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**Women and the dairy industry in England, c.1800-1939
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I. Overview: the English dairy industry

The dairy industry in England has been dominated by the production of three products: liquid milk, cheese and butter. Prior to the nineteenth century dairying was a small but significant component of agricultural production in England. The industry was dominated by farmhouse processing of milk into butter and cheese and this had been part of the female sphere of production for centuries (although accurate data for the scale of production and size of the labour force are not available for this period). Women had special skills in the dairy, based on the handing down of extremely sensitive methods of ensuring the development of a quality product by word of mouth from generation to generation: either from mother to daughter, or mistress to maid. Men traditionally played virtually no part in production or processing, which from milking the cow to selling the products at market were controlled by women. Men had jurisdiction over the handling and care of dairy stock, and also helped out in the milking of cows in some regions. Although many women worked in a small-farm environment, processing milk primarily for household consumption, evidence suggests that in specialist dairy regions (concentrated increasingly in the western counties such as Cheshire, Gloucestershire and Shropshire), dairying was big business by the eighteenth century, with herd sizes increasing and male cheesemongers and butter dealers working for a national market.² This demand made dairying a full-time occupation for women on large enterprises. It was generally reckoned that a milkmaid could milk 10 cows a day and process the milk from 20 cows. A herd of 30 cows was therefore fulltime work for at least 3 women. In many cases this was supplied by women employed as servants on a year-long contract, supervised by the farmers' wife.

From the mid nineteenth century the dairying industry entered into a period of growth and internal change. Agriculture as a whole went through an extended period of depression between c.1870 to 1940, but dairying was one sector that saw growth and

¹ This paper is based upon a collaborative project being undertaken by Dr John Broad (London Metropolitan University), Dr Anne Meredith (independent researcher) and Dr. Nicola Verdon (Sheffield Hallam University). Dr Verdon is grateful for a £10,000 research grant from the Museum of English Rural Life during 2005-6, where much of the research for the paper has been carried out.

² Broad 'Regional Perspectives'; Edwards, 'Dairy Farming'.

comparative success. Table 1 shows that across the first three decades of the twentieth century, dairy produce consolidated its importance, whereas that of livestock and crops fell. There was increasing demand for liquid milk in urban areas, a demand that could be met with the development of a comprehensive railway network and refrigeration. This demand was met by existing dairy farmers as well as other farmers switching to milk production. This growth in the liquid milk market coincided with the increasing availability of imported medium quality cheese (firstly from the USA and then New Zealand and the Netherlands) and the consequent fall in prices for English cheeses.³

Table 1: Gross agricultural produce of England and Wales

	1908	1925	1930/1
Livestock	39.9%	35.1%	32%
Dairy produce	20%	25.6%	27.1%
Poultry/eggs	3.4%	6.7%	10.4%
Farm crops	31.6%	24.8%	22.5%

Source: Taylor, 'The development of English dairy farming', p.48

Table 2: Proportions of milk, butter and cheese in England, 1860-1930

Year	Liquid milk	Butter	Cheese
1860	30%	30%	40%
1900	75%	15%	10%
1930	80%	15%	5%

Source: Taylor, 'The development of English dairy farming', p.87. Taylor states that the figures are 'conjectural... but probably reflect the overall trends with a reasonable degree of accuracy.'

Table 2 shows the proportions of dairy produce in 1860, 1900 and 1930. Cheese production fell rapidly from 40% of the market in 1860 to just 5% in 1930. Butter and cheese making on a national level clearly declined in importance steadily, but there was still a market for high-quality farmhouse products. Indeed, the vast majority of cheese and butter produced in England after 1850 continued to be made on the farm. Although there was some vocal support for the establishment of cheese factories, there were only 20 factories in England by the mid 1870s, producing no more than 25,000 hundredweight (cwt) of cheese, against the 1.75 million cwt produced nationwide.⁴ In 1908 the Census of Production revealed that cheese sold from all classes of holdings in England was 362,000 cwt (and a further 18,000 cwt for farm consumption) with only 53,000 cwt (or 15 per cent of the total) being factory

³ Perren, *Agriculture in Depression*; Collins, *Agrarian History of England and Wales*, pp.472-78; Taylor, 'The development of English dairy farming'; Taylor, 'The English dairy industry', 1860-1930: the need for reassessment'; Taylor, 'The English dairy industry, 1860-1930'; Taylor 'Growth and structural change in the English dairy industry'.

⁴ Taylor, 'The development of English dairy farming'.

produced.⁵ Farmhouse dairy production continued to take place where it was more profitable than liquid milk sales. Prices for good quality English cheeses were higher than exported cheese and remained so in the 1920s and early 1930s and cheese making continued regionally, in parts of the West Country, and the north-west. It was the foundation of the Milk Marketing Board in 1933 which fundamentally altered the dynamics of the dairy industry. The MMB held the rights to purchase and collect all milk sold wholesale from farms in England and Wales, providing a guaranteed market, and price, for the product. Figures published by the board show the sharp fall in farmhouse cheese production and the increase in factory-produced cheese, although there was a brief recovery after increased subsidies were available from 1934-5 (see Table 3).⁶

It is very difficult to quantify the number of women (and indeed men) employed in dairy manufacture. Female relatives (wives, daughters etc) who assisted in productive work in family enterprises such as farming were removed from the occupational tables by the Census Office between 1881 and 1911. The mis-recording, or under-recording of female agricultural workers, labourers and servants, by the census is also well-established.⁷ However it is our contention that women continued to play a key role in the farmhouse production of cheese and butter in England into the early 1930s although by this time the industry was clearly in steep decline.

Table 3: Farmhouse and factory cheese production in England and Wales, 1924-39

Year	Farmhouse cwts	Factory cwts
1924-1925	502,000/481,000*	n/a
1934	196,000	623,000
1935	130,000	817,000
1936	238,000	856,000
1937	243,000	n/a
1938	268,000	n/a

* The first figure shows cheese made, and the second the amount for sale (the difference is consumed on the farm)

Sources: MAFF (1930), 'Report on the marketing of dairy produce in England and Wales'; *Agricultural Register*, 1933-4 - 1938-9.

II. Historiography: the historical account of women and work in dairying

The transformation of the dairy industry in Western Europe and the United States, and the changing position of women within it, has been explored recently by various scholars.⁸ The dominant trend is clear: the processes of commercialisation, technological innovation and mechanisation radically altered the existing gender division of labour, marginalizing women as dairy managers and workers, and promoting the authority of men. This happened in different countries at different

⁵ Taylor, 'Growth and structural change', pp. 49,51.

⁶ Milk Marketing Board, *Milk Marketing Scheme: Five years' review 1933-1938*.

⁷ Higgs, 'Occupational censuses and the agricultural workforce'

⁸ For an overview see Shortall, 'In and out of the milking parlour'

times. In the central Canadian provinces the introduction of cheese factories in the 1860s rapidly changed the nature of dairy production and by 1900 had completely removed women from production.⁹ In north-western America the rapid centralisation of cheese processing between 1860 and 1880 also resulted in the de-feminisation of the industry, although women themselves often promoted this transformation, which relieved them from heavy and burdensome labour.¹⁰ Similarly in Denmark the rise of creameries in the mid 1870s, managed by men, left women in a subordinate position, with a decline in wages and prestige of a previously female-dominated industry.¹¹ The same process occurred slightly later in Irish dairying.¹² However in Sweden women did not lose their position as dairy production centralised and mechanised from the late nineteenth century: dairymaids, performing skilled, heavy labour and in charge of mechanised processes, dominated the industry into the 1920s. Only in the 1950s had men replaced female labour in the Swedish dairy industry.¹³

The most influential accounts date the transformation of the English dairy industry between 1750 and 1850, earlier than other Western nations, and concurrent with the classic phasing of industrial capitalism in Britain. In 1991 Deborah Valenze published an article in *Past and Present* which argued that there was a significant shift in the gendering of dairy employment after 1750. By 1850, she contended, men had taken over the direction of butter and cheese making, arguing that scientific methods of production ousted traditional female techniques. She argues that this was a key example of how small-scale household production, which for centuries had been the province of women, was squeezed by new production methods and technologies controlled by men.¹⁴ This thesis concurred with Ivy Pinchbeck's classic account, published in 1930, which also placed the displacement of women in dairying from the late eighteenth century.¹⁵ It was also in tune with K.D.M Snell's recently published (and since contested) finding that women were being excluded from the agricultural workforce in the later eighteenth century in parts of England.¹⁶ Valenze's findings have become a standard reference point and an accepted part of the literature of gender, women's employment and the industrial revolution in Britain.¹⁷ Yet in the same year as Valenze published her article in *Past and Present* a substantial article by Sally McMurry appeared in *Comparative Studies in Society and History* that compared dairying (and especially cheese-making) in Britain and America between 1800 and 1930. Its conclusions were quite the opposite of Valenze's. McMurry found 'a substantial element of continuity' in women's participation in cheese-making in Britain. Although men became increasingly visible as researchers, educationalists and experts, women's involvement in farmhouse production remained in tact until the

⁹ Cohen, 'The decline of women in Canadian dairying'

¹⁰ McMurry, 'American rural women'; McMurry, *Transforming rural life*. See also Jensen, 'Butter making'; Osterud, *Bonds of Community*

¹¹ Bodilk, 'Rural women in late nineteenth century Denmark'

¹² Bourke, 'Dairywomen and affectionate wives'; Bourke, *Husbandry to housewifery*

¹³ Sommerstad, 'Gendering work, interpreting Gender'; Sommerstad, 'Able dairymaids and proficient dairymen'; Sommerstad, and McMurry, 'Farm daughters and industrialisation'

¹⁴ Valenze, 'The art of women and the business of men'

¹⁵ Pinchbeck, *Women workers and the industrial revolution*

¹⁶ Snell, *Annals of the Labouring Poor*

¹⁷ See for example Shoemaker, *Gender in English Society*; Honeyman, *Women, gender and industrialisation*; Berg, *The Age of Manufactures*

1930s.¹⁸ This article is rarely cited in general works, and to this point the discrepancy between the two accounts has not been put to the test.

This paper aims to investigate and challenge the accepted chronology of women in the dairy industry in Britain. It will argue that firstly, Valenze's article was highly misleading and that no transition from small-scale home-based dairying run by women, to farm or factory-based production dominated by men took place before 1850. It will go on to argue that cheese and butter making remained dominated by women as both managers and workers, work which continued to take place overwhelmingly outside the factory after 1850. The expansion of dairy education, with women predominant as both pupils and teachers, also reveals the persistence of dairying as a female occupation into the interwar period. It was larger structural changes in the industry, particularly the shift to the production of liquid milk to serve growing urban demand, which had the greatest impact on women's work in the dairy and which ultimately signalled the demise of farmhouse dairy work in the 1930s.

III. Dairy work and gender specialisation prior to 1850

For Deborah Valenze commercialisation of the English dairy industry in the century after 1740 was the key to women's reduced role. Dairying and women's work became a hotly contested arena as market-orientated dairying, particularly cheese making, became more common and new definitions of femininity were popularised. Valenze argues that dairying literature, informed by new scientific discourses, promoted standardisation, rationalisation and empiricism in the dairy, rallying against the traditional, organic and largely mysterious methods of women. Thus men appropriated a traditional branch of women's work, erasing women from positions of authority in their texts and writers such as William Marshall and Josiah Twamley turned to male factors as their source of information. Printed farming tracts proliferated during the age of agricultural improvement from the mid eighteenth century onwards. Dominated by male experts and readership, and infused with the new discourses of science and empiricism, Valenze sees this literature as remodelling and usurping the traditional role of women in the dairy. 'Through the writing and dissemination of these texts' she argues, 'male practitioners redefined the art of women and appropriated it as their own'.¹⁹

This is a very selective assessment. In fact commentators from the late eighteenth and early nineteenth century, including William Marshall and Josiah Twamley, and most of the reporters to the Board of Agriculture between 1793 and 1815, had the highest regard for women's skills in the dairy. The second edition of Twamley's book in 1787 was dedicated to dairywomen, and includes a preface which states that he had cut out two less relevant chapters to reduce the price of the book in the hope that dairywomen will buy and read it.²⁰ If Twamley's writing is sometimes self-satisfied and

¹⁸ McMurry, 'Women's work in agriculture'

¹⁹ Valenze, 'The art of women', p.153

²⁰ The preface reads: 'If a dedication, or Introduction to the following Work should be thought necessary, I must humbly, and justly address it to the excellent DAIRY-WOMEN, of Great Britain; duly sensible, that from them I received the first hints that led me to the performance, and without whose assistance and encouragement, joined with my own knowledge and experience, I should never have offer'd it to the Public'. Twamley, *Dairying Exemplified*

condescending, the thrust of his argument is not that women need to take on scientific methods to improve their cheese (though he sees no harm in experiments to improve consistency) but that they try to improve their cheese by what in current educational parlance is called 'reflective practice'. In particular Twamley was convinced that it was not the breed of cow, or the quality of pasture that determined the success of cheese-making, but the abilities of the dairywomen, mistress or servant, to adjust her practice to accommodate to the richness of the milk, and to changes in ambient temperature and humidity. In his opinion 'good Cheese may be made by a skilful Dairy-woman in any place, or on any land'.²¹ As a practising cheese factor Twamley's concern was the inconsistency of cheese making on the farm, and the numbers of poor cheeses reaching the market that were rejected. Moreover he found dairywomen secretive and unwilling to share the skills of their trade in case it reduced the price of their own cheeses could fetch. His concern to spread good practice amongst dairywomen was not entirely altruistic, for as buyer for distant markets he took the risk of taking poor cheeses, and as demand expanded he needed more good cheese. For Valenze, Twamley was a male agent of change wishing to remove female authority in the dairy.²² We would argue this significantly misinterprets his main motive, which was to spread best practice among women in the dairy, not to displace them.

Almost without exception, the agricultural writers of the late eighteenth and early nineteenth century were supportive, indeed admiring, of women's vital role in dairying. Like Twamley, Thomas Davis found in Wiltshire that the dairywoman's skills in cheese-making, based on attention and observation, were paramount to geological advantages. He was surprised 'that the cheese produced on soils and situations totally dissimilar, should frequently be found, when under skilful management, equally good: a strong proof that, although soil and situation may in some measure contribute to the excellence of that necessary article, yet art contributes more'.²³ Thomas Wedge in Cheshire praised their role as managers and businesswomen, blaming their men-folk for their bad practices and poor dealing with the cheese factors as letting down their wives' good work. 'The business of the dairy is, in general, admirably well attended to, by a laborious and careful set of women, who are the support, and ought to be the pride of the county', he writes. Their husbands however undervalue the labour and toil of the female cheese-makers and 'often injure themselves and families' in their inept dealings with the factor.²⁴ Although he wanted greater chemical analysis of cheese making, and advocated the setting up of a model farm by the Board of Agriculture to develop good practice, Wedge wondered at the ways in which a dairywomen's finger ends could be such sensitive thermometers to regulate cheese making. In Gloucestershire Marshall stresses 'that natural cleverness' underlying women's dairying skills, 'let her education be what it may', whilst Charles Vancouver in Devon found dairywomen 'seldom with the necessary qualifications for such employments; being, with very few exceptions, careful, neat, tidy and industrious'.²⁵ Arthur Young was rather less certain of the desirability of this branch of farming, but conceded that 'all will at last depend

²¹ Twamley, *Dairying Exemplified*, p.80

²² Valenze, 'The art of women', p.162

²³ Davis, *Agriculture of Wiltshire*, p.184

²⁴ Wedge, *Agriculture of the County Palatine of Chester*, p.61

²⁵ Marshall, *Rural Economy of Gloucestershire*, vol 1, pp.295-6; Vancouver, *Agriculture of Devon*, p.231

on the practice and skill' of the superintending dairy woman, be she the farmer's wife or hired maid.²⁶ William Pitts's discussion of Leicestershire dairying berates Ferriman for his attack on women's dairying skills. Ferriman had, Pitt claimed, 'in some degree, impeached the skill of the dairywomen of this county, and I suspect either from inattention or mis-information has done them great injustice'.²⁷ These are just the best examples of what was a generally uncontroversial topic in the period up to the end of the Napoleonic Wars.

While some of the highly didactic literature on dairying from 1820 onwards prescribes standard methods for cheese and butter making, the thrust of the printed literature up to the mid nineteenth century follows the blueprint set earlier by Twamley, Marshall *et al.* There is little evidence that technological innovations or scientific knowledge disrupted the traditional gender hierarchy in the dairy. The evidence highlights the continuation of intuitive female knowledge and simple hand technology in the form of buckets, churns, milk pans, sieves, vats and presses. Emphasis still lay upon what were seen as female attributes of hygiene and sanitation. In the dairy, according to J. C. Loudon's *Encyclopaedia*, 'so large a portion of skill, of frugality, cleanliness, industry, and good management, is required in the wife, that without them the farmer may be materially injured'.²⁸ Joseph Russell's *Treatise on Practical and Chemical Agriculture* claimed that 'the profits of the dairy are increased or diminished, in proportion to the attention, skill and management of the dairy woman'.²⁹ James Caird also noted the 'industry and skill' of the farmers' wives who superintended the dairies of Wiltshire and Cheshire in his tour of England in 1850-1.³⁰ Women's dairy knowledge and skills continued to be dominated by tradition and there is little evidence that scientific standardisation had made practical headway into English dairies or that women were marginalized in cheese and butter production by 1850. Throughout her article Valenze states that she is analysing the male discourse of cheese-making in the eighteenth and nineteenth century texts, but at numerous points through the discussion she subtly elides this into a proposition that women were excluded from dairying by 1850. When at the end of the article she openly writes of how the industrial revolution 'displaced women from valued positions' and 'changes in commercial dairying can be related to a general transformation in the nature of work at the end of the eighteenth century', her sole authority is the rather dated perspective of Pinchbeck.³¹ Such tentative conclusions about a transformation from what writers wrote to farming practice have distorted the picture of the gender division of dairying in Britain in the period up to 1850. By 1850 there is little evidence of substantive change in women's work patterns in English dairying and previous accounts have tended to exaggerate transformations in the industry to fit a standard model of work and gendered division of labour during the classic period of industrialisation in Britain.

²⁶ Young, *The Farmer's Kalendar*, pp.158-9

²⁷ Pitt, *Agriculture of Leicester*, p.224

²⁸ Loudon, *Encyclopaedia of Agriculture*, pp.1035-6

²⁹ Russell, *Treatise on Agriculture*, p.399.

³⁰ Caird, *English Agriculture*, p.78 and pp.252-3

³¹ Valenze, 'The art of women', pp.168-9

IV. The impact of science and technology after 1850

After 1850 the specialised printed literature on dairying appears on the surface to marginalize the role of women, overlooking and even criticising their skills and knowledge. The dedication of women, and the quality of their products is questioned. J. C. Morton's 1855 *Cyclopaedia of Agriculture* makes no mention of women in its expansive section on Dairy Management. Indeed he amassed his principle facts from 'practical men thoroughly conversant with this department of farming'.³² The dedication of women, and the quality of their products was also questioned. James Fulton believed that cheese-making in 1860 was 'retrograded' and 'inferior in quality to that which was made centuries ago'.³³ W. T. Carrington alleged that the quality and quantity of English cheese-making was falling in the 1870s. This was due to several factors including the 'want of knowledge on the part of the farmer or his wife of the practical details of cheese-making'. Indeed the 'present generation' of farmers' wives and daughters were 'less disposed than the last to undertake the arduous work of cheese-making'.³⁴ Dr Augustus Voelcker also argued that in the past it had been 'far more common than now-a-days for farmers' wives personally to preside over the dairy and conduct the making of cheese through its various stages' and leaving production to servants damaged the quality of the product. Voelcker argued the mystery attached to good cheese-making was 'purely accidental' and 'good practice may be considerably improved or more correctly speaking, simplified, by the application of scientific principles'. He accepted though that the finest cheese was still produced in dairies managed by the farmers' wife.

Scientific improvements in dairy production were promoted in printed literature precisely because this was recognised as an area where little progress had been made by the middle of the nineteenth century. Fulton argued in 1860 that 'In no branch of rural economy would theoretical knowledge be of more service than in the dairy, yet dairy practice is perhaps less enlightened by science or aided by scientific appliances than any other'.³⁵ By the 1870s and 1880s though improvements had been made. According to Long, science had conveyed previously undreamt of power 'in the hands of a man' who were 'beginning to find out that there is an art in the manufacture of butter, and that there is a difference between samples made according to the old-fashioned plan – if it can be called – and those made by men with modern ideas, increased knowledge, and perfected appliances'.³⁶ The promotion of dairying as a male activity through technical and scientific language gained momentum. Dairying, it was stressed, could become systematic, rigorous and intensive, attract investment and by inference become more masculine and profitable. The role of women in butter and cheese making appears to have been eliminated in these texts. Some authors championed the introduction of cheese factories to ensure standardisation of the product, combat labour shortages and relieve farmers' wives and daughters of the

³² Morton, *cyclopaedia of agriculture*, p.606.

³³ James Fulton, 'Essay on recent improvements in dairy management', *Journal of the Royal Agricultural Society of England [JRASE]*, 21 (1860), pp.73-81, p.73

³⁴ W. T. Carrington, 'On Dairy Farming', *Journal of the British Dairy Farmers' Association [JBDFFA]*, 1, 1 (1877), pp.10-13 (p.11); W. T. Carrington, 'Dairy Farming in 1841-1877 – A Retrospective', *JBDFFA*, 1, 1 (1877), pp.61-2.

³⁵ Fulton, 'Dairy management', p.73. Fussell argues that inventions in English dairying made little impact until the second half of the nineteenth century. Fussell, *English dairy farmer*

³⁶ Long, *British Dairy-Farming*, p.296 and p.112.

‘incessant drudgery and discomfort which inevitably accompanies family cheese-making’.³⁷ However as we have seen, the impact of factory production in England was negligible. Imported cheese and butter in the late nineteenth century made English factory-produced products largely uncompetitive, leaving farmhouse cheese and butter making techniques and traditions largely untouched by modern mechanisation.

The new scientific discourse of dairying privileged the skills and expertise of men but the gap between theory and practice was considerable. Although the chemical processes were certainly better understood by the 1860s and 1870s, and new technologies were widely tested, discussed and disseminated in the farming and specialised dairying literature, access to this knowledge was limited. Dairywomen did not have easy access to, or the time and inclination to read, dairying literature and farming journals. A very perceptive article by Margaret Shanks in 1917, addressing the part women might play in the post-war dairy industry, recognised this estrangement. Women, she argued, were not the inventors of new technology, they did not take part in new scientific discoveries, nor did they read or contribute to learned journals. Because of this women had ‘been deposed from their old position of supreme authority’, and should be encouraged to engage with the current literature and the male-dominated farming societies to restore this imbalance. She writes:

... dairying as a whole is carried on by women and men, working together in closest partnership. Men alone cannot carry on the dairying of the country – although to read through a whole Journal one would think that there was not a woman ever looked at a cow or handled a pail of milk – nor can they tell how the partnership of women could be utilised to the highest advantage. There is no man who will say that the women’s contribution is small ... But this element of just representation has not yet been even fairly grasped by the great body of farmers. They combine, and they confer, and they write as if dairying was entirely in their own hands, and purely under male control. And it is not so.³⁸

The impact of mechanisation and the dissemination of scientific methods of dairy processing were slow and the continuation of farmhouse production meant the traditional gender hierarchy in the dairy was not challenged and the production of cheese and butter continued to be dominated by women as both managers and workers. A report in the *Farmer’s Magazine* in 1854 on Gloucester cheese is typical of the continued division of labour on dairy farms. Mr Hayward gives ‘his experience as a cheese-maker’, although his responsibility actually rests with the management of the cows. It is Mrs Hayward, who attends to ‘every minute circumstance’ in the organization of the dairy and the report centres on ‘the information she has obligingly communicated to us respecting the whole economy of the dairy of this farm’.³⁹ Reports on various English counties published in the period up to the First World

³⁷ H. M. Jenkins, ‘Report on the Cheese-Factory System, and its Adaptability to English Dairy Districts’, *JRASE*, 2nd ser, 1 (1865), pp.173-203 (p.203).

³⁸ Margaret Shanks, ‘The part which women might play’, *JBDFFA*, 31 (1917), pp.108-118 (p.109, p.117).

³⁹ Anon, ‘Gloucester cheese’, *The Farmer’s Magazine* 3rd series, 5 (1854), pp. 487-91.

War, all praise the hard labour and skills of women in the dairy.⁴⁰ In Shropshire Henry Tanner found farmers' wives showing characteristic care and economy and 'a degree of skill and management in carrying out their share of the dairy duties' whilst in the dairies of Somerset 'the real hard labour falls on the women; and very active and industrious they are'.⁴¹ Further north the housewives of Westmoreland were 'perhaps not surpassed anywhere' in the manufacture of butter, whilst around Preston 'the thrifty, hard-working women shoulder their loads like men, and show what they can do in the dairy line'.⁴² The prize-winning dairy farms visited by the Royal Agricultural Society were typically managed and worked by women, although men often take the honours. The dairies of the farms entered in Class 3 (dairy or stock farms not less than 200 acres) and Class 4 (dairy or stock farms between 80 and 200 acres) in 1878 were 'with only one exception ... managed by the farmer's wife'. These dairywomen are praised for their 'great care', 'excellent' management, and for being 'courteous', 'communicative' and 'practical'. Mr Gibbons, winner of the Second Prize in Class 3, had previously taken many prizes in England and France, yet the cheese was made by his wife: 'Mrs Gibbons has good accommodation and the latest appliances; and these, combined with skill and careful management, enable her to produce an article worthy of exhibition anywhere'.⁴³ One prize winner farmer in Class 1 (grazing and dairy farms over 150 acres) in 1884 was 'specially fortunate in having in his wife a lady who thoroughly understands and looks after her share of the work', a dairy farmers' wife in Class 3 (farms under 150 acres) was worth 'a fortune in herself...for a more efficient and willing helpmate to a hard-working energetic man could not be imagined', whilst the wife of a commended farm in Class 1 managed the dairy and rearing of calves with such great skill that "her price is above rubies".⁴⁴ The following year the judges awarded a certificate and silver medal to Miss Fearnall, the unmarried daughter of a farmer near Wrexham, praising 'the uniform excellence of the quality of all the dairy produce'.⁴⁵ On the first prize farm in Class 1 in 1890, a mixed farm of over 800 acres, the work of the dairy had been performed by the

⁴⁰ John Bravendar, 'Farming of Gloucestershire', *JRASE*, 11 (1850), pp.116-77; Thomas Dyke Acland, 'On the farming of Somersetshire', *JRASE*, 11 (1850), pp.666-764; Henry Tanner, 'The agriculture of Shropshire', *JRASE*, 19 (1858), pp.1-64; W. H. Heywood, 'The comparative profit from making cheese or butter, selling milk, or grazing', *JRASE*, 2nd ser., 1 (1865), pp.338-343; Crayston Webster, 'On the farming of Westmoreland', *JRASE*, 2nd ser., 4 (1868), pp.1-37; H. Evershed, 'The agriculture of Staffordshire', *JRASE*, 2nd ser., 5 (1869), pp.263-317; J. Bowden-Jones, 'Typical farms in Cheshire and North Wales', *JRASE*, 3rd ser., 4 (1893), pp.571-620; J. Henry Dugdale, 'Select farms in the Darlington districts', *JRASE*, 3rd ser., 6 (1895), pp.483-529; W. Livesey, 'Wensleydale and its Dairy Farming', *JBDFA*, 1, 2 (1878); Thomas Rigby, 'On the best way of improving the quality of Cheshire made cheese', *JBDFA*, 2, 2 (1886), pp.111-7; F. Punchard, 'On the dairy farming of Cumberland and Westmoreland', *JBDFA*, 7 (1892), pp.105-117; J. H. Burton, 'The letting of dairies - a West Country custom', *JBDFA*, 26 (1912), pp.28-37.

⁴¹ Tanner, 'Shropshire', p.26; Acland, 'Somersetshire', p.706.

⁴² Evershed, 'Westmoreland', p.13; Livesey, 'Wensleydale', p.45

⁴³ Thomas F. Jackson, 'Report on the system of Cheese-making practiced on the Four Prize Dairy Farms', *JRASE* 2nd ser., 15 (1879), pp.37-42 (p.37, p.39). Class 3 included dairy or stock farms not less than 200 acres, Class 4 referred to dairy or stock farms between 80 and 200 acres.

⁴⁴ John Coleman, 'The farm prize competition of 1884', *JRASE* 2nd ser., 20 (1884), pp.508-94 (p.528, p.583, p.553)

⁴⁵ J. Chamber Morton, 'Report on the Dairy and Stock-Farm Prize Competition, 1885', *JRASE*, 2nd ser., 22 (1886), pp.120-171 (p.136).

foreman's wife for nearly 30 years: 'Of her and her work Mr Vosper says he cannot speak too highly, and certainly the judges noticed about the dairy, premises and utensils under her charge a degree of cleanliness which confirms his opinion of her industry, and his reliance on her work being always thorough and properly done'.⁴⁶

These reports are interesting, not least because they reveal the dominance of women as both managers and workers on farms of various sizes in the late nineteenth century. Even on large enterprises, the work and wisdom of dairywomen was indispensable. Whilst investment in new technology and equipment was unlikely on smaller farms, some reports in the 1890s do note the increased influence of scientific techniques and technology into the dairy. The use of the thermometer, standard rennet and improved cheese cutters in cheese making, and of the Laval cream separator in the butter industry were important advances. However rather than undermining women, they are incorporated into women's working lives. The judges of 1891 were relieved to find a Yorkshire dairywoman who 'quite understood when granular form, butter workers, and thermometers were mentioned'.⁴⁷ Similarly, the dairy of Mr Spensley's farm, near Darlington, was run by his wife and her niece, 'and the cleanliness and carefully kept records show that science has much to say now in the manufacture of Wensleydale cheese'.⁴⁸ Scientific principles, and the new intermediate technology of cream separators, cheese presses and turners, churning machines, thermometers and clocks, were seen as a way of producing a more proficient and educated female workforce not in eradicating their role completely. Where they were adopted women worked with this technology; they were not replaced by it. As the early-twentieth century *Standard Cyclopaedia of Modern Agriculture and Rural Economy* comments:

'System, method, regularity in work, alert and intelligent interest in processes, and ungrudging industry whilst duties are being performed, are all met with in the trained and efficient dairymaids who control up-to-date dairies of the present time. It is not necessary that a dairymaid should be – practically – a chemist, or a microscopist, or a bacteriologist – work under these sciences has been done for her professionally – but she has need to study the work that lies to her hand, in order to realise what fermentation and structural changes in milk so mean, and the laws under which these things occur; and she requires to know what that microscope has revealed in the dairy, and what the functions are of the bacilli which find in milk so congenial a sphere of activity...All this is within the capacity of an educated dairymaid'.⁴⁹

The scope for mechanisation in the English farmhouse dairy was limited. Small-scale production and declining prices for the product made investment in equipment less likely. But where new technology was introduced it reinforced, not undermined, the role of women. Previous literature has suggested that dairying was an area of specialised female work where technological change led to the redundancy of women workers in England. There is no evidence that this took place before 1914.

⁴⁶ F. Punchard, 'The farm prize competition of 1890', *JRASE* 3rd ser, 1 (1890), pp.776-823 (pp.787-8)

⁴⁷ W. C. Brown, 'The Farm Prize Competition of 1891', *JRASE* 3rd ser., 2 (1891), pp.547-84 (p.566)

⁴⁸ J. Henry Dugdale, 'Select farms in the Darlington District', *JRASE* 3rd ser., 6 (1895), pp.483-529 (p.524).

⁴⁹ Wright, *Standard Cyclopaedia*, vol IV, p.109.

V. The inter-war years and the growth of dairy education

Butter and cheese-making occupied a prominent place in the dairy textbooks until the First World War. After this date it is sidelined by the dominance of liquid milk production and the need to produce clean milk for the market. However inter-war farming magazines, particularly the best-selling weekly *Farmer and Stockbreeder*, continue to showcase dairy work as a suitable career for girls and women. The demand was for 'capable dairy workers who have received a scientific and practical training'.⁵⁰ Throughout the 1920s and early 1930s the situations vacant pages of this publication are filled with adverts for girls and women to work in farmhouse dairies. The skills most sought-after include milking, cheese making and butter making, with some also looking for knowledge of stock-rearing, account keeping and modern dairying methods. Management credentials were often required. In February 1925 an advert was placed for a farm in Salop: 'Dairymaid wanted thoroughly experienced in Cheshire cheese; knowledge of Lancashire cheese preferred though not essential; must be strong and capable of taking sole charge of 70-cow dairy; modern dairy'.⁵¹ Husband and wife teams were also desirable, often with the man as overseer of the herd and the wife as dairy manager. A typical advert ran: 'Man and wife wanted at once (not over 40) for a home farm in Herts. Man to attend small herd of registered Shorthorn and Jersey cattle, pigs and poultry, help given; wife to be a first-class dairy woman; model dairy, good cottage and garden'.⁵² Finally the growing importance of dairy education is evident as farmers increasingly sought a skilled and knowledgeable female workforce. In June 1919: 'Dairymaid wanted to take charge of home farm dairy, with BDFA certificate for butter and cheese (Cheddar, Stilton and soft) or National Dairy diploma; knowledge of electrical apparatus desirable; accuracy at figures essential' and in 1925: 'Thoroughly experienced Dairymaid required immediately for sole charge up-to-date private dairy; clean milk production and buttermaking; good qualifications and references essential. Bucks'.⁵³

The dissemination of dairying expertise through educational provision was opened up to rural girls and women from the 1880s onwards. Agricultural education in England was established as a response to depression, rural depopulation and strong competition from foreign imports.⁵⁴ Motivation and funding was provided by a number of sources: central government, county councils and agricultural societies (such as the Royal Agricultural Society of England, the British Dairy Farmers Association and the Bath and West Society). By the First World War a patchwork of agricultural education covered England with individual counties developing individual responses to meet the needs of their area. Dairying was a key element in agricultural education, concentrating on butter and cheese-making. Butter-making education tended to be peripatetic, with an instructress travelling around the county holding short courses, funded by county councils. Cheese-making instruction tended to be located on a farm or at a dairy school. Student names rarely survive but farmer's

⁵⁰ 'A promising career', *Farmer and Stockbreeder*, August 1926

⁵¹ *Farmer and Stockbreeder*, February 1925

⁵² *Farmer and Stockbreeder*, January 1925

⁵³ *Farmer and Stockbreeder*, June 1919 and May 1925

⁵⁴ Brassley, P., 'Agricultural science and education', in Collins, *The Agrarian History of England and Wales*, Part 1, 594-649, especially pp.641-643.

wives and daughters are frequently mentioned.⁵⁵ From the 1900s the annual show of the Royal Agricultural Classes frequently held butter-making competitions sponsored by the county councils for people who had received instruction at one of their schools. Women dominated the prize lists and the number of people entering the competitions demonstrated the popularity of the courses. One study on Somerset has shown that approximately 1,000 women between 1908-11 received dairy education in that county alone.⁵⁶

In addition to peripatetic classes in butter making and fixed cheese classes held on farms a number of dairy institutes were opened. In the midlands for example a number of county councils co-operated to establish a Midland Dairy Institute at Kingston-On-Soar which in 1900 became the Midland Agricultural and Dairy Institute.⁵⁷ Here students could gain additional instruction having done well in a migratory class. Finally the British Dairy Institute, which from 1896 was located at Reading, provided a centre for advanced studies. In time it was to become the national centre for dairy instruction. A hierarchy did begin to emerge as students who did well in the peripatetic classes were then awarded scholarships to take courses at the fixed dairy schools, agricultural colleges or the BDI. More farm institutes were opened in the inter-war period (there were 15 in England and Wales by 1927), providing shorter courses in dairying and it was generally accepted that women would form the majority of students.⁵⁸ Moreover, women largely provided the instruction in dairying, and this is shown very clearly in the staff of the County Councils.

The number of women undertaking dairy instruction can be measured at a national level through the National Diploma in Dairying. The acquisition of the NDD does not demonstrate that a young woman actually worked in dairying. However the acquisition of the qualification did demonstrate a commitment to studying dairying and competence at practical butter and cheese-making. Table 4 shows the number of men and women obtaining the qualification between 1896 and 1939 from the examination centre in England (usually the BDI).⁵⁹ Women clearly dominated. 638 women compared to 419 men gained the qualification between 1896 and 1939 inclusive. Just before the First World War formal entry prerequisites were introduced. A candidate was required to have attended at least a six month session at an approved dairy training institution, which included attending approved courses in science. In addition a candidate had to spend at least four months on an approved dairy farm (and have taken part in the work!).⁶⁰ In 1929 the NDD merged with the diploma offered by the BDFA and entry requirements then stated that candidates were required to attend a two-year diploma course at an approved institution and to have worked on an

⁵⁵ Board of Agriculture, 'Reay Report' cd.4207, evidence and minutes, (1908). For example Mr Richard P Ward, director of education, Cheshire county council, in his evidence to the Reay committee stated that the pupils at Worleston dairy institute were overwhelmingly female and that 80-85% were daughters of farmers.

⁵⁶ Tall, 'Work and learn' pp.260-263, fig 6.6 and maps 6.4 and 6.5.

⁵⁷ Tolley, 'M J R Dunstan', pp.74-75.

⁵⁸ 'Report of the work of the educational and research division of the ministry for the year, 1932-33', *Journal of the Ministry of Agriculture*, (1934-5), p.764.

⁵⁹ There was also an examination centre in Scotland which was used by candidates from Scotland and the north of England.

⁶⁰ *JRASE* (1913), 74, p.342 and (1914), p.248.

approved dairy farm for at least six months.⁶¹ From 1915 women formed the majority of candidates awarded the NDD. The women must have felt that the benefits were worth it, as did whoever was paying their college fees; parents, county councils, ministry of agriculture or United Dairies.⁶²

Table 4: The National Diploma in Dairying awarded at the English examination centre, 1920-1939

Year	Men	Women	Total	% women
1920-24	52	133	185	72
1925-29	59	119	178	67
1930-4	55	100	155	65
1935-39	107	145	252	58
Total	273	497	770	65

Source: *Journal of the Royal Agricultural Society of England*, 1920-1939.

Valenze argues that ‘female capacities were perceived as tradition bound and thus incompatible with the new standards of dairying.’ The dairy education evidence suggests to the contrary that it was women as instructors who were essential to the improvements in cheese and butter manufacture.⁶³ A teaching post was one career opportunity open to the ambitious and well-qualified dairywoman. In the years leading up to the First World War teachers were appointed based on their expertise with qualifications being of less importance. However the advanced training of teachers was recognised by the BDI who in 1895 introduced a teachers’ certificate, which carried on in one form or another until the end of World War One.⁶⁴ The staff lists for county council staff in the late 1920s show the majority of dairy instructors (especially amongst the female instructresses) possessed the NDD.⁶⁵ The University of Reading awarded the first degrees in Dairying in 1929, with women graduates working in agricultural education, dairies and milk publicity.⁶⁶ The impact of dairy instruction therefore played a vital role in disseminating enhanced techniques and improved standards. It was women who were at the forefront of this teaching and who were the largest recipients of training in dairy education in England. Women played a vital role in the adoption of improved standards of farmhouse butter and cheese manufacture that were essential to ensure the continued viability of farmhouse dairy products in the inter-war period.

⁶¹ *JRASE* (1929), 90, p.337.

⁶² Crossley, E L (1976), ‘A half century of dairying: from tradition to technology’, *Journal of the Society of Dairy Technology*, 29, 1, 5-14, p.11. The author acknowledged the important contribution of the NDD to the dairy industry.

⁶³ Valenze, ‘The art of the women’, p.143.

⁶⁴ *JBDA* (1895), 10, p.196 through to *JBDA* (1920), 32, p.197; *JBDA* (1910), 24, p.199. The Board of Agriculture sponsored a short course for dairy teachers in 1893 and 1894. Board of Agriculture, ‘Report on the distribution of grants for Agricultural Education in Great Britain, (1892-1893), p.122; (1893-4), p.103 .

⁶⁵ *JBA* (1928-9), 35, 90-97, 189-194.

⁶⁶ The information was taken from ‘The Proceedings of the University of Reading’, 1929-1939 and *Old Student News* (1930-1939). Information was available on only some of the women graduates.

IV. Conclusion

1. The years after 1850 did witness the declining importance of the cheese and butter industries in Britain, due primarily to the increasing importance of liquid milk sales to the farm economy.
2. Where women left the dairy industry it was not due to the replacement of women by men, or women by machinery, it was due to an overall shift in the development of the dairy industry away from butter and cheese production and towards liquid milk.
3. The capitalist development of dairying envisaged by Valenze for the period between 1750 and 1850 did not take place until well into the twentieth century. There was no radical shift in the gender division of labour in the industry before 1850. Women's traditional patterns of labour and control of cheese and butter making remained predominate into the 20th century.
4. Most information centres on cheese making. A demand for high quality English regional cheese ensured women's skills and knowledge were valued until the early 1930s and in some regions farmhouse production for the quality market could compete in the marketplace. It was the advent of the Milk Marketing Board in 1933 and finally the Second World War that led to the final demise of farmhouse cheese making. By 1956 there were only 140 cheese-making farms left in England.⁶⁷

⁶⁷ Valerie Cheke (1959), *The Story of Cheese-making in Britain*, p.272.

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