

STILL-BIRTHS AND THE MEASUREMENT OF URBAN INFANT MORTALITY RATES c.1890-1930

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Introduction

Before they were first compulsorily registered in 1927, still-births could be buried without the registration certificate that was required for all other interments. The purpose of this paper is to assess the possible extent of still-births in a selection of towns and cities in England towards the end of the nineteenth century. For historical populations it is now accepted that levels of mortality and morbidity were significantly higher for city dwellers compared to their rural counterparts. The highest price of urbanisation, in mortality terms, was certainly paid by the most vulnerable members of society: infants. During the period under consideration, national rates of infant mortality (IMR) fell from around 150 per 1,000 live births in 1890 to about 60 per 1,000 in the 1930s.¹ However, the variability across the urban system was wide. In 1890, for example, the registered IMR in Preston was 223 per 1,000 live births, whilst in Bath it was only 165 per 1,000.² The question of how far the imperfect system of still-birth recording may have affected these levels of infant mortality will also be discussed.

Still-birth legislation

In September 1893, a Select Committee on Death Certification was set up in Parliament to investigate the effectiveness and comprehensiveness of the civil registration system with particular reference to the efficiency of death recording. Most of the Committee's ten recommendations concerned the process of death certification, registration and burial in England and Wales. However, the ninth referred specifically to still-births and stated:

That still-births which have reached that stage of development of seven months should be registered upon the certificate of a registered medical practitioner, and that it should not be permitted to bury or otherwise dispose of the still-birth until an order for burial has been issued by the registrar.³

Evidence given to the Committee had suggested that abuse of the existing law was widespread. Although the burial of a dead infant as if still-born carried with it the risk of a £10 penalty,⁴ this was not, apparently, an adequate deterrent. The law regarding still-births carried with it a number of gaping loopholes which, in the opinion of the Committee, facilitated numerous

opportunities for the concealment of crime. Unlike all other burials, which required the registrar's certificate, still-births could be buried simply with either a doctor's certificate, a coroner's order in the case of an inquest, or with the declaration of a 'qualified informant'. As the Committee observed, this latter provision regarding the definition of a 'qualified informant' was wide open to interpretation, since:

[T]he certificates which are regarded as sufficient authority for burial of still-born children in public burial grounds are far from being satisfactory. Any person can make a statement in writing that a child is still-born, and if the undertaker can be induced to accept the certificate – and it practically rests with him to decide as to its sufficiency – burial would take place.⁵

For persons wanting to conceal the murder of a child, for example, this could be manipulated to their advantage. However, the 'certificate' from the mother of a still-born child would also be taken as authority for burial and we must therefore ask, in the context of this discussion, were these certificates genuine in all cases? Unfortunately, we cannot escape the fact that the widespread opinion of the medical community was that the birth of an illegitimate child was sometimes concealed by the parents.⁶ Once again we can use the delicate words of the Select Committee to outline the nature of this problem:

In the case of illegitimate children the fact that a still-birth has not to be registered, coupled with the desire for secrecy, is an inducement to a certain class of midwives to ensure that the child be still-born.⁷

The wording may be diplomatic, but the meaning clearly is not.⁸ The Committee were intimating in no uncertain terms that the murder of babies during childbirth, especially illegitimate ones, was common enough to require a change in the law. In fact, in the eyes of the Select Committee, interpretation of the existing law more or less encouraged this practice. A Parliamentary Return, **Still-births, England and other countries**, published in June 1893, appears to have convinced the Committee that the burial of dead live births as still-births was widespread. As its title suggests, the Return was intended to afford international comparison concerning still-birth registration and a questionnaire was circulated among all the civil registration authorities in Europe. The seventh question asked of each authority, 'what are the penalties for criminally causing a child to be still-born?' The response in the English case ran as follows:

Where there is no procuring of abortion, the killing of a child in the act of birth, and before it is fully born, is not an offence by the present law, although, if injuries are inflicted before birth which cause the child's death after the birth, the law of murder applies.⁹

As the Committee aptly commented, '[i]f this be a correct statement of the law, it requires revision'. The interpretation, in a somewhat circuitous manner, certainly represents an admission on behalf of the authorities that they were powerless in detecting the burial of live births as still-births.¹⁰

Rather than this legal inducement which helped conceal crime, it was also argued that there was a less sinister, and perhaps more important, economic incentive to have a dead infant buried as still-born, particularly for the poorer classes. Evidence given to the Committee showed that money could be saved on funeral expenses if the child was buried as still-born. For example, Frederick Lowndes, a Liverpool practitioner, noted that the difference in Liverpool could be between 1s.6d. and 7s.6d., whilst St Pancras Burial Board in London charged 7s.8d. for the burial of a live born child as opposed to 2s. for a still-born one:

[I]t seems to me that the poor will never be induced to see why they should pay, what is to them a very serious sum, merely because the child has breathed and died very soon after its birth, while on the other hand they have to pay a less sum for a child that is still-born.¹¹

The crux of this matter is, of course, that according to the law of civil registration, still-births were treated as if they had never even existed, being registered as neither a birth nor a death. People unaware of the law who may have brought a doctor's or midwife's still-birth certificate to the local registrar were turned away without the fact being registered.¹² They would not even be obliged to bury the body in a burial ground, but without a certificate were well within the law to inter it on private land. John Sykes, the Medical Officer for St Pancras, was of the opinion that a 'good many such burials' took place. Unconsecrated sections of burial grounds were even set aside for such purposes, legitimately one might add.¹³ Despite this, not all the Committee's witnesses were convinced of the value of registering still-births. Although as a vital statistician William Ogle (William Farr's successor as Superintendent of Statistics at the General Register Office) did 'quite recognise the value of having information about still-born children', he also considered that the problems encountered in the procurement of such information would be too great. Even if a definite period of pregnancy were set whereby a birth could be considered a still-birth, how was this period of gestation to be proved, he asked?¹⁴ This is certainly a fair point, and is reflected in the fact that the Select Committee themselves could not reach a satisfactory conclusion on the matter.¹⁵ Furthermore, he refused to acknowledge that the registration process may have prevented cases of infanticide, preferring to favour the maintenance of a strict register of all still-birth burials.¹⁶ Unfortunately, and despite continued argument from the medical profession in favour of them,¹⁷ the Committee's recommendations regarding still-births and other aspects of death registration were not implemented until the Births and Deaths Registration Act of 1926.¹⁸ Despite efforts to the contrary, still-births remained unregistered until this Act, which became operational in July 1927. Private members' Bills of 1908 and 1914 both failed, although it has been suggested that the introduction of compulsory birth notification in 1915 improved matters, since it required those in attendance to notify a birth within 36 hours.¹⁹ Whilst this applied to still-births too, the annual still-birth rate recorded in this way over the years 1918 and 1926 was between 30 and 33 per 1,000 live births, which was probably substantially below the real figure.²⁰

Extent of still-births

The official figures given for the second half of 1927, the earliest date for which they are available, show that the national still-birth rate was 40 per 1,000 live births (obviously the inclusion of the still-births in the population at risk would reduce these values, but only by a couple of points per 1,000 at the most).²¹ Since from 1927 still-births had to be registered in order to be buried, and that each registration needed a certificate from either a registered medical practitioner or a registered midwife, it is likely that by this time the practice of burying a live born child as still-born had largely been reduced, if not eradicated altogether.

However, for the nineteenth- and early twentieth-centuries, the extent to which the under-registration of infant deaths was affected by this practice remains at best unclear. As noted earlier, it was a popularly held belief among the medical profession at this time that a number of the still-birth burials not certified by a registered medical practitioner had actually been live births.²² Frederick Lowndes was afraid that in Liverpool the 'making away with children that are born alive' was, 'very frequent, more frequent than it should be';²³ Yet we have no way of knowing the true extent of still-births – certified or otherwise – during the nineteenth- and early twentieth-centuries. Had a strict register of all still-birth burials been kept, as Ogle had suggested, then we might at least be able to use confidently the records of the various local Burial Boards (where, and if, they exist) as a reliable, quantitative indicator. That we know such registers were not assiduously kept lies in one document which sheds a valuable though frustratingly narrow beam of light on the still-birth issue as a whole. In 1890, a return of all still-birth burials in public Burial Board Cemeteries was compiled by Robert Rentoul, a Scottish physician, in an attempt to show the poor certification procedure of these burials and especially midwives' malpractice.²⁴ He had passed the results of this survey to Charles Cameron (who later pressurised for the appointment of the Select Committee on Death Certification and subsequently became one of its members) who ensured that it was printed as a Parliamentary Paper.²⁵ Tables 1 and 2 show Rentoul's findings for the London cemeteries and the cemeteries in a selection of five towns outside London.

The problems encountered in the interpretation of this source with regard to levels of infant mortality will be discussed later. However, we may first note that the Paper revealed an alarming situation with regard to certification. At a national level, more than 26 per cent of still-birth burials were uncertified by a qualified medical practitioner. For some cemeteries, such as Camberwell, Deptford St Paul and Woolwich in London; Everton and Toxteth Park in Liverpool; and Heaton Cemetery in Bolton, this figure exceeded 50 per cent. For some towns, the percentage of still-births buried without a certificate was almost twice the national average, as in Bolton (48.9 per cent), Liverpool (48.0 per cent), and Norwich (44.8 per cent), whilst Bath's was 23.8 per cent and Preston's only 10 per cent. In many cemeteries, still-births could represent a comparatively high proportion of all burials, but particularly in Battersea,

Table 1 The number of still-birth burials: London cemeteries and England and Wales, 1890

Burial Board Cemetery	Still-birth burials	Still-births buried without certificate (%)*	Total burials	Still-birth burials as a percentage of all burials
City	109	32.1	5,279	2.1
Battersea, St Mary	134	14.9**	713	18.8
Camberwell	178	84.3	3,551	5.0
Charlton	9	22.2****	244	3.7
Chiswick (Middx)	22	13.6	380	5.8
Deptford, St Paul	119	58.8	1,962	6.1
Fulham	143	25.2	1,772	8.1
Greenwich	64	0.0***	1,037	6.2
Hammersmith	84	17.9	1,575	5.3
Hampstead	31	3.2	836	3.7
Islington	206	23.3	4,821	4.3
Kensington	33	18.2	1,210	2.7
Lambeth	264	0.0	3,830	6.9
Paddington	124	15.3**	2,507	5.0
Plumstead	0	-	110	0.0
Putney	19	0.0	254	7.5
St Anne Soho	1	0.0	10	10.0
St George, Hanover Sq.	82	11.0	2,661	3.1
St Marylebone	89	43.8**	2,287	3.9
St Pancras	370	0.0***	5,398	6.9
St Saviour Southwark	38	0.0***	586	6.5
Wandsworth	58	0.0	847	6.9
Westminster (St Magt. & St John)	6	0.0	75	8.0
Woolwich	33	51.5	837	3.9
London total	2,216	21.2	42,782	5.2
England and Wales	17,335	26.3	257,285	6.7

Notes: No return given for Clapham, St Mary Newington, Stoke Newington, Streatham (no cemetery belonging to the parish) and St Leonards, Shoreditch (clerk stated all burial grounds in parish disused).

* i.e. certificate of a registered medical practitioner

** i.e. midwife's certificate used as burial certificate

*** i.e. no burials have taken place without the medical practitioner's certificate

**** i.e. buried upon the order of the coroner

Source: *Return of still-birth interments*, BPP 1890-91, vol.LXVIII, 655-75.

London; Lincombe in Bath; and again at Heaton in Bolton, although the figures for the towns as a whole do not diverge greatly from the national average of 6.7 per cent. It may be that some cemeteries were well known locally for a policy of burying still-births 'without competent testimony',²⁶ or perhaps had an unconsecrated area set aside for still-birth burials, as had been suggested by John Sykes in his evidence to the Select Committee.

Since a large proportion of the still-births were uncertified by a registered medical practitioner or, in some cases, even a midwife, any conclusions this source will bring us regarding both the still-birth rate or the extent of infanticide will of course be a matter of conjecture and debate. However, as the Paper represents the one and only national statistical return on the topic for the

Table 2 The number of still-birth burials: cemeteries of five provincial towns, 1890

Burial Board Cemetery	Still-birth burials	Still-births buried without certificate (%)*	Total burials	Still-birth burials as a percentage of all burials
Lincombe, Widcome & St James	35	28.6	332	10.5
St Michael	5	20.0	50	10.0
St Saviour	4	0.0	67	6.0
Twerton-on-Avon	17	0.0**	137	12.4
Walcot	18	44.4	328	5.5
Bathwick	1	0.0	26	3.9
Bath (total)	80	23.8	940	8.5
Heaton	133	55.6	1,204	11.1
Tonge	129	45.7	1,566	8.2
Farnworth	10	0.0	267	3.8
Bolton (total)	272	48.9	3,037	9.0
Anfield Park	64	28.1	3,033	2.1
Everton	23	78.3	1,743	1.3
Kirkdale	13	23.1	1,876	0.7
Toxteth Park	240	51.7	2,501	9.6
West Derby	43	48.8	1,271	3.4
Liverpool (total)	383	48.0	10,424	3.7
Norwich (total)	163	44.8	1,803	9.0
Preston (total)	150	10.0	2,995	5.0

Notes: * i.e. certificate of a registered medical practitioner

** i.e. no record kept

Source: **Return of still-birth interments**, BPP 1890-91. LXVIII, 655-75.

whole of this period, it is certainly worthy of further investigation. Therefore, it is necessary to establish the exact nature of the tables presented in the Paper. To begin with, private cemetery companies and church graveyards were not included. The 1,333 Burials Boards included in the survey – where, it was suggested by Rentoul, still-birth burials were fewer and the restrictions on certification more rigid than in church graveyards – were governed by the local authorities, and it was the clerk of each Board who provided the requested information.²⁷ In turn, only about half of all the nationally registered deaths officially published in the GROs 1890 **Annual report of the Registrar-General** were captured in the burial totals. This causes serious problems when the calculation of a still-birth rate for urban areas is attempted. First, if all deaths are not accounted for by the burials, then it follows that neither are all the still-births. Second, one cannot be sure if the numerator and the denominator in the equation apply to exactly the same geographical area (since the total number of live births is extracted from the **Annual Report**). In all probability they do not. The only way to minimise this problem is to ensure that all the Burial Boards listed under the name of the registration district (or its constituent sub-districts) in the 1890 **Annual Report** correspond as closely as possible.²⁸ So, in Table 2, for example, six Burial Board Cemeteries were listed as being in or near Bath; three in Bolton; five in Liverpool; and one each in Norwich and Preston.

Table 3 Cemetery still-birth rates per 1,000 live births (SBR): England and Wales, London and five provincial towns, 1890*

	Still-births **	Live births ***	Cemetery SBR	Cemetery Burials **	Registered deaths	Inflation factor	Corrected SBR
Bath	80	1,784	44.8	940	1,344	1.43	64.1
Bolton	272	7,177	37.9	3,037	5,204	1.71	64.8
Liverpool	383	24,066	15.9	10,424	18,917	1.81	28.8
Norwich	163	3,131	52.1	1,803	2,004	1.11	57.8
Preston	150	4,735	31.7	2,995	3,599	1.20	38.0
London	2,216	128,161	17.3	42,782	87,689	2.05	35.4
England and Wales	17,335	869,937	19.9	257,285	562,248	2.18	43.6

Notes: See text for the calculation of the still-birth rates and the inflation factors.

Source: * The definition of each of the urban areas in this table, with regard to registration districts, can be found in, N.J. Williams, 'Infant and child mortality in the urban areas of nineteenth-century England and Wales: a record linkage study', (Unpublished Ph.D. thesis, University of Liverpool, 1989), Appendix 1.

** See Tables 1 and 2 for these totals.

*** Taken from the **Annual Report of the Registrar-General 1890**, corresponding to the urban areas shown in the first column of this table.

Given what we know about still-birth rates in other nineteenth-century populations, what I have termed the 'cemetery' still-birth rates (SBR, expressed as the number of still-birth interments per one thousand birth events, i.e. live births in the registration district plus the cemetery still-birth burials) shown in Table 3 are very interesting. Even though it is likely that a number of still-births will not have been recorded in these returns (because of the omission of church graveyards and private burial grounds), some of the rates are very high indeed. Even in its crude form, the figure for Norwich (one cemetery; a single registration district), at 52.1 still-births per 1,000 birth events is high by international standards, as are the rates registered in Bath and Bolton. For example, Roger Schofield has shown that between 1751 and 1850, 28 per 1,000 of all Swedish births were still-births.²⁹ Meanwhile, in 1866-85, the values for John Knodel's six German districts ranged from 26 to 48 per 1,000 live births.³⁰ However, most of the other figures for the English places are at levels we would consider to be fairly low, with the larger cities such as London and Liverpool at the bottom of the urban list.

Arguably, a closer reflection of the true still-birth rate would be arrived at if those still-birth interments unrecorded here could be incorporated into the 'cemetery' still-birth rate equation. An attempt at this has been made in the final column of Table 3, using an inflation factor which increases the number of still-births by the proportion to which registered deaths exceeded burials. The same method of calculating the SBR applies, but with the new still-birth figure substituting the old.³¹ In some instances, the results are startling. The national figure doubles from 19.9 to 43.6 per 1,000 birth events. In Bolton's case, the corrected SBR jumps by more than 20 per 1,000 to 64.8, and Bath's from 44.8 to 64.1. The figure in Norwich changes little, rising to 57.8 per 1,000. Liverpool and Preston register lower corrected SBRs than average. At 35.4 per 1,000 birth

Table 4 Infant mortality rates per 1,000 live births, corrected for uncertified still-births: England and Wales, London and five provincial towns, 1890

	Registered IMR	No. of uncertified still-births	Corrected IMR*			
			(25)	(50)	(75)	(100)
Bath	165	19	168	170	172	174
Bolton	168	133	171	175	179	183
Liverpool	171	184	172	174	175	177
Norwich	181	73	186	191	195	200
Preston	223	15	223	224	224	225
London	163	470	163	164	165	166
England and Wales	151	4,562	152	153	154	155

Notes: * figures in parentheses show the percentage of uncertified still-births included in the infant death totals.

events, London's rate is very close to the first officially registered figure of 32 per 1,000 live births in 1927 and is also below the national average. This may be due to the high number of hospital births in the capital.³²

Two questions arise from these results. First, can we believe these rates? Secondly, to what extent are they a reflection of the under-registration of infant deaths? Although it is impossible to fully resolve the latter, any estimates we may make depend on the answer given to the former, which, I believe, should be in the affirmative, especially if we consider the evidence on the level of still-births towards the end of the period under consideration. After the introduction of the 1926 Act, when the registration of still-births became compulsory, the official rates were initially only provided at an aggregate district level. Urban districts registered marginally higher rates than rural ones. For County Boroughs, the rate was 42 per 1,000 live births; for other Urban Districts, 41; and for Rural Districts, 38. Assuming that the 1926 Act managed to prevent the malpractice of burying live births as still-born, then the figures shown in the final column of Table 3 appear to be a fair approximation of the level of still-births in the late nineteenth century.

Still-births and infant mortality rates

This leaves us with the question of how far the number of live births buried as still-born distorts the registered rates of infant mortality. For the moment, let us assume that a certain percentage of the uncertified still-birth interments recorded by the Burial Boards were actually live births. Table 4 does this for England and Wales, London and the five provincial towns. The officially registered IMR of each place has been recalculated by including in the number of infant deaths a certain percentage of the uncertified still-births recorded by the Burial Boards (the remaining registered still-births have not been included in either the infant death or the live birth totals). Presuming only 25 per cent of uncertified still-births were live births resulting in an infant death, then the

figures are little changed. However, for some places, the inclusion of a greater percentage of the uncertified still-birth burials gives considerably higher IMRs. This is most noticeable in Norwich, where incorporating 50 per cent of the uncertified still-birth interments (a little over 35 infant deaths) increases the registered IMR by 10 infant deaths per 1,000 live births. Were all uncertified still-births in Norwich counted as live births, then the IMR would reach 200 per 1,000. Whilst Norwich provides the most extreme instance, there are also appreciable increases in Bath and Bolton, too. Of course, these estimates amount to little more than extremely rough guesswork, and in the case of Norwich, for example, a relatively small number of deaths can markedly affect the overall IMRs disproportionately. In balance to this, we may again remind ourselves that the Burial Board returns must have only captured a limited percentage of all the still-birth burials in each town.

Conclusion

More work could profitably be carried out on this valuable source material. For example, a county-level study would perhaps yield more reliable estimates to help untangle the question of infant death under-registration more adequately than has been possible here. In addition, the source would be a useful starting point for any researcher wishing to carry out a local study on still-birth burial practices and their possible effect on the rates of infant mortality. The prevalence of still-births is one demographic way in which the success or failure of the infant welfare system – or pregnancy notification schemes such as that operating in Huddersfield from 1916 – may be evaluated.³³ This paper has made an attempt to quantify the extent of still-births and examine the question of how they may have deflated levels of infant mortality in urban areas. Whilst very localised burial practices and customs make generalisations difficult to make, on the evidence presented here it would appear that those places likely to have been affected most were the smaller provincial towns such as Norwich and Bath. This, in turn, would suggest that the infant 'urban penalty' was paid in relatively small urban areas to an extent that may not hitherto have been expected.

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NOTES

1. R.I. Woods, P.A. Watterson and J.H. Woodward, 'On the causes of rapid infant mortality decline in England and Wales, 1861-1921. Part I', **Population Studies**, 42 (1988), 351.
2. For a full discussion of this see N. Williams and G. Mooney, 'Infant mortality in an "Age of Great Cities": London and the provincial towns compared, c.1840-1914', **Continuity and Change**, 9 2 (1994).
3. **Second Report of the Select Committee on Death Registration**, BPP 1893-94, II, para 101.
4. **Births and Deaths Registration Act, 1874**, section 18.
5. **Second Report**, para 85.

6. However, it has been noted that the decline in fertility during the last two decades of the nineteenth century probably led to a reduction in the levels of infanticide: certainly the attentions of the popular press turned from infanticide to abortion. R. Sauer, 'Infanticide and abortion in nineteenth-century Britain', **Population Studies**, 32 (1978), 81-93.
7. **Second Report**, para 86.
8. For a discussion of the working of the registration and burial systems with regard to infanticide, see L. Rose, **The massacre of the innocents. Infanticide in Britain, 1800-1939**, (London, 1986), 120-35.
9. **Still-births, England and other countries**, BPP 1893-94, XI, 355-468.
10. In fact, in 1891 only three prosecutions were made for either burying a still-born child without the certificate, or for the burying as still-born infants who had been born alive, **53rd Annual Report of the Registrar-General, 1890**, xxiii. We know from the Registrar-General's evidence that these prosecutions were against sextons or burial authorities: B.P. Henniker, Responses to questions 220-222, Minutes of Evidence, **Second Report**.
11. F.W. Lowndes, Response to question 1692, Minutes of Evidence, **Second Report**.
12. C.R. Barnes, Response to question 388, Minutes of Evidence, **Second Report**.
13. J.F.J. Sykes, Response to questions 570-72, Minutes of Evidence, **Second Report**.
14. W. Ogle, Response to questions 4088 and 4094-96, Minutes of Evidence, **Second Report**.
15. It would appear the gestation period of seven months, given in the ninth recommendation, was only chosen because it was that accepted in Germany and Denmark and 'affords a convenient starting point for registration', **Second Report**, para 90.
16. W. Ogle, Response to question 4090, Minutes of Evidence, **Second Report**. Ogle here was using the same arguments as George Graham, who has been blamed for the laxity of still-birth registration in the 1874 Births and Deaths Registration Act. Graham was then the Registrar-General. L. Rose, **The massacre of the innocents**, 131.
17. See, for example, F.W. Lowndes, 'Death certification', **Public Health**, 6 (1893-94), 202-05; T.E. Hill, 'Death certification and registration', **Public Health**, 6 (1893-94), 208-10. At this meeting, the medical officers of health carried a motion which, '...urges on Parliament to take legislative action to put into force the recommendations of the Select Committee...'; J.R. Kaye, 'Certification and registration of death - the urgent need for improvement', **Public Health**, 14 (1901-02), 13-19; and E.M. Smith, 'The amendment of the Births and Deaths Registration Act', **Public Health**, 19 (1906-07), 559-63.
18. **Births and Deaths Registration Act, 1926**.
19. L. Rose, **The massacre of the innocents**, 134. The notification of births, including still-births, had been optional from 1907 and had been adopted in many towns across the country. See H. Marland, 'A pioneer in infant welfare: the Huddersfield scheme, 1903-1920', **Social History of Medicine**, 6 1 (1993), 49.
20. See 'Text' volume, **Registrar-General's Statistical Review of England and Wales, 1927 (New Annual Series 7)**, 128.
21. **Registrar-General's Statistical Review of England and Wales, 1927**, 130.
22. See, for example, Editorial, 'The burial of so-called stillborn children', **The Lancet**, 21 March (1891); and Lowndes' evidence in the **Second Report**.
23. F.W. Lowndes, Response to question 1690, Minutes of Evidence, **Second Report**.
24. Rentoul was preparing himself to give evidence to the 1892-93 Select Committee on Midwives Registration. L. Rose, **The massacre of the innocents**, 131-33.
25. **Return of still-birth interments**, BPP 1890-91, LXVIII, 655-75.
26. **Second Report**, para 84.
27. R.R. Rentoul, Response to question 3023, Minutes of Evidence, **Second Report**.
28. The names of many of the cemeteries listed here conveniently co-incide with that of the registration sub-district. Since the Burial Boards are listed alphabetically in the return, the sub-district names therefore provided a reasonably reliable search term, although the possibility remains that the figures of some Burial Boards interring bodies from the registration district under study have been omitted.
29. R. Schofield, 'Did the mothers really die? Three centuries of maternal mortality in "The world we have lost"', in L. Bonfield, R.M. Smith and K. Wrightson (eds), **The world we have gained**, (Oxford, 1986), 231-60.
30. J. Knodel, **Demographic behaviour in the past. A study of fourteen German village populations in the eighteenth and nineteenth centuries**, (Cambridge, 1988), Table B.1, 482-83.
31. Corrected still-birth rates = ((SB*d/b)/B)*1,000. Where:
 SB = still-birth burials
 d = total number of registered deaths
 b = total number of cemetery burials
 d/b = inflation factor
 B = live births

32. See L. Marks, "'Dear Old Mother Levy's': the Jewish Maternity Home and Sick Rooms Help Society 1895-1939', **Social History of Medicine**, 3 1 (1990), 81.
33. H. Marland, 'A pioneer in infant welfare', 41.

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