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The Retail Milk Trade in London, c. 1790–1914

By P. J. ATKINS

THE last decade has seen a renewal of interest in the varied nature and changing structure of retailing in the nineteenth century. Published work has covered aspects as diverse as the theory of shop location, the modernity of retail structure, the so-called “retail revolution”, and the role of retail provision in the expansion of the suburban fringe.¹ Jefferys’s pioneering work on general trends has now been supplemented by several detailed studies, but as yet little of substance has been added to our scant knowledge of the various specialist retailers who seem to have traded in some cities from an early date. The purpose of this paper in looking at milk retailing in London between 1790 and 1914 is to outline the development of one trade which completely changed its nature in the nineteenth century. It will not be argued that the milk trade was typical of food retailing in general, or even that London was representative of the national evolution of milk selling, but it is hoped to show that studies of individual trades in their urban setting can contribute to our understanding of how the Victorian city economy behaved in the important everyday function of supplying retail goods. After an initial exploration of the development of types of milk retailing and a discussion of problems in interpreting available source material, the expansion of the trade will be considered structurally in terms of the “retailing revolution”. The stability of the retailing price will then be shown to have been an important element of associated service provision by dairymen, especially in the doorstep delivery of milk.

I

Our modern experience of the separation of the production and sale of agricultural produce is quite inappropriate for an understanding of the milk trade in London in the late eighteenth and early nineteenth centuries. The demand for regular doorstep delivery of previously ordered quantities, a key structural feature of the trade after about 1850, was rare before this date outside the wealthiest households. Milk was less of a convenience food than it is today, and contributed little to the average diet. Its purchase was either casual, in quantities small enough to prevent wastage caused by souring, or occasional, as part of the cream teas enjoyed by the frequenters of the pleasure gardens and resorts of peripheral London.

¹ A select list in order of publication: J. B. Jefferys, *Retail Trading in Britain, 1850–1950* (Cambridge, 1954); D. Davis, *A History of Shopping* (1966); J. Blackman, ‘The Development of the Retail Grocery Trade in the Nineteenth Century’, *Business History*, ix (1967); D. G. Alexander, *Retailing in England during the Industrial Revolution* (1970); M. T. Wild and F. Shaw, ‘Locational Behaviour of Urban Retailing during the Nineteenth Century: The Example of Kingston upon Hull’, *Transactions of the Institute of British Geographers*, LXI (1974); R. Scola, ‘Food Markets and Shops in Manchester, 1770–1870’, *Journal of Historical Geography*, I (1975); D. Sibley, ‘The Small Shop in the City’, *University of Hull Occasional Paper in Geography*, xxii (1975); J. Blackman, ‘The Corner Shop: The Development of the Grocery and General Provision Trade’, in D. J. Oddy and D. S. Miller, eds. *The Making of the Modern British Diet* (1976).

Throughout the period there was a certain amount of producer-retailing, but the most common means of distribution from early times until at least the 1840s resulted from the first major division of labour in London's liquid milk trade. In the eighteenth century, vendors had become responsible for the majority of retail sales, and the "milkmaids" in particular entered the folklore of London's streets with their prominent role in the May Day celebrations, and their shrill cry of "mi-o" or "milk below". Some were employed by small dealers or by the cowkeepers themselves, but the majority were independent operators who contracted with their suburban suppliers for the daily produce of a specified number of cows, which they themselves were required to milk. J. Nelson described their arduous routine:

The milk is conveyed from the cow-house, and sold, principally by robust Welsh girls and Irish women; and it is amazing to witness the fatigue these females undergo. . . They arrive here in particular from different parts of the metropolis by 3 or 4 o'clock in the morning laughing and singing to the music of their empty pails, with these, when filled, they return to town; and the weight they are thus accustomed to carry on their yokes, for the distance of several miles, is sometimes from 100–130 lbs [*sic*].¹

This occupation was said to have been dominated by Welsh girls, by the wives and daughters of Irish labourers, and by other elements of the immigrant poor whose efforts to eke out a living from casual and unskilled employment seem to have characterized certain areas of London in this and later periods. They were described by one uncharitable dairyman as the "dregs of the residuum",² but not all the milk sellers can have been poor for it was reported in 1825 that as much as £100 changed hands for the "goodwill" of a milkwalk.³ Even if such transactions were more usually in only two figures, it would indicate that some milk sellers must have had sufficient capital, or at least credit-worthiness, to make them outstanding amongst the street folk; and, moreover, it would indicate that the "milk-walk" itself was established to the extent that goodwill or regular custom could be relied upon. One suspects, however, that before the mid-nineteenth century this regularity of purchase was sustained only in the areas of highest social class, because milk consumption among working people was low and their demand unreliable.

The female involvement in the trade implied by Table 1 changed its nature in mid-century. J. Timbs reported the virtual disappearance of the milkmaid from the streets of London by 1855, although the yoke and pail as a means of transport continued to be used for a further thirty years.⁴ It seems likely that the female labourer was absorbed into shop retailing, and that the heavy loads of the new milk "perambulators" were pushed by men.

Another early form of milk retailing derived from the universal suspicion in the public's mind of fraudulent practice by the milk seller. The desire for fresh and unadulterated milk was translated into a considerable demand for milk drawn from the cow in the presence of the customer. This demand was satisfied at the cowshed, and at the "milk fair" present in St James's Park from the seventeenth

¹ J. Nelson, *The History, Topography, and Antiquities of the Parish of St Mary, Islington* (1811), p. 109.

² Anon. 'Recollections of the Trade Forty Years Ago', *Cowkeeper and Dairyman's Journal*, iv (1882), 46.

³ Anon. *A Treatise on Milk* (1825), p. 16.

⁴ J. Timbs, *Curiosities of London* (1855), p. 250; *Dairyman*, 1 (1876), 53.

Table 1. *The Number of Milksellers, Cowkeepers, and Dairymen in London*

	Male	Female (%)	Total
1831	?	?	1,430
1841	1,950	738 (27.5)	2,688
1851	3,938	1,262 (24.3)	5,200
1861	4,273	1,321 (23.6)	5,594
1871	5,113	1,211 (19.1)	6,324
1881	6,597	1,219 (15.6)	7,816
1891	8,850	1,319 (13.0)	10,169
1901	9,360	1,211 (11.5)	10,571

Source: *Census of England and Wales, 1831-1901*.

century until 1905, but also popular was doorstep milking of the cows, goats, and asses which were driven around the streets.

An important factor in the changing pattern of milk distribution in the early nineteenth century was the growth of London's built-up areas. In the eighteenth century, and earlier, the customer, in order to collect his milk hot from the cowshed, had to overcome the barrier of distance: the intensive production of Islington parish, for instance, lay one mile north of the city. By the 1840s the steady accretion of residential districts had reduced this gap, and whereas the Laycock family, large-scale cowkeepers in Islington and neighbouring parishes in the early decades of the century, had sold most of their output either wholesale to the dealers or milkmen and semi-wholesale to institutions such as hospitals, their successor, John Nicholls, decided in 1845 to sell retail. His customers lived sufficiently close to his premises to justify the employment of servants to deliver milk to the doorstep.¹

The increasingly dense pattern of cowsheds within the urban area itself from the 1820s and 1830s also encouraged retail sales *in situ*. Proximity to market was obviously an advantage for these producers, but more often than not their increasing costs in a hostile urban environment forced them to seek the wider margin afforded by retailing. Producer-retailing, however, never became as important a mode of sale in London as it did in many provincial cities in Britain.

Two other developments are worthy of note in the period before 1850: one proved to be a promising innovation that did not succeed, but the other was to be significant in the structural transformation of the trade. The former was inspired by William Harley of Glasgow, a capitalist who decided in the 1820s that his city needed a pure milk supply. He employed staff to retail the milk produced by his cows at Willowbank, and it was sold on the streets under the strictest conditions of fairness and hygiene.² This integration of production and sale was imitated by several joint-stock companies founded during the decade in Edinburgh and London,³ but it was a failure at this time.⁴ The

¹ Business card, dated 1847, in the local history collection of Islington Central Library; 4/59/1060.

² W. Harley, *The Harleian Dairy System* (1829), pp. 155-61; J. Wilson, 'New Milk Dairies', *Encyclopaedia Britannica*, 8th edn. (Edinburgh, 1854), 622.

³ The Alderney Dairy Company, founded in Northampton Square on Harleian principles in 1822, was rapidly followed by the Metropolitan, the Westminster, and the South London Dairy Companies. None of these enterprises, however, survived the decade.

⁴ Anon. *A Treatise*, p. 3; Anon. 'London Dairies', *British Farmers' Magazine* (1831), 80-1.

laudable aim of selling pure milk was impracticable as long as such companies remained in direct competition with the established producers and retailers, who were able to sell their product at a lower price without regard for the expensive consideration of cleanliness.

The second development was that of fixed-shop retailing. It is difficult to say when this first appeared as a significant feature of the trade, but at least one of London's commercial directories had "dairymen" outnumbering cowkeepers as early as 1829.¹ The implied distinction between the cowkeepers who produced milk and the dairymen who sold it is important. It may tell us something about the structure of the trade at this time because most of the "dairymen" were located within a tight belt stretching from Clerkenwell to Hyde Park Corner. This is the pattern one would expect because the turnover threshold of shop-retailing is most likely to have been met either in the most accessible parts of the city where the daytime passing trade was at its peak, or in those residential districts where consumption per head was high or where the density of population was great and *per capita* demand above average. These conditions were met most comprehensively in the City and West End of London in the early nineteenth century. In other areas milk selling remained a peripatetic function performed by street hawkers, although even their range must have been limited by constraints such as the density of local demand and the distance or time the milk could be carried by yoke and pail without deteriorating.

II

One of the major difficulties facing a study of fixed-shop retailing in the early nineteenth century is the nature of the source material. This is illustrated in Table 2 by the apparent inconsistency of the various directory lists of producers and retailers of milk. Here the difficulty may stem from the extent of the areas covered, the efficiency of the compilers, or simply from the occupational definitions used.

In its desire for clarity of definition the *Milk Journal* declared that "a dairy, properly so-called, cannot exist without cowkeeping as the foundation of the establishment. It is a misnomer to call a milkshop a dairy."² This would have been fair comment in 1800, but gradually the accepted meaning of the term "dairy" changed as the cowkeeping side of the business waned in the late nineteenth century. By 1900 it literally meant a shop that sold milk, although many "dairies" had come to rely upon the sale of groceries, margarine, and eggs for the majority of turnover.³ On the other hand, a writer in the *Cowkeeper and Dairyman's Journal* pointed out that "dairy" was a term used "implying a place properly constructed, well paved and drained, and thoroughly ventilated, where milk may be stored without fear of contamination; a milk shop being premises where no additional place is attached to keep milk sweet, pure and wholesome";⁴ and on this basis

¹ *Robson's Classification of Trades and London Street Guide* (1829). ² *Milk Journal*, iv (1871), 67.

³ Shortly after the First World War it was estimated that at least 30 per cent of the turnover of the average "dairy" enterprise was derived from the sale of goods other than milk. In this way firms were able to spread their irreducible costs over a higher turnover. See *Departmental Committee on the Distribution and Prices of Agricultural Produce* (P.P. 1923, ix), pp. 73-4.

⁴ *Cowkeep. Dairyman. Jnl.* 1 (1879), 52.

Table 2. *The Number of London Milk Tradesmen Listed in Trade Directories, 1829-55*

	<i>Robson</i>	<i>Pigot</i>	<i>Kelly Post Office</i>	<i>Watkins</i>
1829	196	—	—	—
1830	—	—	—	—
1831	—	—	—	—
1832	173	645* (68)	—	—
1833	222	—	—	—
1834	223	—	—	—
1835	244	—	—	—
1836	—	951* (178)	—	—
1837	317	—	—	—
1838	409 (161)	— (213)	—	—
1839	464	618 (171)	—	—
1840	582	619	150	—
1841	595	—	263	—
1842	662	—	333	—
1843	—	—	399	—
1844	—	—	638	—
1845	—	—	729 (146)	—
1846	—	—	756	—
1847	—	—	805	—
1848	—	—	1,072	—
1849	—	—	986	—
1850	—	—	972	—
1851	—	—	977	—
1852	—	—	897	797
1853	—	—	1,044	1,108
1854	—	—	1,343	1,090
1855	—	—	1,562	1,115

Notes: The directory trade classifications published in London from 1763 ignored the milk trade until 1829. The data in this table refer to the number of cowkeepers and dairymen in the inner portion of London. The figures in brackets record additional numbers in the suburbs.

* Milksellers, dairymen, and cowkeepers.

the paper in 1881 was willing to recognize only twelve true dairies in London as “complete respectable depots for the sale of milk”.¹

The terms “purveyor of milk” and “milk seller” were coined to overcome some of these difficulties, and in late nineteenth-century legislation were used in connexion with any retailer who sold milk, whether or not his main business lay in dairy lines, and whether or not he had a fixed place of business. These semantic niceties are important in two ways. Firstly, the classifications of commercial directories which used these categories should be treated with care because their columns may have been swollen by the many itinerant milksellers whose recorded addresses were no more than the cellars in which they stored their milk overnight. This problem is less likely to have occurred where the classification was restricted to “dairymen”. Secondly, for many years, when both dairymen and purveyors of milk were registered by the authorities, only the former were visited by the Inspectorate, on the grounds that they had storage facilities which required supervision, whereas the purveyor of milk might be simply a grocer or general dealer who sold only a few pints per day. The result was that many tradesmen relying wholly or largely upon the sale of dairy produce for their livelihood mis-

¹ *Cowkeep. Dairym. Jnl.* II (1881), 185.

registered themselves as purveyors of milk in order to escape the annoyance and possible expense arising out of sanitary visitation.¹

The question of definition is vital for a clear understanding of the milk-trade's evolution. The very terms used in our main sources, the directories and local authority registers, are ill-defined and therefore subject to possible misinterpretation. How can we tell what the rate of growth in the shop trade was, when the number of itinerants remains an unknown quantity? Even the question of the association of production and sale remains uncertain because the main directory series did not subdivide its category "cowkeepers and dairymen" until 1886 (Table 3).

Table 3. *The Number of London Milk Tradesmen, 1856-1914*

Date	Central London		Suburbs north		Suburbs south	
	Cowkeepers	Dairymen	Cowkeepers	Dairymen	Cowkeepers	Dairymen
1856	—	1,579	—	—	—	—
1857	—	1,545	—	—	—	—
1858	—	1,551	—	—	—	—
1859	—	1,563	—	—	—	—
1860	—	1,445	—	121	—	196
1861	—	1,335	—	—	—	—
1862	—	1,347	—	—	—	—
1863	—	1,401	—	140	—	200
1864	—	1,410	—	—	—	—
1865	—	1,392	—	137	—	218
1866	—	1,388	—	—	—	—
1867	—	1,289	—	—	—	—
1868	—	1,409	—	134	—	292
1869	—	1,457	—	—	—	—
1870	—	1,475	—	—	—	—
1871	—	1,526	—	—	—	—
1872	—	1,540	—	188	—	320
1873	—	1,561	—	—	—	—
1874	—	1,557	—	—	—	—
1875	—	1,573	—	—	—	—
1876	—	1,614	—	231	—	344
1877	—	1,636	—	—	—	—
1878	—	1,633	—	—	—	—
1879	—	1,657	—	—	—	—
1880	—	1,702	—	274	—	462
1881	—	1,613	—	—	—	—
1882	—	1,762	—	—	—	—
1883	—	1,751	—	—	—	—
1884	—	1,752	—	325	—	497
1885	—	1,744	—	—	—	—
1886	301	1,435	—	—	—	—
1887	305	1,471	—	—	—	—
1888	296	1,484	—	402	—	585
1889	296	1,515	—	—	—	—
1890	285	1,491	—	—	—	—
1891	280	1,494	—	—	—	—
1892	267	1,468	—	392	—	557
1893	257	1,435	—	—	—	—
1894	239	1,420	29	372	—	628

continued overleaf

¹ The classification used in the *Metropolitan Dairymen's Directory* (1886) must be called into doubt for this reason.

Table 3 (*cont.*)

Date	Central London		Suburbs north		Suburbs south	
	Cowkeepers	Dairymen	Cowkeepers	Dairymen	Cowkeepers	Dairymen
1895	213	1,446	—	—	—	—
1896	199	1,442	26	369	54	507
1897	184	1,446	—	—	—	—
1898	173	1,437	25	387	54	534
1899	175	1,576	—	—	—	—
1900	168	1,579	16	238	44	526
1901	152	1,546	11	245	34	541
1902	142	1,523	11	242	31	541
1903	135	1,485	11	227	35	549
<i>Suburbs north and south</i>						
1904	126	1,482	44	799		
1905	125	1,462	37	879		
1906	125	1,423	41	797		
1907	118	1,396	38	774		
1908	117	1,368	32	754		
1909	109	1,338	26	774		
1910	102	1,316	25	739		
1911	94	1,306	24	762		
1912	90	1,250	22	752		
1913	86	1,223	19	770		
1914	80	1,214	19	722		

Sources: *Post Office Directories, London and Suburban.*

Note: Branches are not included.

One more reliable source, and a useful point of comparison in this discussion of definition, is the register of licensed cowkeepers compiled by the Metropolitan Board of Works and its successor the London County Council.¹ The first complete register for 1880/1 has survived, and a check of all the 998 recorded addresses has shown that only 56.6 per cent were listed by the Post Office Directory.² This throws further doubt upon the usefulness of the latter source, but the actual proportion is useful if we regard the level of under-recording as fairly constant through time. Allowing for a slight improvement in the efficiency of the directories' compilers it is probably safe to assume for 1864, when we have a comprehensive count of 1,361 cowkeepers, that about 50 per cent (say 680) would have been listed by the Post Office Directory.³ The addresses of 1,747 cowkeepers and dairymen were published in the central and suburban London directories of 1865 so, by subtraction, about 1,067 would have been "dairymen". Comparing this figure with roughly 2,300 for the mid-1880s, we can estimate a growth of 216 per cent in the intervening twenty or so years. The decline in numbers shown in Table 3 for the years 1865-7 was due to the effect of the rinderpest or "cattle plague" upon urban milk production, and had comparatively little effect upon the retail sector which came increasingly to rely upon milk imported by railway from country districts.⁴

¹ Greater London Record Office, MBW 1807 b-g and LCC PH/REG/2 17-38.

² In addition, there were certainly some unlicensed producers unknown to the authorities.

³ The 1864 count of cowkeepers was made by the various local sanitary authorities under their obligation, introduced by the Metropolitan Management (Amendment) Act of 1862, to register milk producers. The information was partly derived from the Annual Reports of the respective Medical Officers of Health and partly from J. C. Morton, 'On London Milk', *Journal of the Society of Arts*, xiv (1865), 74.

⁴ For a full account of the effect of cattle disease upon urban production and the importation of railway

The uncertain nature of the sources available will not allow the extrapolation of this calculation further into the past, and it is therefore impossible to say when the early growth-rate in the "dairy" sector was most rapid. We can guess that it was fairly rapid in most decades between about 1840 and 1880 but, as Table 3 shows, this buoyancy was checked thereafter. The 1890s and the decade or so before the First World War experienced stagnation and then decline in absolute numbers. Table 4 emphasizes this watershed by revealing that from about 1900 there was a reversal in the declining numbers of potential consumers per dairy outlet; by 1914 this had returned to the ratio current before 1861.

Table 4. *The Dairy-Population Ratio*

	<i>Population of the county of London (millions)</i>	<i>Number of dairies and cowsheds</i>	<i>Potential population per dairy/cowshed</i>
1831	1.65	200*	8,275
1841	1.95	700*	2,783
1851	2.36	1,100*	2,147
1861	2.80	1,801	1,557
1871	3.25	2,097	1,551
1876	3.54	2,270	1,559
1880	3.77	2,544	1,482
1884	3.94	2,727	1,445
1892	4.27	3,031	1,409
1896	4.42	2,933	1,507
1900	4.51	2,996	1,506
1905	4.68	2,927	1,601
1910	4.87	2,716	1,792
1914	4.52	2,535	1,782

Sources: Census of England and Wales, Registrar General's Annual Reports, Robson's London Directory (1832 and 1841), The Post Office, London and Suburban Directories, The City of London Directory.

* Including an estimate for the number of suburban cowsheds and dairies.

III

These aggregate figures are interesting for the light they throw upon the general trend of growth or decline in the numbers of traders, but they tell us little about structural evolution within the milk trade. It would be interesting to know, for instance, to what extent the milk trade was affected by the so-called "retailing revolution" of the last third of the nineteenth century, in which the trends were towards branching of outlets and vertical integration, and towards smaller goods variety, lower retail margins, and a more rapid stockturn than had been the custom.

Table 5 suggests that branching of dairy shops did indeed take off in the 1870s, and developed rapidly in the 1880s and 1890s.¹ Initially, this was based upon the growth of small proprietorial groups of shops, and in itself differed from the

milk, see P. J. Atkins, 'London's Intra-Urban Milk Supply, c. 1790-1914', *Transactions of the Institute of British Geographers*, new ser. II (1977), and idem, 'The Growth of London's Railway Milk Trade, c. 1845-1914', *Journal of Transport History*, new ser. IV (1978), 208-26.

¹ This seems in general terms to accord with the chronology hypothesized for the grocery trade in general. See D. I. Padberg and D. Thorpe, 'Channels of Grocery Distribution: Changing Stages in Evolution—a Comparison of the U.S.A. and U.K.', *Journal of Agricultural Economics*, xxv (1974), 13.

Table 5. *Dairies and Their Branches*

Size group	1860	1872	1880	1892	1900*	1910*
1	1,725	2,007	2,359	2,676	2,214	2,109
2	68	74	146	128	168	162
3	3	—	18	57	66	66
4	—	4	12	24	28	48
5	5	5	10	20	10	35
6-10	—	7	—	33	24	91
11-15	—	—	—	54	53	40
16-20	—	—	—	39	71	35
21+	—	—	—	—	96	187
Total	1,801	2,097	2,545	3,031	2,730	2,773

Sources: *Post Office London and Suburban Directories*.

Note: The table records the number of shops in each size group, including the headquarters shop.

* Excluding cowkeepers.

established retailing structure in degree rather than in kind. Small dairies of this sort had been well known since the 1850s,¹ but a more significant departure had its origins in the 1860s and early 1870s in the foundation and success of a number of joint-stock and limited dairy companies. Perhaps the best known were the Express County Milk Co. (1864), the Aylesbury Dairy Co. (1866), and the Dairy Reform Co. (1871). Their manifest success in raising capital and attracting custom encouraged the formation of other companies, especially in the early 1880s when the trade press reported a rash of new enterprises. Some of these were not floated successfully, and others were bankrupted by the fierce competition experienced throughout the trade in the 1880s and 1890s.² The impact of the survivors on retail dairying in London was considerable. By 1900 there were at least six flourishing companies with an issued capital of £100,000 or over, and for the first time the dominance of the market by the small dairy master was challenged. At the turn of the century the ten largest companies controlled over 40 per cent of all London's dairy branches, and in the subsequent fourteen years although the number of branches increased by 28 per cent, the number of single-shop enterprises decreased by 5 per cent.³

The larger companies were able to raise capital on the stock exchange, and besides being largely responsible for the branching innovation, were instrumental, along with the independent wholesalers, in several other technological changes in the trade. One important example was the installation of pasteurization and bottling plant in the early twentieth century; this required heavier capital investment than was feasible for the small dairyman. Economies of scale and of organizations were also available to those concerns which instituted vertical integration of their operations. Control of the conditions of production was advantageous in order to ensure not only the quality and lasting properties of the

¹ Felix Champney, Thomas Bevan, and Collinson Hall each built up proprietorial groups of half a dozen shops.

² See, for instance, *Cowkeep. Dairym. Jnl.* II (1881), 145; IV (1882), 35; IV (1883), 105, 119; VIII (1886), 691; IX (1888), 881; X (1888), 971, 1059, 1094; XXIII (1900), 708.

³ Fierce competition for middle-class custom in the 1880s led in the early 1880s to a price-cutting war and to a squeeze on company profits. Net profits of 20 per cent on turnover were halved. For discussion, see P. J. Atkins, 'The Milk Trade of London, c. 1790-1914' (unpublished Ph.D. thesis, University of Cambridge, 1977).

milk but also the regularity of supply. The wholesaling function of dealing with shortages and surpluses was incorporated into their operations by firms like the Dairy Supply Co. a sister company of the Express, and as a matter of course country-consigning and town-based reception depots became an integral element in firms which previously had been concerned exclusively with retailing.

The example *par excellence* of the new order of integrated firms was the United Dairies, formed in 1915. By the end of the war it controlled about two-thirds of London's wholesale and one-third of its retail milk supply. It made considerable savings by reducing the number of its rounds from 2,744 to 1,944, the number of horses it used from 1,217 to 517, and by eliminating 63 depots and retail shops considered surplus to requirements. The beneficial effect upon business efficiency was such that within one year the group became subject to excess profit duty.¹

At this stage it should perhaps be emphasized that the prewar company trade, though an important and increasing portion of the market, did not control a majority of the market either in outlet numbers or in sales volume until the formation of United Dairies. As late as 1910, for instance, the single-shop enterprises still controlled 76 per cent of the retail-dairy outlets in London. For an accurate perspective on the trade structure characteristic of the second half of the nineteenth century, one must also note that below the specialist dairyman in the retail hierarchy there were thousands of other vendors of milk. The large number of itinerant salesmen has already been remarked upon, but there were also thousands of grocery and general shops which sold small quantities of milk. Table 6 shows that in 1883 general shops and itinerants together represented roughly 70 per cent of London's registered milk-sellers.

Table 6. *The Variety of Registered Milk Producers and Vendors*

Cowkeepers	895
"Dairies"	231
Shops selling only milk and dairy produce	1,941
General shops	4,421
Milk stored in a dwelling (itinerants)	516
	<hr/>
	8,004

Source: Metropolitan Board of Works, *Annual Report* (1883).

Because milk was merely an adjunct to their trade, these small grocers and general shopkeepers were unwilling to expend any great effort in preserving its quality or purity and the authorities found difficulty in enforcing the relevant sanitary regulations first framed in 1879.² This was because their power of entry and inspection was not supported until 1908 by the power to remove a

¹ W. Gavin, 'Some Aspects of the Dairying Industry of England and Wales', *Journal of the Board of Agriculture*, supp. xvi (1916), 15; *Committee on the Production and Distribution of Milk* (P.P. 1919, xxv), p. 663; *Standing Committee on Trusts* (P.P. 1920, xxiii), p. 569; *Departmental Committee on the Distribution and Prices of Agricultural Produce* (P.P. 1923, ix), p. 83; R. B. Forrester, 'The Fluid Milk Market in England and Wales', *Ministry of Agriculture and Fisheries, Economic Series*, xvi (1927), 86.

² These were made by the M.B.W. under the Dairies, Cowsheds, and Milkshops Orders of that year, and covered such items as the lighting, paving, and drainage of the dairies, the storage of milk, and the cleansing of utensils.

transgressor from the register.¹ These shops were undoubtedly a source of dirty and infectious milk throughout the period, but any attempt to reduce or abolish their participation in the trade would have deprived poor people of a valuable source of nutrition in areas of the city which were badly served by retailing facilities.

IV

A most important feature of London's milk business in the period 1840-1914, was the stability of the mean retail price (Table 7). Fluctuations in wages and general commodity prices meant that the "real" cost of a quart of milk varied over the years, but within the trade itself there was comparatively little variation in time or space for the pure, standard article. Competition therefore grew around the provision of various services to the consumer, or around the sale of different qualities of milk.

Table 7. *The Modal Retail Price of Milk in London*
(pence per quart)

	<i>Retail price</i>	<i>Retail margin</i>		<i>Retail price</i>	<i>Retail margin</i>
1790-4	3·0	—	1879	4·0-5·0	0·8-1·8
1795	3·5	—	1880	4·0-5·0	1·25-2·25
1796-1804	4·0	—	1881-2	5·0	2·25
1805	4·25	—	1883	5·0	2·1
1806	4·5	—	1884	3·0-5·0	0·4-2·4
1807	5·0	—	1885	4·0-5·0	1·5-2·5
1808	5·25	—	1886	2·5-4·0	0·1-5
1809	5·5	—	1887-8	3·0-5·0	0·5-2·5
1810	5·75	—	1889-91	4·0-5·0	1·7-2·7
1811	6·0	—	1892	4·0	1·5
1812	6·5	—	1893	4·0-5·0	1·5-2·5
1813-20	6·0	2·0	1894	2·5-4·0	0-1·5
1821-33	—	—	1895	2·5-4·0	0·3-1·8
1834-50	4·0	1·0-1·5	1896-9	3·0-4·0	1·0-2·0
1851-64	3·0-4·0	1·25-1·5	1900	4·0	1·9
1865	5·0	1·75	1901	4·0	1·8
1866	5·0	2·0	1902	4·0	1·7
1867-9	4·0	1·0	1903	4·0	1·8
1870	4·0-5·0	1·0-2·0	1904	4·0	1·9
1871	4·0	1·5	1905	4·0	2·1
1872	4·0	1·4	1906	4·0	2·0
1873	4·0-5·0	1·2-2·2	1907-10	4·0	1·8
1874-5	4·0-5·0	1·8-1·8	1911-12	4·0-5·0	1·6-2·6
1876	4·0	0·8	1913	4·0	1·6
1877-8	5·0	1·75	1914	4·0	—

Sources: The sources used in the compilation of this table are fully referenced in Table 38 of P. J. Atkins, 'The Milk Trade of London, c. 1790-1914' (unpublished Ph.D. thesis, University of Cambridge, 1977), where the difficulties encountered are also discussed.

One normally associates retail services with the holding of a variety and volume of stocks, with the break of bulk, the processing and packaging of foods, and the provision of facilities for the comparison of quality and price. Most of these features were present in grocers' shops of the early and mid-nineteenth century, but for obvious reasons they did not apply to the sale of liquid milk.

¹ These powers were granted under sect. 5 of the L.C.C. General Powers Act, pt. II. In the years 1910-11 the Council removed 1,290 insanitary milkshops from the register.

It is true that the cheesemongers of the early century, and the retailers of manufactured dairy produce who replaced them, did provide some of these services, but the highly perishable nature of milk meant that it could not be stored for more than a few days without becoming unsaleable. In consequence, the trade was constantly plagued with the difficulty of matching supply and demand.

The value of quick availability as a service was appreciated from the earliest times by both the trade and the public, and this was made possible by the provision of doorstep delivery. This had originally developed in the rich residential areas, but seems to have become more generally available from the mid-century with the introduction of the perambulator. Indeed, it ought to be stressed at this stage that, although the fixed dairy shops were an important source of milk for people in certain parts of London, they were never the dominant channel of retail distribution. The convenience of delivery came to be demanded by most consumers, and was recognized by retailers as a relatively efficient way of employing their labour, besides being a means of ensuring regular custom and a higher turnover than if collection had been the rule.

As far as quality is concerned, several aspects merit attention. Firstly, there is the question of price. According to Levy:

Milk as a saleable product differs from bread and meat by being a far more homogeneous commodity. Differences in quality are in the main far less pronounced than with any other agricultural commodity . . . [for] there are no specialities which the dairyman may elaborate out of the raw materials as the baker does with cake or pastry.¹

This may well apply in the twentieth century, but it seems that our forebears expected and demanded variety in milk quality and price. At the lower end of the market, for instance, independent itinerants often sold at 25 to 30 per cent below the average retail price, especially when in times of a production surplus they were able to buy cheap milk at the railway termini. The reputation of the milk trade in general was low throughout the century, and the dishonesty of these hawkers was proverbial, but the public seems to have been willing to accept malpractices such as adulteration and short measure in return for cheap milk.

At the other end of the price-scale, some milk was offered at 25 to 50 per cent over the norm, especially the rich milk of Channel Island cattle or the so-called "nursery-milk" sold for consumption by infants and invalids.² After the early 1870s, for instance, much of the milk produced by the cows kept within London was offered for sale as a high-quality product, in an attempt to preserve for the urban cowkeeper an area of trade free from the increasingly competitive price of milk brought to London by rail.³ These expensive milks were often bottled or canned, and were held in high esteem by a public which was unsure about the quality of the general supply. Unfortunately the cynicism of many dairymen made a mockery of this faith: "I have it on the authority of a very large milk contractor that he does not know anyone in the trade who makes it a rule of

¹ H. Levy, *The Shops of Britain: A Study of Retail Distribution* (1948), p. 54.

² *Cowkeep. Dairym. Jnl.* III (1881), 43; VII (1886), 554; VIII (1887), 749.

³ *Select Committee on the Adulteration of Food Act, 1872* (P.P. 1874, vi) Q. 2437; *Cowkeep. Dairym. Jnl.* I (1879), 20; R. Bannister, 'Our Milk, Butter, and Cheese Supply', *Jnl. Soc. Arts*, xxxvi (1888), 967-8.

distinguishing between invalid's or nursery-milk and the ordinary milk, except in theory—in practice it is one and the same."¹

Secondly, quality should also be considered in the sense of both freshness and purity. Needless to say, all dairymen claimed to serve fresh or "new" milk as it was called, and some even went to the lengths of adding hot water to convince the customer that the milk was still warm from the cow. Anyone admitting that his milk was other than "new" would have lost his clientele, and in effect the public unconsciously demanded as a *service* that dairymen conceal the true fact that "railway milk" was often 24 hours old before it was delivered, and up to 36 hours old before ingestion. Moreover, the requirement of Londoners for a rich-looking milk encouraged the widespread use of the yellow vegetable dye, annatto, to simulate a creamy colour, and their refusal to buy sour milk encouraged the use of chemical preservatives to maintain an appearance of freshness. A conspiracy of silence on the part of the trade and of apathy on the part of the public was instrumental in maintaining these practices as an essential element in retail profitability, although it was stated that "many tradesmen would gladly give up these practices, if giving up did not involve giving up their living".² It was only the imposition of higher standards of honesty by legislation and inspection from the 1870s which began to erode the link between profit and sharp practice in the milk trade, but it was not until the early twentieth century that the public at large became willing to pay extra for the pure and genuine article.

Thirdly, different qualities of milk were made available to cater for specific tastes. Kosher milk, for instance, was in demand owing to the Jewish community of Whitechapel in East London, and there was also a ready market in the late nineteenth century for beverage specialities such as malted milk and soda milk.³ In the 1880s and 1890s sterilized and humanized milk became popular with mothers concerned that their infants might be exposed to contamination or deprived of nourishment by drinking cow's milk. On the other hand, the tinned condensed milk which had become increasingly popular in working-class families from about 1870 was purchased for its keeping qualities. Buttermilk and skim-milk were never as popular or as readily available in the capital as in cities like Liverpool or Glasgow, although skim-milk was provided in the 1890s by Lord Vernon as a by-product of his Derbyshire manufacturing enterprise at several milk shops he owned in the poorer districts of London.

This discussion of service provision and the quality of milk presupposes that the customer was in a position either to demand a certain type of service or to choose the quality of milk he desired. For many inhabitants of London, however, choice was restricted by low incomes. Delivery, for instance, was uncommon in some of the poorest areas until the last decade or two of the nineteenth century, most milk being sold from the small corner general shops. These stores acted as "pantry shops" by carrying all the practical lines such as food, second-hand clothing, and fuel, that were likely to be needed at short notice. Their long hours of business made them a valuable social service at a time when much working-

¹ Anon. 'Three Months in the London Milk Trade', *Economic Review*, iv (1894), 185; C. Hassard, 'The Milk Trade from Within', *ibid.* xv (1905), 205–6.

² Anon. 'Three months', 188.

³ A. E. Baxter, 'Milk-sellers', in C. Booth, ed. *Life and Labour of the People in London*, vii (1896), 176.

class housing had little provision for any form of storage, let alone for perishable foodstuffs.¹ A farthing, or ha'pennyworth of milk, new or condensed, was generally the most that customers could afford, and sales were therefore more often in gills than in pints or quarts. Because the average volume of transactions was very small, even a marginal fraud by the retailer would in aggregate have earned an excessive profit. Indeed, this form of exploitation was common, whether by short measure or by adulteration, and was inflicted especially upon those customers whose room for complaint was restricted by their indebtedness to the shopkeeper, and whose alternative sources of supply were limited by their immobility. Detecting fraud of this sort was exceptionally difficult for the authorities because retailers in these neighbourhoods knew their regular customers and therefore needed to serve genuine milk only to those few strangers who might have been food inspectors.

V

In the second half of the nineteenth century doorstep delivery was the key structural feature of the retail milk trade. Deliveries were made twice, and in some areas three times a day, and competition was often severe because the retail price tended to be stable and a dairyman's prosperity therefore hinged on his ability to boost his turnover on a low net profit per sale. The urge to gain new custom, either by extending rounds or by poaching on the territory of rivals, perforce outweighed the contrary desire to minimize distribution costs, and towards the end of the nineteenth century the intensity of competition led to the overlapping of rounds and to instances of a single street being served by five or six retailers. In fact, down to 1914 the delivery round, as a spatial expression of competition, never resolved itself into a mutually exclusive territoriality. It continued to be characterized by duplication of services and consequent spatial inefficiency until after the First World War.

This inefficiency was exacerbated by a constant threat from an irregular army of itinerant milksellers selling adulterated milk at 3d. a quart. They needed very little capital—Mayhew estimated £1—to hire or buy the necessary equipment of yoke and pails or perambulator, and were able to scrape a living from as little as two gallons a day.² Their combined weight of numbers caused serious problems to established traders in central and west London, and particularly in the second half of the century in those rapidly growing suburbs where fixed-shops and regular delivery rounds were in an early stage of development. In 1884, for instance, during a spell of oversupply they were reported to have “stormed” parts of Kensington and Shepherd's Bush, and throughout the period they counted amongst their best customers the less discerning of the middle class.³ In north London there were constant complaints of unfair competition, and in 1876

¹ There are no readily available data on the extent of domestic storage facilities in London, but a survey conducted in Colchester between 1905 and 1908 showed that 92·8 per cent of the 2,669 houses inspected had no larder or pantry accommodation whatsoever.—W. G. Savage, *Milk and the Public Health* (1912), p. 271.

² H. Mayhew, *London Labour and the London Poor*, I (1861), 192; *C.S. on the Adulteration of Food Act, 1872* (P.P. 1874, vi), Q. 2602.

³ *Cowkeep. Dairym. Jnl.* v (1884), 318.

a despairing Metropolitan Dairymen's Society was forced to admit that "all attempts at establishing uniformity of price in the several parts of London have failed".¹

A most important innovation in the delivery of milk in the 1850s and 1860s was the introduction of the perambulator, a two- or three-wheeled cart capable of carrying one or two full churns and of being pushed by one man. Although these prams must have required considerable strength for propulsion in the hillier districts, they became widely used. As their advantage of added load came to be appreciated, the familiar yokes and pails disappeared from the streets, and by the early 1880s the transition in London was probably complete.² It was estimated in 1880 that a typical roundsman on an average round in London could sell a maximum of 30 gallons in one day using a pram, compared to 20 gallons with yoke and pails, and 40 gallons from a horse-drawn float.³ In practice the amount sold depended on factors such as the topography of the area served, the amount of time spent settling accounts and selling groceries, the compactness of the round, and the density of the demand for milk.⁴ In a poor area, for instance, where demand per head was low, a roundsman might have had to make 500 calls a day.⁵

VI

The account of the evolution of London's retail milk trade presented here differs from that given by J. B. Jefferys⁶ in a number of respects. His working hypothesis seems to have been that the trade retained its relatively simple structure until the twentieth century, when for the first time there was a development of wholesaling, multiple-shop retailing, and doorstep delivery. It has been shown elsewhere⁷ that wholesaling became a vital element of London's railway milk trade as early as the 1870s. The present article suggests that delivery was an important, perhaps the most important, mode of distribution from the mid-nineteenth century in London. Thirdly, multiple-shop dairy retailing achieved prominence in the capital at least 20 or 30 years before the date suggested by Jefferys for the nation as a whole, Jefferys's study may require revision in some respects, but it should be noted that trends in London cannot be regarded as typical of developments elsewhere in the country.

One amplification to emerge from this article relates to the biased structure of London's retail milk trade in the nineteenth century with respect to the social class of its customers. From the earliest times demand per head was greatest amongst wealthy families: they were provided with the best service the milk trade could offer, and were the first to benefit from any innovation in retail tech-

¹ *Dairyman*, II (1878), 128; *Cowkeep. Dairym. Jnl.* II (1881), 72; Metropolitan Dairymen's Society, *Third Annual Report* (1876); idem, *Eighth Annual Report* (1881).

² J. C. Clutterbuck, 'On the Farming of Middlesex', *Journal of the Royal Agricultural Society*, 2nd ser. IV (1869), 24; *Dairyman*, I (1876), 53.

³ *Jnl. Soc. Arts*, XV (1867), 356; *Dairyman*, I (1876), 40; *Cowkeep. Dairym. Jnl.* I (1880), 63; *D.C. on the Distribution and Prices of Agricultural Produce* (P.P. 1923, IX), p. 75.

⁴ For further discussion of these factors see R. B. Forrester, loc. cit. 97; The Food Council, *Report . . . on Costs and Profits of Retail Distribution in Great Britain* (1937), p. 13; B. Wierenga and A. Van Tilburg, 'Determining the Optimal Policy for Home Delivery Milk Retailing', *European Review of Agricultural Economics*, IV (1978), 245-70.

⁵ *D.C. on the Distribution and Prices of Agricultural Produce* (P.P. 1923, IX), p. 76.

⁶ Jefferys, op. cit. ch. 8. ⁷ Atkins, 'Railway Milk Trade'.

nique. The West End, for instance, saw the nascent development of shop retailing in the early century; it was the first area to rid itself of the unpleasant environmental consequences of urban cowkeeping; it benefited most from the proximity of the major railway termini for their new supply of country milk; and it had the first fruits of multiple-shop and dairy company retailing in the 1870s and 1880s.¹ At the other end of the social scale, the East End of London suffered some of the highest rates of adulteration of its milk supply, and saw only a late development of doorstep delivery, which never eclipsed customer collection from the numerous local general shops as the dominant mode of sale in working-class areas.

The basis of this structural bias was the income elasticity of demand which made milk a regular dietary item for the moneyed classes, but an irregular or even an unknown food for slum dwellers. Demand advanced rapidly after the mid-1870s, especially amongst the middle classes.² This was a response to the improved image of milk after legislation against adulteration, and to the increased consumption of tea and a decline in breast feeding.³ When coupled with the rapid decline of cowshed production in London from the late 1870s, which itself encouraged a new trade structure based upon the importation of country milk, this expansion of demand was a turning-point in the economic history of the trade.

This article has dealt with selected aspects of milk retailing in nineteenth-century London. These have been mainly structural and have been cast in an evolutionary context. A more complete explanation of changes in the trade waits upon an analysis of the spatial dynamics of retail dairy-shop location and of the delivery round,⁴ and upon a comparison of the developments described here with those in other food trades.

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¹ Contrary to the trend suggested by Padberg and Thorpe, loc. cit. 13, for whom the phase of "localized replication" drew its strength from the need to supply groceries to the working classes of London and the expanding northern cities.

² Much of the additional milk bought by working men was of the tinned condensed variety, which could be purchased in any grocer's shop.

³ A. E. Roberts, 'Feeding and Mortality in the Early Months of Life; Changes in Medical Opinion and Popular Feeding Practice, 1850-1900' (unpublished Ph.D. thesis, University of Hull, 1973).

⁴ Some comments on the spatial structure of retailing will be found in Atkins, thesis, ch. 7.