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Female relatives and domestic service in nineteenth-century England and Wales: Female kin servants revisited

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Abstract

This article uses the full sample of the 1851 census enumerators' books (CEBs) to revisit and reanalyse the well-known phenomenon of female kin servants in the British census. We find that the recording of female kin servants points to three distinct possibilities – day servants, domestic work at relatives' homes, and work at relatives' homes as part of the family business unit. Accordingly, we argue that female kin servants offer a rare opportunity to look into the interaction between gendered work, household economy, and market economy, and they should be considered as much in the labour force as classic servants. We further offer tentative methods to revise the number of female domestic servants. Our revision suggests that domestic service probably employed more women than manufacturing activities of all sorts put together. It highlights the limited impacts of industrialization on most women's work experiences as well as traditional sector's importance for women's employment, even as late as the mid-nineteenth century.

KEYWORDS
domestic, gender, servant

Domestic service was the single largest employer of women in nineteenth-century Britain. In 1851, nearly nine per cent of adult women worked in domestic service, which accounted for nearly

25 per cent of adult women's total employment.[1] Schwarz argues that these figures may have been even higher in earlier centuries.[2] Given the sheer scale of women's employment in domestic service, women's labouring experiences in the past cannot be fully grasped without a thorough understanding of their work in this sector.

Fortunately, the existing literature has paid great attention to topics such as female servant wage rates,[3] working conditions,[4] socioeconomic background,[5] employers' characteristics,[6] and the relationships between masters and their servants.[7] When it comes to who female servants were, what they did, and how well they fared, we are now in possession of a rich body of knowledge. However, and perhaps surprisingly in light of this volume of information, there is still little consensus on the precise scale of women's involvement in domestic service in nineteenth-century Britain.

To a large extent, this lack of consensus arises from uncertainty over the activities of the substantial number of female servants related to their 'employers' by kinship – for example, a daughter identified as a domestic servant and living in her parents' household. This phenomenon, coined 'female kin servants', was first brought to light by Edward Higgs in a series of articles published in the 1980s.[8] In these, Higgs analysed the 1851 census enumerators' books (CEBs) for the registration district of Rochdale, Lancashire. Using a one-in-four sample of households with female servants, Higgs found that, of 367 women listed as servants, 160 were related to the household head by kinship ties.[9] Comparison between the number of women listed in domestic service in the sample of CEBs and the published census table suggested that most of these 'kin servants' were included in published census totals, such that over 40 per cent of the women listed in domestic service in the 1851 published census tables were likely kin servants.[10] Higgs labelled this as a possible mis-specification of women's occupation in the census. He asserted that, if the same held true for the whole country, half a million women's occupations were wrongly enumerated and tabulated.[11]

Subsequent scholarship uncovered different patterns. Rosemary Hancock, based on the CEBs from one village in Cambridgeshire and two small towns in Isle of Wight and Worcestershire,

[1] These figures are calculated based on the number of women reported under the occupational heading 'domestic servant (general)' in 'Occupations of the people, division I-X', *Census of Great Britain 1851, population tables II, vols. 1&2* (pp. 1852–3, LXXXVIII, pts. I&II). The 1851 published census offers detailed listing of different types of servants such as 'domestic servant (cook)', 'domestic servant (housekeeper)', and 'domestic servant (nurse)', etc. If we also take into account these occupational headings, then the corresponding figures become 12 per cent and 35 per cent, respectively. This article only focuses on domestic servants (general). Adult women refer to those aged 15 years or above.

[2] Schwarz, 'English servants', p. 238.

[3] Field, 'Domestic service'; Horn, *The rise and fall*.

[4] McBride, *The domestic revolution*; Horn, *The rise and fall*.

[5] Pooley, 'Domestic servants'; Drake, 'Aspects of domestic service'.

[6] Outram, 'The demand'; Kent, 'Ubiquitous but invisible', Pooley, 'Domestic servants'.

[7] See Steedman, 'The servant's labour'; eadem, 'Servants'; eadem, *Labours lost*; Tadmor, *Family and friends*, pp. 18–43.

[8] See Higgs, 'The tabulations'; idem, 'Domestic servants'; idem, 'Women, occupations and work'.

[9] Higgs, 'The tabulations', p. 61.

[10] Ibid. Note that Higgs includes housekeeper, cook and nurse, etc., in addition to domestic servant (general) in his analysis of kinship in domestic service. Specific servant types had different proportions of female kin enumerated. For example, while around 30 per cent of domestic servants (general) in Higgs' 1851 sample were related to the household head by kinship, the corresponding figure for housekeeper was 85 per cent.

[11] Higgs, 'The tabulations', p. 64.

confirmed Higgs' finding as to the existence of kin servants. However, her study shows that the high enumeration rate of female kin servants in Rochdale was not typical of the country as a whole. She also found that the number of female kin servants increased in her sample between 1851 and 1881, which was driven by the expansion of opportunities for day servants to perform service tasks on a daily basis outside the home.[12] Michael Anderson, using a two per cent national sample of the 1851 CEBs, similarly found that the scale of female kin servant enumeration was on average much smaller than what Higgs has suggested, though with considerable regional variation.[13] Anderson further suggested that, even if female kin servants in the 1851 CEBs constituted a mis-specification of women's occupation, this was at least partly rectified in the published census tables – not all the female kin servants from the CEBs were tabulated into the published employment figures.[14] In addition, he argued that the census clerks became aware of this issue and were able to make more thorough revisions over time, such that a great proportion of female kin servants were probably left out of published census tables in subsequent census years.[15] However, Adair, comparing the CEBs from Tenbury in Worcestershire with the corresponding published census reports in 1851 and 1861, rejected Anderson's prediction, as he found that female kin servants in the CEBs were more likely to be tabulated in the published census reports in the later year, rather than the opposite.[16]

Ever since the 'discovery' of female kin servants in the British censuses, a lively debate has persisted as to whether they were 'true' servants. This in turn raises the question of whether female kin servants should be considered part of the female labour force. In fact, Higgs himself holds conflicting views on this issue: On the one hand, he claims that the female kin servant occupational title was a mis-specification of women's occupations and that female kin servants should not be included in female employment totals. On the other hand, he suggests that the title did not necessarily represent a mis-specification of women's work. Many female kin servants probably worked within the household economy and were treated by householders in much the same way as paid domestic servants. To quote Higgs: 'It is perhaps unwise, therefore, to look at domestic service as a distinct "occupation". Rather it should be studied as a series of social relationships with a similar work content on a spectrum from close kinship to the cash nexus'.[17]

At the heart of this question lie the fundamental issues of the difference between 'work' and 'occupations', and of the types of work that ought to be considered 'productive'. Central concerns in this enduring debate are whether the labouring activities are paid or not, and whether the end products are designated for the market or for personal use.[18] In modern industrial societies, productive work tends to be seen as what one does as an employee or in self-employment to earn an income.[19] National income and labour statistics were designed to gather information mainly on such remunerated economic activities,[20] and despite feminist researchers' advocacy since the 1980s to bring unpaid domestic work out of the statistical shadows,[21] these are still considered

[12] Hancock, 'In service or one of the family?'

[13] Anderson, 'Mis-specification', pp. 260–4.

[14] Ibid, pp. 265–7.

[15] Ibid, p. 260.

[16] Adair, 'Can we trust the census reports?', pp. 104–6.

[17] Higgs, 'Women, occupations and work', p. 69.

[18] For a summary of this debate, see Benería, 'The enduring debate'.

[19] Whittle, 'A critique', p. 35.

[20] Benería, 'The enduring debate', p. 288.

[21] Benería, Berik and Floro, *Gender, development and globalisation*, p. 181.

to lie outside the 'production boundary' and are excluded from national accounts in accordance with United Nations (UN) guidelines.[22]

However, this narrow definition of 'productive' work based on renumeration and market exchange has been increasingly criticized for underestimating women's total labouring activities[23] and their contributions to the household economy, market economy, and society's general well-being.[24] Development economists have demonstrated that women's unpaid work at home has high levels of imputed monetary value;[25] Marxist-feminist scholars emphasize its importance in creating the daily and generational reproduction of workers and their capacity to work;[26] and some historians further argue that there may have not always existed a clear boundary separating the 'domestic' from the 'market'. Focusing on the early modern period, Jane Whittle finds that women's unpaid domestic work in pre-industrial societies was highly intertwined with the commercialized market economy. This leads her to argue that projecting a narrow definition of work back in time is fundamentally problematic: Any rigid distinction between domestic and market is grossly unhelpful, if not wrong.[27]

Given these competing conceptualizations of productive work, female kin servants could be categorized in multiple different ways, even if we knew with certainty what their labouring activities were. In fact, we know next to nothing about what the 'servant' occupational title was intended to describe when attributed to female relatives: Were they day servants who worked in other households during the day, and resided at home at night? Was the servant occupational title an acknowledgement of their menial work at home instead? In that case, did their work within the home entitle them to financial and material compensation? Was the product of their work consumed at home by family members for convenience and comfort, or did it form an integral part of the goods and services that entered a wider market? These are the questions this article tries to answer.

It should be noted that the purpose of this article is not to engage directly with the debate on what should be considered productive work. Its main aim is to explore and test the various hypotheses regarding female kin servants' labouring activities mentioned above. Indeed, the recording of female kin servants has been one of the most frequently cited pieces of evidence against the censuses' reliability as sources for the study of women's work in the past.[28] By ascertaining its meaning, we may re-assess the accuracy of a major historical source. More importantly,

[22] There are now, however, supplementary satellite accounts of household production for several countries that allow for augmented national accounts incorporating the imputation of unpaid domestic work's monetary values. Floro, 'Time allocation', p. 149.

[23] For example, modern time-use surveys find that women on average spend three times as much time on unpaid domestic work than men. Once paid and unpaid work are combined, women work longer hours than men. Giddings, 'Gender division', p. 295.

[24] Benería, 'The enduring debate', pp. 305–6. In a recent study, Jane Humphries innovatively demonstrates the value of women's unpaid domestic work in turning commodities into livings as well as its implications on the household living standards and economic development in Britain over the long run. See Humphries, 'Respectable standards of living'.

[25] Its estimated share of GDP in modern economies varies from 19 per cent to 60 per cent. See Jefferson and King, 'Domestic labour'; United Nations Development Programme, *Human Development Report 1995*.

[26] Molyneux, 'Beyond the domestic labour debate'; Edholm et al., 'Conceptualising women'; Himmelweit and Mohun, 'Domestic labour and capital'. For demonstration in a historical context, see Humphries and Thomas, 'The best job'.

[27] Whittle, 'A critique'.

[28] See, for example, Horrell and Humphries, 'Women's labour force participation', p. 95; Bourke, 'Housewifery', p. 167; Humphries and Sarasua, 'Off the record', p. 48.

we argue that, by occupying a unique position that straddles the realms of the domestic and market economies, this particular instance of recording, hitherto considered problematic, offers a rare opportunity to look into the interaction between gendered work, household economy, and market economy. By investigating the uses of this descriptor in context, both at the household and local level, much can be learned about women's dual contributions both inside and outside the home in the past.

Throughout this article, and unless otherwise stated, the term 'servants' refers exclusively to general domestic servants. It does not refer to other servant occupational titles such as housekeepers, cooks, or nurses. The term 'classic servants' refers to live-in servants who were not related to their employers by kinship ties. 'Occupation' refers to paid employment. 'Work' refers to labouring activities either within the home or on the market, both paid and unpaid.

The rest of the article is organized as follows. Section I discusses the main source material. Section II establishes the scale and spatial distribution of the census recording of female kin servants. Section III examines the possibility of female kin servants being part of the paid labour force as day servants. Section IV discusses various aspects of female kin servants' work at home and its implications for both household and market economies. Section V highlights some caveats to our findings. Section VI makes tentative suggestions on how to move beyond the limitations of census recording to re-estimate the scale of women's involvement in domestic service. Section VII concludes.

I | SOURCE MATERIALS

The major source material used in this article is the 100 per cent sample of the 1851 CEBs for England and Wales, which contains around 18 million records. The CEBs were the census manuscript books containing individual-level data on name, sex, age, marital status, relationship to household head, 'Rank, profession or occupation', place of residence, and so on. When necessary, this article also refers to the published census reports to compare relevant figures with the CEB data. The major difference between the CEBs and the published reports is that the latter only contain tabulations grouped by sex, age, and various geographical units based on the information recorded in the CEBs. In the process that led to the tabulation of published reports from the CEBs, editorial interferences such as checks, revisions, and standardization were undertaken by different groups of personnel involving enumerators, registrars, and clerks,[29] such that corresponding figures in the two documents do not always align with each other.

The occupational information recorded in the 'Rank, profession or occupation' column and the relationships recorded in the 'Relation to head of family' column in the CEBs form the core pieces of information on which this article relies to identify female kin servants. For example, a woman who was recorded as 'domestic servant' in the 'Rank, profession or occupation' column but was recorded with a non-servant descriptor such as 'daughter' in the 'Relation to head of family' column is categorized as a female kin servant. By contrast, a woman who was recorded as a servant in both the 'Rank, profession or occupation' column and the 'Relation to head of family' column is regarded as a servant in the classic sense – living-in and paid for her work.

The sheer volume of data contained in the 1851 CEBs and published census reports constitutes an analytical obstacle. Fortunately, the CEBs have been fully digitized by the I-CeM project[30]

[29] For a detailed discussion on the census enumeration and tabulation, see Mills and Schürer, 'The enumeration process'; Higgs, *Making sense of the census*.

[30] Schürer and Higgs, *Integrated Census Microdata (I-CeM), 1851–1911*.

led by Kevin Schürer and Edward Higgs, with raw data supplied by their commercial partner FindMyPast.[31] As part of the digitization project, Schürer and Higgs reformatted the input data, performed a number of consistency checks, coded the non-standard textual occupational strings according to the occupational classification schemes used by the Registrar General, and added a number of enriched variables relating to household structure.[32] A number of researchers based at the Cambridge Group for the History of Population and Social Structure[33] (Campop) later undertook further checks and corrections to the I-CeM dataset. The Campop corrections are largely focused on the coding of occupational information and of the place of residence at the registration sub-district (RSD) level. Researchers at Campop, together with members of the I-CeM project, have also linked the I-CeM dataset to the Geographic Information System (GIS) boundary data, so that cartographical representations can be produced at the parish, RSD, registration district, and registration county levels. The published census reports were digitized by Campop as part of the *Occupation Project* led by Leigh Shaw-Taylor and the late E. A. Wrigley.[34] This dataset was also linked to GIS boundary data. The information recorded in the 'Rank, profession or occupation' column in both the CEBs and the published census reports have been coded into the PST occupational classification scheme.[35]

II | PATTERNS OF RECORDING

Let us begin with the common assertion that kin servants represented a case of mis-specification and over-recording of women's occupations,[36] and examine the scale of its recording in the 1851 census. Figure 1 shows that the recording of female kin servants in the CEBs was not homogeneous across the country: In most areas, the share of female servants who were related to the household head by kinship ties was between 10 per cent and 20 per cent. The textile manufacturing districts in Lancashire and Yorkshire West Riding, which include Rochdale, stand out with a much higher corresponding figure at around 40 per cent: Rochdale and its surrounding registration sub-districts (RSD) were not representative of the country, and it immediately becomes clear that the scale of the mis-specification highlighted by Higgs and which he then applied to the entire country is a gross overestimation.

Table 1 compares the share of kin servants in our full sample of CEBs in England and Wales with that from Higgs' one-in-four Rochdale sample. While nearly 30 per cent of female servants were related to their household head in the Rochdale sample, the corresponding figure for England and Wales as a whole was less than 14 per cent. Further, unlike what Higgs had suggested, not all female kin servants were included in the published employment totals. It is probable that nearly

[31] The digitization of the full sample of 1871 CEBs was not yet available when I-CeM datasets were launched.

[32] Higgs, Jones, and Schürer et al., 'Integrated Census Microdata (I-CeM) Guide'.

[33] Gill Newton, Carry van Lieshout, Harry Smith, Bob Bennett ('Drivers of entrepreneurship and small business' project, ES/M010953); Joe Day, Hannaliis Jaadla, Eilidh Garrett, Alice Reid ('Atlas of Victorian fertility decline' project, ES/L015463/1); and Xuesheng You and Leigh Shaw-Taylor ('Occupational structure of Britain c.1371-1911' project), in collaboration with Kevin Schürer and Edward Higgs, all worked in various aspects of data correction and improvement.

[34] 'Occupational structure of Britain *c*.1371–1911'. For the full list of funding bodies, see www.campop.geog.cam.ac.uk/research/occupations/acknowledgements/funding/ (accessed on 16 December 2022).

[35] See Wrigley, 'The PST system'.

[36] Higgs, 'Women, occupations and work', p. 69; Horrell and Humphries, 'Women's labour force participation', p. 95.

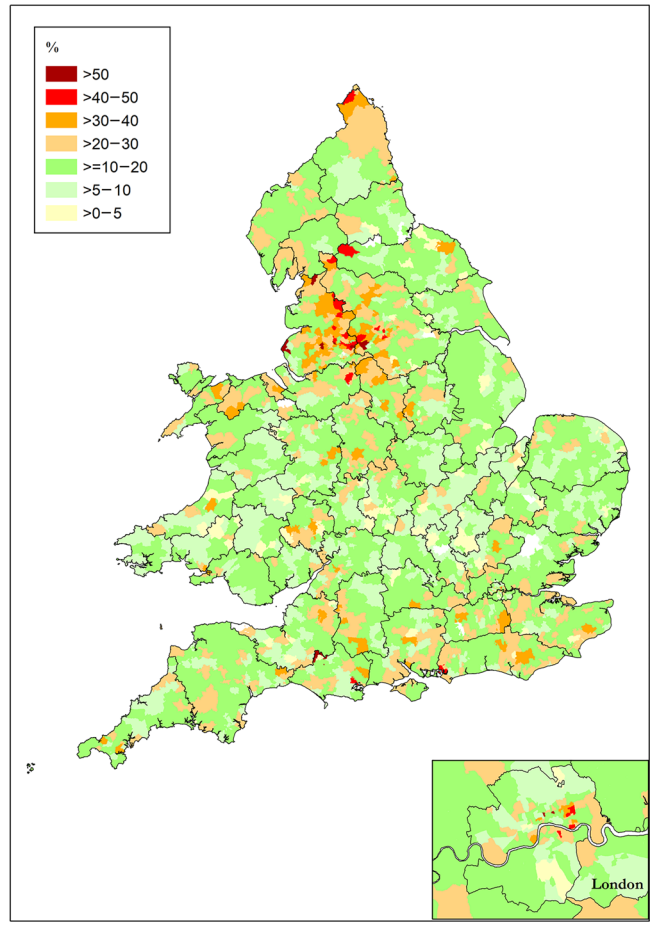

FIGURE 1 Percentage share of female domestic servants related to the household head by kinship in England and Wales, 1851. *Source*: Schürer and Higgs, 'Integrated census microdata'. [Colour figure can be viewed at wileyonlinelibrary.com]

40 per cent of the female kin servants enumerated in the 1851 CEBs were not tabulated in the published census reports.

In short, for England and Wales as a whole, female kin servants were enumerated in the CEBs on a much smaller scale than Higgs had suggested, and the tabulation of female kin servants in the published census tables was also lower than Higgs had asserted. Hence, even if female kin servants represented a case of mis-specification of women's occupations, this would have affected less than 10 per cent of the female servants recorded in the published census tables, as opposed to Higgs' suggested 46 per cent.

III | DAY SERVANTS

Furthermore, the argument that female kin servants represent an instance of mis-specification and over-enumeration of female occupations holds if, and only if, none of the female kin servants were in the paid labour force. If this does not hold, then the number of female servants reported in the published census tables, rather than being an overestimation, would represent an instance of under-reporting of women's employment instead.

TABLE 1 Share of domestic servants with familial relationship to the household head in a 100% sample of census enumerators' books (CEBs) in England and Wales and the 1-in-4 sample of CEBs in Rochdale, 1851

	Number of adult women, 100% sample in this article	Number of adult men, 100% sample in this article	Number of adult women, Higgs's Rochdale 1-in-4 sample	No. adult men, Higgs' Rochdale 1-in-4 sample
Domestic servant (general), published census reports	524 488	69 022	244.8	n/a
Domestic servant (general), CEBs	553 475	74 035	217	n/a
Kin servants, CEBs	73 882	10 369	59	n/a
Kin servant share of domestic servant, CEBs (%)	13.3	14.0	27.2	n/a
Kin servants in the CEBs not tabulated in the published census (%)[a]	39.2	48.3	0 (implied)	n/a

[a]The discrepancy between the number of domestic servants enumerated in the CEBs and tabulated in the published census reports is first calculated. This discrepancy is assumed to be accounted for by the number of kin servants in the CEBs who were not tabulated in the published census reports. Dividing this figure by the number of kin servants enumerated in the CEBs gives the percentage share of kin-servants in the CEBs who were not tabulated in the employment totals in the published census reports.
Source: Schürer and Higgs, 'Integrated census microdata'. 'Occupations of the people, division I-X', *Census of Great Britain 1851, Population Tables II, vols. 1 & 2* (pp. 1852–3, LXXXVIII, pts. I & II). The figures pertaining to Higgs' 1-in-4 sample in Rochdale are reproduced from Higgs, 'The tabulation of occupations', table 2.

We argue that some female kin servants were indeed in the paid labour force, and that they most probably worked as day servants in others' households during the day and resided in their relatives' homes at night. Table 1 sheds some light on this possibility by revealing the existence, in the CEBs, of male kin servants. Kin servants have hitherto been described as an exclusively female phenomenon and, to our knowledge, there exist no mentions of male kin servants in the literature. This is perhaps due to the implicit assumption that the recording of kin servants was a reflection of gendered divisions of labour, with women being in charge of menial domestic work.[37]

Men may not have been completely absent from the domestic scene,[38] but it was typically not through their limited involvement in domestic duties that men's socioeconomic role within home was highlighted. Therefore, if the recording of kin servants was designed mainly to reflect household members' unpaid domestic work, one would not expect it to be associated with men. Table 1, however, shows that not only were there male kin enumerated as servants in the CEBs, but their enumeration rate was even slightly higher than that of female kin servants. As alluded to above, it is unlikely that the male kin's servant occupational title was intended as an indicator of their role in unpaid domestic work. Instead, it must have indicated their paid work in domestic service outside the home.

If the servant occupational title indicated work as a day servant in the case of male relatives, so must it be for some female relatives. There is in fact contemporary evidence supporting this argument. In their survey of the London labouring classes in 1901, Charles Booth and Jesse Argyle suggested that one-fifth of the servants may have been day servants, travelling daily to and from

[37] For the general discussion on gendered role at home, see for example, de Vries, *The industrious revolution*; pp. 186–237; Griffin, *Bread winner*, pp. 27–61, 160–92; Griffin, *Liberty's dawn*, pp. 84–106; Roberts, *A woman's place*, pp. 125–63.

[38] Tosh, *A man's place*, pp. 1–8; Harvey, 'Men making home', pp. 529–36.

TABLE 2 Top 10 occupations of household heads that employed female classic servants and female kin servants in England and Wales, 1851

Households with female classic servants		Households with female kin servants	
Head occupation	**Percentage of all female classic servants**	**Head occupation**	**Percentage of all female kin servants**
Farmer	23.4	Agricultural labourer	13.1
Independent means	8.9	Farmer	8.2
Innkeeper	5.3	General labourer	5.2
Grocer	2.5	Shoemaker	3.0
Clergyman	1.7	Laundry work	2.9
Unspecified	1.5	Domestic servant	2.7
Butcher	1.5	Unspecified	2.4
Draper	1.4	Innkeeper	2.4
School master	1.1	Carpenter	2.2
Clerk	1.1	Independent means	1.9
Total	48.4	Total	44.0

Source: Schürer and Higgs, 'Integrated census microdata'.

their work rather than living-in with their employer.[39] Similar evidence has not come forth in the literature for the earlier period. However, there should be little doubt that there were also female kin working as day servants in the mid-nineteenth century.

We further test this argument by analysing the occupations of household heads living with female kin servants against those with classic servants. Female kin working as day servants likely reflects a strained household budget requiring the help of all household members, including those with limited earning capacities. Therefore, if some of the female kin servants were indeed day servants, we would expect the occupational profile of their household heads to be characterized by comparatively disadvantageous socioeconomic characteristics, distinct from those employing classic servants. The results presented in table 2 support this hypothesis. Classic-servant-employing households show the typical characteristics of servant-employing households as identified in the literature. First, servants were employed not solely to create domestic convenience and comfort, but were instead frequently employed by farming and artisan families to meet their productive needs.[40] Second, the servant-employing households were in general wealthier:[41] Most of the classic-servant-employing households in table 2 can be labelled as of the middling sort.

The occupational profile of the household heads living with female kin servants, by contrast, displays disadvantageous socioeconomic characteristics. A disproportionately large share of female kin servants can be found in households headed by agricultural labourers, general labourers, and laundry workers. These were some of the occupations associated with the lowest level of income and with acute household poverty. It is unlikely that these households kept, or were able to keep, female relatives at home to perform domestic duties. The female relatives in

[39] Booth and Argyle, 'Household service', p. 212.

[40] Kent, 'Ubiquitous but invisible', pp. 114, 119–20; Higgs, 'Domestic servants', pp. 207–9.

[41] Banks, *Prosperity and parenthood*, pp. 70–85; Horn, *The rise and fall*, pp. 124–32.

TABLE 3 Top 10 occupations of household heads that employed male classic servants and male kin servants in England and Wales, 1851

Households with male classic servants		Households with male kin servants	
Head occupation	**Percentage of all male classic servants**	**Head occupation**	**Percentage of all male kin servants**
Farmer	29.7	Farmer	10.9
Innkeeper	9.6	Agricultural labour	5.0
Independent means	8.0	Innkeeper	4.3
Clergyman	4.5	Domestic servant	4.0
Butcher	2.8	Laundry work	3.8
Miller	2.2	Shoemaker	3.3
Physician	1.7	Unspecified	3.0
Unspecified	1.4	Gardener (agriculture)	2.8
Domestic servant	1.4	Carpenter	2.6
Baker	1.3	Independent means	2.2
Total	62.7	Total	42.0

Source: Schürer and Higgs, 'Integrated census microdata'.

these households, like many other working-class women, had to contribute to the household budget whenever possible.[42] Hence, their servant occupational title most likely reflected their work as paid day servants outside the home, as part of the household survival strategy.[43] We can add further strength to the argument by repeating the same exercise for male servants. Similar patterns are identified in table 3: A disproportionately large share of male kin servants can be found in households headed by those working in low-income occupations such as general labourers and laundry workers. Like their female counterparts, male kin servants probably worked as day servants to enlarge the household budget. Regardless of sex, the servant occupational title must be, at least for some co-resident kin, a truthful recording of their paid work outside the home.

So far, our analysis has revealed the possibility that at least some female kin servants were day servants. Hence, a broad-brush assumption that female kin servants represent a case of occupational mis-specification would lead to an under-reporting of women's paid employment outside the home. Furthermore, table 2 also shows that some female kin servants were found in households headed by innkeepers, shoemakers, and those living off independent means. Female kin servants in these types of households were likely engaged in domestic work or family business at home, which is the focus of the next section.

[42] You, 'Women's labour force participation', pp. 119–23.

[43] In appendix A1, we repeat the exercise by comparing the top 10 occupations of household heads who lived with female kin servants with that of household heads who lived with kin charwomen. Similar to day servants, charwomen's labour activities were in general part of the survival strategy of economically disadvantaged households. If some female kin servants were day servants coming from economically disadvantaged households working outside home to enlarge the family budget, the occupational distributions of those living with kin servants and those with charwomen should be broadly similar. Appendix A1 confirms this similarity.

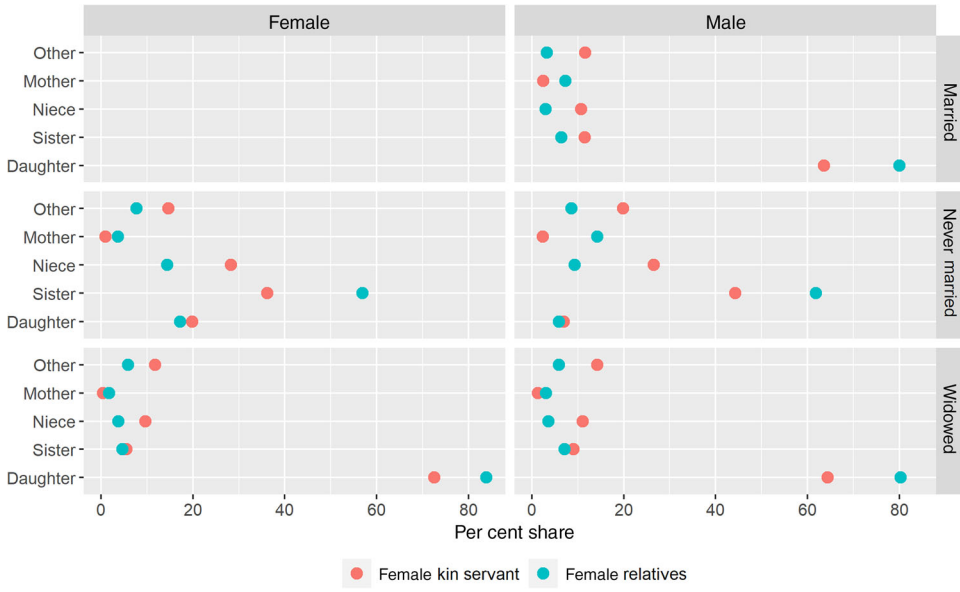

FIGURE 2 Relationship to the household head among female kin servants and female co-resident relatives by the head's sex and marital status in England and Wales, 1851. *Note*: The heading of each column shows the household head's sex. The labelling on the righthand side shows the household head's marital status. Kins' relationships to the household head are shown on the lefthand side. *Source*: Schürer and Higgs, 'Integrated census microdata'.
[Colour figure can be viewed at wileyonlinelibrary.com]

IV | WORK AT HOME

Kinship does not necessarily imply altruism: Numerous examples from the past have shown that family members frequently engaged in utilitarian calculations to achieve mutually beneficial outcomes.[44] One of the most notable mechanisms for doing so was through co-residence, in which co-resident kin provided labour in menial work or for the family business in return for accommodation, food, and even cash payment.[45] In that sense, work within the family represents a business transaction in the context of kinship.

This section aims to investigate whether the occupational title 'servant', when applied to female relatives, was intended to capture these female relatives' work within the home. There are few records with direct evidence on household members' work within the family. However, we may infer those activities from a range of demographic and socioeconomic evidence drawn from the census data, such as familial relationships, occupations, age structures, and marital status.

Figure 2 shows female kin servants' relationships to their household heads. Notably, regardless of the head of household's sex and marital status, nieces and other distant relatives were overrepresented among female kin servants relative to their underlying share of the population. This hints at the possibility that at least some female kin servants worked within the home. Indeed, kinship covers a wide range of family relations: Not all relationships have the same 'quality', and different family ties will likely involve different degrees of altruism and reciprocal

[44] Anderson, *Family structure*.

[45] Finch, 'Do families support each other', pp. 91–5, 99.

expectations. More specifically, it can be speculated that, the more distant kinship is, the more utilitarian the calculations involved will be, with higher expectations of reciprocity. The additional cost of food and accommodation imposed on the household budget by relatives' co-residence was more likely to be compensated for by work, domestic or otherwise, when kinship ties were more distant such as in the case of nieces. We may even speculate that, for many households, the reason why they opened their homes to distant relatives in the first place was perhaps to seek assistance for menial housework or family-based business. Conversely, those many families who sent kin, such as a daughter, to work as a servant in a relative's home were likely relieved that they no longer needed to bear the cost of a daughter's upkeep, even if the daughter's work was not paid for in cash.[46] Furthermore, we should not assume that, just because kinship was involved, payment in kind was the only form of compensation for female kin servants' work. Some studies demonstrated that, even though kin servants may not have received cash payment initially, wills often included specifications for the remuneration of relatives who took up the function of servants.[47] In that sense, kinship involved transactions of a business nature, and some female kin servants' occupational titles duly reflect this.

While distant relatives were over-represented among female kin servants, daughters of ever-married heads were under-represented. How then, can we reconcile their under-representation among female kin servants with the large body of evidence showing daughters' role in menial housework such as cooking and washing, as well as assisting with family business?[48] While daughters' role in the aforementioned tasks is undisputable, perhaps even more so was their role in bringing home an additional income by participating in the labour market.[49] For those daughters who were recorded as servants, the same logic applies as described above: Some were likely day servants residing at home but working in other households, whilst others must have assisted with domestic duties or the family business. However, many daughters will also have undertaken other work outside the home, in which case this would likely have trumped the 'servant' qualifier in the census recording. In fact, the level of recording of daughter-servants in the CEBs if anything probably under-reports the scale of daughters' work within the home, as those with income-generating activities outside the home would have seen their contribution to domestic duties eclipsed.

Sisters of never-married heads of household are another group of kin that were clearly under-represented among female kin servants. For the majority of never-married heads who lacked close kin of working age such as a spouse or offspring, co-residence with more distant kin such as a female sibling may have been a means to pool resources together, enlarge household income, and weather the storm of potential economic hardship.[50] Hence, the socioeconomic functions performed by female siblings in these households were less likely to consist of menial housework or mere assistance with the family business. Instead, they were more likely to be 'partners' of equal status.[51] Indeed, in households headed by never-married women who lived with at least one sister, siblings were recorded with the same occupation about 70 per cent of the time. The

[46] Griffin, *Bread winner*, p. 32.

[47] See case studies in Cooper and Donald, 'Household and "hidden" kin'.

[48] Griffin, *Bread winner*, pp. 28–35.

[49] Horrell and Humphries, 'Children's work'; easdem, 'The exploitation'; Horrell and Oxley, 'Gender bias'.

[50] Davidoff, *Thicker than water*, pp. 148–53.

[51] Barker, *The business of women*, p. 118.

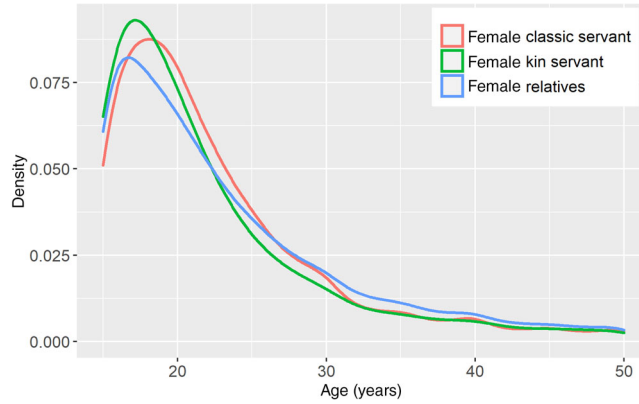

FIGURE 3 Age distribution of female classic servants, female kin servants, and female co-resident relatives in England and Wales, 1851. *Source*: Schürer and Higgs, 'Integrated census microdata'.
[Colour figure can be viewed at wileyonlinelibrary.com]

corresponding figure for those living with other female relatives was just 30 per cent. This helps explain why few sisters were recorded as servants.

Taken together, the findings so far suggest that socio-economic interactions varied across kinship groups. While some hinged upon female relatives' ability to bring an additional income from the labour market, others capitalized on their work within the home. The different enumeration rates of female kin servants across different relationship categories duly reflect this.

The age profile of female kin servants can further support the argument that at least some of them performed labouring activities similar to those of a classic servant. Figure 3 shows the age distribution across three groups: female kin servants, female classic servants, and female co-resident relatives.[52] The age profile of classic servants reflects the life-cycle nature of domestic service,[53] with a disproportionately large share of them still in late adolescence and early adulthood. By contrast, if the recording of female kin servants was a random enumeration practice, their age profile should follow that of female co-resident relatives. However, female kin servants display a much younger age profile than the underlying population of female co-resident relatives; Instead, their age profile comes closer to that of female classic servants, with female kin servants being even younger on average. This strongly suggests that the kin servant occupational descriptor captured many young female relatives' work before leaving home, and is consistent with existing qualitative evidence. For instance, it is known that young daughters were assigned with and trained in domestic duties at home from a young age to prepare them for employment in domestic service or housewifery in the future.[54] It has also been shown that many young girls performed day service in other households before entering classic residential service later in their teenage years.[55] Some of these labouring activities were probably recognized and recorded under the 'servant' occupational title, leading to the observed age profile of the female kin servants.

The characteristics of female kin servants presented above suggest that the 'servant' occupational title, when attributed to female relatives, could be indicative of their work both within and outside the home. An analysis of the characteristics of households with female kin servants helps to reinforce this argument by demonstrating that these households would typically have had a higher need for servants and their work, for both domestic and productive purposes.

[52] Wives are not included in our analysis of female relatives and female kin servants.

[53] Laslett, *Family life*, pp. 33–4; Cooper, 'From family member to employee'; de Moor and van Zanden, 'Girl power'.

[54] Griffin, *Bread winner*, pp. 34–6.

[55] Ibid, p. 38.

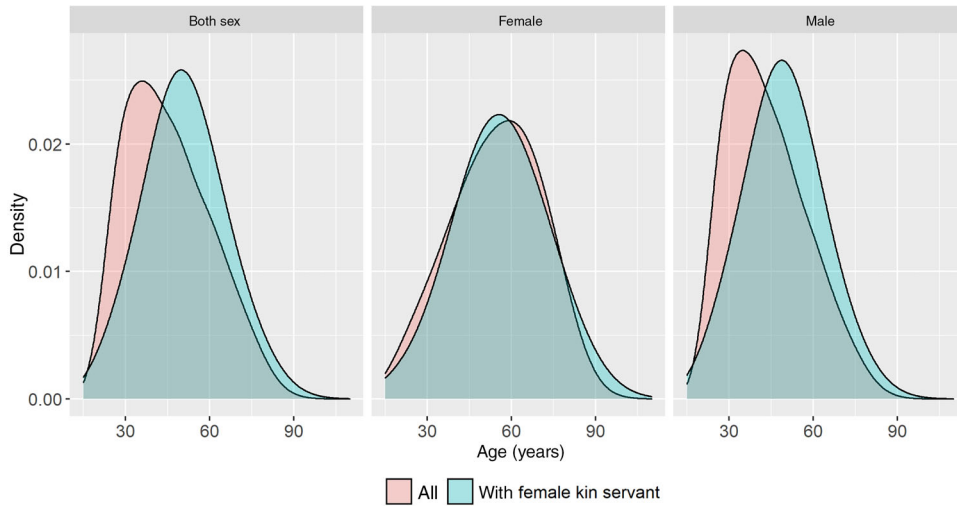

FIGURE 4 Age distribution of household heads by heads' sex and presence of female kin servants, England and Wales, 1851. *Note*: The column heading shows the household head's sex. *Source*: Schürer and Higgs, 'Integrated census microdata'.
[Colour figure can be viewed at wileyonlinelibrary.com]

Figure 4 shows the age prolife of household heads living with female kin servants against that of all household heads, by sex. On average, household heads living with female kin servants displayed an older age profile. This is largely driven by the experiences of male household heads: The older age profile of male heads living with female kin servants hints at higher demand for domestic help, and hence female relatives' work to provide such help. Analysis of male heads' marital status lends further support to this argument. Whilst just over 11 per cent of all male heads were either never married or widowed, the corresponding figure for those living with a female kin servant was about 18 per cent. The over-representation of female kin servants in male-headed households without a spouse highlights their role in domestic duties.

The function of female kin servants in female-headed households may have differed. Firstly, figure 4 shows that the age profile of female heads living with female kin servants was similar to that of the underlying population of female heads. Unlike with the male heads of household, it does not suggest higher demand for domestic service due to householders' old age. Secondly, male-headed households may be expected to have higher demand for domestic help than their female-headed counterparts, at least on average. Hence, if female kin servants were mainly performing domestic duties, we would expect to find a disproportionately large share of female kin servants in male-headed households. However, that is not the case. Female-headed households were more likely to have female kin servants than their male-headed counterparts: Whilst only 15 per cent of all households were headed by women overall, of those with female kin servants, 25 per cent were headed by women. This suggests that the labouring activities of female kin servants could cover a wide spectrum of work content, not limited to home-oriented menial domestic duties.[56] The role of female kin servants in female-headed households may have been closely linked with marketable production and exchange.

[56] Kent, 'Ubiquitous but invisible', pp. 114, 119–20; Higgs, 'Domestic servants', pp. 207–9.

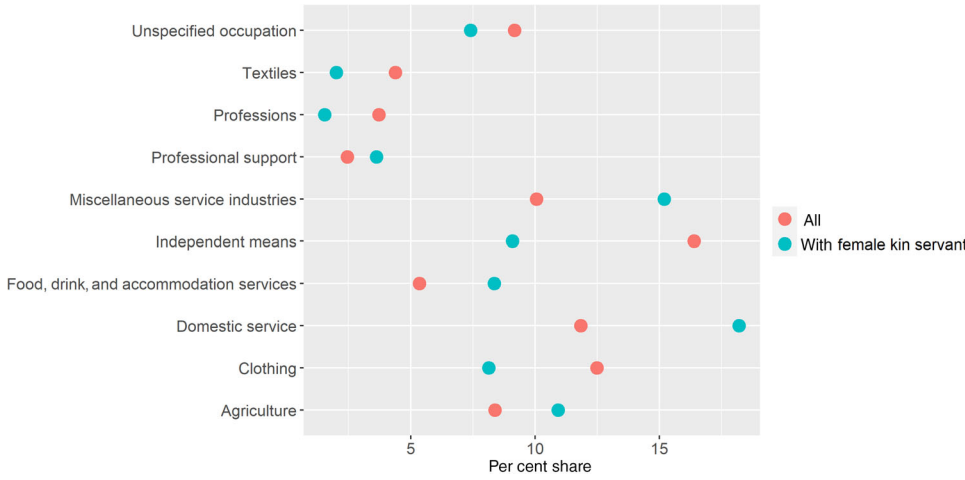

FIGURE 5 Top 10 occupational groups' share of the female household head's employment by the presence of a female kin servant, England and Wales, 1851. *Source*: Schürer and Higgs, 'Integrated census microdata'. [Colour figure can be viewed at wileyonlinelibrary.com]

The occupational distribution of female household heads lends support to this argument. If the female kin servants were mainly engaged in activities such as cleaning, cooking, and washing, they would be most likely to appear in households that could best afford them, such as the households of those of independent means. However, figure 5 shows that the opposite was true: Owners of capital living on independent means accounted for the largest share of female heads, but were much less likely to have female relatives working at home as a servant. Female heads in food, drink, and accommodation services as well as in agriculture, on the other hand, were more likely to have female kin servants. These were the economic activities that were frequently associated with female entrepreneurship,[57] and in these households female kin servants most probably worked in and assisted with the lodging houses, shops, inns, public houses, and farms run by the female heads. In this scenario, kin servants' labouring activities would have formed an essential part of the family-based business and been linked to a wider market economy. Female heads working in domestic service and miscellaneous services, such as washing and laundry work, were also more likely to live with female kin servants. As argued before, some of these female kin servants were probably day servants, but others, particularly those living with laundresses, must also have provided labour for the family-based enterprise.[58] These represent another scenario in which, in the face of low levels of human capital and economic resources, female relatives lived and worked together as a survival strategy. The recording of female kin servants again captured this form of market-oriented work.

It should be noted, however, that female kin servants working in family-based businesses was not a phenomenon exclusive to female-headed households. Male heads who worked in family-based businesses such as food, drink, and accommodation services were also more likely to live with female kin servants.[59] Similarly, it should not be assumed that the female kin servants in

[57] van Lieshout et al., 'Female entrepreneurship', pp. 454–5; Aston, *Female entrepreneurship*.

[58] Malcolmson, *English laundresses*, pp. 19–23.

[59] Food, drink, and accommodation services accounted for 2 per cent of male head's total employment. The corresponding figure for male heads living with female kin servants doubled.

female-headed households only provided labour for the family-based business, and were by and large free from domestic drudgery. No broad-brush categorization of female kin servants' work should be made on the basis of crude household characteristics alone, and much would have depended on the specific household context. However, whether they were undertaking domestic chores, assisting with the family business, or doing both, the simple analysis above suggests that some female kin servants at least performed work similar to that of classic servants.

V | CAVEATS

The results presented so far suggest that the occupational title 'servant', when attributed to a female relative, was a genuine indication of her labouring activities. However, a major caveat is that not all of the female relatives who worked as day servants outside of their home, or provided much-needed labour within the home, were duly recorded as a servant: The CEBs most probably under-reported female relatives' work in domestic service.

One clear example of this under-reporting is the fact that many census enumerators did not record any female kin servants within their enumeration district at all. According to the 1851 census expense form, there were more than 30 000 enumeration districts for that census year.[60] However, we estimate that nearly 6000 enumeration districts recorded no female kin servants at all, and the real number may be even higher.[61] It is hard to comprehend how the labouring activities discussed in the previous sections could have been undertaken without the help of any co-resident female kin in more than 20 per cent of all the enumeration districts. Instead, this appears to be an example of householders and census enumerators simply ignoring female relatives' unpaid work within the home.

The recording of female kin servants among textile workers' families in Lancashire is another case in point: As shown in section II, the textile manufacturing districts in Lancashire had the highest shares of female servants who were related to the household head by kinship ties. Given the well-documented role of co-resident female relatives in freeing wives and mothers from domestic chores to participate in factory employment,[62] we may expect this to be driven by the prevalence of textile employment in the region, and hence to find a disproportionately large share of female kin servants in households working in textiles. Table 4 shows that is not the case. Textiles accounted for about 35 per cent of household heads' total employment in Lancashire textile manufacturing districts.[63] But only 18 per cent of household heads living with female kin

[60] 'Return of expense'.

[61] There was no enumeration district identifier as such in the I-CeM dataset. Upon consultation with Kevin Schurer, we created pseudo-enumeration-district identifiers by combining the 'NumPiece' and 'EnuDist' fields in the I-CeM dataset. The field 'NumPiece' indicates a whole or part of an RSD. The field 'EnuDist' shows the transcribed textual string indicating an enumeration district within a particular RSD. However, due to the transcription errors and absence of information on the original CEBs, our method can only produce an imperfect set of 23 921 enumeration district identifiers. It is clear that some of our pseudo identifiers, such as '2220.-' or '2407.Blank', identify a group of enumeration districts instead of a single enumeration district. We exclude them from our analysis. This leaves 23 796 enumeration districts. Of these remaining pseudo enumeration districts, nearly 6000 did not record any female kin servants. However, due to the aforementioned identification issues, the true number of districts recording no female kin servants must be over 6000. Unfortunately, we cannot ascertain the extent of the mis-identification of enumeration districts.

[62] Anderson, *Family structure*, pp. 68–78.

[63] On average, 20 per cent of the adults in Lancashire worked in textiles. We define the textile RSDs as those where more than 25 per cent of the adults worked in textile manufacturing. There were 75 such RSDs out of the 166 RSDs in Lancashire.

TABLE 4 Top 10 occupations of the household heads living with female kin servants in Lancashire textile districts, 1851

Occupation	Percentage of household heads[a]
Textile manufacturing	18.0 (33.6)
Farmer	14.0 (5.3)
Innkeeper	5.3 (1.0)
Grocer	3.5 (1.5)
General labourer	3.4 (4.6)
Domestic servant	3.3 (2.5)
Agricultural labourer	3.1 (3.0)
Beer seller	3.0 (0.8)
Tailor	1.9 (1.2)
Shopkeeper	1.7 (0.7)
Total	57.1 (54.2)

[a]The number in the parentheses shows each occupation's corresponding share of all household heads in Lancashire textile districts.
Source: Schürer and Higgs, 'Integrated census microdata'.

servants were recorded with a textile occupation: Despite their kin's clear domestic function, textile workers' households were less likely to have their female relatives recorded as servants.

Three factors may have led to this observation. First, given the time constraints involved in factory employment and the high wage rates it provided, there may have been higher ad hoc demand for day servants in the textile districts. Many female kin servants in the textile districts were probably day servants. They did not necessarily come from textile workers' families. Second, domestic help was not necessarily the only or dominant form of labouring activities provided by female kin. As argued in the previous sections, many female kin servants provided labour for family-based businesses. As a matter of fact, table 4 shows that the occupations that were most frequently associated with family-based business, such as farming, innkeeping, and shopkeeping,[64] were all over-represented among households with female kin servants. Last but not least, female co-resident relatives in textile workers' families were exposed to better-paid textile factory employment. Hence, the opportunity cost of taking care of domestic chores at home full-time was most likely too high. Many must have worked outside the home and helped with the chores when needed, such that their income-generating role most likely obscured their domestic function in the eyes of householders and census enumerators. This hypothesis is supported by a number of findings. First, while more than 60 per cent of female kin servants were adult daughters in England and Wales, the corresponding figure was less than 50 per cent in the Lancashire textile districts. The discrepancy can be attributed, perhaps in no small part, to the factory employment opportunities readily available to daughters of working age in the textile districts. Conversely, while just about two per cent of female kin servants were household heads' mothers in England and Wales, the corresponding figure was more than 10 per cent in Lancashire textile districts. For female relatives such as mothers who had fewer employment opportunities and limited earning capacities, their domestic function may have become more apparent to householders and enumerators.

[64] See Smith et al., 'Household and entrepreneurship'; van Lieshout et al, 'Female entrepreneurship'.

TABLE 5 Female relatives' co-resident rate and proportion of households with female kin servants in Lancashire textile manufacturing districts, 1851

	Number of households	Percentage of households with female relatives	Percentage of households with classic servants	Percentage of households with female kin servants	Percentage of female domestic servants as kin servants
Lancashire textile RSDs	153 788	37.6	4.0	1.5	25.4
England and Wales	3 699 125	29.2	9.1	1.8	15.0

Source: Schürer and Higgs, 'Integrated census microdata'.

The question remains, however, as to why a much larger share of all female servants were kin servants in Lancashire textile districts. Table 5 shows that this is largely the result of a lower tendency to employ servants overall. As a matter of fact, the proportion of households with female kin servants in Lancashire textile districts was no higher than the national average. However, while nearly 10 per cent of all the households in England and Wales employed classic servants, the corresponding figure for Lancashire textile districts was less than half of that. Taken together, these two factors lead to the observation that kin servants accounted for a larger proportion of all female servants in the textile districts.

This result, however, should not be interpreted as a statistical artefact; instead, it reveals key elements of the operation of the household economy in the local economic environment. Jobs in textile factories constituted a more appealing form of employment, with higher pay and greater personal autonomy, than domestic service.[65] Competing with factory employment, domestic service struggled to attract female labour in Lancashire textile districts. When the formal labour market fell short of meeting the demand for domestic service, female relatives stepped in to ease the pressure,[66] which then contributed to the high frequency of female kin among servants in Lancashire textile districts. However, as alluded to before, not all female relatives undertaking service-related work would have been recorded as servants. Table 5 shows that, while less than 30 per cent of households in England and Wales had co-resident female relatives, this figure was nearly 40 per cent in Lancashire textile districts. One of the key reasons behind this high co-residence rate was probably the heightened demand for domestic help in textile districts.[67] However, it did not lead to a higher proportion of households being recorded with female kin servants in these districts, again suggesting an under-reporting of female kin's work in the CEBs.

Similar patterns are also evident in the coal mining districts. Coal mining families exemplified the breadwinning–homemaking model in which male coal miners provided the household income while wives, daughters, and other female relatives provided domestic service at home.[68] Due to the indispensable nature of female relatives' work in the home, it has been shown that mining families kept female kin such as daughters at home for much longer on average.[69] However, female kin's evident and intensive level of domestic work within the home did not translate

[65] McIvor, *A history of work*, p. 188; Steinbach, *Women in England*, p. 23.

[66] Anderson, *Family structure*, pp. 68–78.

[67] Ibid.

[68] See Humphries and Thomas, 'The best job'.

[69] See Day, 'Leaving home', pp. 66–9.

into high enumeration rates of female kin servants in the mining district.[70] This again constitutes a clear case of the CEBs under-reporting female kin's domestic work within the home.

In short, not only does the recording of female kin servants appear to indicate female relatives' genuine labouring activities, not all of these activities were recorded. This caveat bears important implications for our new estimate of the number of female servants in the next section.

VI | TENTATIVE SUGGESTIONS

This article argues that female kin servants performed work similar to that of classic servants, and that they should therefore be considered part of the labour force. Furthermore, the caveats mentioned in the last section suggest that, to re-estimate the number of women in domestic service, we need to move beyond the simple inclusion of female kin servants into employment totals and must also account for those female kin whose work was not acknowledged in the census. This section offers two tentative approaches to do so. The first method, based on a logit regression, uses information drawn from households with female kin servants to infer the likelihood that co-resident female relatives in households without recorded female kin servants were engaged in domestic service. The second method draws on the fact that co-residence did not occur randomly but rather signals a demand for female kin's domestic work to estimate how many co-resident female relatives were kin servants.

In the first method, we restrict our sample for the regression estimation to enumeration districts where at least some households were recorded with female kin servants: Because the method uses these households as a 'model' to establish household characteristics associated with having female kin servants, it requires using information from those districts where discernible efforts were made to acknowledge female relatives' work.[71] We can then identify other households with similar characteristics, and argue that the female kin in those households were also likely to have worked in domestic service. We identify household characteristics associated with the presence of female kin servants by obtaining the logit estimators of the equation that follows. The unit of analysis is at the household level and, as the recording of female kin servants could only occur in households with female relatives, we further limit our sample to households with co-resident female relatives.

$$Y_{i,c} = \beta_1\, HeadSex + \beta_2 HeadAge + \beta_3 AgeSqr + \beta_4 HeadSingle + \beta_5 HeadMarried$$
$$+\beta_5 HHDSize + \beta_6 ClassicServt + \beta_7 DependenceRatio + \beta_8 FemaleRatio$$
$$+ \sum \beta_k FemaleRelats + \sum \beta_j HeadOccs + CountyFixed + \varepsilon_{i,c}$$

$Y_{i,c}$ takes the value of 1 if household i in county c has a female kin servant, and 0 otherwise. $HeadSex$ takes the value of 1 if the household head is male, 0 if female. $HeadAge$ shows the household head's age. $AgeSqr$ is the square of the household head's age. $HeadSingle$ takes the

[70] We focus on the northeast coal mining counties of Durham and Northumberland and define the coal mining RSDs as those where more than 10 per cent of the adults worked in coal mining. Within the mining districts, 1.5 per cent of households had female kin servants, while the national average was 1.8 per cent. In all, 7.5 per cent of households within the mining districts had classic servants, while the national average was 9.1 per cent.

[71] Our control group therefore is made up by the households without a female kin servant, but only in the enumeration districts where we can find recordings of female kin servants.

value of 1 if the household head is listed as never married, 0 otherwise. *HeadMarried* takes the value of 1 if the household head is married, 0 otherwise. *HHDSize* is the household size. *ClassicServt* is a dummy variable taking the value of 1 if the household has a female classic servant. *DependenceRatio* shows the ratio of dependents within the household. It is calculated as the proportion of household members who are aged either under 10 years or over 60 years. *FemaleRatio* shows the share of household members who are female. *FemaleRelats* is a group of dummy variables indicating whether the household has a daughter, a mother, a sister, a niece, or other female relatives. *HeadOccs* is a group of dummy variables controlling for the household head's occupation. They include the top 10 male and female entrepreneurial occupations as well as the occupations that were frequently associated with the presence of female kin servants as listed in table 2.[72] *CountyFixed* controls for county fixed effects such as urbanization and economic structure. It should be stressed that we are not claiming any causal link between the presence of female kin servants and any of the explanatory variables in our estimation – instead, we are using a regression method merely to arrive at estimated correlations between having female relatives providing service-related labour and various household characteristics. The estimated coefficients are reported in appendix A2.

The estimated coefficients are then applied to all households with co-resident female relatives but no female kin servants. The resulting average value of the dependent variable among these households – the likelihood of having female relatives providing service-related labour in the household – is 0.073. Since there were approximately 940 000 households with co-resident female relatives but no female kin servants, this implies that, apart from those approximately 80 000 female kin servants recorded in the CEBs, there were probably another 70 000 (940 000*0.073) co-resident female relatives who carried out work similar to that of a classic servant but were not explicitly recorded as such. They should be included in the female employment totals.

The resulting estimate should be considered an absolute lower-bound estimate for the following reasons. Firstly, even within the enumeration districts from which we draw our estimation sample, it is more than likely that some householders did not assign a servant occupational title to their co-resident female relatives even when they performed service-related activities. Hence, our estimated coefficients are most likely downwardly biased. Secondly, many female relatives most probably undertook domestic work in the home on occasion, even when this was not their main socioeconomic function within the household. On an individual level, this occasional help may not have sufficed for householders or census enumerators to assign these women the occupational title 'servant' but, on the aggregate level, this must have constituted a sizable share of total labour inputs in domestic service. Our estimation cannot account for this. Furthermore, we did not include wives in our analysis. Wives were always the principal agents in domestic duties. However, they were rarely assigned a servant title. To householders and enumerators, wives' role

[72] We choose those occupations, as the households headed by people engaged in those entrepreneurial occupations on average had more servants and more extended family members to either help in the family business directly or free other household members from domestic duties. See Smith et al., 'Household and entrepreneurship', pp. 105–6. The list of top 10 female entrepreneurial occupations can be found in van Lieshout et al., 'Female entrepreneurship', p. 455. They include: 'dressmaker', 'laundress', 'farmer', 'milliner', 'shirtmaker', 'lodging house keeper', 'grocer', 'shopkeeper', 'straw plait manufacture', and 'innkeeper'. The list of top 10 male entrepreneurial occupations is provided to us by Harry Smith based on Bennett et al., *British business census of entrepreneurs*. They include: 'farmer', 'shoemaker', 'innkeeper', 'tailor', 'grocer', 'carpenter', 'butcher', 'blacksmith', 'hawker', and 'gardener'. Reassuringly, these three groups of occupations have a considerable degree of overlap. Only four occupations from table 2 – 'independent means', 'domestic servant', 'agricultural labour', and 'general labour' – are not covered by the occupations listed above. They are also included for the regression analysis.

in domestic duties was so apparent that it required no occupational title to describe it. Using the recording of female kin servants to gauge whether wives were engaged in domestic duties is a moot point. Hence, even though our estimate nearly doubles the number of female kin servants, it does not account for the majority of labour inputs into domestic work, namely, that from wives. Last but not least, due to the aforementioned issue of enumeration district mis-identification, the districts from which we draw our sample may in reality contain some where no female kin servants were recorded at all, and hence our control group may contain households in which the absence of recorded female kin servants simply represented an instance of under-recording, and not the absence of female kin's domestic work. This also leads to downward bias in our estimation.

In light of these potential shortcomings, we may argue that, while the aforementioned method makes statistical sense, its accuracy may have been obstructed by problems in our data. To address this issue, we develop another estimation method from a different angle. This utilizes the fact that co-residence did not happen randomly, and argues instead that the 'self-selection' of households into co-residence arrangements signals the demand for female relatives' work.

Given the prevalence and predominance of the nuclear family form in England and Wales in the period,[73] instead of asking which types of households were more likely to have female relatives working at home, a better question to ask is perhaps why families kept female relatives, particularly those extended family members and daughters beyond the conventional leaving home age, in the first place. Given the well-documented reciprocal nature of co-residence,[74] female kin must have made significant contributions to the household economy to initiate and/or sustain the co-residence. Their contributions could come broadly in two forms – monetary contribution from gainful employment outside the home or service-related work at home. Those who were gainfully employed on a regular basis outside the home were probably attributed an occupational title in the census.[75] For others who were not regularly employed outside the home, what they lacked in monetary contribution must have been compensated for by their labouring activities within the home, either in the form of assistance with the family business or of help with domestic duties. The unpaid nature of their work in the home may have led householders or enumerators not to assign them any occupational descriptors, but their labouring activities are nevertheless similar to that of classic servants, and hence these individuals should be considered part of the workforce. Therefore, it might be argued that, regardless of household characteristics, the very fact of co-residence itself may suffice to infer the presence of some female relatives' work within the home. We hence use information on the number of female co-resident relatives without a distinctive occupational title within each household to re-estimate the number of female kin servants, particularly those in households where the family was the production unit or where the demand for domestic help was high. The results are presented in table 6.[76]

[73] Laslett, *Family life*, pp. 12–49.

[74] Anderson, *Family structure*, pp. 162–5.

[75] Shaw-Taylor, 'Diverse experiences', pp. 34–42; McGeevor, 'How well'.

[76] The top 10 male entrepreneurial occupations are kindly shared with me by Harry Smith. Only two of these occupations, blacksmith and hawkers, do not appear in the list of male occupations that accounted for 60% of female classic servants' employment. The full list of top 10 male entrepreneurial occupations can be found in footnote 72. The top 10 female entrepreneurial occupations are taken from van Lieshout et al, 'Female entrepreneurship'. Only two of these occupations, shirtmaker and strawplaiter, do not appear in the list of female occupations that accounted for 80% of female classic servants' employment. We use a higher threshold because female heads of 'independent means' alone covered c. 40% of female classic servants' employment. The full list of top 10 female entrepreneurial occupations can be found in footnote 72.

TABLE 6 Re-estimations of the number of adult female domestic servants (general), their share of female employment, and female labour force participation rate in England and Wales, 1851

Household head occupation selection	Estimated additional number of female kin servants (excluding wife)	Estimated additional number of female kin servants (including wife)	Estimated number of female domestic servants (excluding wife)	Estimated number of female domestic servants (including wife)	Estimated domestic servant share of female employment (excluding wife) (%)	Estimated domestic servant share of female employment (including wife) (%)	Estimated FLFPR (excluding wife) (%)	Estimated FLFPR (including wife) (%)
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)
Group A	169 568	525 613	767 938	1 123 983	31.3	40.0	41.0	47.0
Group B	133 834	441 862	732 204	1 040 232	30.3	38.1	40.4	45.6
Group C	119 371	347 446	717 741	945 816	29.8	35.9	40.2	44.0

Note: all the calculations presented in this table only concern adult women aged 15 years or above. The number reported under the occupational heading 'domestic servant (general)' for adult women in the published census report was 524 488. The number of female kin servants identified in the CEBs was 73 882. The un-revised domestic servant's share of female employment, based on the author's own calculation using the published census report, is 23.7%. The un-revised adult female labour force participation rate (FLFPR) is 37.0%. Column (IV) = 524 488 + 73 882 + column (II). Column (V) = 524 488 + 73 882 + column (III). The re-estimations of domestic servants' share of female employment (VI) and female labour force participation rate (VIII) are then based on column IV. The re-estimations in columns VII and IX are based on column V. Group A: For households headed by men, we choose the male head occupations that accounted for 60% of female classic servants' employment (we exclude agricultural labour from the selection), top 10 male entrepreneurial occupations, and occupations in textile manufacturing as well as in coal mining. For households headed by women, we choose the female head occupations that accounted for 80% of female classic servants' employment (we exclude domestic servant and uncertain occupation from the selection), top 10 female entrepreneurial occupations, and occupations in textile manufacturing. Group B: For households headed by men, we choose the top 10 male entrepreneurial occupations, and occupations in textile manufacturing as well as in coal mining. For households headed by women, we choose the top 10 female entrepreneurial occupations and occupations in textile manufacturing. Group C: For households headed by men, we now only choose the top 10 male entrepreneurial occupations. For households headed by women, we now only choose the top 10 female entrepreneurial occupations.

Source: 'Occupations of the people', *Census of Great Britain 1851* (pp. 1852–3, LXXXVIII), and Schürer and Higgs, 'Integrated census microdata'.

We limit our sample to female relatives aged between 15 and 50 years old to focus on those of working age, who were therefore more likely to contribute to, rather than receive, service-related work. We further limit our sample to households without any classic servants to focus on those households where female relatives were most likely to be the main providers of service. We select households that had family-based businesses, or a high level of demand for domestic help, based on the household heads' occupations. Different groups of occupations under consideration are reported in column I. For reasons explained before, we then take the number of co-resident female relatives without any occupational title, or those who were recorded under the occupational column as someone's daughter, sister, niece, or mother in these households as the estimated extra number of female kin servants. The estimations are reported in column II.

Even our most conversative estimate, in which we only target households headed by those in the top 10 entrepreneurial occupations, arrives at a figure of nearly 120 000 more female kin servants than were recorded in the CEBs. If we relax our restrictions by also including in our sample households where male heads worked in textiles or coal mining as well as those where female heads worked in textiles, the estimated number of additional female kin servants would imply doubling that recorded in the CEBs. Consequently, as shown in column VI, this would imply an increase in domestic servants' share of female employment from 23 per cent to approximately 30 per cent.

Similar to the other method presented earlier, the current estimate does not consider wives. By way of demonstration of the possible implications of wives' work within the home, we add in wives from households with family businesses or high demand for domestic work to our earlier estimates and present the results in column III. Household selection criteria based on the heads' occupation remain the same. For reasons stated before, we only select the wives who did not have any occupational title or who were recorded as 'someone's wife' in the occupational column. We further restrict the sample to wives from the households in which there were no other female relatives present. Given our selection criteria, this subgroup of wives were probably engaged in various forms of work within the home in an even more regular and intensive manner than other wives. Even considering just this small fraction of wives' work within the home, the implication for our estimate is significant. Take household selection group B as an example: We estimate that nearly 450 000 female kin servants ought to be included in the employment totals. As a result, the new figure for female domestic servants, including both classic and kin, would be over 1 million (column V), and the estimated share of domestic service in adult women's employment would be about 40 per cent (column VII), as opposed to just over 20 per cent if calculated directly from the published census reports. Furthermore, there would be a nearly 10-percentage point increase in adult women's labour force participation rate, to more than 45 per cent.

VII | CONCLUSION

This article utilizes a novel dataset – a full sample of the digitized 1851 CEBs from the I-CeM project – to revisit and re-analyse the recording of female kin servants in the British census. Instead of dismissing it as a mis-specification of female occupation, we argue that it provides a unique opportunity to look into the interaction between gendered work, household economy, and the wider market economy.

By linking the recording of female kin servants with a number of socioeconomic factors on the individual, household, and local levels, we find that its recording reflects female relatives' genuine labouring activities, and points to three distinct scenarios – female kin working as day servants,

performing domestic work in their relatives' homes, and providing work to support their relatives' family businesses. In all cases, female kin servants carried out work similar to that of classic servants. Therefore, it may not be appropriate to continue gauging whether women were employed in domestic service through criteria such as whether their work took place within or outside the home, or was paid in cash or not. This echoes the development and feminist economists' earlier suggestion of bringing women's domestic work out of the statistical shadow in recognizing its contribution to the household economy, market economy and to society's general wellbeing. Though most female kin servants in our sample were probably working at home without being paid by wages, instead of following the conventional definition, they should be considered part of the labour force in the same way that classic servants are, and should therefore be included in the employment totals.

We also reveal a surprising finding that there were male kin servants enumerated in the CEBs, at an enumeration rate even higher than that of female kin servants. Though small in absolute numbers, this group of male servants may nevertheless reveal some new aspect of gender roles in household and market economies. It invites more serious efforts in considering men's domestic labour in future research.

We further attempt to estimate the number of female relatives who were likely engaged in domestic service but were not recognized as such in the CEBs. Using a simple regression method, we argue that, as an absolute lower bound estimate, the number of female kin servants should be doubled. Using a different method focusing on co-resident female relatives in households that were most likely to have high demand for kin's work, we estimate that the number of female domestic servants could increase from about half a million, as reported in the published census total, to three-quarters of a million. Moreover, if we take into account even just a small selective group of married women, the estimated number of female domestic servants surpasses 1 million. This is equivalent to an increase in domestic service's share of female employment from approximately 25 per cent to 40 per cent. In opposition to the popular assertion that the recording of 'female kin servant' is a mis-specification of occupation and over-reporting of female employment, we find that the British census under-reported women's work in domestic service – and significantly so.

The findings presented in this article potentially have important implications for our assessment of the impacts of industrialization on women's work. The new estimates presented here highlight female occupational structure as an area of particularly slow progress, in an economy that was experiencing significant change in its organization, technology, and energy sources. The new estimated number of over 1 million female domestic servants is larger than the entire adult female workforce employed in manufacturing activities of all sorts, and four times as large as those employed in the modern sectors of cotton and woollen manufacturing.[77] Of course, it is wrong to think that female relatives' work at home was exclusively about creating domestic comfort and convenience: As shown in this article, it also covered a wide spectrum of economic activities closely linked to marketable production and exchange. However, many such activities were related to the traditional sectors of agriculture, hospitality, and artisan productions. These industries were barely touched by new forms of production organization or technology. Industrialization brought in pockets of expanding job opportunities and financial autonomy for

[77] Based on B.P.P.1852-3, 'Occupations of the people', *Census of Great Britain 1851*, there were just over 900 000 adult women employed in the secondary sector of manufacturing. The corresponding figure for cotton and woollen manufacturing was just over 250 000. The unrevised number of adult female domestic servant was just under 525 000.

women.[78] But once we take into account female relatives' service-related work, the impacts of industrialization on most women's experiences at work appear limited. The importance of the traditional sectors for women's employment, even as late as the mid-nineteenth century, becomes even clearer.

In summary, whether working as day servant, as unpaid domestic help, or as part of the family business unit, many female relatives, whether explicitly recorded as servants or not, made important contributions to the household and market economy. They were just as much a part of the labour force as their sisters working in masters' parlours, craftsmen's workshops, and steam-powered factories. It is now our turn to acknowledge this.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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