Modern Mothers, Modern Babies: Breastfeeding and Mother's Milk in Interwar Britain¹

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Abstract: In 1938, an obituary of Frederic Truby King, the New Zealand doctor who had founded the Mothercraft Training Society in London in 1918 announced that he had 'hypnotise[d] thousands of mothers into the belief that breast feeding is the important factor in infant care...' (Mother and Child, March 1938: 454). Truby King was an influential figure in the promotion of 'scientific breastfeeding', and this article investigates the position of breastfeeding in infant welfare and infant care advice directed at middle-class mothers in the interwar period. Positioned as the 'natural' way of feeding infants, breastfeeding was concurrently represented as the 'modern' and 'scientific' way of safeguarding babies' healthy development. This article examines the development of the science of breastfeeding, which centred on the practice of breastfeeding and breast milk as a substance, and explores middle-class women's experiences of breastfeeding in interwar Britain.

In 1938, an obituary of Frederic Truby King, the New Zealand doctor who had founded the Mothercraft Training Society in London in 1918, claimed that he had 'hypnotise[d] thousands of mothers into the belief that breast feeding is *the* important factor in infant care...' ² Truby King was certainly an influential figure in the interwar promotion of 'scientific breastfeeding', which occupied a key place in the 'mothercraft' teaching established as a matter of national policy in Britain with the passing of the 1918 Maternal and Infant Welfare Act and leading to an increase in infant welfare centres and health visiting schemes. ³ The *Mothercraft Training Manual*, based on Truby King's ideas and first published in 1924, has been described as the 'major source of orthodoxy in infant care and management for the next thirty years'. ⁴ Other historians, however, have questioned whether mothers 'really did follow such an extraordinarily rigid regime' as advocated by Truby King. ⁵ Indeed the extent to which knowledge of 'mothercraft' and 'scientific breastfeeding' was disseminated among mothers in

Britain is unclear: contemporary commentators claimed that while working-class women made use of the new infant welfare centres and received instruction in mothercraft, middle-class women mostly did not, although they were eager to receive scientific advice on the bringing up of their children.⁶

This article focuses on these middle-class women, and seeks to establish the extent to which they were in fact influenced by contemporary medical approaches to breastfeeding. Hitherto, scholarship on middle-class mothers and infant feeding in the interwar period in Britain has been limited, in contrast to the rich literature on the early twentieth-century infant welfare movement which targeted working-class women.⁷ Historians of the United States have shown how there in the first half of the twentieth century a developing ideology of scientific motherhood, by which raising babies was to be informed by expert knowledge, was accompanied by the embrace of bottle feeding by doctors and mothers alike.⁸ In a recent study, Jessica Martucci has explored how subsequently from mid-century onwards, an ideology of 'natural motherhood' underlay the slow revival of breastfeeding in the USA in later decades.⁹ In Britain, however, the ideology of scientific motherhood was characterised by strong breastfeeding advocacy, which only intensified after the First World War. As this article will explore, in this context, breastfeeding was positioned as the natural method of feeding babies, but it was simultaneously represented as the modern and scientific way of safeguarding babies' health. As it developed, the interwar science of breastfeeding focused both on the practice of breastfeeding and breast milk as a substance.

Middle-class women had long been the intended audience and most avid readers of infant care advice manuals, which presented mothers with strict instructions on how to bring up their children.¹⁰ However, after 1918, the pivotal involvement of medical professionals in the infant welfare movement raised questions about whether middle-class women had access to the latest scientific knowledge on infant rearing. The magazine *Mother* introduced its 'babycraft' section in 1936 thus: 'Doctors, nurses and scientists are constantly making new discoveries about Baby's welfare. But do you feel confident that this knowledge is available to you?'¹¹ Historians have established the social and cultural embeddedness of experiences of motherhood. In a ground-breaking study of this kind, Ellen Ross traced how poor mothers looked after babies and children in London before the First World War.¹² More recently, Angela Davis has shed light on experiences of motherhood in the second half of the twentieth century.¹³ Fruitful attention has been paid to parents' interpretations of newly visible childcare advice in post-war Britain which popularised theories of the emotional and psychological needs of children, and shifted the focus from 'bodies to minds'.¹⁴ In the interwar period, however, there was a firm infant welfare focus on babies' physical health. This article fills a gap in the literature on motherhood by exploring how middle-class mothers responded to and positioned their feeding practices in this context.

In what follows, the article establishes the critical place of breastfeeding advocacy in infant welfare and care advice directed at middle-class mothers in the interwar period. The concept of mothercraft became near synonymous with the teachings of Truby King's Mothercraft Training Society after the First World War, but his was an approach which chimed in with wider medical opinion. A consideration of the importance of the foundation of a network of baby clinics, the Babies' Clubs, by a group of London mothers to facilitate access to modern medical advice on infant feeding and care, follows. The article then explores the practices associated with scientific breastfeeding, as promulgated by the Mothercraft Training Society, the Babies' Clubs, and others, and traces the ways in which middle-class mothers engaged with and negotiated these by drawing on private letters, baby diaries, and Mass Observation day surveys, as well as letters written by mothers to parenting magazine advice columnists. Finally, the article discusses the interwar science of breast milk, with its emphasis

on the composition and ‘quality’ of this bodily fluid, and argues that this science was negotiated in varied ways by infant welfare specialists, family doctors, and mothers.

Middle-Class Mothers, Breastfeeding, and Infant Welfare

In 1928, Vera Brittain in an article describing the newly established ‘Chelsea Babies’ Club’, declared that ‘the mother with a profession’ was ‘urgently in need’ of infant welfare centres to receive instruction in baby care.¹⁵ Infant welfare centres grew considerably in number after the passing of the Maternity and Infant Welfare Act of 1918: while in 1917 there were 396 infant welfare centres run by local authorities, and a further 396 were operated by voluntary societies; in 1948, there were 4700 centres run by local authorities. Furthermore, health visiting was increasingly provided uniformly all over the country.¹⁶ As it developed from the turn of the twentieth century, the infant welfare movement had singled out the high infant mortality rate as a major national problem and principally targeted poor women. After the First World War, these efforts continued, but these years also saw a new focus on middle-class mothers.¹⁷ This was underwritten by the establishment of subscription-based infant welfare centres, such as the Mothercraft Training Society founded in 1918 and the ‘Babies’ Clubs’, the first of which was established in 1927, which embraced the focus on maternal education that dominated infant welfare endeavours.¹⁸

At the beginning of the twentieth century, a consensus had emerged among infant hygienists that breast milk provided the best nutrition for babies, and the infant welfare movement positioned feeding practices as the pre-eminent determinants of infant health. This was based on the understanding that the infant death rate from all causes, but in particular from diarrhoea, was higher amongst bottle- as compared with breastfed babies. After World War I, studies continued to uphold that bottle feeding was associated with higher mortality and morbidity of infants.¹⁹ Reports into breastfeeding rates often reflected infant feeding patterns in poor households, but it was commonly understood that middle-class mothers were less likely to breastfeed than those of the working class.²⁰ ‘Weaning at or shortly after birth is, I need hardly say, very common among the well-to-do classes’, the physician Lucy Naish declared in 1913.²¹ Commentators sometimes pointed out that more working-class children died, although their mothers were more likely to breastfeed, but the infant welfare message of ‘breastfed is best fed’ was nonetheless increasingly extended.²² The Mothercraft Training Society’s teaching consequently pivoted on ‘the theory and practice of breastfeeding’, which was also reflected in the Babies’ Clubs’ sense of mission. Margaret Emslie, the medical officer of the Hyde Park Babies’ Club, for instance, declared that one of the chief concerns of middle-class infant welfare work should be the ‘promotion of fuller knowledge of the one “safe” method of infant feeding’.²³

The growing focus on middle-class mothers’ infant feeding practices after 1918 came during the age of the housewife *par excellence*. Marriage rates were high, and few married middle-class mothers were in paid employment; many saw their primary task as raising their children, often fewer than their mothers had had.²⁴ In this, they commonly relied on the help of domestic servants. Despite concerns that there would be a ‘servant problem’ after WWI, this never materialised and on the whole middle-class households continued to employ servants, including nannies (or ‘nurses’).²⁵ By then, nannies had undergone a process of professionalisation furthered by the growth of training institutions. Originally an upper-class institution, they had become more widely employed in middle-class households.²⁶ However, it also continued to be common to assign the care of children to untrained domestic servants. The Babies’ Club movement was based on the understanding that middle-class mothers often did

not employ trained nannies and hence needed different channels of accessing modern knowledge on infant rearing.²⁷

In infant care advice, the association of breastfeeding with national and imperial, as much as individual, health came into view. Breastfeeding was to assure the healthy development of individual children, which in turn would ensure the wellbeing of the nation and empire. Following the enormous loss of life in WWI, anxieties about the decline of the birth rate and the ability to rule an empire in which white Britons were the minority positioned infant welfare programmes as a solution to ‘one of the great problems of national reconstruction’: the reduction of infant mortality.²⁸ It was a drive that could intertwine with eugenic concerns about ‘race deterioration’ in its search to ensure that ‘the future race is being built of the very best material.’²⁹ In focusing on post-natal interventions, it expressed those strains of eugenic thought that gave importance to environmental influences. Babies’ wellbeing was malleable and as such lay in the hands of their mothers.

Breastfeeding advocacy implied a focus on women as housewives and mothers, as well as ‘race reproducers’. It also became entangled in the development of feminist explorations of motherhood. In the growing interest in questions of sexual difference apparent in the interwar women’s movement, some feminists became involved with matters of mothering and the dissemination of modern infant care advice. This intersected in various and shifting ways with concerns about maternal welfare, access to birth control, and, for some, eugenics, as well as the promotion of what Vera Brittain termed ‘feminist motherhood’.³⁰ This was informed by the perception that motherhood needed to be learned, thus removing it from the realm of the natural and instinctive and positioning it, in Brittain’s words, as a ‘science which has to be taught’.³¹

The Mothercraft Training Society and the Babies’ Clubs Movement

A first attempt to establish an infant welfare centre aimed at the ‘wives of professional men’ was undertaken in 1916 by the Mothers’ Union, an organisation for Anglican mothers. In the event, it never materialised, possibly due to lack of support from the British Medical Association.³² The establishment in London in 1918 of the Babies of the Empire Society, soon renamed the Mothercraft Training Society, was far more successful.³³ The term ‘mothercraft’ had been coined at the beginning of the century by the Medical Officer of Health of St Pancras, John Sykes, but after WWI it became near synonymous with the teachings of the Mothercraft Training Society. Upon his death, its founder, the New Zealand doctor Frederic Truby King, was remembered as the man to whom the ‘conception of motherhood as a craft and not a gift or an intuition’ was owed.³⁴

Linda Bryder has shown that the Motherhood Training Society was a significant organisation that garnered support from many different quarters.³⁵ The Duchess of York became President of the Society and regularly visited its headquarters. Vice-Presidents included Dame Margaret Lloyd George, Arthur Newsholme (Chief Medical Officer to the Local Government Board until 1918), Benjamin Broadbent (a pioneer of infant welfare services), as well as Lady Rhondda and Maud Pember-Reeves. The Society’s matron, Mabel Liddiard, published a very successful childcare advice manual, *The Mothercraft Manual*. It first appeared in 1924, and by 1954 it had gone through twelve editions.³⁶ However, the influence of the Mothercraft Training Society went far beyond the advice manual. The Society functioned as a large infant welfare centre, with several affiliated clinics, a dietetic babies’ hospital, and it provided training to midwives, nurses, health visitors, and nursery nurses.³⁷ Furthermore, its infant care advice was also offered through a regular column in *Woman’s Pictorial* (entitled ‘Better Babies by Post’).³⁸

When conceived, the Society's infant welfare clinic was explicitly set up for middle-class women.³⁹ However, in the early 1920s, the Society began to receive annual grants from the Ministry of Health, which made it a condition to accept payment on a sliding scale according to means. The Society started to run clinics to which 'mothers of all classes' could take their babies.⁴⁰ Soon, affiliated clinics were set up in Earl's Court, Kingston-on-Thames, Brighton, Cambridge, Oxford, Newport and Cardiff, and links were established with the Violet Melchett infant welfare centre in Kensington. Clinic attendance rose steadily in the 1920s and 1930s.⁴¹ It continued to be perceived to be there for the benefit of middle-class women, however. According to the *British Medical Journal*, the Mothercraft Training Society clinics filled a want for 'the middle-class parent who is unwilling to attend the public health welfare centre or to afford doctor's fees for frequent visits for advice on infant feeding and management'.⁴²

In 1924, *National Health* commented that there was nowhere but the Mothercraft Training Society for middle-class mothers to seek advice on infant feeding and management.⁴³ However, in 1927, a group of mothers took matters into their hands and set up the Chelsea Babies' Club, a subscription-based infant welfare centre.⁴⁴ Other similar clubs soon followed, including in Hampstead and other London locations, as well as Teddington, Oxford, Reading and Edinburgh, and in 1931 the Federation of Babies' Clubs was established.⁴⁵ The Babies' Clubs were aimed at the middle-class mother, who, according to the secretary of the Chelsea Club had started to demand 'regular medical supervision of her infants, as a preventive measure'.⁴⁶ Club membership provided weekly access to a baby clinic, supervised by a physician, visits to the home by a qualified nurse, and classes for mothers.⁴⁷ The British Medical Association initially reacted unfavourably to the clubs, acting on concerns that they would displace general practitioners, but the clubs responded by declaring that, like local authority infant welfare centres, they would not provide medical treatment.⁴⁸

While nothing compared in size to the Mothercraft Training Society, the clubs became very important to some of its members. Vera Brittain, for instance, discovered the Chelsea Club in the spring of 1928 when her baby son, born the previous December, was not thriving. She later credited the Club with his survival.⁴⁹ To her, the necessity of these clubs was evident, and she declared her 'angry detestation of a trained mind' for the 'muddling through' to which, it seemed to her, the babies of the middle class were subjected.⁵⁰ What particularly commended the Club to her was that its medical personnel provided modern advice. Its medical director, Harold Waller, was a 'first-rate young infant specialist', who had 'up-to-date (Truby King) qualifications' and was thus of a 'very different type' than her family doctor.⁵¹

Brittain's irritation with her family doctor in matters of baby care was indicative of an issue that crystallised in this period. Middle-class mothers were likely to consult their family doctors about their babies' health, but unlike medical officers of health or child health specialists, general practitioners were often not familiar with recent developments in infant hygiene. Family doctors, therefore, often did not provide breastfeeding support. Eventually, they came to be singled out as an important factor in decisions to wean, although this remained a controversial proposition.⁵² As for Vera Brittain, she made sure she found a new family doctor who she felt was 'au fait with all the latest developments in everything' and happy to collaborate with the Babies' Club's doctor.⁵³

Feeding Babies by Bottle

There was an intense infant welfare promotion of breastfeeding in the interwar period, but it was entirely possible for babies who were not breastfed to thrive, as had been the case for a long time. The private employment of wet nurses had mostly disappeared, but cow's milk and

commercial infant foods were readily available. The nursing pioneer Agnes Hunt's mother, for instance, bottle fed all but one of her eleven children in the 1860s and 1870s. Katherine Furse, the founder of the Voluntary Aid Detachment force, recorded in her autobiography that she bottle fed her two children, born at the beginning of the century.⁵⁴ Infant welfare breastfeeding advocacy, however, was based on the understanding that overall bottle-feeding carried a greater risk of infant death, and that 'encouragement of breastfeeding is one of the methods of combating the excessive infant mortality', as 'breast-fed infants show a greater freedom from disease and a greater power of recovery from disease than artificially fed infants'.⁵⁵ Nonetheless, by the middle of the 1930s, some commentators started to call attention to the considerable improvements in sanitation and available alternative foods. It was pointed out in *The Lancet* in 1935, for instance, 'that the artificial feeding of infants has greatly improved in recent years ... is not likely to be disputed.'⁵⁶

Commercial infant foods had first appeared in the late nineteenth century. It was noticeable that after 1918, in contrast to some earlier marketing strategies they were mostly not promoted as competing with or claiming superiority over breast milk. Instead, they were commonly advertised as the closest substitute when 'mother's milk has failed.'⁵⁷ While commercial baby food products were available for purchase, physicians often favoured giving bottle-fed babies modified fresh milk mixtures, or 'humanised' milk.⁵⁸ Cow's milk was not without its hazards however: contamination was only brought fully under control through pasteurisation in the 1930s and 1940s.⁵⁹ Milk had started to be chemically analysed in the nineteenth century with the intent of modifying cow's milk to resemble human milk more closely, and throughout the interwar period, mothers continued to be advised to modify cow's milk themselves by mixing it with sugar and water, or barley and lime water. Special 'creams' were also available to be added to cow's milk to make it suitable for young infants, such as the Marylebone cream, developed by Eric Pritchard, or Karilac (a mixture of fats and oils, dextrose and lactose) and Kariol (lactose, dextrose and gelatine), available at Mothercraft Training Society clinics.⁶⁰

After WWI, the vitamin content of infant foods became a pressing preoccupation. Vitamins were discovered in the early 1910s when Casimir Funk of the Lister Institute of Preventive Medicine in London attributed some diseases, such as beriberi, scurvy and possibly rickets to dietary deficiencies.⁶¹ In 1918, J. C. Drummond pointed out in *The Lancet* that those interested in 'the science of infant feeding are only just beginning to appreciate the vital importance of these substances', but soon vitamins were considered essential for growth and healthy development.⁶² Baby milk companies paid attention to the developing science of nutrition and altered their products accordingly. For instance, Glaxo investigated the presence of 'antiscorbutic vitamin' (vitamin C) and vitamin D in dried cow's milk and agreed that supplements of orange juice and cod liver oil were necessary to compensate for deficiencies. In 1928, the company added vitamin D for the first time to a baby-milk product which became known as the 'Sunshine Glaxo'.⁶³

Middle-class mothers could receive medical advice on bottle feeding from their family doctors, baby clinics, advice manuals, or from parenting magazine advice columns, often written by nurses or midwives. Mothers of recently weaned babies who wrote for guidance on bottle feeding to *Woman's Pictorial*, which was provided in the name of the Mothercraft Training Society, sometimes received instructions on how to attempt to re-establish lactation instead. Those writing to *The Nursery World* with bottle feeding enquiries commonly received practical advice on how to adjust milk mixtures or quantities. However, bottle feeding could be a complex undertaking, as directions for modifying cow's milk could be challenging to understand. 'I am very confused', one mother wrote to *The Nursery World* when asking for advice on how to bottle feed.⁶⁴ Or another mother writing to *Woman's Pictorial* explained that

her doctor had counselled her to feed her baby modified cow's milk instead of patent food but that she was 'very uncertain of the proportions'.⁶⁵

When babies were not thriving, finding the right food could become an all-consuming and distressing experience, as Vera Brittain's letters to her husband attest. Brittain had attempted, but not succeeded in breastfeeding her first-born baby: the nursing home where she gave birth and her family doctor, she felt, had failed to provide her with adequate support.⁶⁶ Her family doctor advised her to switch to the bottle and suggested an alternative food that was later deemed to be too 'rich'. It led to too rapid weight gain and the baby breaking out in sores all over his body. A child health specialist who was consulted prescribed 'weaker' food, which 'tided him over a bad period when his digestion was all wrong', but was 'insufficient to make him grow'. At the age of two months, the doctor of the Chelsea Babies' Club, Dr Waller, prescribed 'a special kind of malt-extract in his bottles & to start having cow's milk twice a day and gradually to go on it altogether'. When this did not go as well as hoped, the clinic made a 'small alteration' to his diet, which resulted in more weight loss, followed by another modification. At age three and a half months, the baby received a mixture of cow's milk and water, with added sugar malt and cod liver oil, as well as orange juice and sugar separately on a spoon.⁶⁷ Baby John Edward weathered the difficult start in life. Brittain, however, continued to feel that not having been breastfed had long-term health consequences. When John at the age of three needed his tonsils removed and developed a problem with his legs, she wrote: 'I suppose we are still paying the penalty for Hughes [her family doctor] – and shall probably do so for some years.'⁶⁸

The Science of Breastfeeding

The view that in general breastfeeding best served babies in the short and long term was widespread in the interwar period. Harold Waller, a consultant physician to the British Hospital for Mothers and Babies and medical officer to the Chelsea Babies' Club (who became Vera Brittain's most trusted advisor on her son's health), explained in 1930 that it was thus essential to work towards the promotion of 'the natural prehistoric method of feeding children.'⁶⁹ But while breastfeeding was represented as 'natural' and 'prehistoric', it was simultaneously positioned as scientific and modern. In this process, breastfeeding was transformed into a practice that was to be undertaken following the guidance of medical experts. The roots of this went back to the decades before the First World War when a science of breastfeeding was elaborated in a transnational context of paediatric connections and knowledge exchange.⁷⁰ It was pivotal to interwar breastfeeding advocacy, and at its core was an attempt to regulate the times of feeding and the amount taken through feeding in prescribed intervals, timing feeds, test-feeding babies, and charting weight-gain.

Test-feeding, or test-weighing, involved weighing the baby before and after a feed to establish the quantity of milk produced by the mother and ingested by the baby. It was commonly undertaken in nursing homes, lying-in hospitals, and dietetic baby hospitals, as well as being offered at infant welfare clinics, including the Mothercraft Training Society clinics and Babies' Clubs. Mothers who owned scales could also do this at home. 'I have just finished feeding him... I carry him into the next room and put him on the scales', a Mass-Observer wrote of her three-months-old son in 1937. As the baby was doing fine, precision was not essential: the baby's mother and nurse engaged in a discussion of how much he might have regurgitated to establish how much he had consumed in the first place (the nurse thought it might have been half an ounce; to the mother, covered in it, it appeared more like three ounces).⁷¹ When babies did not follow an expected weight-gain pattern, however, test-weighing became a diagnostic tool. Mothers whose test-feeds seemed not to produce sufficient

milk could be told to supplement with bottles.⁷² Alternatively, they could be told to seek to increase milk production. This was the approach commonly taken by the Mothercraft Training Society and involved a regime of sponging breasts alternately with warm and cold water.

If babies were occasionally weighed before and after breastfeeds to establish milk intake, they were also weighed regularly - at infant welfare clinics, chemists, or at home - to chart growth. In the early twentieth century, weight-gain became the critical indicator of appropriate diet and healthy development in babies.⁷³ Absence of expected weight gain quickly caused concern about the possibility of a nutritional disorder. Dora Russell, for instance, in 1924 was almost relieved to realise that her baby's recent weight stagnation was explained by the incubation of measles and 'not anything more dangerous'.⁷⁴ Vera Brittain, for her part, navigated her first baby's difficult early months by carefully recording weight. Weight gain was accompanied by great relief, lack of it by more anguish.⁷⁵ Weight in relation to age became a primary diagnostic tool for the advice columnist of *The Nursery World*. If the baby's weight did not correspond to expectation, advice would follow to time breastfeeds differently, or, in the case of bottle-fed babies, to adjust milk mixtures.

Test-feeding and charting weight became part of the breastfeeding experience. The key pillar of scientific breastfeeding, however, was feeding by the clock. While this is often associated with the teachings of Truby King, he was not the first nor the only one to advocate a feeding routine. This originated in the decades before WWI, when medical opinion commonly recommended feeding in two-hourly intervals. This was seen to be vital to the development of infant health by training the stomach into 'rhythmical and automatic habit' and by ensuring that the baby was neither under- nor overfed. The stomach needed to be entirely emptied between feeds, and failing to feed following a routine could have severe consequences: according to Eric Pritchard, a figurehead of the infant welfare movement, 'many breastfed infants are killed annually by want of observance of this rule.'⁷⁶ 'Overfeeding' continued to be seen as a dangerous cause of illness throughout the first half of the twentieth century, which had to be avoided through careful regulation of breast- and bottle-feeding.⁷⁷ After 1918, however, it became more common to advise following a routine of four-hourly intervals, with the understanding that some babies would do better initially on three-hourly intervals. Night-feeds were no longer permitted.⁷⁸ Truby King's ideas were particularly influential here, and what came to be known as the 'Truby King method' was closely associated with a strict four-hourly breastfeeding routine. The advice provided by infant welfare centres, lying-in hospitals and nursing homes, advice manuals and parenting columns was remarkably consistent in its insistence on a feeding routine, although there continued to be variance between recommending a three- or four-hourly routine. In middle-and upper-class households, monthly nurses or nannies could be in charge of regulating the times of feeds.⁷⁹ A *Mass-Observer*, for instance, recorded when her baby was about a month old: '4 am. Woken by the baby crying...His [college-trained] nurse won't bring him in to me as early as this...'⁸⁰ It was only at the end of the 1930s, that some medical texts started to suggest that some flexibility in feeding times in the early days and weeks would be more conducive to the establishment of breastfeeding.⁸¹

Historians have established that the promotion of routine in infant care was intended to shape the character of the child through habit-training and discipline. It was to lead to the formation of a 'stable' personality, the bedrock of a strong nation.⁸² This aspect surfaced in discussions on infant feeding. Feeding babies outside of the routine when they cried risked spoiling them: 'She still cries a good bit, but now I know she is not hungry and I can be more strict with her', a mother wrote to *The Nursery World*.⁸³ However, it must be stressed that for doctors and mothers alike the concept of scheduled feeding was most deeply embedded in an understanding that it was critical to babies' healthy physical development, as explained above. The interwar advice that feeding should take place in a stretched four-hourly routine, however,

also addressed another issue: it supposedly made breastfeeding less burdensome. Commentators, medical and others, often assumed that middle-class mothers decided against breastfeeding due to the time commitment and interference with social obligations it entailed. A routine of feeding the baby every four hours, however, was seen to allow mothers time for other engagements. For Truby King, this was part of a pronatalist drive to raise the birth-rate and safeguard the future of the empire.⁸⁴ For others, a stretched feeding routine supported a particularly modern form of middle-class mothering, which advocated mothers' close involvement in their young babies' lives (in a task that could not be delegated to nurses), yet still allowed time for other pursuits. 'By feeding him four-hourly by day and not at night', the birth-control campaigner Charis Barnett explained in her infant care manual, 'a woman is able to lead a human life instead of having it completely disorganised.'⁸⁵

A four-hourly routine could be appealing to mothers, as is evident from letters written to *The Nursery World* advice column:

I am still in the hospital and am therefore feeding baby three-hourly according to the methods used here. When I come home in three days' time shall I change to four-hourly feeds straight away? ... Four-hourly feeding would be much easier for me....,

a mother wrote after the birth of her third child in 1939.⁸⁶ Sister Morrison, the Mothercraft-Training-Society qualified advice columnist, was equally conscious that three-hourly intervals could be less favoured by mothers: 'If temporarily you could manage to feed baby at three-hourly intervals instead of four I advise this...', she wrote to another mother in the same year.⁸⁷ Following a feeding routine worked well for some mothers for the recommended nine months. 'Anne's mother' thus wrote to *The Nursery World* in August 1926:

I'm very keen on Dr Truby King's methods ... my little girl... was fed three-hourly until about two months old, as my doctor and nurse both favoured it, but when I got her on to four-hourly feeding at that age she was much better... She was breastfed until 9 months old.'⁸⁸

Or 'Robin Redbreast' wrote in the same year: 'I ... was particularly pleased to find an article by Miss Liddiard ... my baby boy ... has been breast-fed and brought up strictly on the methods advised by the Mothercraft Training Society'.⁸⁹ But, of course, not all mothers followed the ubiquitous advice. Hence, in 1923 a letter-writer, herself a TrubyKing devotee, was perplexed to meet a fellow mother 'who spends every night feeding her baby whenever he cries - about every hour!'.⁹⁰

While implementing a feeding routine worked well for some mothers and their babies, this was not necessarily the case with all their children. One mother thus wrote in 1935:

I brought up my first little boy entirely according to your methods and I am very anxious to do as well for the second... The second seems to need more attention, and doesn't sleep through the night... He always seems ravenous and would take more than I give him...⁹¹

Other mothers found it difficult with all their children. Mary White (née Truby King) was the adopted daughter of Frederic Truby King, who spent much of her life promoting her father's teachings in Australia. In the 1970s, she reflected on the bringing up of her two children: 'Naturally', she wrote, 'I tried to follow the T.K. method to the very best of my ability, but I admit that it was hard work...'. Her milk 'petered out' when each of her children was about three months old, and she consequently did not nurse for the recommended nine months.⁹² Others were less concerned with religiously following feeding instructions. When the obstetrician and psychoanalyst Merrell Middlemore explored the establishment of breastfeeding in a lying-in ward of a teaching hospital (with women from 'genteel suburban

homes with a sprinkling of professional women'), she recorded that babies with a birth-weight over 7lb were fed every four hours in the hospital. However, in the first weeks after leaving the hospital, it was not uncommon for mothers to change the timing of feeds. The routine could be shortened to soothe a crying child or lengthened if the baby was asleep.⁹³ A Mass-Observer also recorded when her month-old baby was crying: 'I hurry through [my lunch] and feed him a little early'.⁹⁴

The emphasis on breastfeeding, and to do so by the clock, could exert inordinate pressure on mothers. A middle-class mother writing to the developmental psychologists John and Elizabeth Newson after WWII, explained it:

My daughter was born during the Truby King period ... For the mother who finds breast feeding terribly difficult - and there are so many of these - these solemn pronouncements she will hear from her own parents and from health visitors, obstetricians and other professional people can lead to real emotional and mental suffering.⁹⁵

There were other women, however, who found it meant that extensive breastfeeding support was available. In 1939, a mother thus recollected how she had tried but not succeeded in breastfeeding her first four children. With the first one, her doctor told her that as she did not have 'the temperament of a cow' she would not be able to nurse successfully; with the second and fourth ones her doctor and nurse told her that her milk did not agree with the baby; with the third she was ill after the birth. With her fifth child, however, she employed a Mothercraft-Training-Society monthly nurse. According to Mrs Le Quesne, the monthly nurse was unfalteringly encouraging, and she eventually established breastfeeding, after a difficult start involving test-feeds, supplementary bottle feeds and regular hot and cold sponging of the breasts. The baby was breastfed for ten months and the next one for eleven.⁹⁶

The Science of Breast Milk

The interwar science of breastfeeding extended to breast milk as a substance. An article in *The Lancet* in 1922 explained that only through fully knowing the composition of human milk would it be possible to arrive at a 'system of infant feeding established upon a truly scientific basis'.⁹⁷ Analyses of how the composition of mother's milk compared to animal milk continued to be the focus of considerable medical interest and research in the early twentieth century. In this spirit, Janet Lane-Clapton, an assistant medical inspector to the Local Government Board, was commissioned by the Medical Research Committee in 1916 to survey existing research.⁹⁸ Questions about the composition of human milk contributed to shaping discussions on infant feeding and influenced women's feeding experiences.

The ratios of fat, sugar and protein were the focus of ongoing research in the 1920s and 1930s, but other attributes also came into view: before WWI, reports about the immunological properties of human milk had started to appear in research papers; after the war reference to these appeared with increasing frequency in paediatric textbooks and advice literature.⁹⁹ Added to this was the new interest in vitamins. It became a common proposition that breast milk best suited the needs of infants because it was sterile, easily digested, contained immune bodies and the right amounts of vitamins.¹⁰⁰ And yet, the intense focus on the constituent elements of mother's milk contained the assumption that it was variable and could disagree with the baby. Nursing mothers often expressed concern about the quality of their milk, and they could be told by their family doctors to desist from breastfeeding on the basis that their milk was not satisfactory, even when there seemed to be plenty.¹⁰¹ Infant health specialist made a point of

arguing that milk needed to be chemically analysed before coming to the conclusion that it was of poor quality, but still supported the notion that this was a possibility.¹⁰²

Breast milk had long been seen to be an alive and active substance, and this view was mapped onto new research.¹⁰³ Some voices suggested that the composition of breast milk was mostly unaffected by lifestyle. Janet Lane-Claypon, in her survey, for instance, concluded that under-nourishment could affect lactation (this knowledge informed programmes to improve the nutritional status of nursing working-class mothers). However, she also found that neither human nor cow's milk was affected by particular types of diet and that the deficiency of a specific element in the diet did not lead to its deficiency in the milk.¹⁰⁴ This, however, was not a widely adopted position in the following two decades. It was more common to propose a close relationship between mothers' lifestyles and their milk. Questions about how mothers' diet, levels of exercise, as well as emotional states, affected the quality and quantity of breast milk remained pertinent in the interwar period. To produce good milk, mothers, so it was said, needed to adopt a suitable regime of rest, exercise, diet, and a calm emotional state. While the maternal body was defined by its nutritive function, its ability to nurture babies to healthy development was dependent on adopting an appropriate lifestyle.

Analyses of the composition of breast milk showed variability in the protein, sugar and fat content, with the latter being the most inconstant. According to some commentators, mothers' diet and levels of exercise had an impact.¹⁰⁵ The milk suffered if 'she is over-fed and under-exercised', declared Catherine Chisholm, the medical director of the Manchester Babies Hospital in 1924.¹⁰⁶ According to the Mothercraft-Training-Society nurse Hester Viney, levels of exercise affected the fat ratio and protein content: 'Exercise out of doors is necessary for her: but she should bear in mind that too much exercise tends to decrease the protein and fat content of the milk, while too little exercise increases it'.¹⁰⁷ Women also needed to remember not to feed the baby when hot from rushing around.¹⁰⁸ A mother writing for advice to *The Nursery World* in 1939 explained that her doctor told her that 'I was probably dashing about too much and "churning" my milk and taking the goodness away.' The mother, however, doubted this: '...but I feel that thousands of nursing mothers do as I do with regards to housework.'¹⁰⁹

The new significance given to vitamins informed novel questions about the relationship between breastmilk and maternal diet. Already in 1918, J. C. Drummond declared that vitamin content was susceptible to the 'effects of dietary restriction'.¹¹⁰ How women's diet affected the vitamin content of their milk became a much-discussed issue. The 'badly-fed mother be she human or bovine', the paediatrician Victoria Bennett explained in 1931, 'cannot give what she does not possess and, in either case, the milk will be lacking in vitamins.'¹¹¹ This could be interpreted as meaning that breastfed was not always best fed after all: 'The human mother... often lives so unnaturally that her milk is not always the best for the baby', Josiah Oldfield pronounced in 1926.¹¹² More commonly, however, it underlay the conviction that mothers needed to monitor their diet carefully when nursing.¹¹³ When breastfed babies did not display satisfactory weight gain, mothers could be told to adjust their diet. A Mothercraft-Training-Society certified nanny thus wrote to the Society's magazine in 1937 that a mother she worked for had been told by her doctor to modify her diet to produce better milk. She reported that it did not seem to have the desired result.¹¹⁴

The view that the quality and quantity of breast milk depended on women's diet opened an opportunity for the marketing of commercial products. Ovaltine, for instance, was advertised as producing 'in a perfectly natural way, a rich and adequate supply of maternal milk'.¹¹⁵ The most widely sold product for this purpose was Lactagol, said to stimulate the production and enhance the quality of breast milk. Many infant welfare centres distributed it, and it could be bought at the chemist. Peter Cooper's mother recorded in her diary how her monthly nurse convinced her to buy Lactagol to 'improve the quality', despite having plenty

of milk.¹¹⁶ Formula milk for babies was commonly also marketed as dietary supplements for nursing mothers. As was explained in the *Glaxo Baby Book*: 'By taking Glaxo YOURSELF before and after the birth of your baby you can, all other conditions being suitable, transform it into nutritious breast-milk...'.¹¹⁷

Mothers' milk - conceived of in terms of percentages of fat, protein and sugar, with added immunological properties and vitamins - was thus understood to be a variable substance affected by mothers' lifestyles. Not only that, but women's emotional states were also thought to leave imprints on their milk. Age-old conceptions of an intimate relationship between nursing women, milk, and infants continued to resurface in the two decades between the wars. The idea of the transmission of morality and personality via breast milk that had once coloured discussions on wet-nursing had disappeared.¹¹⁸ However, the notion of a relationship between nursing women's emotions and their milk continued to persist. Medical professionals continued to espouse such ideas throughout the 1920s. By the 1930s, infant health specialists in particular, however, paid increasing attention to the impact of emotional disturbances on the ability to lactate. Family doctors and mothers, on the other hand, often continued to embrace the understanding that strong emotions could spoil breast milk.

The belief that breast milk could be dangerous to the suckling baby had a long history. Before WWI, medical writings on breastfeeding and breast milk still repeated stories about babies dying from convulsions after consuming the milk of a mother who had undergone violent emotions.¹¹⁹ After the war, the perception of breast milk as nutritionally ideal for babies no longer allowed the sense that it could become deadly. Mothers' emotions, however, continued to be seen to affect the quality of their milk. Already slight mental upset could lead to variation in composition.¹²⁰ Worry and anxiety, in particular, were thought to cause milk to disagree with the child: it 'probably increases proteins, and decreases fat', Catherine Chisholm conjectured in 1924.¹²¹ Added to this was an increasing concern that worry, or the experience of emotional shocks could affect milk production.¹²² H.W. Pooler, a medical officer of health, for instance, declared that 'great emotion' could completely inhibit milk production, and minor, but long-continued worries could diminish the supply.'¹²³ Mothers knew of the potential effects of their emotions on their milk. Filling in her Mass-Observation Day Survey after her second child was born in 1937, an observer recorded in August: 'Glance at the *Daily Worker*. It is not soothing reading for a nursing mother. I wonder if I should stop reading newspapers if I want to feed the baby.'¹²⁴

The question of whether and how worry and anxiety affected the quality and quantity of breast milk achieved renewed pertinence with the outbreak of war. Concerns were soon voiced about the impact of the war on breast milk, and it became a frequent topic for which advice was sought in *The Nursery World*. 'Perhaps my problem may be the same as many mothers have just now', a mother started her letter in July 1940, continuing: 'Do you think that the state of mind of the mother can have such an effect on her milk as to seriously upset the baby and necessitate weaning?'¹²⁵ The advice columnist felt compelled to publish a special note later that month, reassuring the growing number of concerned mothers: 'A point of great importance is that weaning should not take place solely because of the mother's mental strain or anxiety.'¹²⁶

Conclusion

Childrearing advice based on the enforcement of strict routines influenced interwar infant care practices. This has to be understood, however, in the context of the importance assigned in this advice to breastfeeding by the clock. This helps to explain why the 'Truby King method' found wider favour: it corresponded closely with broader medical ideas on infant feeding and babies'

healthy development, even if there remained disagreement about whether three- or four-hour feeding intervals were most appropriate. Although often associated with Truby King, the fundamental tenets of scientific breastfeeding had been developed before the First World War. One of the novel aspects of the interwar period, however, was a new infant welfare focus on middle-class mothers. It is difficult to categorically assess the impact of the concept of scientific breastfeeding on their childrearing practices. The first national statistics on infant feeding collated in 1946 indicated that breastfeeding rates had declined in preceding years, particularly in terms of the average duration. They also showed a different trend: differences in feeding practices along the lines of class were inverting. For the first seven months, the establishment and maintenance of breastfeeding was higher among middle-class compared to working-class women.¹²⁷

While constructed as ‘natural’ in opposition to ‘artificial’ bottle feeding, breastfeeding in the interwar period was not centred on a conceptualisation of natural motherhood, nor was it conceived of as an instinctual skill. Feeding at the maternal breast was positioned as a scientific endeavour and a craft that had to be learned. In explorations of the twentieth-century politics of breastfeeding, La Leche League tends to stand out. Founded in Chicago in 1954 by a group of wealthy Catholic mothers, with the first groups appearing in the UK in the 1970s, the League conceptualised breastfeeding as ‘a womanly art’ and prioritised the expertise of mothers over that of the medical profession.¹²⁸ This article has called attention to that in the 1920s, a group of middle-class mothers in London instigated the establishment of an earlier network of centres to promote and support breastfeeding, the Babies’ Clubs. These, however, were based on a different premise. As Vera Brittain expressed it, ‘mother instinct is not enough’.¹²⁹ Rather, the Babies’ Clubs were to provide middle-class mothers with scientific knowledge on how to (breast)feed and care for their babies, by facilitating access to medical professionals with up-to-date training in infant hygiene. Interwar medical breastfeeding advocacy positioned feeding as the key determinant of babies’ health, and middle-class mothers sought out modern advice on infant feeding. Paradoxically perhaps, this gave them the tools to reject family doctors’ authority over their bodies and their babies, but at the same time invited their involvement in the medicalisation of breastfeeding and the scientific management of the lactating body.

Not all interwar middle-class mothers breastfed, and many more did not do so exclusively for the recommended nine months. Alternative foods were readily available and, as has been explored in the case of Vera Brittain, extensive support for bottle feeding could be found if the need arose. Brittain, however, regretted that she had not known of the Babies’ Clubs before giving birth or at least in time to help her to re-lactate.¹³⁰ The medical message that babies, whenever possible, ought to be breastfed and that most women could do so if only taught properly spread widely. Mothers shared the infant welfare concern with feeding. The infant mortality rate consistently dropped over the course of the early twentieth century and reached its lowest point since records began in 1939.¹³¹ However, the memory and knowledge that babies easily succumbed to illness remained. ‘A baby ... can be perfectly well by midday and dead by the evening’, Vera Brittain impatiently explained to her husband in 1928.¹³² Mothers worried about how to feed their babies and, if breastfeeding, how to go about it and whether they produced enough milk of ‘good quality’. Nursing by the clock for nine months was clearly impossible or at least very difficult for many mothers, although it was a method that worked for some, including when earlier attempts at breastfeeding had not succeeded. The intense promotion of breastfeeding meant that it could be possible to access extensive support when needed, which was very much welcomed by some women. Interwar mothers, however, appraised the feeding instructions they received. Especially when babies were thriving, rules could be disregarded, occasionally or more consistently. Bottles were often introduced long before nine months, and feeding intervals could be shortened or lengthened to accommodate

the baby's or the mother's needs. When her baby daughter was three months old in 1924, Dora Russell decided to introduce two bottle feeds for the time being, but continued to breastfeed at 10am and 6pm. Aware that the baby was 'supposed to have three feeds from me' to reach the recommended five feeds, Russell nonetheless decided that 'I shall go on with two'. It was, after all, working just fine.¹³³

¹ I would like to thank Lucy Bland, Caroline Bressey, Clare Midgley and Cornelia Usborne for their helpful comments on an earlier version of this article.

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¹³³ Dora Russell to Bertrand Russell, 23 March 1924, box 8.10, Bertrand Russell Archives.