during her antenatal course, that she would not co-sleep with her daughter: 'Particularly one midwife, the one who was discharging us from the hospital […] I'd had a horrendous night when I was up and down and up and down, and I wanted to actually fall asleep in the bed with her and she said, "No, no, no – you absolutely *mustn't*, it's a really bad idea"'. Another mother, Leanna, similarly

remembered the advice that she had been given in hospital after the birth of her daughter, saying, 'At the hospital when she was born they kept talking about cot death and SIDS and all that, and they kept going on. It was scary!' The physical environment for mothers and babies in maternity wards equally encourages separated sleeping, with cots placed beside each bed for mothers and infants who stay in hospital after birth. Karen, a Baby Café facilitator, observed:

> When we go round the hospital auditing [for the BFI], you can see the difference between the first-time and second-time parents. Cots are always there and they act as an implicit deterrent to co-sleeping – it's the obvious place to put the baby. So all the first-timers are in cots whereas with the second-timers mum or dad is holding the baby, they're confident enough to do that. Parents spend far too much energy trying to settle their babies, which is just conning them into thinking someone's still holding them. Babies are supposed to be held.

Further to the physical environment that mothers encountered immediately after giving birth, a number of mothers recalled posters lining the walls of the maternity ward that warned against co-sleeping. These had a particularly strong impact on one mother, Kirsten, who explained that she had initially been afraid to bring her son into bed with her 'because of all the terrifying posters all over the hospital and everything about cot death'. Recommendations against co-sleeping have intensified over the last decade, and for mothers with multiple children, the gradual change was noticeable. Leanna, a mother of three, commented, 'It's funny because I didn't get any of that advice with [older two children]. With my oldest I definitely shared a bed, and they didn't say anything. And then the second one it was a bit more, but this time – there was loads!'

Mothers occasionally described instances from within the healthcare system in which co-sleeping was endorsed, though generally in a manner that implied subversion. They reported that some midwives gave advice that contradicted the prevailing norm, with older, more experienced midwives often being described as more willing to advocate safe co-sleeping. Vanessa described the disparity between two midwives who had

conducted separate home visits after the birth of her son: 'The midwife who came to do my first visit after I'd come home, I actually know her professionally, she's a very experienced midwife. She felt confident to give advice about co-sleeping, she's had a lot of experience, but my other midwife who's much, much more junior and less experienced was less so'. Daniela similarly recognized the disparity between more and less experienced health professionals during an instance in which an older midwife had challenged RCM policy on co-sleeping using her own experience as a corroboration of safe co-sleeping: 'When you talk to the experienced midwife, she said, "Well I know I'm not supposed to say it", official NHS, because of cot death and stuff like that, but she said, "I had all my four children sleeping with me, and if you are not drug addict or if you don't drink you can sleep with a baby in bed"'. Another mother, Chrissie, similarly experienced advice from a midwife that challenged the policy norm. The week after she returned home from hospital, following nights of disrupted sleep, a home-visit from a midwife prompted Chrissie's first night of co-sleeping with her son: 'At the beginning I was adamant I wasn't going to co-sleep, and after a couple of days one of the midwives suggested it, I know they're not really meant to but I mean I was broken, and ever since then we've done loads and loads of lying down feeds'.

The above evidence, from this study and others, indicates that mothers who co-sleep face stigma in the UK by engaging with a practice that is associated with risking infant death at worst, and affecting healthy development at best. As a result of this stigma and the prevailing medical advice, most mothers in this study planned to sleep separately. This aligns with the results of Ball et al's (1999) prospective study of sleep arrangements in Britain, which suggested that nearly all parents intended for their infants to sleep in the same room but not in the same bed as them for a number of weeks, before being moved to a separate room. Some participants complied with the advice after birth as well: sleeping

separately, with their infants in a Moses basket (a small basket designed to provide a confined space commensurate to the newborn infant's size), a 'co-sleeper' (similar to a Moses basket, but designed to attach or sit directly next to a bed), or a cot. Celia, for example, explained 'I was absolutely terrified of co-sleeping. I still am […] There's lots of stuff about safe co-sleeping, but the safest thing for us is not having him in our bed, asleep. There's just no other alternative. My husband is such a deep sleeper that I'd lie awake all night worrying about it'. A second mother, Gil, explained 'I never felt quite confident enough to try it […] I worried that I wouldn't wake up when he was upset, because I am a very heavy sleeper […] and we haven't needed to try it because he's just been able to get back to sleep'. Aside from the risks to the infant, some mothers believed that co-sleeping would be detrimental in the long run, as evidenced by one mother: 'We don't sleep in the same bed, we sleep in the same room though – we are trying to be really strict about it because she will get into a bad habit'. Another mother, whose four-month-old infant was sleeping in the same bed as her and her husband, explained, 'It's difficult to explain to my husband because he's worried [the baby] won't be independent'. These comments reflected a common concern among mothers that co-sleeping would become a 'habit' that, once established, would be difficult to break.

Despite unequivocal educational communication of the worst-case scenario risks of co-sleeping, however, – i.e. infant death – practices among parents in this study often involved co-sleeping. Again, this echoes Ball et al's (1999) findings that a large portion of infants slept with their parents regularly for part of the night or at least occasionally. Research indicates a rise in bed-sharing rates among breastfeeding parents, attributed at least partially to rising breastfeeding rates (Kendall-Tackett et al. 2010; McCoy et al. 2004; Willinger et al. 2003). Many of the parents in this study, upon returning home with their newborn child, experienced difficulties in putting their infant to sleep in the separate

bed as they had planned to do. While Celia had never co-slept with her daughter, the majority of mothers in the study could recall at least one period of time during which they had slept in the same bed as their infant, and many co-slept consistently throughout the first months or sometimes years of their infant's life.

It is worth noting that, for most of these women, the transition to co-sleeping was not a conscious acceptance of risk, but rather one borne out of circumstance, motivated by specific events or a gradual change in perception over the risks involved. Kara, like most other first-time mothers in the study, had bought a crib and a cot in preparation for her new arrival, planning to sleep in the same room but in a separate bed to her baby, Caleb. After three nights of use, with both Kara and her husband exhausted from frequent trips out of their bed across the room to Caleb's, the crib was relegated to a corner of the bedroom and Caleb began sleeping in the same bed as his parents. The discovery of co-sleeping as a solution to her persistent sleep deprivation came by accident to Kara: 'On the third night of waking up every ten minutes I just fell asleep, and I remember this blissed awareness when I woke up an hour later and he was still latched on and I had slept, and I thought this is the way forward'. Kara co-slept with her baby until the birth of her next child two-and-a-half years later, and while this caused tensions with her husband Kara found co-sleeping to have been central to her willingness to continue breastfeeding. Another mother, Susan, had similarly intended to sleep separately from her daughter Posy: 'When we went to NCT classes they said not to [co-sleep] and before [birth] I would have definitely said no because my husband's huge, he's about twice my size, and I would have said well actually we might roll onto her anyway, and she might be smothered and all sorts so I was strongly against it anyway'. For the first three weeks after birth, Susan and her husband kept to their plan, with their daughter sleeping in a Moses basket next to their bed. In the fourth week, however, Posy became more restless

during the night and began to cry each time Susan or her husband put her down in the basket: 'She wouldn't let us put her down at all so we co-slept that week because that was the only way any of us could get any sleep at all'.

Likewise for a third mother, Vanessa, it was a coincidental event that caused her to begin co-sleeping with her daughter: 'I had an infection when Lara was three weeks old, and I was so ill, with such a horrible fever, that I couldn't actually get out of bed. And so [co-sleeping] ended up being something that had just happened.' Mothers also often co-slept in response to infant behaviour. Ania, for example, explained, 'When I try to transfer her into the cot she will wake up and she demands to be taken back. So I just don't fight. And especially in the middle of the night I feed her always – but it's easier because we sleep together'. Parental perception and assessment of risk thus changed over time in an unconscious way, rather than being a conscious weighing up of risk and consequent transgression.

The transition from separated to shared sleeping space was often legitimized by the undertaking of one risky behaviour – co-sleeping – to reduce the risk of another – cessation of breastfeeding. Many participants who co-slept with their infants identified the practice as enabling them to continue breastfeeding exclusively. It allowed them to decrease the amount of time they spent awake during the night, giving them the physical and psychological resources to breastfeed throughout the night and nonetheless to remain alert during the day. Studies do indicate that mothers who co-sleep with their infants obtain more sleep than mothers who sleep separately (Quillin and Glenn 2004). Chrissie began co-sleeping just days after the birth of her son, and described the immediately positive effect of the practice on her life post-birth. It had, she felt, been central to her ability to breastfeeding exclusively, and she believed that it was a common practice among breastfeeding mothers despite recommendations to the contrary: 'Otherwise how

the hell do you sleep? People would stop [breastfeeding] because you just can't do it'. Vanessa, a GP in her early 30s, explained:

> I think [co-sleeping] helped me to continue, probably, to persevere. I'm not saying I would have stopped breastfeeding, but it was certainly a positive thing because I got more sleep I think than a lot of people I know who weren't doing that, at that early stage […] and I think that's important, because I think if I were more tired than I am I might not still be breastfeeding.

For Erika, whose daughter tended to 'cluster-feed' (that is, breastfeed repeated in small quantities over an extended period of time) at night, co-sleeping was 'a complete lifesaver […] it just felt much less gruelling. Basically, co-sleeping is brilliant. Saved a lot of stress'. Carly's son Daniel was similarly restless at night, waking up frequently to feed with Carly getting little more than forty-five minutes of consecutive sleep at night. Carly explained the turnaround after she and her husband began sharing a bed with their son: 'When I slept with him we could maybe get an hour and a half of sleep at a time, which I think was brilliant for both of us'. Six months on, Daniel was sleeping in his own cot after having begun to 'sleep through'; but the previous months of co-sleeping had, Carly assured me, been hugely beneficial. Carly, like the other mothers described above, credited her initial co-sleeping arrangement with improvements in her sense of well-being: 'It's the best sleep the two of us can get. If you're not well enough to take care of yourself, then you can't take care of anybody else. Like, if I'm not rested enough to look after him then it's just pointless'. Some mothers went further and explained that co-sleeping was not simply a matter of convenience or weighing up risk; it was actively pleasurable, enabling companionship and closeness between them and their infant. During a discussion involving sleep at her one-bed flat, Daniela commented: 'Her father is not around and sometimes I feel lonely, so I just want to cuddle to my baby because she's warm. It's not just that I am giving her protection; she also gives me comfort. So I quite *like* sleeping together.'

Concurrent to mainstream medical advice that emphasizes the risks involved with infant feeding, a small group of breastfeeding experts advocate for co-sleeping (Tomori 2016:6). Notwithstanding recommendations to the contrary co-sleeping is becoming increasingly widely recognized as a safe way to sleep when certain precautions are taken – for example avoiding alcohol, sleeping on a firm surface, removing pillows and cushions from the bed. In fact, a growing body of research shows that provided these precautions are adhered to co-sleeping is actively beneficial both for infant development and for reducing the likelihood of SIDS; an evolutionarily adaptive behaviour involving physiological reciprocity between the child's and the mother's body, which plays a critical role in facilitating breastfeeding as well as in regulating infant body temperature and respiration (Gettler and McKenna 2011; McKenna et al. 2007; McKenna and McDade 2005; McKenna et al. 1993; Richard and Mosko 2004). The scientific endorsement of co-sleeping (despite not being communicated through institutional channels) and the dissemination of information on co-sleeping safely through certain channels provided reassurance to mothers who engaged with the practice in contravention of to the advice of their Health Visitor or midwife. As well as providing a forum in which mothers could commiserate over restless infants and their own lack of sleep, Baby Café constituted a space in which co-sleeping was supported and encouraged, as well as a space in which women who wanted to co-sleep could gain affirmation that the practice was both common and safe. Louise explained that though she was hesitant at first to bring her daughter into bed with her, a visit to a Baby Café session affirmed her own view that co-sleeping would be unproblematic: 'I came here and talked to Lauren and she told me to look at the NICE guidelines, so I did, and it was talking about all the risk factors like smoking and drinking, and I don't do any of those and she sleeps on top of the duvet and has her own blanket and stuff, so it's just fine'.

The conception of co-sleeping as a risky behaviour in clinical and policy ontologies was reflected in mother's narratives concerning their decision to co-sleep. Tessa commented, 'Now I've reached a point where, and I shouldn't say this, but she sleeps in the same bed as me'. 'I shouldn't say this, but…' was a common preface to admissions of co-sleeping, demonstrating the sense of subversion that women felt in relation to risk discourse surrounding co-sleeping. The lack of certainty with regard to the risks of co-sleeping, as well as the stigmatized nature of the practice, constitutes the crux of parental dilemmas in relation to infant sleep. As Ball and Volpe comment, 'Co-sleeping is a practice that is valued by its advocates for strengthening attachment, promoting infant development and supporting breastfeeding. By contrast, critics of the practice present it as neglectful parenting that exposes infants to unnecessary risk of accidental death through suffocation, overheating or SIDS' (2013:86). Co-sleeping in the UK context thus represents a complex set of factors, associated with both risks and benefits, which are dependent upon the context of the sleep environment and the characteristics of individual families, making the provision of simple public health messages difficult (Ball and Volpe 2013). The differing views of co-sleeping were perceived as a source of anxiety for many mothers in the study.

Night is a period of time that every parent must negotiate with their child, which in this context constitutes a key site of conflict for breastfeeding women. Mothers must balance the widely publicized risks of co-sleeping – and of contravening prevailing advice – with the challenges of breastfeeding a child in a separate bed. This is a particularly difficult task since the risks of co-sleeping are communicated as actively dangerous – the ultimate consequence being infant death. As with many other areas of infant feeding, recommendations and guidance concerning sleep and breastfeeding were experienced by some mothers in the study as contradictory, both between and within

organizations. This made the task all the more difficult. Erika explained: 'We had very conflicting advice, some of the Health Visitors said no whatever you do don't do it, then one of the older ones interestingly said, you know what, everybody ends up doing it, so just make sure you do it safely and that's fine. I really wish the advice was clearer, and a few people were willing to say, the science on this is very dubious […] most of them clearly delivered the line that they were supposed to deliver, but some looked more convinced by it than others.' Overall, advice against co-sleeping was perceived as particularly unsettling by mothers who experienced breastfeeding difficulties because it associated a potentially effective solution with an ostensible unacceptably high risk to the life of the baby.

The preponderance of advice from sources described by mothers as 'official' condemning co-sleeping was a cause of frustration for mothers who co-slept, or who wanted to co-sleep, safely and without recrimination. Jemima, mother of Ellie, who had researched sleeping arrangements before giving birth, described her dissatisfaction at the approach that was taken at the hospital, where she spent two weeks leading up to the birth of her daughter due to pre-eclampsia. Her opinion was that the strong advice against co-sleeping was not only biased and misleading, but also constituted a risk to infant health in itself:

> In the hospital they told us that we shouldn't do it, and then gave us a leaflet about why we shouldn't do it, and *kept* saying that we shouldn't do it … but in the kind of way where they know that it's nonsense but they sort of have to give you that advice because they just have to give you that advice. And that really pissed me off, because I just think it's such unsafe advice. Because *loads* of people co-sleep not really knowing how to do it safely, and that seems to me way more dangerous.

After being discharged from hospital Jemima slept in the same bed as her daughter, confident in the fact that she had thoroughly investigated the benefits and risks of co-sleeping herself before giving birth. Kirsten, by contrast, had assumed she would put her son to sleep in a crib each night after absorbing the information given to her during her

antenatal course about the risks of co-sleeping. Having slept in the same bed as her son for two nights, contrary to the advice of her Health Visitor, Kirsten had searched online for information on co-sleeping. Finding numerous blog posts and articles outlining evidence in support of co-sleeping, Kirsten questioned the prevailing emphasis on separated sleeping:

> One book says actually co-sleeping can be really good for their development and it can help you get into sync […] Why are they telling everybody not to have them in bed with you, just because of the tiny number of people who smoke or roll over onto them […] You're so terrified of having them even lie in bed when they're wide awake, because you think that that's bad, and there's the stigma about co-sleeping because there's this tiny proportion of cot deaths. When actually, the vast majority of responsible people are going to know not to smoke or drink or leave them in bed under a duvet unattended. I think that there's too much stigma about co-sleeping, as if it's only irresponsible sixteen-year-old mums who do it. When actually probably the most informed and attentive parents do it, but don't talk about it, because it's the best thing for their development and your bonding.

The consequence of the opprobrium described by Kirsten is that, similar to the experiences of women who supplement their own milk supply with formula milk, mothers who co-slept often felt guilty doing so due to the perception that they were putting their infants at risk, potentially of death. Miranda, mother of one-year-old Luke, described the first three months after birth during which time she co-slept as follows: 'He didn't want to sleep except from with me, and I was going crazy because they scare you so much with SIDS and stuff that I couldn't sleep, I was worried about him the whole time. I felt so guilty about sleeping with him'. Correspondingly Jemima, who as described above had wholeheartedly embraced co-sleeping, knew many other mothers who had had negative experiences due to the dominant advice: 'The co-sleeping advice in hospital was don't do it, and I've got friends who really took that to heart and then had a really miserable six months where they really struggled to settle their baby and they didn't get any sleep, and then at six months they were like oh maybe we should let them sleep in our bed, and then everyone slept. What a waste of time'.

Mothers who co-slept were thus aware of the potential risks, but justified them with reference to the concurrent benefits that co-sleeping provided. Ania, who listened to the advice of Health Visitors and midwives but routinely ignored it in favour of her own views on child-rearing passed down to her from her mother and grandmother in Poland, explained: 'There are midwives, and most of them they will tell you the official way, they will come and for instance say, "Oh, does the baby sleep separately, in a cot, during the night?" And then I just said to all of them, "Oh yes, yes", because they just tick the boxes, and actually the baby has been sleeping with me in bed.' Laura spent several days after birth sleeping in a separate bed to her daughter, getting out of bed up to six times a night in order to cross the room to her infant's crib and breastfeed. On the fourth night Laura took her daughter into bed with her, contravening the recommendations she had received during her antenatal course. She continued doing so until her daughter was three months old: 'Everyone will tell you that it's really risky and you shouldn't do it, but that's what works the first few months and if it works after not being able to sleep for a couple of days you just try it and it's okay'. Paula co-slept with all three of her children (one nine-month-old toddler and two seven-year-old twins) during the first year, and while she knew that co-sleeping posed certain risks she struggled to combine breastfeeding and separated sleeping: 'My kids have all slept in the bed with me because I just can't put them down apart from anything else, and I just can't make it work. So in that sense I'm not following the safest thing to do, which is an *awful* thing to say, especially if you're as neurotic as I am about your children!'

While many women experienced co-sleeping as a critical factor that improved ability to breastfeed, it is not presented within public health messages as being part of the successful breastfeeding process. On the one hand, this serves to highlight the problematically reductive approach to breastfeeding in public health policy. On the other

hand, it indicates ways in which women manage certain risks in order to enable them to carry out infant care in a way that is effective and suited to their own needs as part of a mother-infant dyad. The persuasive power of the advice and its effect in either determining avoidance of co-sleeping or inducing feelings of guilt where mothers contravene the advice derives from an exaggeration, or rather a universal application, of the risk. This places mothers in a position where any scope for legitimate independent decision-making is removed. Even if the actual risk is minimal, mothers are placed in a position in which they are charged with protecting the infant in accordance with prevailing guidelines, regardless of any opposing evidence and the nature of their own individual circumstances. The next section will identify the common ground between this section and the last and explore the attitude of 'doing what works' in relation to managing risk.

5.4 'Doing What Works': Rethinking the Success Model and Rediscovering Diversity

Successful breastfeeding is presented in public health education as a choice that, with sufficient information, perseverance and discipline, can be achieved by all mothers. This thesis has demonstrated thus far that this is not the case. Under-recognized physiological conditions inhibit breastfeeding, support may be unavailable or difficult to access, and women undertake practices like co-sleeping that are defined as risky as a result of circumstance and experience rather than because they are uninformed or negligent. Existing literature that addresses the low rate of UK women who conform to policy objectives justifiably engages with the structural and cultural constraints that serve to explain or precipitate noncompliance, focussing on societal factors that restrict female choice and compel women to engage in behaviours that are considered risky. Although

exploring these issues is imperative, it is equally crucial that the agency women have in questioning, challenging or resisting the assumptions that underpin infant feeding policy in the UK is not overlooked. This section will challenge the binary nature of breastfeeding success, serving to demonstrate that breastfeeding success is a complex process of balancing risk with practical considerations and negotiation of conflicting ontologies – a process described by mothers as 'doing what works'. In order to do so, I will return to the experiences of women who supplemented their own milk supply with formula milk, thereby failing to meet the standards of successful breastfeeding outlined in health policy. While the first section of this chapter confirmed the findings of existing studies that the initial response to the introduction of formula milk tended to be negative among mothers who had intended to breastfeed exclusively in accordance with standards of successful breastfeeding, this section examines the narratives of these mothers *after* this initial response, demonstrating the agency of individual women in contravening standards of successful breastfeeding in a pragmatic negotiation of risk and responsibility.

The experiences of four women, Erika, Laura, Georgia and Andrea, who all 'topped up' their own milk with formula milk in response to unexpected difficulties with breastfeeding, illustrate this process particularly well. Erika, whose experiences with weight loss were explored in Chapter Four, had already spent several weeks visiting the breastfeeding clinic at the JR before coming to a Baby Café session in a state of exhaustion. Her daughter was experiencing rapid weight loss and Erika was beginning to lose confidence in her ability to breastfeed. Erika continued to try and feed her daughter exclusively with breastmilk until she was five weeks old, at which point she decided to introduce supplementary formula feeds. Two months later I visited Erika's home to interview her: sitting in her living room, surrounded by toys and watching her daughter play happily in a baby bouncer, Erika was visibly more relaxed that the last time we had

seen each other. She explained that, having introduced a bottle of formula milk a day in addition to her own milk, she no longer needed to breastfeed through the night. This allowed her to sleep more, which in turn had enabled her to start re-introducing work to her daily activities:

> I used to like the fact that she would feed all night, because I knew that your supply is higher at night, and so I thought fine, if this is when she needs to get the milk, that's absolutely great, and I don't mind. I'm now starting to think, you know what, if you have to have a bit more formula and you feed slightly less during the night, that's okay too [laughter], because this is getting a *little* bit tiring and I'd like to do a *little* bit of work.

Although initially distraught at the possibility of 'giving up' on exclusive breastfeeding, Erika had, by this point, accepted the development and had started to see it in a positive light. Erika's work was important to her, and although she was not planning to return to work full-time until her daughter reached six months, she had a variety of projects that she wished to pursue during her maternity leave. She felt that the daily bottle of formula milk didn't significantly reduce the amount of breastmilk her daughter was receiving, and that it gave her flexibility to start moving back towards her work.

Laura, a Chilean postgraduate student nearing the end of her PhD, found herself in a similar position to Erika: her son was losing weight, and there seemed to be no obvious reason for this. His latch was good, there were no obvious physical signs of impediment, and Laura did not find breastfeeding painful or hard. After several weeks of deliberation, on the advice of her paediatrician and midwife, she and her husband decided to introduce formula milk. She explained how the change had affected her family: 'The thing is that after we started introducing formula, everything was better and he was pooing and he was gaining [weight], he starting gaining weight like crazy, going back to his birth centile and even higher than that, so we were really quite happy, it was really a life-saver for us'. For Laura, formula milk made the process of breastfeeding more enjoyable, because she no longer needed to spend time and effort worrying about his slow weight gain. She had also

come to the conclusion that the introduction of formula milk was beneficial for her progress as a graduate student, allowing her to be more efficient with her writing:

> It fits a lot with my studies, because I'm finishing my thesis. So since he was around three months more or less I had to go back to my thesis, so I work on the weekends, when my husband takes care of him, and I just go to the house over there that has a common room, and I work there and I usually need like at least six hours of work to be able to produce something and I need to stay focused for a while. And if I were just exclusively breastfeeding it would be impossible to do that, I would have to kind of go back and forth, and he takes quite a long time also when I breastfeed him, at least an hour or even more, so I would only have an hour of work and then another hour, and I don't work very well like that.

The introduction of formula thus helped Laura to integrate her life as a mother with her life as a graduate student which, she felt, would have been 'impossible to do' had she been feeding her infant by breastfeeding alone.

Georgia felt similarly that introducing formula feeds had allowed her more time to sleep, and that it therefore gave her more energy when she was with her son during the day:

> Now I've done it I think I'm quite pleased I have. I think he's gaining so much from all the things that we do during the day, and if I was getting up every hour at night still, I wouldn't want to go to all these classes and that sort of thing. And during the day we wouldn't play as much because I'd just be absolutely exhausted. And so in a way I think [formula milk is] probably more beneficial. Even though I know breastmilk's better for him. I think that if that's what it takes then it's probably more beneficial in the long run, that he's getting that time to develop and spend time with me and do fun things together, than just sitting around being tired all the time.

Although Georgia believed that breastmilk was 'better for him', she felt that spending time actively 'doing things' with her son during the day was more important to his development in the long run than breastfeeding. This process of reasoning allowed Georgia to embrace formula milk as a positive part of her infant feeding experience. Asserting that breastmilk was 'better' in general, Georgia felt that for *her* son specifically, in their particular set of circumstances, introducing formula milk had enabled her to create an approach that was 'more beneficial in the long run' due to her own increased

energy and attentiveness during the day: 'It just seems to work quite well for us'. She also felt that it had positively influenced the relationship between her son and his father: 'It's his time with his dad as well, when he's been at work all day, and it's almost like that's our routine now as well, like he knows that he has a bottle and then he goes to bed.' Georgia thus perceived her new approach to infant feeding, which did not include exclusive breastfeeding, as *more* successful than when she had exclusively breastfed in the initial weeks after birth.

Similarly to Georgia, a fourth mother began using formula milk in response to hindrances that she had experienced while breastfeeding exclusively. Andrea, a highly educated professional accustomed to thinking critically, was one of the few mothers in the study who were sceptical about the unmitigated promotion of the health benefits of breastfeeding in a context where clean water and the ability to sterilize feeding bottles remove an unequivocal health advantage of breastmilk over formula milk. She explained:

> When we got the information about breastfeeding from [the NCT] there wasn't a single statistic on it, there was nothing other than, you know, a kind of, "Of course this is the best thing for you" – and there didn't seem to be any scientific literature around that. […] All I found was an awful lot of opinion, really. […] I mean, I know the sort of relations between – there are purported to be links, aren't there – between allergies and intolerances, but I just wasn't sure how convincing any of that was in what I was presented with.

Nonetheless, Andrea felt a 'very strong moral compulsion' to breastfeed (largely influenced by her midwives), and fed her first son exclusively for six months before weaning. While Georgia's difficulties stemmed from problems with the act of breastfeed itself, Andrea found the process easy to master; however, both her sons suffered from severe reflux that caused different problems with breastfeeding. Gastroesophageal Reflux (GER) is common in infancy (the incidence being approximately 75%), and is defined as 'involuntary retrograde passage of gastric contents into the oesophagus with or without regurgitation of vomiting' (Barnhart 2016:212). The severity of symptoms varies

considerably and a variety of treatment options exist, however there is little high-level evidence available despite a significant body of literature dedicated to the topic and extensive clinical experience (Barnhart 2016). Andrea explained that while she enjoyed breastfeeding in principle and found that it helped her to bond with her children, the symptoms of reflux compromised these advantages: 'I was being vomited on twenty times a day and they both woke up every half hour or hour through the night'. Acting on advice from her Health Visitor, Andrea attempted several remedies to resolve the problem, excluding dairy and gluten from her diet, but the problem persisted. Three months after the birth of her second son she decided to shift entirely to hypoallergenic formula milk. While most formula milks are made from cows' milk, hypoallergenic formula is made with fully hydrolyzed (broken down) proteins. This type of formula is often used to treat infants with food protein allergy, which can exacerbate symptoms of reflux. With respect to her second child, Andrea explained, 'He could keep [the formula] down in a way that he couldn't keep my breastmilk down, even when I was cutting stuff out of my diet. He was much happier on it, he slept better, and I felt really sad because I actually thought the best thing for you is to just give you this milk'. While Andrea was disappointed to lose the aspects of breastfeeding that she had previously enjoyed, she regarded the introduction of formula milk as crucial to her son's health and wellbeing. Her initial scepticism of the benefits of breastmilk reinforced this decision: 'My academic brain was saying, you know, why would it be worse to have some formula? And I couldn't actually see much that gave me firm evidence for the benefits of breastfeeding'. For Andrea therefore, not having been convinced of the validity of public health communication to begin with, the process of redefining what breastfeeding success meant for her – i.e. ceasing to breastfeed entirely – was simple and involved the health and wellbeing of her child as much as her compulsion to initiate breastfeeding had done.

All three women were prompted by specific factors in their and their infant's circumstances to turn to formula feeding, and all discovered associated benefits that came to define success under their own terms. Three out of the four mothers retained their commitment to breastfeeding and found ways of combining breastfeeding and formula feeding. Georgia and Erika appreciated the ease with which they could leave the house, without formula milk and associated paraphernalia, while Laura regarded breastfeeding as 'a moment for the two of us to relax' – particularly useful, she found, when visiting her large extended family overseas. Andrea, meanwhile, was pleased to have found a solution in the form of artificial milk to her son's reflux, which was having a detrimental impact on her relationship with him. It was the flexibility in feeding methods, therefore, which was most beneficial for these four participants. Notwithstanding their belief in breastmilk as 'best', they found that formula milk offered different but equivalent advantages in allowing them to integrate infant feeding with everyday life, and overcome the challenges that they experienced with exclusive breastfeeding.

Existing research on the challenges that women face in pursuing successful breastfeeding focus on the cultural and structural impediments to breastfeeding, highlighting the need for significant changes in socio-structural frameworks (for example in the provision of adequate maternity leave and postnatal support) in order to enable women to make informed decisions about infant feeding. While these findings are crucial in drawing attention to and improving the rights of mothers worldwide, the agency that mothers have in contravening standards of optimal infant feeding in order to prioritize convenience, comfort, or a multitude of other factors, must not be overlooked. An experienced mother of three, Paula explained that 'everybody does what they *can* do, not exactly what they *should* do'. The discrepancy between what mothers felt they could and should do underpinned the approach that many mothers took towards infant feeding,

while also highlighting a disconnect between policy objective and lived reality. While women recognized that successful breastfeeding was desirable – what they 'should' be doing – they also came to negotiate practical solutions to everyday problems, which often involved diverging from policy-prescribed notions of successful breastfeeding.

Once mothers had ceased to act in accordance with the successful or optimal modus operandi, they generally – after a process of adjustment following initial responses that were often negative – adopted a pragmatic approach towards infant feeding. While infant feeding policy is directed towards entire populations, the practicalities of infant feeding are dependent upon the contexts and experiences of individuals and families, which affect both the process and outcome of breastfeeding. Teresa, a mother-of-one on maternity leave from her job as a GP, became a regular at Baby Café around the start of fieldwork. A friendly and reassuring presence to other mothers, she continued to attend Baby Café intermittently for the duration of fieldwork, long after she required any practical support. During a conversation among a group of mothers who were discussing the difficulties of learning to breastfeed, Teresa pointed out, 'It's about flexi-parenting – doing what gets you through the day'. Though mothers intended and wanted to feed their infants in accordance with recommendations they were also often pragmatic in their approach to finding solutions to everyday problems. As one mother observed, 'My friend Judy, who's normally at Baby Café, she calls [formula milk] McDonalds because you shouldn't have it all the time but it's useful to have in case'. Recognition of the benefits of breastmilk was therefore often superseded by pragmatism in response to difficulties with breastfeeding.

Previous research has attributed the process of 'coming to terms' with formula feeding (and therefore contravention of normative standards of breastfeeding) to 'identity work' (Goffman 1959), also referred to as 'moral work' (Ryan et al. 2010). In relation to

motherhood, this term has been used to describe a process in which the mother in question must 'work hard', in order to justify her ostensibly risky behaviour to herself and others and keep her identity as a 'good mother' secure (Murphy 1999). Ellie Lee, using this research as a basis for her examination of women who formula feed, corroborates the idea of identity work, observing that 'women's sense of themselves as "good mothers" may be compromised when they formula feed since this infant feeding method is widely deemed risky' (Lee 2008:476). Though women in this sample who introduced formula generally did so with trepidation, this did not on the whole stem from a desire to justify their actions as being part of 'good' motherhood in the light of risky behaviour. Rather, the initial trepidation stemmed from the gradual realization that the normative advice available was not right for them or their infants in their specific circumstances. Once that step had been taken, the resulting feeling was one of having achieved a successful outcome. This was focused not exclusively on the baby, but on both participants in the process and in one case on the father as well. Success in this context meant being able to better integrate breastfeeding into their daily lives: rather than identity work, then, the women in this study sought to negotiate the varying risks and constraints in relation to infant feeding through a process of pragmatic strategies in a way that aligns with Lock and Kaufert's (1998) approach to the concept of resistance.

Much of the information available to mothers outlines the benefits and steps they ought to take towards optimal infant feeding, presenting norms that ignore individual circumstances. They neglect to offer practical information on how to breastfeed in ways that fall short of delivering absolute success and fail to give advice that could enable an individual mother to identify a way that works for her and her baby in their specific circumstances. This was perceived by mothers as a failing in efforts to enable and encourage higher numbers of women to breastfeed. Georgia explained, 'I feel like if you

want people to breastfeed, you've got to say these are all the different things that you can do to make it work for you, because it *isn't* an easy thing, it turns out, for a lot of people, and actually you can do that, you can do this, you can do the other to make it work'. Georgia perceived an unwillingness to provide information on options alternative to exclusive breastfeeding, asserting, 'It's because they want you to feed them in this particular way, when actually it doesn't make any difference'. Of combination-feeding, Georgia went on to say, 'I just feel like they need to give you the options a bit more, so that you can choose how it works for you. Because I nearly gave up so many times.' The lack of information relating to combination feeding as a result of the emphasis on exclusive breastfeeding was described too by another mother, Carol, who said:

> The advice you get from the Health Visitors and Baby Café is very pro-breastfeeding, so what's hard to find is the middle ground, whether it's okay to be half breastfeeding and half formula feeding or something. It's all a bit black and white so it's a bit hard to get a sense of how much worse for him is it going to be if I give him one bottle of formula a day or two bottles of formula a day or something alongside the breastmilk. As a consequence maybe I've been a bit all or nothing about it, in really trying to keep him having only breastmilk. But at the cost of me getting less sleep and spending more time of my day expressing milk and so on. So those have been maybe the more difficult things to try and balance right.

The difficulty of identifying behaviours that were acceptable, if not optimal, versus behaviours that were actively damaging, was a common theme running through narratives of women who did not breastfeed in accordance with breastfeeding guidelines.

As discussed in section 5.1, mothers often initially perceived combination feeding as a failure; to a large extent because of the emphasis on exclusive breastfeeding in health education. Often, mothers did not realize that combination feeding was possible, or were led to believe that introducing any formula milk would prevent them from breastfeeding in the future. One mother for example, Gemma, who visited Baby Café several times over the course of a month just after the birth of her son, had intended to breastfeed exclusively but ended up feeding him with a combination of breastmilk (both by

breastfeeding and with expressed milk in a bottle) and formula milk. She explained that she had initially assumed that feeding her son formula milk would mean the end of breastfeeding: 'I didn't know that I could [combination feed], I thought that it was breast or not – it's nice to know, because needs must'. She went on to say, 'I don't want to take the formula out because it's an absolute godsend – I'm pro breastfeeding but I'm also pro mental health, I want to feel okay'. By determining the viability of combination feeding as an alternative to exclusive breastfeeding Gemma was able to embrace it as a response to the difficulties she experienced with exclusive breastfeeding, concluding ultimately that formula milk was actively beneficial to her particular situation. While feelings of failure and guilt were experienced by mothers in this study, the long-term ethnographic nature of this study allowed a more complex picture to emerge in which women reformulated their perceptions of successful breastfeeding to *include* formula milk where necessary, assuaging feelings of both failure and guilt.

Like Gemma, mothers are generally dissuaded from feeding infants with both bottle and breast because it is thought to inhibit successful breastfeeding, which results in the lack of information described by mothers above. Although difficulties that arise from combination feeding have been widely debated, the practice is nonetheless counselled against in the ninth step of the WHO/UNICEF *Ten Steps to Successful Breastfeeding*: 'Give no artificial teats or pacifiers to breastfeeding infants'. This is included in part due to the concept of 'nipple confusion', which is defined by Dowling and Thanattherakul as 'the infant's response to the various mechanical and flow characteristics afforded by an artificial nipple compared with the breast, which in turn causes the infant to prefer one feeding mechanism over the other' (2001:218). Susan described, 'Initially we wanted to express because I didn't sleep at *all* for the month or six weeks leading up to her delivery, so my husband was saying, "Oh maybe I could feed her", so I could get some sleep, but

then the midwives did say try not to because of the nipple confusion'. Although some studies found evidence to support the idea of nipple confusion (Hla et al. 2003; Moimaz et al. 2008) others found no such evidence (Moral et al. 2010; Schubiger et al. 1997). Reaching a credible conclusion is made challenging both by a relative lack of research and by methodological difficulties that inhibit definitive identification of causation or correlation. Specifically, there is a difficulty in ascertaining whether infants are refusing the breast in favour of the bottle because they are already having trouble breastfeeding or are doing so as a result of nipple confusion. While increasing use of formula milk as a substitute for breastmilk can lead to a reduction and eventual cessation in milk supply (Hill et al. 1997), combination feeding was practised by mothers as a useful alternative to exclusive breastfeeding that provided pragmatic solutions – whether short- or long-term – to breastfeeding problems.

The difficulty that women faced in their pursuit of pragmatic solutions to infant feeding difficulties was the fact that these solutions ran counter to the standards set out by infant feeding guidelines. The unwillingness on the part of health professionals to acknowledge the validity of alternative ways of infant feeding was a source of frustration to some mothers. Vanessa, who despite having found exclusive breastfeeding relatively effortless had objected to the prescriptive nature of infant feeding policy, explained:

> I'm all for [breastfeeding] and I think women should try to breastfeed first before deciding that they don't want to do it. But I also think there has to be some pragmatism, and I think that women are very, very vulnerable at that time, and feeling judged was not helpful, I was already doing enough of that self-judgement, I'm judging myself, you know, 24 hours a day.

Vanessa drew on her experience as a GP to further illustrate the potential impact of the emphasis on exclusive breastfeeding, observing:

> I know a lot of women who've had that feeling that is, you know, it's all breastfeeding one hundred per cent, or nothing. And anything less than that is not okay. Whereas actually women I know who've had problems, who've held out and tried and tried and tried, and got to the point where they've had no other

> option, and the paediatrician is just telling them they're going to have to combination feed, you just saw that at the point that that happened *everything* just fell into place. And that's not to say that they shouldn't have spent that time *trying*, that they shouldn't have tried to persevere with it, but perhaps they'd been put under undue stress. For longer than was perhaps necessary. That they've been encouraged to stick with something that was really potentially starting to become harmful for them *and* their baby, because they were so strung out and stressed and unhappy, and their baby was not gaining weight at quite an important development time.

Erika's experiences corroborated Vanessa's view. Erika's initial resistance to supplementing her own milk supply with formula milk despite her daughter's weight loss was based upon perception of combination feeding as detrimental both to her daughter's health and to her own ability to continue breastfeeding. Retrospectively, Erika resented the fact that combination feeding had not been presented more clearly as a viable alternative to exclusive breastfeeding:

> If we had been told a bit earlier that combination feeding is fine, if necessary, it would have been *so* much less stressful […] and any amount of breastmilk is going to be good, and the more breastmilk you give the better they will digest the formula, and they're still getting the antibodies […] but you have to dig around and really read *everything* to find out that it's not the end of the world.

In relation to co-sleeping, too, mothers felt that a greater acknowledgement of the practical advantages of practices other than those preferred by health professionals would be a welcome change in clinical and political approaches. Erika explained: 'I don't know *any*body who hasn't ended up with their baby in the bed. So there is no point in saying, well, you know, your baby might die, it just needs to be accepted that there are safe ways of doing it, or saf*er* ways of doing it'.

While it is of course important to ensure that women are appropriately informed of the risks that certain behaviours might pose to infants, it may be that a greater acceptance of pragmatic approaches that suit individual circumstances and needs would remove the stigma from approaches other than the perceived optimum, thereby reducing feelings of guilt and failure that arise when mothers are in the process of consciously

contravening optimal standards of infant care. Erika, outspoken and feminist in her approach to women's rights and political issues concerning gender, observed:

> I think there are a lot of ways in which things that relate particularly to women are turned into issues that are women's responsibilities. And especially if there aren't enough women to say this is not something that is just about a personal decision based on what's most convenient, this is something that actually involves all sorts of complications […] people have moral opinions on what's the right thing to do, without any understanding of the practicalities.

Objecting to the patriarchal governance of women's infant feeding decisions, the moralistic undertones of motherhood and the castigation of women's pragmatic approaches to infant feeding, Erika's observation encapsulates the problematic nature of biopolitical approaches to successful breastfeeding. While the standards of successful breastfeeding communicate inflexible criteria that outline how women *should* approach infant feeding, these take little account of the realities that women navigate in the decisions that they take in relation to infant feeding practices. These take on moral implications when combined with discourses of risk and responsibility that aim to ensure conformity with successful breastfeeding standards, actively overlooking the pragmatic strategies that women inevitably engage in in order to negotiate competing ontologies and constraints.

This section has demonstrated the positive impact of formula milk introduction in allowing mothers to pursue pragmatic strategies in overcoming difficulties or constraints in their approaches to infant feeding. For new mothers – and particularly first-time mothers – this entailed a highly individual process of identifying the risks that were worth taking and those that were not, a process that varies substantially for each mother-infant dyad. While the policy approach to infant care is focused above all on risk avoidance, the maternal approach involved weighing up different risks against one another through a process of compromise that demands agency rather than passive conformity to standards of successful breastfeeding. The agency of the women in this study did not, on the whole,

stem from a desire to resist medical authority; even in those cases where women actively resisted directives from medical authority (such as Health Visitors and midwives), this occurred instead in pursuit of convenience rather than as a result of intransigence. Nor was the negotiation of normative standards of breastfeeding a response to the need for 'identity work'; those mothers who re-evaluated conceptions of breastfeeding success did so through discovery of unexpected utilitarian advantages to formula milk rather than out of a desire to justify their actions as 'good' motherhood. Instead, agency for the women in this sample was characterized by pragmatism, an acceptance that breastfeeding involves navigation and negotiation – with the child, with one's own breasts, with other people – all within the socio-cultural context. While the mothers in this study all intended to breastfeed according to the standards of infant feeding defined as best, many experienced difficulties in doing so and, in line with a pattern of infant feeding practices across the UK, a significant proportion of mothers continued to breastfeed but did not comply with the absolute standards set by public health guidelines. Mothers thus came to exploit infant feeding practices defined both as suboptimal and risky, in order to provide solutions to everyday problems, often serving to enhance their enjoyment of breastfeeding. This widespread pragmatism, described by many mothers as 'doing what works', led to a diverse range of infant feeding practices across the sample.

Conclusions

This chapter has sought to demonstrate that the successful breastfeeding model, which is communicated as a set of infant feeding prescriptions in public health campaigns, has a negative impact upon women who are unable or unwilling to breastfeed according to these prescriptions. While early motherhood in general is often an unsettling and uncertain time, communicating breastfeeding in terms of a set of standards that is

designed to achieve absolute success increases the likelihood of demoralization in cases when these standards are not achieved. Since the overwhelming majority of women in the UK do not breastfeed according to the optimal standards infant feeding, these findings are significant and affect a large proportion of mothers in the UK population. Optimal infant feeding standards are presented as a simple matter, based on four principles. First, breastmilk (provided exclusively for six months) is best for babies under all circumstances. Second, rates of breastfeeding exclusively for six months in the UK are critically low, both in absolute terms and in relation to other countries, and the primary aim of infant feeding policy is therefore to increase the number of women in the UK who breastfeed according to these standards. Third, since all mothers can, theoretically, breastfeed according to this standard, in order to achieve an increase in breastfeeding rates women are held accountable to achieve breastfeeding success as defined by these standards. Fourth, given the designation of these standards as 'optimal', feeding an infant in any other way constitutes both failure, and risk to the health of the baby.

For individual mothers and infants, a more nuanced approach is required, and it is this that is missing from public health narratives, political approaches to breastfeeding, and clinical treatment of women in the process of feeding young infants. Mothers have to respond to competing demands and constraints, and infant feeding practices must fit in with those demands within the varied circumstances of women living in the UK. As demonstrated by the mothers in this study, infant feeding is a relational process of negotiation rather than the pursuit of a fixed objective, and this inevitably leads to infant feeding practices that are heterogeneous rather than uniform. Rather than seeking to suppress certain practices associated with infant feeding, this diversity should be recognized in public health messages in order to acknowledge the individual relationships inherent to breastfeeding. Recognition of the individual process of compromise that each

mother undertakes may be crucial to ensuring that each woman performs motherhood in a way that is best for her infant as well as for herself; balancing risk is an individual process of negotiation, and what is optimal for one mother-infant dyad may not be optimal for another. This approach to infant feeding challenges the political drive to implement normative standards of successful breastfeeding, prompting the need for a shift in policy that necessitates active engagement with the diversity present in women's infant feeding practices and acknowledges the process of negotiation that each family undertakes in the pursuit of their own breastfeeding success.

Chapter Six:
Discussion and Conclusions

The objective of this thesis was to examine how new mothers negotiate the biopolitical governance of infant feeding, encapsulated in policies that attempt to normalize specific practices as 'optimal'. The line of enquiry taken was based on three central questions. Firstly, do infant feeding norms place undue responsibility upon women with respect to achieving successful breastfeeding according to the policy optimal? Secondly, might alternative conceptions of optimality exist that do not accord – or that directly conflict – with the policy optimal, thereby leading to alternative conceptions of what 'successful breastfeeding' is? Finally, does the prevailing concept of 'culture', which is conceived of in policy as a 'barrier' to successful breastfeeding, provide an adequate explanatory model for the divergence between policy and practice?

Ethnographic methods enabled an in-depth examination of these issues as they played out in the narratives and experiences of mothers who negotiate the reality of infant feeding in their day-to-day lives, highlighting the conflicts and complexities that are largely absent in policy discourse. The findings indicate that policy attempts to normalize specific infant feeding practices place responsibility on mothers for achieving a narrowly defined standard of 'successful breastfeeding', with often detrimental and counter-productive effects. Maternal ontologies of success frequently conflict both with policy and clinical conceptions of optimality, which mothers must negotiate without the requisite level of support to do so assuredly. Far from being the result of a homogenous or ubiquitous culture, this process of negotiation resulted in pragmatic strategies that were highly specific to the circumstances of individual women and their infants.

On the one hand, mothers understand and internalize the arguments that underpin policy in support of breastfeeding: this is clear from the way in which mothers spoke of

breastfeeding as 'best' for their infants as well as the intentions and attempts on the part of the majority of mothers to comply with recommendations outlined in the policy (see Chapter Three *Maternal Understandings of Successful Breastfeeding* and Chapter Four *Measuring Breastfeeding Success and Nutrition-Related Infant Health*). On the other hand, widely reported statistics reveal the divergence between policy and practice, which demonstrates the relative inefficacy of regulatory attempts in actually altering women's infant feeding practices (McAndrew et al. 2012). The salient question, therefore, is how attempts to regulate infant feeding practices are experienced by the women they target.

Participants in this study often referred to their breastfeeding 'story' or 'journey', and it is this metaphorical construction of the process of breastfeeding that reflects the pragmatism, uncertainty and fluidity of their experiences of breastfeeding. The process of successful breastfeeding is presented in antenatal education as a series of steps that mothers can – and ought – to follow, with difficulties presented as the result of deviation (whether deliberate or circumstantial) from these instructions. By contrast, the reality of breastfeeding is of finding one's way, negotiating challenges and impediments creatively without, necessarily, a specific goal in mind. Conceptualizing breastfeeding in terms of optimality or success suggests an end point, a target to which women aspire, which is not compatible with the notion of a breastfeeding 'journey'.

The problem, then, is that while women are willing to employ strategies of negotiation in addressing competing ontologies of breastfeeding success, discourses of risk and responsibility – employed to educate women on the risks of formula feeding and their concurrent responsibility towards optimizing the development of their infant – generate feelings of failure if women are unable or unwilling to conform to normative standards of successful breastfeeding. Efforts to 'normalize' breastfeeding exemplify 'the way in which modern medicine helps to govern the society of which it forms a crucial

part: by ordering; by holding up normality as a norm, a standard, an ideal for each and everybody (every body) to attain' (Mol 1998:280).

6.1 Discussion

Wedel and Feldman identify three features of anthropology that make it well suited to exploring the social nature of policy. First, they contend, anthropologists can destabilize the assumptions that underpin the construction of policy problems, thereby opening up the possibility of alternative policy options. Second, and related, anthropological approaches challenge discourses that prevail in public policy. Third, by focussing on 'players' more than policies, anthropological analyses can disentangle the outcomes of policies in practice and explain how and why a mismatch between policy and practice occurs (Wedel and Feldman 2005:2). The findings of this thesis engage with each of these three features, focussing on questioning the basis of policy in maternal experiences of infant feeding; analysing these experiences as alternative perspectives to the central tenets of infant feeding policy; and examining the outcomes of political approaches to infant feeding practices.

In the context of infant feeding, parallels can usefully be drawn between the 'successful breastfeeding' discourse and the concept of 'successful aging', which has also emerged over recent decades. First appearing in an article by Robert Havighurst (1961), the concept of successful aging has gained traction both in gerontological research and public health concerns. The discourse emphasizes 'independence, prolonging life, and declining to decline at the expense of coming to meaningful terms with late-life changes, situations of (inter)dependence, possibilities of frailty, and the condition of human transience' (Lamb 2014:42). The concept has been placed under increasing scrutiny in recent years, with three primary objections having been raised by anthropologists and

sociologists. First, the idea of successful aging imposes universal notions of what 'success' means in relation to aging, regardless of cultural differences in goals and values regarding aging (Iris 2016:183; Willcox et al. 2007). 'Successful aging' is defined by biomedically-determined criteria for success both in gerontological research and in the terminology for those who do not achieve these criteria. Second, it fails to account for biological, physical and cognitive changes associated with 'normal ageing' (Iris 2016:183). This inevitably sets up for failure, embarrassment, or loss of social personhood in those who inevitably face bodily or cognitive impairments and impending mortality (Lamb 2014:42). Third, the successful aging paradigm places a considerable amount of responsibility on individuals for achieving this normatively desirable state of being (Holstein and Minkler 2003).

Each of the above-mentioned three critiques can be applied to the concept of successful breastfeeding. First, successful breastfeeding imposes biomedically defined universalizing notions of what breastfeeding success is or should be, when in fact breastfeeding is, as Willcox et al observe of successful aging, 'a relative concept, located within a given cultural context, with accompanying culturally relevant norms and values' (2007:138). Second, it fails to account for the difficulties associated with 'normal breastfeeding' processes, which then become couched in terms of failure. Third, the successful breastfeeding paradigm responsibilizes mothers, exemplifying critiques of individualism that have been levelled against biomedical approaches to health by medical anthropologists. The parallels between the effects of the successful aging and breastfeeding discourses on individual experiences of the two processes are significant, and form a useful platform on which to identify the problematic aspects of current policy approaches to infant feeding. Findings relating to the three questions posed at the

beginning of this thesis (and the beginning of this chapter) will be discussed in this section, before presenting the final conclusions in the following section.

a) Holding Mothers Responsible for Successful Breastfeeding

The concept of successful breastfeeding raised the question: who is held responsible for achieving success as defined by policy? Existing scholarship suggests that behaviour change strategies such as those targeting infant feeding practices reflect a political shift towards neoliberalism, focussing on individual choice rather than underlying structures as determinants of health. Technologies of normalization clearly communicate the 'right' choice, reflecting a self-regulatory approach that allows individuals to be 'governed at a distance' (Miller and Rose 2008). Meanwhile policy discourses focussing on risk avoidance emphasize the vulnerability and plasticity of the infant body, framing mothers as 'risk managers' (Knaak 2010:345) responsible for ensuring that the developmental environment carries as little risk as possible. Work by Megan Warin, among others, links these processes with increased attention to the early years of a child's life, arguing that the use of DOHaD research in policy effectively transfers responsibility for ensuring infant health from state to individual mother (Mansfield and Guthman 2014; Pickersgill et al. 2013; Warin et al. 2012). This thesis contributes to this field of research by demonstrating that infant feeding policies and practices provide a rich opportunity for understanding how this process of responsibilization occurs and is negotiated by individuals.

The findings of this thesis suggest that mothers are held responsible for achieving successful breastfeeding according to the policy optimal, which does not take adequate account of the multiple factors, both in and outside a mother's control, that might prevent them from achieving this standard (see Chapter Three, *'There wasn't any of that beautiful*

rooting': When Breastfeeding Breaks Down). While potential difficulties are acknowledged in antenatal education, mothers found that these tended to be glossed over in favour of a focus on the benefits of breastfeeding. 'Mind over matter' – i.e. a mother's confidence in her own ability to breastfeed – is emphasized in policy as a key factor in overcoming these difficulties and achieving successful breastfeeding.[37] This strongly implies responsibility (on the mother's part) towards breastfeeding outcomes, overlooking the importance of the co-operative nature of learning that involves mother *and* infant as well as the variability of support that each individual mother is able to access.

Women who were exclusively breastfeeding their infants were also profoundly aware of their position as the sole source of sustenance for their child, which provoked a strong sense of responsibility towards ensuring that the infant was adequately fed. This was most evident among women whose infants were slow to gain weight (see Chapter Four, *Falling Through the Centiles: How Growth Defines Health*). Women are thus held to account by two separate and sometimes conflicting principles: ensuring that the infant grows at an adequate rate (as defined by growth charts) and undertaking to do so by means of exclusive breastfeeding.

Policy attempts to alter infant feeding practices emphasize 'informed choice', highlighting the benefits of breastfeeding through campaigns such as Start4Life in order to 'nudge' women towards conforming to the policy optimal (see Introduction, *Normalizing the Policy Optimal*). While the vast majority of mothers intended to comply with recommendations (indeed many were intensely committed to doing so), mothers highlighted the lack of adequate practical assistance to support them in realizing their intentions. This echoes Furedi's observation that 'support rarely means assisting people to

[37] And, to a certain extent, in research, with literature that focuses on self-efficacy and maternal confidence as an enabler of breastfeeding success (cf. Avery et al. 2009; Blyth et al. 2002; Brown 2014; de Jager et al. 2014; Loke and Chan 2013; Meedya et al. 2010).

improve what they are already struggling to do. In practice, it means placing pressure on people to adopt a course of action favoured by the government' (Furedi 2005 in Faircloth 2013:43). The importance of finding good support during the process of learning to breastfeed is also acknowledged in antenatal education as being critical to overcoming difficulties. However, with a lack of significant situated support in the form of sisters, aunts, friends, grandmothers, women are required to be pro-active in seeking out this support (see Chapter Three, *'You need a tribe!' And Breastfeeding Without One*). Women spoke of their feelings of vulnerability in the initial weeks after birth with several struggling to make the physical journey to services such as Baby Café.

The significance of the mismatch between, on the one hand, informed choice rhetoric emphasizing the benefits of breastfeeding and, on the other hand, the failure to follow through with adequate support for mothers, was highlighted by mothers. Many women became disillusioned as a result, when their expectations of the learning process as coming 'naturally' did not match the reality (see Chapter Three, *'It's all just trying to sell it to you: Raising Rates and Expectations*). The lack of practical help to underpin the process of informed choice is exemplified most clearly in the closure of the Oxford Baby Café Group due to the loss of council funding. While facilitators continue to provide breastfeeding support to mothers in Oxfordshire, they now do so without state funding having been compelled to re-launch as a charity in order to enable them to apply for small grants elsewhere. Furthermore, in some instances women's efforts to comply with the policy optimal are systematically undermined by a failure to acknowledge practical solutions to the daily challenges of exclusive breastfeeding. This is evidenced by limited acknowledgement in policy of co-sleeping as an important factor in women's ability to breastfeed (see Chapter Five, *Considering Night-time Breastfeeding: A Site of Risk and Resistance*).

Factors that have been identified in previous research as having an impact on successful breastfeeding were corroborated in the findings of this thesis: difficulty in accessing reliable support, the consequent conflicts in the advice that mothers were given, and pain experienced during breastfeeding. The findings of this study contribute two further aspects, which appear to have received little anthropological attention and are largely absent from both health education and policy literature. Firstly, the personality or behaviour of individual infants was conceived as a potential constraint over which mothers had little or no influence, with breastfeeding often being conceptualized as a conflict between mother and infant (see Chapter Three, *'There wasn't any of that beautiful rooting': When Breastfeeding Breaks Down'*). Secondly, infant tongue-tie was evident in narratives as a contested, often unexpected and occasionally severe detriment to breastfeeding success (see Chapter Five, *Defining Success: Product versus Process and the Case of Tongue-tie)*. Kate Boyer identifies the 'intracorporeal agency' of breastmilk as a determinant of a woman's ability to breastfeeding, conceiving of cases of mastitis and blocked ducts as instances in which 'a mother's desire to breastfeed is in tension with forces within her body that seek otherwise' (2018:190). The findings described above add to this the influence of inter-corporeal agency, where the actions of the infant are in tension with maternal intentions; as well as the intra-corporeal forces of tongue-tie in the body of the infant alongside those in the mother as identified by Boyer.

The nature of the field site as a breastfeeding support service may have skewed the sample of participants towards a greater proportion of women experiencing difficulties with infant feeding than occurs in the general population of breastfeeding mothers. This may therefore have caused an overemphasis in the study on the negative or challenging aspects of breastfeeding. Nevertheless, the proportion of women found to stop breastfeeding sooner than they had intended in statistical terms (McAndrew et al.

2012) suggests that this may in fact be an accurate representation of experiences of breastfeeding in the UK in general.

The findings suggest that the successful breastfeeding paradigm is not only a particular biopolitical model but, despite its encouraging intentions, it is in some ways a counterproductive one. Women are given 'responsibility without power' (Daykin and Naidoo 1995:63) through emphasis on the importance of achieving successful breastfeeding, without being given adequate tools to address difficulties that they experience along the way. The promotion of breastfeeding under rigid terms of success – exclusivity and duration – reduces it to a health practice, encouraged in order to minimize risk and maximize developmental outcomes. It has been suggested that if women view their breastfeeding experience as successful, this positive perception can enhance self-esteem and confidence in their mothering abilities (Mercer and Rerketich 1995; Rubin 1984). Therefore, if the model were to encompass a more diverse conception of success, this could reduce the risk of setting women, and indeed the family, up to fail. It would be beneficial to acknowledge the flexibility inherent in human infant feeding practices, recognizing the multiplicity of factors at play in the lived reality of infant feeding in the UK in order to curb the prevailing emphasis on the pursuit of the optimal. Similarly, findings suggest that framing the diverse ways in which breastfeeding mothers negotiate difficulties and demands as incompatible with successful breastfeeding is unhelpful. Rather than emphasizing individual responsibility, it would be more constructive to acknowledge what Meredith Minkler terms individual 'response-ability', or 'the capacity of individuals for building on their strengths and meeting the challenges posed by the environment' (1999:124).

Since individual 'response-ability' depends heavily on such factors as having an adequate income, access to affordable and nutritional food, having affordable and good

quality healthcare and support, these factors are bound to affect the capacity of women to pursue successful breastfeeding. The study took place in a city in which, although pockets of profound poverty exist, the overall social demographic is one of relative affluence. Accessing different demographics of mothers proved challenging – while some Baby Café sessions were located within areas of lower socio-economic status, the demographic of women attending the sessions was largely similar across field sites. The women encountered throughout fieldwork tended to be white, heterosexual, cisgender, middle-class, educated professionals, broadly representing a privileged set of mothering circumstances (Boyer 2018:12). The study site largely limited the sample to women who were pro-active about wishing to breastfeed, since a certain amount of commitment to breastfeeding was required in order for women to attend the sessions at Baby Café. Nonetheless, focussing on women who were in any case pro-active, well informed and well resourced in their efforts to breastfeed prompts the question: if these women experienced difficulties despite their commitment, how might women who are less well supported experience the same challenges and conflicts? Further comparative research would be valuable in confirming this hypothesis and to provide a comparison among a more ethnically, educationally and economically diverse sample.

The sense of responsibility that many mothers feel towards breastfeeding has been conceived in existing research as a response to moral pressure or moralizing discourse (Miller et al. 2007). The findings presented in this research are framed rather in terms of biopolitical governance, of which moral rhetoric is one technology that operates alongside risk discourse and surveillance in attempts to shape infant feeding practices. The findings in this thesis contribute to research that seeks to remove blame and responsibility from mothers in relation to infant feeding practices and mothering more generally (cf. Boyer 2018; Hays 1998; Warner 2006) by highlighting the complexities

involved in successful breastfeeding that are not adequately acknowledged by the stringent criteria outlined in infant feeding policy.

b) Ontologies of Success: From Optimality to Optimalities

The experiences of women in this study reveal conflicts in what constitutes 'optimal' infant feeding, and in how breastfeeding success is and can be achieved. Optimal infant feeding is presented as clear-cut in policy: women should practice exclusive breastfeeding for six months, which is achievable by virtually all women. By enacting the policy optimal, mothers achieve 'successful breastfeeding' as outlined in clinical standards of care (the *Ten Steps to Successful Breastfeeding*) and health education. Two further ontologies of success emerged from the data: the maternal and the clinical. The narratives of mothers who did not conform to the policy optimal reveal tensions and conflicts between the different ontologies of success that are key to understanding the adverse effects of pro-breastfeeding discourse as identified in previous research. These divergent and often conflicting ontologies of success raise the question: can the policy optimal be applied in all circumstances for all women, or is a more nuanced approach required?

The policy approach to HIV and breastfeeding was examined at the beginning of the thesis (see Chapter One, *Examining the Biopolitical Governance of Infant Feeding*) as a recent and significant challenge to the policy optimal, where notions of optimality were renegotiated repeatedly within policy documents. While the existing policy optimal eventually prevailed, this prompted recognition that, in some (albeit extreme) circumstances, multiple optimalities may exist in relation to infant feeding. The findings of this thesis suggest that everyday circumstances can also lead to alternative notions of optimality that are at odds with the policy optimal. These alternative notions of optimality arise from maternal attempts to balance multiple risks and constraints that are not

acknowledged within the limited (and restrictive) bounds of the policy optimal (see Chapter Four, *Negotiating Risk, Responsibility and Conflicting Ontologies of Success*). This finding provides empirical evidence for Melanie Martin's (2018) suggestion that the evolutionary flexibility of human weaning patterns casts doubt on the principle that noncompliance with biological optimality, as defined by policy, is always 'suboptimal'. It also indicates that maternal costs must be accounted for in conceptions of optimal infant feeding. These might refer to energy requirements (Hinde and Milligan 2011; Picciano 2003), resource allocation (McDade and Worthman 1998; Panter-Brick 1991; Rippeyoung and Noonan 2012) and time (Charnov and Berrigan 1993); but also the stress that women experience in managing risks associated with infant feeding, the pain that many women in the study endured in the early stages of breastfeeding, the effort that was required from them in order to learn effectively and, in the case of tongue-tie, the financial cost of treatment to enable efficient feeding. Reducing maternal costs to breastfeeding may therefore be more effective in policy terms than the individualized behaviour change strategies that are currently employed (Tully and Ball 2017:201).

Maternal ontologies of breastfeeding success diverged from the policy ontology of success in instances where mothers engaged in practices that are presented in policy as suboptimal or risky, such as the use of formula milk and co-sleeping. These are both examples of practices that some women identified as critical to breastfeeding success, *despite* their designation in policy as potentially harmful. In particular, the use of formula milk as a supplement to breastmilk within the first six months of an infant's life runs explicitly counter to the prevailing norm of successful breastfeeding as outlined in policy. The adoption of 'risky' practices often initially prompted negative feelings (see Chapter Five, *'Failing' at Successful Breastfeeding: Initial Responses*), which has been identified in existing infant feeding research (cf. Larsen et al. 2008; Taylor and Wallace 2012b).

Few studies have investigated beyond the point of deviation from recommendations (from exclusive breastfeeding to mixed feeding or subsequently from partial breastfeeding to exclusive formula milk). The statistic that 80% of women who stopped breastfeeding would have liked to carry on for longer (McAndrew et al. 2012:82) is often used in support of breastfeeding advocacy efforts. However, this statistic is based on mothers who stopped in the first two weeks: the narratives of participants in this study reveal a longer-term change in approach whereby mothers incorporated practices described as 'risky' in policy as part of, and sometimes essential to, their personal story of breastfeeding success. The findings of this thesis suggest that the concepts of 'identity work' and 'moral work', while valuable in understanding women's emotional responses to the introduction of infant formula milk, do not fully explain the approaches taken by women in this study. Rather than – or perhaps in some cases as well as – a process of identity construction or reconstruction, the transition from 'moral collapse' to acceptance of formula milk instead reflects a pragmatic response to the difficulties that they faced day-to-day (see Chapter Five, *'Doing What Works': Rethinking the Success Model and Discovering Diversity*).

The clinical ontology of breastfeeding success was most apparent in the routine surveillance of infant health. After a period of two weeks in which an infant is expected to lose weight, mother-infant dyads must begin to meet clinical measures of breastfeeding success (see Chapter Four, *Examining Clinical Markers of Breastfeeding Success*). Infant weight emerged as the primary clinical indicator of health and growth, thereby serving to ensure that breastfeeding was successful from a clinical point of view. Routine monitoring of infant health plays a significant role in the lives of new parents, and for exclusively breastfeeding mothers in particular the health and growth of the infant became a key measure of breastfeeding success. Slow weight gain on the part of the

infant, or occasionally infant weight loss, obliged women to reassess their intentions to breastfeed exclusively. Mothers in this position, under the assumption that their own milk was inadequate or insufficient to sustain the infant effectively, therefore often supplemented with formula milk in order to maintain the rate of growth displayed in the infant's growth charts. Confusions about what constituted 'enough' milk were apparent in the diverse attempts that mothers made to assess the quality and quantity of their milk, and in their concomitant concerns about whether their milk was 'good enough' to sustain their infant (see Chapter Four, *Measuring Milk: Quality and Quantity in the Pursuit of Breastfeeding Success*). Mothers were thus placed in a position of having to prioritize either the policy optimal by continuing to breastfeed, or the clinical optimal by supplementing with formula milk in order to maintain adequate growth. This decision is further complicated by the inherently problematic nature of growth charts as a measure of infant health, whereby the adequacy of standardized growth curves – statistical constructs – in assessing healthy growth is still being debated. Normal child growth involves a great degree of flexibility, and the extent to which relatively marginal weight loss constitutes a risk to infant health is unclear. The difficulties that women faced in deciding whether or not to supplement with formula milk demonstrates a need for further research, which is currently limited, on mixed feeding and health outcomes (Martin 2018:149). Research of this kind would provide vital information for mothers in order to assist in the process of balancing different risks in the context of their own individual circumstances (Martin 2018).

Conflicts between clinical and maternal conceptions of breastfeeding success were particularly evident in cases of tongue-tie (see Chapter Five, *Defining Success: Product Versus Process and the Case of Tongue-Tie*). Mothers spoke of an imbalance in clinical concern; if the infant in question was gaining weight according to the standard growth

curves, tongue-tie was more prone to being overlooked or dismissed by healthcare professionals, even in cases where mothers were experiencing severe symptoms of the condition. Van Esterik's (1988) concept of 'product versus process' resonates clearly in the narratives of mothers whose infants suffered from tongue-tie. Considered in terms of the product versus process dichotomy, so long as the product (breastmilk) was being delivered effectively for the infant, maternal experiences of the process (breastfeeding) were conceived in clinical terms as less critical. The data show that infant growth and acknowledgement of the policy optimal are *part* of maternal ontologies of breastfeeding success. However, instances of tongue-tie revealed clearly that there are other elements at play too: the importance of comfort and/or lack of pain; the amount of time that women spend breastfeeding; the behaviour of the infant while feeding at the breast. Tongue-tie thus represents a locus of conflict between maternal and clinical ontologies of breastfeeding success: while the clinical ontology of success might be met through adequate infant weight gain, experiences of tongue-tie suggest that it often obstructs the maternal ontology of success by inhibiting a mother's ability to breastfeed comfortably.

Despite initial efforts to conduct research in clinical settings (with the aim of carrying out participant observation in maternity wards and breastfeeding clinics in hospitals), the length of time required for gaining NHS ethical clearance for fieldwork proved unfeasible in the amount of time available for the project. The study would have benefited from direct independent observation of clinical encounters to avoid reliance on participant accounts regarding clinical conceptions of breastfeeding success. Access to clinical settings might have allowed a more comprehensive insight into the interaction between the political, clinical and maternal conceptions of breastfeeding success by enabling direct observation of exchanges between clinicians and mothers. The one opportunity that did arise for observing breastfeeding support in a clinical setting (the

breastfeeding support clinic at the JR) revealed the potential for illuminating insights into the differing power structures at play in clinical versus independent settings. Observations made by mothers and health professionals (midwives and support facilitators) also suggested that the implications of policy might be apparent to a greater degree in clinical settings as opposed to the more informal context of independent support organizations. Multi-sited research would prove useful in the pursuit of this direction of research in order to develop further understandings of the interaction between the three ontologies that shape conceptions of breastfeeding success examined in this thesis.

Furthermore, investigating the narratives of other agents involved in infant care – partners, fathers, co-parents or grandparents – may yield yet further ontologies of success, which could conflict or align with any of the three ontologies examined in the thesis. The methodology in this study largely excluded the perspectives of these agents: at the time of research the legislation allowing shared parental leave had yet to come into effect, and fathers or co-parents therefore received a finite parental leave of two weeks. Given that Baby Cafés took place during the working day, it was therefore inevitable that fieldwork took place predominantly among primary caregivers (providing further tangible evidence that mothers are placed in a position of primary responsibility for achieving successful breastfeeding). Investigating further potential ontologies of success would add nuance to the complex navigation that women undertake to forge their own conceptions of breastfeeding success. Research of this nature could also yield useful findings on how wider social support networks could be better mobilized to support breastfeeding mothers.

Throughout the process of infant feeding women grappled with their own conceptions of breastfeeding success, which often underwent shifts as their circumstances changed. Attempts to match their own needs with the clinical and policy conceptions of

success resulted in tensions and conflicts that women had to navigate. This process of negotiation resulted in an approach that participants termed 'doing what works' (see Chapter Five, *'Doing what works': Rethinking the Success Model and Rediscovering Diversity*). While policy recommendations communicate a binary dichotomy between successful breastfeeding and risky practices such as formula feeding, the findings of this thesis suggest that the lived experience of breastfeeding demands negotiation of multiple and often conflicting ontologies as well as functional challenges that require a flexible, practical response that is often not compatible with the policy approach. The concept of successful or optimal breastfeeding thus fails to acknowledge the diversity that was present – and often necessary – in women's approaches to navigating the conflicts and tensions involved in feeding an infant. Each woman engages in different practices to make breastfeeding successful for the circumstances in which she finds herself, which is currently not acknowledged in infant feeding policy. Both policy and clinical ontologies of breastfeeding success place an emphasis on the health and development of the infant, exemplified by the promotion of breastfeeding by UNICEF (the fund for children) rather than UNIFEM (the fund for women) (Faircloth 2013:54; Maher 1992a:157). The findings of this study add to existing research that advocates for a more 'woman-centred' approach to the promotion of breastfeeding (Burns et al. 2012; Hoddinott et al. 2012; Taylor and Wallace 2012a) that takes greater account of the process of breastfeeding as experienced by mother (and infants) rather than focussing largely on the benefits of the product for the infant.

c) 'Culture' in Policy and Practice

The term 'culture' is commonly used in infant feeding policy to explain the divergence between recommendations and practice. The findings presented in this thesis suggest that

this conceals the political and structural frameworks that shape and constrain the experiences of individual mothers. Furthermore, it portrays women as passive recipients of culture rather than active participants. While policy recognition of the cultural complexities inherent to infant feeding is important, there is a danger that the concept of 'culture' depoliticizes nonconformity, presenting it as a static belief system that arises ultimately from the subjects of intervention.

Public health documents present a dichotomy between 'breastfeeding culture' and 'bottle-feeding culture', where the former serves to describe a desirable outcome and the latter is used to describe the status quo as well as a set of causal factors in the disparity between policy and practice (see Chapter One, *'Culture' as a Barrier to Successful Breastfeeding*). The concept of 'culture' in these formats appears to refer to a set of practices – for example formula feeding or early weaning – that do not accord with the policy optimal, as well as 'values' and 'beliefs' (for example that infants must be fed according to a schedule) that impede successful breastfeeding. The conception of 'breastfeeding culture' versus 'bottle-feeding culture' clearly favours the former over the latter in terms of desirable health outcomes, and the principle underlying the concept of breastfeeding or bottle-feeding cultures is that they can be altered in order to facilitate individual change. Similar assumptions can be found in the concept of 'organizational culture', whereby businesses target their internal 'cultures' as a strategy for improving productivity (Hudelson 2004). Susan Wright observes that, in this context, 'culture has turned from being something an organization *is* into something an organization *has*, and from being a process embedded in context to an objectified tool of management control. The use of the term culture itself becomes ideological' (Wright 2004:4).

In public health discourse, the application of the term 'culture' masks the diversity in both practices and approaches to infant feeding that was apparent from the experiences

of mothers in this study. It implies homogeneity and fails to acknowledge the blurred lines between breastfeeding and bottle-feeding that were evident among participants. In fact, the narratives of women in this study demonstrate that there is considerable overlap between the two purported cultures: into which category do mothers who feed their infants with both breast and bottle fall? Many of the women in this study ascribed to the implied values of a 'breastfeeding culture', intending to breastfeed according to the policy optimal (see Chapter Three, *Preparing to Breastfeed*). There were nonetheless, as discussed in previous sections, instances in which women embraced aspects of a 'bottle-feeding culture' by introducing complementary foods or supplementing with formula milk.

This transition from breastfeeding to (partial) bottle-feeding might be interpreted as the *result* of the 'incursions of a bottle-feeding culture' (WHO/UNICEF 1990:2). 'Cultural barriers' or 'taboos' to breastfeeding have been identified in previous research as being central to shaping experiences and practices of infant feeding (Dowling 2018; Newell 2018; Scott and Mostyn 2003; Smyth 2018). These barriers include factors such as anxiety over breastfeeding in public (cf. Boyer 2011; 2018) or sexualization of breasts to the detriment of breastfeeding (Bartlett 2005), which scholars argue require cultural or societal change to address (Boyer 2018; Brown 2016). However, neither of these two factors emerged as significant for women in this study. The majority of women were comfortable breastfeeding in public, at least after an initial period of building their confidence in breastfeeding. The site of fieldwork could explain this, with participants viewing Oxford as a liberal city where they generally felt comfortable breastfeeding in public. It may also reflect the demographic of participants in that women were, generally speaking, well informed about their rights to breastfeed in public. Notwithstanding these caveats, diverse infant feeding practices are, if anything, a cultural response to politico-

economic structures and structural inequality rather than the product of a particular culture. Particular methods of infant feeding constitute practices that, while perhaps affected by social, environmental and political frameworks among others, do not constitute a 'culture' on their own.

The difficulties that mothers experienced in this study were most often of a practical rather than a cultural nature, and maternal agency proved critical in navigating structural constraints around infant feeding. Use of the concept of culture within policy runs the risk of obscuring this agency. The findings presented in the thesis provide further evidence for Lock and Kaufert's assertion, in relation to women's responses to technology and medicalization, that 'it is usually pragmatism that motivates women's behaviour' (1998). It is clear that breastfeeding mothers operate within a framework of structural constraint: breastfeeding occurs within historically, politically and socially structured contexts. And yet, breastfeeding mothers are able to exercise a good deal of agency in negotiating these constraints and employing strategies through which they are able to shape their own conceptions of breastfeeding success. Writing about motherhood more generally, Lisa Smyth has observed that:

> The strategic priority accorded to problem-solving from a pragmatic perspective […] allows some relief from the burdens of guilt, anxiety, resentment, and the struggle for self-perfection which otherwise can be accepted as part and parcel of motherhood […] This perspective can accept changed situations not as positive or negative reflections of their individual efforts or choices, but as simple facts, which may demand a response, including a revision of previously established intentions or goals.
> (2012:145-146)

This matter-of-fact (and in many ways propitious) approach was clearly evident in the narratives of mothers in this study who adopted a pragmatic approach towards negotiating infant feeding norms, and is reflected in the matter-of-fact (longer-term) embracing of 'risky' practices such as formula milk by some mothers as discussed previously. In this way, the pragmatic strategies and approach adopted by these women appear to mitigate

somewhat against the effects of responsibilization precipitated by individualized behaviour change strategies.

The concept of 'culture' serves to depoliticize the structural inequalities that shape and constrain women's infant feeding practices. The findings indicate that it is more useful to examine these difficulties as structural inequalities rather than as culture. While infant feeding 'cultures' may be difficult to change and, indeed define, discussing infant feeding practices in terms of ontology allows for multiple different realities between and among women rather than just one uniform 'bottle-feeding culture' that stands in opposition to a 'breastfeeding culture'. Crucially, it also places maternal ontologies of breastfeeding success on a level footing with policy and clinical ontologies, enabling all three to be discussed on equal terms without emphasizing the importance of the policy or the clinical – or both – over the maternal.

6.2 Conclusions

The policies and practices examined in this thesis emerge as products of historical process, global and national governance, local operation, and individual constraint and potential. They represent an entanglement of mother and infant, body and state, biology and politics, nature and culture, all of which coalesce in the experiences of individual women. Overall, the findings of this thesis demonstrate that the biopolitical governance of infant feeding has certain adverse effects for women who are unable or unwilling to conform to the policy optimal. This is significant given the high proportion of women in the UK population who do not feed their infants according to the policy definition of optimal infant feeding.

Life with a new baby is characterized by uncertainty; and the act of breastfeeding exacerbates this uncertainty, since many women face challenges associated with initiation

and continuation of this method of feeding. Women question whether they will be able to breastfeed, whether or not their new baby will thrive, and how long it will take them and their infants to master the skill of breastfeeding. Andrea Cornwall describes a similar state of uncertainty in her ethnography of 'reproductive strategies' in south western Nigeria, observing:

> The pathways that people move through their lives are pitted with uncertainties. Looking back over their lives, they may identify moments, choices, and events that gain significance only in retrospect. Some of their hopes may have been realised; others were changed along the way by the circumstances in which they found themselves.
> (2007:230)

The reproductive strategies employed by Cornwall's participants were not the product of pre-planned actions, but rather a process of continuous negotiation. Similarly, in her exploration of women's approaches to contraception, Gina Hunter de Bessa observes that 'women's contraceptive practices are not based on a 'rational' assessment of costs and benefits so much as they are embedded in a series of ongoing, shifting decisions and negotiations with partners and institutions' (2006:226).

There are significant parallels between both of the above-mentioned analyses of contraceptive approaches and the experiences of breastfeeding detailed in this thesis. The retrospective narratives of women in this study represent a '"completed performance" rather than the outcome of a specific plan' (Richards 1989:4), and the process by which the women in this study reached completed performance is through one of fluid negotiation of multiple different constraints and actors. Conceptualizing breastfeeding in terms of pre-defined notions of success assumes and indeed necessitates a specific process, a designated plan of action, which is communicated clearly in breastfeeding advocacy and parental education. This approach fails to acknowledge the process of *un*completed performance that is so integral to the exploratory nature of infant feeding, particularly for first-time mothers. Rather than following a set plan, this requires

tempering strategies with contingencies and finding ways to manage the uncertainty of breastfeeding, demanding creative adaptation and acceptance of real-life eventualities that hinder the best-laid plans (Cornwall 2007:30). While existing literature acknowledges the challenges and constraints of breastfeeding in environments such as the UK where it is no longer the predominant method of infant feeding, there is little recognition that real-life uncertainties require individual innovation rather than (or perhaps as well as) simplified and general solutions. It is clear from the narratives of mothers in this study that the biopolitical governance of infant feeding places undue responsibility on women for achieving successful breastfeeding according to the policy optimal. Moreover, policy conceptions of successful breastfeeding do not account for alternative ontologies of breastfeeding success, which often come into conflict with the policy optimal.

These complexities present challenges for policy, which relies on making generalized statements that can be applied to entire populations and implemented on a wide scale. Nonetheless, if infant feeding is conceptualized in terms of parent-offspring conflict as discussed in Chapter One, maternal costs in relation to breastfeeding ought to be recognized rather than dismissed, and policy efforts must be directed towards minimizing these costs. A recent report published by SACN indicates a step in the right direction:

> Given the rapid decline in the proportion of women breastfeeding over the first few weeks of an infant's life in the UK, greater focus should be given to: reducing attrition rates, supporting women who make the informed choice to breastfeed. Increasing the proportion of women who continue to breastfeed or express breast milk beyond six months of age would yield additional benefits.
> (SACN 2018:xvii)

This statement represents a subtle but evident shift away from promoting the benefits of breastfeeding, and towards supporting women who do wish to breastfeed; as well as minimizing the focus on exclusivity. If progressed in such a way, the operative upshot of this approach might be to give women the support they need in order to learn to

breastfeed; to empower women who want to breastfeed while allowing those who do not to make choices based on accurate and unbiased information; and to minimize the maternal costs of breastfeeding.

The purpose of the thesis is not to argue against policy that encourages women to breastfeed, or to argue that the way in which mothers feed their infants is unimportant. Even if the evidence that informs the policy optimal were to be disregarded, formula-feeding carries certain risks inherent in the process of manufacturing and producing infant formula (Dalzell et al. 2010:18). These risks are exemplified by recent cases in France (2005 and 2018) and China (2008), where infant formula milks were found to be contaminated with salmonella (Alderman 2018; Brouard et al. 2007; Willsher 2018) and lethal quantities of melamine (Tang et al. 2015) respectively. Examples such as these have catastrophic consequences for the infants and families involved: in 2004, Humana Milchunion (a German company) agreed an out-of-court settlement of $20 000 000 with Israeli families whose children had suffered major neurological damage as a result of thiamine-deficient formula milk (Siegel-Itzkovich 2004). In any case, many women (the majority, in the case of this study) *do* want to breastfeed, often desperately so. Infant feeding policy is a necessity; but, as Van Esterik and O'Connor observe, 'policy that attempts to micromanage breastfeeding directly does not work' (Van Esterik and O'Connor 2017:164).

Policy must instead focus on making the process of breastfeeding possible, acknowledging the importance of viable alternatives where necessary. This need not necessarily mean formula milk: mother-to-mother milk sharing is emerging as an increasingly widespread response to the challenges that many women face with breastfeeding, facilitated by online platforms such as *Eats on Feets* and *Human Milk 4*

Human Babies (cf. Akre et al. 2011; Palmquist 2015).[38] In fact, such measures were endorsed by the WHO in the *Global Strategy*: 'For those few health situations where infants cannot, or should not, be breastfed, the choice of the best alternative – expressed breastmilk from an infant's own mother, breastmilk from a healthy wet-nurse or a human-milk bank, or a breast-milk substitute fed with a cup […] – depends on individual circumstances' (2002:7). Infant feeding policy has yet to catch up with the proliferation of informal milk sharing, however a focus on services that facilitate mother-to-mother milk sharing would help to provide an alternative both to formula milk and to breastfeeding by the infant's mother.

The findings presented in this thesis add to countless calls for the provision of more constructive and practical support for breastfeeding mothers, as well as providing a rationale for a more mother-centred focus in infant feeding policy. Policies such as the one evident in this research highlight the importance of anthropological analysis in problematizing the boundary between state and subject; examining the practices that occur within modes of biopolitical governance; and investigating the way in which individuals experience state intervention. It is hoped that, by engaging with the experiences of mothers in this way, the thesis contributes a new angle of research to the way in which women's choices and experiences are constrained and shaped by attempts to regulate infant feeding practices. This approach opens up possibilities for research that examines the construction of infant feeding policies at the IGO and national levels, as well as interrogation of the ontologies of success that are forged either by mothers themselves or imposed upon them by other agents or institutions.

[38] For Eats on Feets see http://www.eatsonfeets.org/
For Human Milk 4 Human Babies see http://hm4hb.net/

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