WILEY

The Collection and Utilisation of Official Statistics Bearing on the Extent and Effects of the Industrial Employment of Women

Author(s): Clara E. Collet

Source: *Journal of the Royal Statistical Society*, Vol. 61, No. 2 (Jun., 1898), pp. 219-270

Published by: [Wiley](#) for the [Royal Statistical Society](#)

Stable URL: <http://www.jstor.org/stable/2979733>

Accessed: 05-03-2015 21:52 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Wiley and Royal Statistical Society are collaborating with JSTOR to digitize, preserve and extend access to *Journal of the Royal Statistical Society*.

<http://www.jstor.org>

JOURNAL
OF THE ROYAL STATISTICAL SOCIETY,
JUNE, 1898.

*The COLLECTION and UTILISATION of OFFICIAL STATISTICS bearing
on the EXTENT and EFFECTS of the INDUSTRIAL EMPLOYMENT of
WOMEN. By CLARA E. COLLET, M.A.*

[Read before the Royal Statistical Society, 15th March, 1898.]

The President, The Right Hon. LEONARD H. COURTNEY, M.P., in the Chair.]

ANY attempt to measure the extent of the industrial employment of women must, so far as official statistics are concerned, be based almost exclusively on the returns of occupations obtained every ten years by the Census Office. The approach not only of a new census, but of the first centenary of the English Census, makes it desirable to overhaul this statistical material with greater attention to its defects than can be given on its publication, when naturally the value of the information supplied to us is more obvious than the absence of facts which might be, but never have been given us.

It is, however, not only in order to secure reforms in methods of collecting and using statistical data that a critical examination of the census returns is required; every would-be reformer has to be on guard against the encroachments of other reformers, and so much is this the case with the census, that it would hardly be unfair to insist that any change proposed to be made by the census authorities involving the loss of any information hitherto supplied by them, should only be allowed after due notice to the nation, and after consideration of objections lodged against such action.

In examining the census statistics of the employment of women, this side of the question is especially worthy of attention. I venture to think that in this branch at least the census authorities, unlike most compilers of statistics, unduly depreciate the value of the returns published by them, and that because in some respects the returns for women are notoriously more inaccurate than those for men, they are inclined to assume that this greater defectiveness must be even more pronounced in the sections in which the returns for men are admittedly weak.

In this connection, therefore, it may be useful to consider how far, if at all, the returns for women with regard to

- (1.) Age,
- (2.) Occupation,
- (3.) Employers and Employed,

are misleading, bearing in mind that returns may be positively defective but relatively correct.

(I.) *Age*.—The inaccuracy in the age returns of women is illustrated in the Census Report by the following table, showing the exaggerated numbers returned as being of 20 and under 25 years of age :—

Col. ...	1	2	3	4
Date of Census.	Girls enumerated as 10 and under 15 Years of Age at each Census	Women enumerated as 20 and under 25 Years of Age, Ten Years later.	Calculated Survivors of the Girls in Col. 1, Ten Years later, on the basis of the last English Life Table.	Excess per Cent. of the Enumerated over Calculated Survivors in Col. 3.
1841	851,736	871,152	812,408	7'2
'51	949,362	969,283	905,526	7'0
'61	1,045,287	1,052,843	997,022	5'6
'71	1,208,469	1,215,872	1,147,900	5'9
'81	1,398,101	1,399,066	1,333,445	4'9

Whether the life table be correct or not, mis-statement of age at one or other of the age periods is obvious, by the fact that there are more returned as between 20 and 25 than were actually living ten years before between 10 and 15 years of age.

It is pointed out in the Census Report, and shown in the above table, that the error is diminishing; the question of whether it has been transferred to a later age period is not considered. Incorrect returns of this kind are all the more mischievous, that greater truthfulness in the next census results in greater relative error. The error is lessened by treating age returns in decennial groups. But it is not usually sufficiently emphasised that this age error does not affect all classes of returns equally.

Only a small proportion of women directly fill in their own census returns; in the great majority of cases they are filled in by their fathers or husbands or employers. The only reason for mis-statement of the ages of children by their fathers is the desire to escape the operation of the Education Acts and the Factory Acts, and would probably affect the returns for boys and girls about equally. The age limits, however, fortunately from a statistical point of view, allow of some misstatement of age without any error in the quinquennial grouping of age, although error would occur where the ages of the elder children had to be raised to

leave room for the younger ones above the prescribed age limit. Such misstatement would affect districts in which half-timers were much in request. The attempts to evade the Factory Acts in this respect are much rarer now than twenty or thirty years ago.

The age returns of wives would often be incorrect in cases where the wife was much older than the husband. But in working class circles, where comparatively early marriages are common, little importance is attached to a few years' difference on either side, and I doubt whether there is much objection to give the correct age.

The returns filled in by employers will be much less accurate. Domestic servants and shop assistants are the groups whose age returns will probably be the most inaccurate. The child of 14 will be called 15, and the girl of 19 will call herself 20, and both will appear in their wrong quinquennial groups. Both domestic servants and shop assistants have an interest in not seeming to be middle aged. But ideas as to what constitutes middle age change. The class of persons who, twenty years ago, were afraid of admitting themselves to be 25 years of age, would probably at the present time be content with remaining under 30, and this extension in the period of youth is probably the principal explanation of the diminution of error in the returns shown in the preceding table.

The greatest age error will probably be found in the returns of a not very important class, namely, middle class unmarried women in boarding houses and hotels, where the form is filled in by the proprietor.

With the exception of domestic servants, therefore, I doubt whether the age returns of any large section of wage earning women are to any great extent vitiated by wilful misstatement.

(2.) "The most laborious, the most costly, and, after all, perhaps the least satisfactory part of the census, is that which is concerned with the occupations of the people." This is the opinion expressed in the Census Report for 1881, and so far as the classification of men's occupations is concerned it is no doubt true. The difficulties in the way of correct classification of men's occupations under the 349 headings given in the Census Report are insuperable. If the occupation of every man and boy were given quite correctly and definitely in the schedules, it would still be no easy task to draw the line that separates group from group. The classification of women's occupations is simplicity itself in comparison. Of the occupied women and girls, 28 out of every 34 are grouped under one or other of eighteen headings, and there is very little doubt as to the groups to which each should be assigned; the other 6 are distributed among the remaining 331 headings,

none of them including so many as 1 per cent. of women and girls occupied. Half the occupied women and girls are grouped under three headings. Although the system of classification of women's occupations might in some respects be improved, it introduces little error into the result, a statement which could not safely be made with regard to the classification of men's occupations.

Whether any considerable error is to be found in the women's occupation returns through misstatement, may perhaps be decided by a study of the tables of occupations of women and girls given in the appendix, for the years 1851, 1861, 1871, 1881, and 1891, the section showing the increase or decrease relatively to the female population above 10 years of age being the most important.

In the summary of these returns given below, a great increase in the employment of women in 1861 is apparent, and a still greater decrease in 1881 which cannot be accounted for merely by the exclusion of women returned as "retired."

Table showing for England and Wales the Number of Women and Girls Occupied per 10,000 Living at each Age-Period.

Year.	10* and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and Upwards.	10 Years* and Upwards.
1851....	2,148	5,652	3,078	2,639	2,250	3,466
'61....	2,146	5,936	3,168	2,795	2,520	3,608
'71....	2,120	6,123	3,155	2,927	2,593	3,658
'81....	1,506	6,214†	2,900†	2,608†	1,828†	3,405†
'91....	1,626	6,336	2,960	2,497	1,598	3,442
<i>Increase of Women and Girls Occupied per 10,000 Living at each Age-Period on Previous Decade.</i>						
1861....	— 2	+ 284	+ 90	+ 156	+ 270	+ 142
'71....	— 26	+ 187	— 13	+ 132	+ 73	+ 50
'81....	— 614	+ 91†	— 255†	— 319†	— 765†	— 253†
'91....	+ 120	+ 122	+ 60	— 111	— 230	+ 37
<i>Women and Girls returned as Retired, per 10,000, at each Age-Period.</i>						
1891....	....	5	23	100	470	60

* Children under 10 years returned as occupied are included here.

† In 1881 persons returned as "retired" from specified occupations were no longer included as hitherto among the occupied, but there is no means of estimating what proportion of the decline was due to this change in classification, other than that afforded by the returns of those "retired" given in the 1891 census.

Dealing with the 1861 returns first at the different age-periods, it will be observed that the proportion of indoor domestic servants increased at every age-period. At the same time, however, there is a diminution of "inn and hotel" servants, and of agricultural or farm servants. Between 15 and 25 the increase of domestic servants is greater than the decrease of inn and farm servants; between 25 and 45 the increase in domestic servants is less than the decrease in these two branches; after 45 it is greater. In every 10,000 women and girls above 10 years of age, 155 more were returned as indoor domestic servants in 1861 as compared with 1851, and 118 less as inn or farm servants.

The decline amongst the inn servants must have been largely due to the greater use of railways, the period between 1851 and 1861 being the one when the change from the old system to the new was most keenly felt. But this period saw also another great change, viz., the change in the woollen trades brought about by the use of the power loom and the breakdown of the domestic system of weaving. In 1850, according to the Factory Returns, there were only 9,170 power looms in woollen factories in England and Wales, and 32,617 in worsted factories. In 1856 there were 13,726 power looms in woollen factories, and 38,809 power looms in worsted factories. In 1861-62 there were 20,344 power looms in woollen factories, and 42,968 power looms in worsted factories. The effect of the change as shown in the census returns is an increased employment of women and girls between the ages of 15 and 45, and a decrease in employment at other age-periods in the woollen industry, and a decrease at every age-period in the worsted industry. The diminution in the woollen trade is however by no means accurately measured by the census returns. The hand loom weaver was very largely dependent on the help of his wife and children; and the wife who assisted her husband frequently did not return herself as occupied. The number of women occupied was therefore considerably understated in 1851. With the decay of the domestic system came the necessity for the wife to become a wage earner working for other employers than her husband, and in this capacity her occupation was much more likely to be entered in the census return.

The increase in the employment of women shown in the 1861 returns is probably therefore partly due to understatement in 1851, but also very largely to the impetus given to trade by the adoption of free trade, the opening up of railroads, and the development of the factory system, resulting in a more effective demand on the part of the nation to be washed, clothed, taught, and served.

In 1871 the proportion of employed women and girls between 15 and 25 years of age increased, but between 25 and 45

diminished very slightly. The event of the period 1861-71 was the introduction of the sewing machine into common use. If we look at the table of occupations for the age-period 15 to 25, it will be noticed that the proportion of domestic servants again shows an increase; the cotton industry shows a decrease, and it is well known that during the Cotton Famine at the beginning of this period, many girls withdrew from the trade and went into domestic service. Dressmaking, plain needlework, and boot and shoe making appear to have diminished, but the "machinist, undefined," shows a large increase, although not equal numerically to the decrease in these three branches. It must be remembered that whenever work can be done by hand and at home, a large number of the women engaged in it are merely casual workers. This was the case in these trades, and these casual workers could not compete with the machinists who, being engaged on a machine involving outlay of capital, would from the first be expected to give regular work. The younger women naturally took to the machine more readily. Many of the older women returned as occupied, would perhaps have been more correctly described as "wanting work."

The decline in agricultural service continued, and the decay of the silk industry became more marked in consequence of the repeal of the silk duties in 1860.

For the decline in the proportion engaged in "washing and bathing service," which appears at every age-period in this census, I have no trustworthy explanation to offer. It would appear, however, that between 1851 and 1871 there was an unusual supply of domestic servants, probably due to the diminishing facilities for earning money at home, and it may be therefore that washing was done at home without so much outside assistance as before. The decline in the two subsequent decades is explained by the figures, which show that young women between 15 and 25 working full time in steam and other large laundries, displaced the elderly and casual washerwoman.

In the Census Report for 1871 the increase in the proportion returned as domestic servants is ascribed to a different cause: "Wives and daughters at home do now less domestic work than their predecessors, hence the excessive demand for female servants and the consequent rise of wages." To form any judgment between the correctness of this view, that increased demand raised wages and therefore increased supply, and the one that I have put forward, that diminished opportunities for remunerative or economical work at home resulted in a larger number of young women going into domestic service, particulars are necessary that at present are not forthcoming. One point on

which it would be most instructive to have accurate information is the wages question: did the wages of domestic servants rise, fall, or remain stationary during the period 1851 to 1871? If they rose continuously the view expressed in the Census Report is no doubt correct. If they remained stationary, presumably both causes, greater wealth among the upper classes, fewer opportunities for home work in the working classes, were operating. My own belief is that if at any period in this century mistresses have admitted a fall in the wages of domestic servants, such an admission must be looked for in the records of this period 1851-71.

The returns for 1881 are what it is the fashion of the day to call startling: making all allowance for the exclusion of the "retired" from business, it is obvious that at every age-period except the period 15—25 there was a marked decline in the employment of women.

The operation of the Education Act is of course the explanation of the great decline in the number of children returned as occupied. The extended use of the sewing machine run by steam power in the factory, and the demand for girls to be trained as elementary teachers, are responsible for the greater part of the increased employment of women and girls between 15—25, and for much of the decline of employment of elderly women. But the decline in domestic service is even more marked at the later age-periods than between 15 and 25. The casual washerwoman and needlewoman, and the uneducated teacher found their occupation gone, but a smaller proportion of young women entered domestic service; their places were not taken by the older women, the proportion at every age-period above 25 being less than that in 1851; more were returned as charwomen and nurses, but the increase here is slight compared with the decrease under domestic service.

The changes in 1891 have been dealt with rather fully in the Labour Department report on the statistics of employment of women and girls, and therefore need not be discussed here. Passing the whole period 1851-91 under review, we find that the proportion of women and girls under 25 returned as in-door domestic servants increased until 1871, and declined in 1881 and 1891; at the age-periods over 25 there was an increase at every census except in 1881. It must be remembered that a large proportion of those who returned themselves as "retired," would probably have been domestic servants; but even if they had all been domestic servants, the decline would not be explained.

In the clothing trades there has been increased employment for women working full time in the factory and workshop; the plain needleworker is being eliminated.

The cotton trade since 1861 has employed a diminishing pro-

portion of the female population above 10, and the woollen and worsted trades a smaller proportion since 1871. The silk trade has steadily declined numerically as well as proportionally.

The proportion engaged in farm and agricultural work has fallen from 207 per 10,000 women and girls above 10 years of age in 1851, to 21 per 10,000 in 1891.

The decline in inn service shown in 1861, and here attributed to the discontinuance of stage coach travelling, was only temporary. Rightly or wrongly, the waitress at the restaurant is included under this heading, and with the growth of towns and the separation of the home from the place of business, there has been a great increase in the demand for this class of service. The professional lodging house keeper is also more in demand.

While admitting that the census in many cases affords a very rough measure of the extent of the employment of women, the examination of these tables convinces me that the changes in their employment are correctly indicated, and that tendencies which might otherwise have passed unnoticed are brought to light by its means.

(3.) *Employers and Employed.*—In the report for 1891 the census authorities conclude their criticisms of this return as follows:—"Although, therefore, we have not considered ourselves justified, after the instructions given to us by the Local Government Board, altogether to discard the statements as to employers and employed from the census volumes, we hold them to be excessively untrustworthy, and shall make no use whatsoever of them in our remarks."

The applicability of this statement to the returns of men's occupations I need not consider, but there is a reason for not allowing it to pass unchallenged so far as concerns the returns of women's occupations. Except by a return of this kind we have no means at all of judging of the numbers of women and girls likely to be affected by protective legislation, or of estimating the success of the Factory Department in covering the area actually under the operation of the Factory Acts. At the present moment no one outside the Home Office, and in 1895 no one inside it, could possibly do more than guess at the number of laundresses who would come under the Act of that year, and the number who would escape its provisions by being neither employer nor employed, nor does the census give us any returns on the subject, correct or otherwise.

In Table II of the appendix the returns of women and girls employed in 1895 in factories and workshops in the more important trades, are placed side by side with the corresponding census returns for 1891. In the cotton, woollen and worsted, and

glass and earthenware trades there are no great discrepancies that could not be sufficiently explained by changes in the trade between 1891 and 1895, and by the inclusion in the census returns of persons returned as occupied but not actually employed.

In the other branches there is great discrepancy, and we must look at the returns of employers and employed for explanation.

The only industries in which any considerable number of women are returned as employers, are those in which it is well known a large number of women *are* employers. In the factory industries but few are returned, and these would in several cases be widows owning the business bequeathed to them, and employing others to manage it for them. The number of women returned as employers in tailoring, and hat and cap making, does not appear excessive, when it is remembered that in branches of these trades women are frequently sub-contractors, and shops for the sale of the goods are included.

The really important section is that relating to the numbers engaged in the dressmaking, millinery, mantle and corset making trades. The census returns give us three times as many returned as occupied in these trades as the factory returns give as employed in factories and workshops. Has the Factory Department therefore completely failed to find the employers in these trades? The returns of employers and employed show conclusively that there has been no such failure, but at the same time show the need for a clearer definition of the term "employed." The number returned under this heading, after the 137,000 working on their own account, and the 34,000 who made no statement, have been removed from the total, is still 89,000 above the numbers in the factory return. But notwithstanding this, the number of employers corresponds very fairly with the number of establishments under inspection. The census of 1891 has 1,041 men, and 21,918 women returned as employers in these trades, 22,959 in all; and the factory return for 1895 includes 175 factories, 20,765 workshops from which returns were received, and 539 from which returns had not come back, 21,479 establishments in all. The average number of women and girls in the factory return is about 6 to every establishment under inspection. The proportion of "employed" women and girls in the census is about 10 to every employer. If the census returns were exact, this would mean that the Factory Department had routed out the small workshops and passed over the large ones. That there are still 2,000 or 3,000 workshops in these trades which have escaped the notice of the inspector is probable, but the total number employed in such workshops would be small, and would leave over 70,000 "employed" women and girls to be accounted for.

The explanation is simple enough. Persons working at their own homes on work given out to them have returned themselves as employed. Others in the same position have returned themselves as working on their own account. Dressmakers working by the day at private houses would return themselves as employed also, although they would not come within the jurisdiction of the factory inspector. The same explanation accounts for the excess in the census returns under the tailoring and shirt and linen collar sections.

If there is error in the returns of women as employers, it would seem to be on the side of under statement, not over statement as in the case of men.

On the whole therefore the returns of the occupations of women seem to me more accurate as presented to us in the census reports than the corresponding returns for men, and to justify a request that the census authorities should make more use of the materials in their possession than they at present do.

The very important question of better classification is one that I cannot refrain from discussing, although all criticism offered in ignorance of the technicalities of compilation must be very wide of the mark. The difficulties of tabulation may be an insuperable obstacle in the way of obtaining guidance as to the possible effects of some legislative measure. It is apparently less expensive to pass an Act and find by experience who come under its operations, than to collect and present statistics in such a form that the probable numbers affected may be estimated beforehand.

The principles on which classification should be framed must of course depend on the objects of special inquiry into women's employments. Although returns of women's employment are useful and necessary in any attempt to measure changes in trade, this purpose is the least important of those which such returns might serve. The *conditions* under which women work are perhaps what we need to know most. And changes in the employment of married women, and more especially of married women in factories, if recorded statistically, may throw much light on the general social progress of the nation.

Women working for wages may be:—

- (1.) Living and working in their own homes or lodgings for an outside employer.
- (2.) Living in their own homes or lodgings, and working on the premises of an employer.
- (3.) Living on premises provided by an employer, and working in shops or workrooms of the employer.
- (4.) Living in the home of an employer, and working in the home of the employer.

All legislation must or ought to take into account the great differences in the circumstances under which these classes work; and I suggest that so far as possible the census classification should be adapted to giving information on these points. Thus, waitresses in tea rooms or refreshment rooms of hotels, who go home when their work is done, should not be grouped indiscriminately with hotel servants and barmaids who sleep on their employers' premises. It is quite easy to gather from the census schedule to which class the worker belongs with approximate accuracy. The division of laundresses into the different groups to which they belong could be effected by an instruction that those working by themselves at home or in the houses of private persons should be described as working on their own account.

At the present moment there is a demand for legislation as to the hours of shop assistants, but the census offers little aid to anyone who wishes to know how many persons come under this designation.

Greater subdivision would of course introduce a greater element of doubt as to the assignment of particular cases to one or other of the smaller groups, but provided the parts together make up the whole given in previous census reports, no error is introduced, and some idea of relative proportions is obtained.

But the greatest defect of the census is the absence of any attempt to classify separately the returns as to the occupations of married women. In 1871 it was agreed that this classification should be made, but in the course of tabulation the task was abandoned as too difficult—in other words, as not worth the trouble and expense.

This judgment may be correct. With a view to obtaining the opinion of the Society on the matter, I have prepared some samples of the kind of information which might be furnished on this head, and the use to which it might be put.

In the Labour Department Report on the Statistics of the Employment of Women and Girls, it was shown that the returns for 1891 pointed to a diminution in the employment of married women and widows in the decade 1881-91. The figures for 1881 suggest a similar decline between 1871 and 1881. The original cause and object of what is called the "woman movement" has been much misunderstood, and this diminution in the employment of women in 1881, and of elderly women in 1891, has caused some surprise. Most of the younger generation seem to think that women have been demanding as a novelty to be allowed to work. The movement really received its impetus from the recognition that a large proportion of women had at some time or other to try to earn money, and the object of the movement was to obtain for women

training and admittance to remunerative work when young, instead of leaving them to enter the labour market as elderly and inefficient beggars for work. Although there is no doubt that there was in certain branches considerable under statement of employment of women in 1851, the census report for that year contains the following statement: "Thus, Great Britain contained 3,461,524 wives, of whom 830,141 (or *one in four*) were engaged "in some extraneous occupation; and 795,590 widows, of whom 505,938 (or *two in three*) were referred to occupations in other "classes." The occupied wives probably included wives of shopkeepers, who were separately classified in that year. But two-thirds of the women who survived their husbands were definitely returned as trying to earn money.

The connection between the employment of women and infant mortality is one which has been more or less frequently discussed in this Society, and it is from the discussion on Dr. Jones's paper on "The Perils and Protection of Infant Life" that I have taken my text. During that discussion Mr. Noel Humphreys said that "with regard to the influence of female occupation upon infant "mortality—a subject of which the importance could scarcely be "over rated—he thought that this question had been pre-judged "without sufficient evidence. It was well known that the infant "death-rate was high in Lancashire and the West Riding of "Yorkshire, where many women were employed in the factories, "and also that it was low in rural districts, where there was much "less female occupation. He was quite prepared to believe that "factory employment of married women must be injurious to the "health of their children; still, statistics did not entirely support "the assertion that factory employment was the main cause of "infant mortality in Lancashire. In Durham and South Wales, "both mining districts, where females were consequently not "much engaged in industrial occupations, the infant mortality "was higher than in the West Riding of Yorkshire. Again, the "gradual increase in the number of premature births had been "attributed to the increasing employment of women; but the "death-rate from premature births was higher in Norfolk and "Suffolk than in Lancashire and the West Riding of Yorkshire, "where the industrial employment of women had reached its "highest development: 37 to 43 per cent. of the women in the "two latter counties were engaged in some occupation, against "only 20 per cent. in Norfolk and Suffolk. Of course it was "impossible to say that premature births and the employment of "females were *not* connected, but the question required fuller and "more careful investigation. His own inquiries led him to the "belief that overcrowding and other general insanitary conditions

“had a much greater influence on the rate of infant mortality than female occupation, and he hoped that some reliable statistics might shortly be prepared in order to throw more light on this important question.”

The table quoted by Dr. Jones as indicating that “an association exists between the general employment of women in industrial occupations and a high rate of infant mortality” was as follows:—

ENGLAND. *Groups of Towns, 1871-80.*

Groups of Towns.	Population.	Rate of Infant Mortality.	Diarrhœa Death-Rate.
1. Over 15 per cent. women workers	2,645,357	175	36
2. 10—15 „ „	1,500,954	171	37
3. Less than 10 per cent. „	1,127,010	154	32

It is not clear whether the term “per cent. women workers” means percentage of women above a certain age who were occupied, or percentage of total female population who were occupied. So also it is not stated whether the census of 1871 or that for 1881 was used in calculating the percentage of women employed. Instead, therefore, of analysing this table I have worked out one based on the percentage of the female population above 10 years returned as occupied in 1891, and have calculated the infant mortality for the five years 1889-93 of the twenty-seven large towns for which (together with London) returns were published.

It will be seen here that when the infant mortality is calculated for the towns collectively the correspondence is almost unbroken; but that when each town is treated as of equal importance and the mean of the rates taken, the sequence is disturbed. The element of evils prevalent in very large towns is introduced in the first case and combined with employment. On the whole, however, in both cases there seems to be a kind of correspondence between employment of women and girls and infant mortality.

But is this a relation of cause and effect? When it is remembered that no account is here taken of kind of employment or conditions of work, of whether the majority employed are married or single, well paid or ill paid, we may well hesitate to come to such a conclusion on such slight evidence.

Table showing the Rate of Infant Mortality for the Five Years 1889-93, in Twenty-Seven Urban Sanitary Districts, grouped according to the Percentage of the Female Population above 10 Years of Age returned as Occupied in 1891.

Percentage of Females above 10 Years returned as Occupied in 1891.	Large Towns.	Births, 1889-93.	Deaths of Infants under 1 Year, 1889-93.	Deaths of Infants in 1,000 Births, 1889-93.*	Mean of Rates of Infant Mortality in the Different Towns, 1889-93.†
60 and upwards	Blackburn.....	20,016	4,137	207	207
55 and under 60	Preston	19,274	4,695	244	244
50 „ 55	—	—	—	—	—
45 „ 50	Bradford, Bolton, Leicester, Oldham, Halifax, and Nottingham	139,259	25,232	181	181
40 „ 45	Manchester, Huddersfield, Brighton, Norwich, Birmingham, Bristol, and Salford	264,375	46,683	177	171
35 „ 40	Leeds.....	61,479	11,071	180	180
30 „ 35	Plymouth, Liverpool, Derby, Portsmouth, and Birkenhead.....	157,221	27,883	177	165
25 „ 30	Wolverhampton, Sheffield, Newcastle, Hull, and Cardiff.....	161,689	28,355	175	175
Under 25	Sunderland	24,374	4,257	175	175

* In this column the rate of infant mortality in each *group* of towns has been given.

† In this column the mean of the rates of infant mortality in each town in the group has been given.

In the following table it will be seen that there is another circumstance which is more closely connected with the rates of infant mortality than the industrial employment of the female population. The proportion of the female population above 10 years of age returned as in-door domestic servants is the basis of classification chosen.

There it is seen that, except in the third group, the two ways of calculating infant mortality come to much the same thing, and that in both cases the lower the percentage of domestic servants, the higher the rate of infant mortality.

Again, if in the previous table the percentage of indoor domestic servants in each group and the average of the percentages of each town of the group be given, it is seen that the correspondence between the infant mortality rates and the percentages of

domestic servants is more complete than that between infant mortality rates and the percentages of women and girls employed.

Table showing the Rate of Infant Mortality during the Five Years 1889-93, in Twenty-Seven Urban Sanitary Districts, grouped according to the Percentage of the Female Population returned as In-door Domestic Servants in 1891.

Percentage of Females above 10 Years returned as In-door Servants in 1891	Large Towns.	Births, 1889-93.	Deaths of Infants, 1889-93.	Deaths of Infants in 1,000 Births, 1889-93.	Mean of Rates of Infant Mortality of the Different Towns, 1889-93.
13 and upwards	Brighton, Birkenhead, and Bristol }	64,958	9,951	153	155
11 or 12	Plymouth, Newcastle, Portsmouth, and Cardiff	92,679	14,907	161	160
9 or 10	Norwich, Liverpool, Derby, Wolverhampton, Hull, Sunderland, and Sheffield	249,905	45,569	182	177
7 or 8	Nottingham, Manchester, Leicester, Huddersfield, Birmingham, Salford, and Leeds	319,852	58,660	183	182
Under 7	Preston, Bradford, Blackburn, Bolton, Halifax, Oldham }	120,293	23,231	193	193

The percentage of women and girls returned as domestic servants affords the best measure of the servant keeping class in a town, and these tables show clearly that the smaller the proportion of this class in a town, the higher the rate of infant mortality. There is a connection shown between small means and infant mortality, and between small means and the employment of women, but the latter relationship is not so close as the former, owing mainly to the migration of women to the wealthier districts as domestic servants.

But although the employment of women and girls generally appears to a great extent to be the result of the same cause as infant mortality, and not the cause of it, it may be urged that the employment of *married* women is at the root of the differences in infant mortality rates.

Table showing the Rate of Infantile Mortality during the Five Years 1889-93, and the Percentage of the Female Population above 10 Years of Age returned as In-door Domestic Servants in 1891, in Twenty-Seven Urban Sanitary Districts, grouped according to the Percentage of the Female Population above 10 Years of Age returned as Occupied in 1891.

Percentage of Females above 10 Years returned as Occupied in 1891.	Large Towns.	Deaths of Infants to 1,000 Births, 1889-93.	Mean of Rates of Infant Mortality in Towns, 1889-93.	Percentage of Females above 10 returned as In-door Domestic Servants, 1891.*	Mean of Percentages of Domestic Servants in Towns.†
60 and upwards	Blackburn.....	207	207	5	5
55 and under 60	Preston	244	244	6	6
45 „ 50	Bradford, Bolton, Leicester, Oldham, Halifax, and Nottingham	181	181	6	6
40 „ 45	Manchester, Huddersfield, Brighton, Norwich, Birmingham, Bristol, and Salford	177	171	9	10
35 „ 40	Leeds	180	180	7	7
30 „ 35	Plymouth, Liverpool, Derby, Portsmouth, and Birkenhead.....	177	165	11	12
25 „ 30	Wolverhampton, Sheffield, Newcastle, Hull, and Cardiff.....	175	175	10	10
Under 25	Sunderland	175	175	10	10

* In this column the percentage returned as domestic servants in the whole group of towns is given.

† In this column the mean of the percentages returned as domestic servants in each town in the group is given.

The census volumes contain no separate returns of employment of married women, and the only method of estimating differences in the extent to which married women are employed is that adopted in the Labour Department Report, of comparing the excess of occupied women over unmarried women between 25 and 45 years of age. This excess gives the minimum number of married women and widows employed at that age-period, and the minimum percentage of wives and widows occupied can be obtained. By these means we can classify towns to some extent according to employment of married women.

Table showing the Rate of Infant Mortality for the Five Years 1889-93, in Twenty-Seven Urban Sanitary Districts, grouped according to the Minimum Percentage of Wives and Widows between 25 and 45 Years of Age returned as Occupied in 1891.

Towns in which the Percentage of Wives and Widows between 25 and 45 Years of Age returned as Occupied was, in 1891,		Births, 1889-93.	Deaths of Infants, 1889-93.	Deaths of Infants in 1,000 Births, 1889-93.	Mean of Rates of Infant Mortality in Different Towns, 1889-93.
At least					
47	Blackburn	20,016	4,137	207	207
39	Preston	19,274	4,695	244	244
25	Oldham and Leicester	46,062	9,035	196	195
20	Nottingham and Bradford	62,961	10,899	173	173
15	Birmingham, Bolton, Salford, and Man- chester	207,871	38,320	184	185
10	Norwich, Bristol, Huddersfield, Hali- fax, Leeds	133,367	22,498	169	167
5	Brighton; Liverpool, Sheffield	161,212	29,725	184	174
1	Portsmouth, Ply- mouth, Wolver- hampton, Derby, Hull, and Cardiff....	123,301	20,438	166	165
Towns in which un- married were in excess of occupied women	Birkenhead, Sunder- land, and Newcastle }	73,623	12,571	171	171

Although this gives no uniformly descending series when 5 is the difference selected for the grouping, when 10 is the difference selected we have such a series. And it is curious that in the former case the alternates give two uniformly descending series. On the other hand the following table shows that this minimum percentage of wives and widows occupied varies inversely with the proportion of the servant keeping classes, even when the smaller grouping is adopted.

Obviously both the real percentage of married and widowed women occupied, and the infant mortality in working class districts, are concealed by the presence of a servant keeping class. But in so far as this method of comparing towns with regard to employment of married women is a test, it lends little support to the theory that differences in the extent of employment of married women in towns are the main cause of the differences in the infant mortality rates.

Married women's labour may be carried on under good conditions or bad conditions; it may be well paid or badly paid; it may be carried on under compulsion or by choice. It may be the

labour of childless women, or of women with children whom they are supporting, or whom they choose to neglect. That the results on infant life should be the same according to numbers of occupied wives, regardless of any question of the proportion in which these different classes exist among them, would be suprising, unless it be held that this proportion would always vary directly with poverty. This is very doubtful; and nothing in the preceding tables seems to me to point to such a conclusion. They point to uniformity of habits of life in the servant keeping classes, but tell us nothing about the working classes.

Table showing the Rate of Infant Mortality during the Five Years 1889-93, and the Percentage of the Female Population above 10 Years of Age returned as In-door Domestic Servants in 1891, in Twenty-Seven Urban Sanitary Districts, grouped according to the Minimum Percentage of Wives and Widows between 25 and 45 Years of Age returned as Occupied in 1891.

Towns in which the Percentage of Wives and Widows between 25 and 45 Years of Age returned as Occupied was, in 1891,		Deaths of Infants in 1,000 Births, 1889-93.	Mean of Rates of Infant Mortality in the Different Towns, 1889-93.	Percentage of Females above 10 returned as In-door Domestic Servants, 1891.	Mean of Percentages of In-door Domestic Servants in the Different Towns, 1891.
At least					
47	Blackburn.....	207	207	5	5
39	Preston	244	244	6	6
25	Oldham and Leicester	196	195	6	6
20	Nottingham and } Bradford.....	173	173	7	7
15	Birmingham, Bol- } ton, Salford, and } Manchester	184	185	7	7
10	Norwich, Bristol, } Huddersfield, } Halifax, and Leeds }	169	167	9	8
5	Brighton, Liverpool, } and Sheffield	184	174	11	12
1	Portsmouth, Ply- } mouth, Wolver- } hampton, Derby, } Hull, and Cardiff }	166	165	11	11
Towns in which unmarried were in excess of occupied women	Birkenhead, Sun- } derland, and New- } castle	171	171	12	12

One thing only is clear, that to find out the causes of high rates of infant mortality, it will not do to compare town with town. Working class districts with low rates must be compared with working class districts with high rates, and districts with high rates must be compared with each other.

To do this we must pass from the returns for the large urban sanitary districts to the returns for registration sub-districts. In

doing so I would call attention to the fact that the census gives us some details of the occupations of women and girls in London and sixty-one urban sanitary districts, but as the infant mortality returns were only published for twenty-seven of these until 1892, and for thirty-two only from that date, the occupation returns cannot be used in this connection. While, on the other hand, although the Registrar-General gives us infant mortality rates (or rather the material from which the rates may be calculated) of sub-registration districts, we have no information as to occupation in these sub-districts.

It was necessary therefore in order to arrive at any kind of conclusion on this subject, to actually count the number of married women returned as occupied in certain sub-registration districts; facilities for doing this were readily accorded to me, but lack of time has prevented me from obtaining more information than suffices to show that high rates of infant mortality are to be found where but a small proportion of married women are occupied, and that in districts with a considerable proportion of married women occupied, the infant mortality rates vary irregularly.

Table showing Rates of Infant Mortality, and Percentage of Married Women Occupied, in certain Sub-Registration Districts.¹

Registration District.	Sub-Registration District.	Population of Sub-Districts, 1891.	Deaths of Infants in 1,000 Births, 1889-93.	Percentage of Married Women Occupied in 1891.
Preston	Trinity	36,503	266	45·0
Sunderland.....	Sunderland.....	15,057	223	6·5
Liverpool	Dale Street.....	12,931	220	17·7
.....	St. George	4,924	200	14·0
Sheffield	South Sheffield	18,411	193	12·1
Preston	Walton-le-Dale	11,432	186	32·7
Rochdale	Whitworth	18,600	177	28·2
.....	Wardleworth	19,238	171	26·7
.....	Blatchinworth	8,384	133	23·4

In the Preston and Rochdale districts it will be noticed that although the infant mortality rates fall with the percentages of married women occupied, they are not in the same proportion as these percentages, nor do they fall proportionately.

The figures for Liverpool and Sunderland suggest a far worse state of things than those for Preston. Whatever may be the dangers to infant life in a district where nearly half the married

¹ I am indebted to Mr. E. J. E. Craven for the checking of the tables in the Appendix compiled from the Census Reports. The above table is liable to some slight error, as time did not permit of a second counting, except in the case of the Rochdale figures.

women are full time workers in a factory, the children of industrious mothers are in a better position than the children of idle women of irregular habits. If the infant mortality of Preston is only due to the employment of married women, the 73 per cent. of infants in the Trinity district who survive have much better chances for the future than the 78 per cent. in the Liverpool Dale Street district, who are exposed to the dangers of a poverty stricken but idle or casually employed community.

But although if the employment of married women is the main cause of the infant mortality in Preston, it is astonishing that it should produce so little effect rather than so much, one question must present itself: why is the infant mortality higher at Preston than at Blackburn? Blackburn has a higher proportion of women and girls occupied, a higher proportion of married women and widows occupied, and a lower proportion of domestic servants, and yet it has a lower rate of infant mortality. The conditions of Preston must have changed, for above the age of 45 the proportion of women occupied in 1891 was higher in Preston than the proportion in Blackburn. Yet although Preston seems to have made progress in this respect as compared with Blackburn, nevertheless the infant mortality in the *registration* district of Preston only fell from 212 during 1871-80 to 203 during 1881-90, whereas the infant mortality in the registration district of Blackburn fell from 191 during 1871-80 to 178 during 1881-90.

In so far as the very round about methods I have been obliged to adopt throw light upon the facts, they all go to confirm Mr. Noel Humphreys's guarded contention, that "statistics do not entirely support the assertion that factory employment is the main cause of the high rate of infant mortality in Lancashire." Liverpool (registration district), with the highest rate of infant mortality, has a low percentage of married women occupied; the factory towns generally have their rate raised as compared with other towns by the absence of any large proportion of the servant keeping classes; and in these factory districts there are differences in infant mortality rates which do not correspond to differences in proportions of married women occupied.

Let me here guard against misapprehension. I take it as an indisputable fact that the industrial employment of married women with young children is an evil. I am not arguing that the employment of married women under such circumstances is not proved to be injurious; statistical evidence of such a fact is not necessary. The point is this, that in towns where an unusually high proportion of married women are occupied in factories, it does not follow that an unusually high proportion of mothers of infants under 1 year are employed, or even that the children of the mothers at

work are more neglected than those of unemployed mothers in the same position; and it is possible that some of the causes at work in districts with high rates of infant mortality and low percentages of married women occupied are also at work in some of the factory districts. And there is nothing so likely to weaken the power and to relax the efforts of the medical officers of health, as the easy going policy of a sanitary committee which believes itself entitled to attribute high death-rates to the moral habits of the community, quite apart from such factors as overcrowding and bad sanitary conditions.

In the Labour Department report on the statistics of employment of women and girls, it was shown that in 18 towns employing a high percentage of women in the textile and clothing trades, the minimum percentage of married and widowed women occupied between 25 and 45 years of age had fallen during the decade 1881-91 in every case except in Burnley. I have since ascertained the actual decline in the employment of married women in three of the Rochdale districts. I have also found the percentage of infants in these three districts whose mothers were returned as occupied married women.

Table showing the Percentage of Married Women Occupied, and the Percentage of Infants returned as Infants of Occupied Married Women, in 1881 and 1891, in Whitworth, Wardleworth, and Bletchworth Sub-Registration Districts of Rochdale.

	Number of Married Women.	Percentage returned as Occupied.	Number of Infants.	Percentage returned as Children of Occupied Married Women.
Whitworth { 1881	3,704	33·5	544	27·6
{ '91	3,297	28·2	408	15·7
Wardleworth { 1881	3,532	33·5	515	28·3
{ '91	3,441	26·7	437	20·4
Bletchworth { 1881	1,390	26·7	206	16·5
{ '91	1,442	23·4	146	8·2

The percentage of infants returned as children of occupied married women is in every case considerably less than the percentage of married women returned as occupied, and it has also diminished to a much greater extent during the decade. On the other hand it must be remembered that *if* the mortality is much higher among the infants of occupied married women, the death-rate, always higher in the first month of existence, *might* be the cause of the percentage of infants of occupied married women

being lower compared with the total infants than the percentage of married women returned as occupied.

To arrive at the truth we ought to be able to find from the census the real proportion of married women occupied; and in registering the deaths of infants under 1 year, the occupation of the mother within (say) six months before the birth of the child and during the period after its birth would have to be stated.

At present only the occupation of the father is given.

Apart from the statistics of infant mortality, it does not seem possible to secure any trustworthy statistics which might throw light on the effects of the industrial employment of women and girls on health.

After marriage the patients at our hospitals are generally described merely as wives, the occupation of the husband being given, and the occupation of the wife before marriage is of course not noted. But much of the injury done to young girls by working long hours under unhealthy conditions only shows itself in an acute form after marriage.

There is also another reason why no trustworthy statistics of the effect of industrial employment on women's health are forthcoming: a large proportion of the young women and girls employed in our large towns as domestic servants, shop assistants, and (to a less extent) dressmakers come from the country. If attacked by any severe illness they are always removed from their employers' premises, and, if possible, sent back to their friends in the country. The death certificate in such cases would probably contain no reference to occupation, as after a long illness the girl would be regarded as having been of no occupation.

Out of 476 female shop assistants in representative West End streets in 1891,

28	per cent.	were born in London.
18	" "	Kent, Sussex, Surrey, Hampshire, or Berkshire.
10	" "	Hertfordshire, Middlesex, Buckinghamshire, Oxfordshire, Huntingdonshire, Bedfordshire, or Cambridgeshire.
10	" "	Essex, Suffolk, or Norfolk.
15	" "	Wiltshire, Dorsetshire, Somersetshire, Gloucestershire, Devonshire, or Cornwall.
4	" "	Herefordshire, Shropshire, Staffordshire, Worcestershire, or Warwickshire.
3	" "	Lincolnshire, Nottinghamshire, or Leicestershire.
4	" "	Lancashire, Cheshire, or Yorkshire.
5	" "	Wales or Monmouthshire.
3	" "	The Northern Counties, Scotland, or Ireland.

I see no way of reforming our industrial statistics of health except by the efforts of private persons, and few medical men with large numbers of working class patients can spare time for such investigations. Patient follows patient so rapidly that there is barely time to ascertain the disease that requires cure, and none to go into questions of its origin.

The establishment of anthropometrical laboratories in every large industrial centre, could alone enable us to arrive at the knowledge we ought to have of the effect of the half-time system on the physique of children, and—even more important perhaps—the effect of full time on the physique of girls between 14 and 18.

I have hitherto made no mention of the Factory Returns. Until last year, the Factory Returns since 1840, although no doubt valuable for the purposes for which they were obtained, are almost valueless so far as any question of the industrial employment of women is concerned. The annual returns which have now to be made will be more and more valuable every year, mainly because they are at once being applied to many practical purposes by the department compiling them. It is this point, of the importance of *using* statistics, on which I wish finally to lay stress. From the statistical point of view it is necessary, for nothing else can secure the improvement of the methods of collecting and classifying the information required. And the application of our statistics should be local as well as imperial. It is therefore most desirable that both the Census Returns and the Factory Returns should give as full information as possible of the extent of employment in each of our large urban sanitary districts and in the sub-registration districts of London. Every medical officer should have such information ready to hand; and such a publication, by eliciting criticism from persons with local knowledge, would most certainly result in a general improvement of our methods of classification.

In illustration of the need for such local knowledge, one or two difficulties in the way of obtaining correct information in my own branch of investigation may be mentioned. I have occupied much of your time in examining the deficiencies of other people's statistics, when perhaps there might seem to be ample scope for criticism nearer home. I have concentrated my attention on the effect of the industrial employment of women on health, when such questions as its effect on the wages and employment of men, the commercial value of women's work, the social loss or gain resulting from their employment, come more within my own province. My excuse must be that very little exact information on such subjects can be obtained from persons who have no knowledge, and can

have no knowledge of the relation their little world bears to the other little worlds which go to make up the town they live in; under such circumstances the sun is generally regarded as going round the earth. One instance only need be given of the kind of error which arises from the want of local knowledge.

About six weeks ago a statement appeared in one of the newspapers that the employment of married women was increasing in Rochdale. I have here shown that it is almost certain that between 1881 and 1891 the employment of married women in Rochdale diminished. It is possible that since 1891 a tendency in a different direction has shown itself; but my point is this, that under certain circumstances the employment of married women may be diminishing in the town and yet seem to the operative to be increasing in the factory. Given a marked decline in the branch of trade under consideration, and before very long the influx of girls and young women will cease; mills will be closed and new ones will not be opened, and it will be the older and more necessitous women who will seek employment in the mills still running. What is really an abandonment of the trade by the younger women, has the appearance inside the mill of an increased employment of married women.

Similarly it is frequently stated that the employment of women is increasing, and that they are taking some branch of trade away from men into their own hands.

Now it frequently happens that the town in which the women, when the matter is looked at in the factory alone, seem to have taken possession of the trade, is one in which, relatively to population, the employment of women in that trade has decreased. A better paying trade withdraws the men from the trade in which they are competing with women, and the women are left to run it; but at the same time the higher wages earned by the men in the other trade enable them to support their wives at home, to keep their children longer at school, and it may be to find them openings in a different branch of employment.

Thus it was pointed out in the Labour Department report on the statistics of employment of women, that the large towns in Lancashire in which the highest proportion of the female population were cotton operatives, viz., Burnley and Blackburn, were (with the exception of Oldham) those in which the highest proportion of the cotton operatives were men and boys; and that those in which the lowest proportion of the female population were cotton operatives, viz., Salford and Manchester, were those in which the highest proportion of the cotton operatives were women and girls.

The points therefore to which I wish to call the attention of

those interested in the improvement of our industrial statistics, are as follows:—

- (1.) That the information relating to occupations of women and girls contained in the schedules filled in at the Census is sufficiently trustworthy to justify greater efforts and expense in its tabulation.
- (2.) That the occupations of married women should be separately tabulated.
- (3.) That the particulars of the occupations of women and girls at different age-periods, both in the Census and Factory returns, should be published for all urban sanitary districts with over 50,000 inhabitants, and for the Potteries, which although nominally an aggregate of small towns, is really one large town employing persons under exceptional conditions.
- (4.) That, if possible, the classification of the larger women's industries should be sub-divided so as to separate persons working under conditions differing so widely as to necessitate different legislative treatment, should legislative treatment have to be applied.

With regard to health statistics, I would merely point out that we have no official statistics connecting the industrial occupation of women and girls with its effects on health in a trustworthy manner. With regard to the deaths of infants under 1 year, this I think might fairly be asked for.

APPENDIX.

TABLE I.—*Showing for the whole of England and Wales the Number of Females per 1891, according to the Census of these Years,*

Occupation.	Per 10,000 Females of				
	1891.	1881.*	1871.	1861.	1851.
Domestic, in-door servant	1,209	1,231	1,375	1,239	1,084
Milliner, dressmaker, staymaker	363	358	352	389	364
Cotton, cotton goods manufac- ture	290	303	319	334	281
Washing and bathing service ...	162	177	193	214	193
Schoolmistress, teacher, pro- fessor, lecturer.....	126	123	108	103	93
Charwoman	92	92	89	84	77
Tailoress	78	53	43	35	25
Worsted, stuff manufacture	61	64	71	65	80
Woollen cloth „	54	59	65	64	66
Sick nurse, midwife, invalid attendant, and subordinate medical service	47	38	35	38	37
Shirt maker, seamstress	46	82	91	99	86
Shoe, boot, patten, clog maker ...	40	36	30	51	42
Draper, linendraper, mercer	40	29	22	15	9
Grocer, tea, coffee, chocolate maker, dealer	40	26	26	26	19
Lodging, boarding house keeper	39	33	25	22	24
Inn, hotel servant	39	26	23	18	46
Silk, satin, velvet, ribbon manu- facture	28	41	60	93	106
Agricultural labourer, farm ser- vant	21	40	66	117	207
Total for above occupations	2,775	2,811	2,993	3,006	2,839
Textile worker, factory worker } (undefined)	14	14	25	14	5
Machinist (undefined)	19	8	24	....	....
Other occupations	634	572	616	588	622
Total for all occupations	3,442	3,405	3,658	3,608	3,466

* See note

APPENDIX.

10,000 above 10 Years of Age Engaged in Occupations in 1851, 1861, 1871, 1881, and with the Decennial Increases or Decreases.

and above 10 Years.

Increase or Decrease on Previous Decade.								Occupation.
1891.		1881.*		1871.		1861.		
In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	
....	- 22	....	- 144	+136	....	+155	....	Domestic, in-door servant
+ 5	....	+ 6	....	....	- 37	+ 25	....	Milliner, dressmaker, staymaker
....	- 13	....	- 16	....	- 15	+ 53	....	{ Cotton, cotton goods manufac- ture
....	- 15	....	- 16	....	- 21	+ 21	....	Washing and bathing service
+ 3	....	+15	....	+ 5	....	+ 10	....	{ Schoolmistress, teacher, pro- fessor, lecturer
....	....	+ 3	....	+ 5	....	+ 7	....	Charwoman
+25	....	+10	....	+ 8	....	+ 10	....	Tailoress
....	- 3	....	- 7	+ 6	....	....	- 15	Worsted, stuff manufacture
....	- 5	....	- 6	+ 1	....	....	- 2	Woollen cloth ,,
+ 9	....	+ 3	....	....	- 3	+ 1	....	{ Sick nurse, midwife, invalid attendant, and subordinate medical service
....	- 36	....	- 9	....	- 8	+ 13	....	Shirt maker, seamstress
+ 4	....	+ 6	....	....	- 21	+ 9	....	Shoe, boot, patten, clog maker
+11	....	+ 7	....	+ 7	....	+ 6	....	Draper, linendraper, mercer
+14	....	....	....	....	....	+ 7	....	{ Grocer, tea, coffee, chocolate maker, dealer
+ 6	....	+ 8	....	+ 3	....	....	- 2	Lodging, boarding house keeper
+13	....	+ 3	....	+ 5	....	....	- 28	Inn, hotel servant
....	- 13	....	- 19	....	- 33	....	- 13	{ Silk, satin, velvet, ribbon manu- facture
....	- 19	....	- 26	....	- 51	....	- 90	{ Agricultural labourer, farm ser- vant
....	- 36	....	- 182	....	- 13	+167	....	Total for above occupations
....	....	....	- 11	+ 11	....	+ 9	....	{ Textile worker, factory worker (undefined)
+11	....	....	- 16	+ 24	....	....	....	Machinist (undefined)
+62	....	....	- 44	+ 28	....	....	- 34	Other occupations
+37	....	....	-253	+ 50	....	+142	....	Total for all occupations

on p. 222.

TABLE I *Contd.*—*Showing for the whole of England and Wales the Number of in 1851, 1861, 1871, 1881, and 1891, according to the Census*

Occupation.	Per 10,000 Females 10 and				
	1891.	1881.*	1871.	1861.	1851.
Domestic in-door servant	665	702	927	824	624
Milliner, dressmaker, staymaker	108	67	48	60	71
Cotton, cotton goods manufac- ture	305	278	377	411	321
Washing and bathing service ...	11	9	9	11	10
Schoolmistress, teacher, profes- sor, lecturer	37	37	22	14	4
Charwoman	2	1	1	....	1
Tailoress	32	12	9	8	7
Worsted, stuff manufacture	87	78	124	101	127
Woollen, cloth „	32	31	63	65	86
Sick nurse, midwife, invalid attendant, and subordinate medical service.....	....	....	....	....	....
Shirt maker, seamstress	8	11	16	20	20
Shoe, boot, patten, clog maker ...	28	17	18	25	25
Draper, linendraper, mercer	8	4	3	2	1
Grocer, tea, coffee, chocolate maker, dealer	6	3	2	2	1
Lodging, boarding house keeper	....	....	....	....	....
Inn, hotel servant	5	5	6	5	22
Silk, satin, velvet, ribbon manu- facture	23	26	64	86	123
Agricultural labourer, farm ser- vant	8	15	35	58	140
Total for above occupations ...	1,365	1,296	1,724	1,692	1,583
Textile worker, factory worker } (undefined)	12	11	31	18	3
Machinist (undefined)	6	2	9	....	....
Other occupations	243	197	356	436	562
Total for all occupations.....	1,626	1,506	2,120	2,146	2,148

* See note

Females per 10,000, between 10 and 15 Years of Age, engaged in Occupations of these Years, with the Decennial Increases or Decreases.

under 15 Years of Age.								Occupation.
Increase or Decrease on Previous Decade.								
1891.		1881.*		1871.		1861.		
In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	
....	- 37	....	-225	+103	....	+200	....	Domestic in-door servant
+ 41		+19	....	....	- 12	....	- 11	Milliner, dressmaker, staymaker
+ 27			- 99	....	- 34	+ 90	....	{ Cotton, cotton goods manufac- ture
+ 2					- 2	+ 1	....	Washing and bathing service
....		+15	....	+ 8	....	+ 10	....	{ Schoolmistress, teacher, profes- sor, lecturer
+ 1				+ 1	....	....	- 1	Charwoman
+ 20		+ 3	....	+ 1	....	+ 1	....	Tailoress
+ 9			- 46	+ 23	....	....	- 26	Worsted, stuff manufacture
+ 1			- 32	....	- 2	....	- 21	Woollen, cloth ,,
....								{ Sick nurse, midwife, invalid attendant, and subordinate medical service
....	- 3	....	- 5	....	- 4	....	....	Shirt maker, seamstress
+ 11			- 1	....	- 7	....	....	Shoe, boot, patten, clog maker
+ 4		+ 1	....	+ 1	....	+ 1	....	Draper, linendraper, mercer
+ 3		+ 1	....	....	....	+ 1	....	{ Grocer, tea, coffee, {chocolate maker, dealer
....								Lodging, boarding house keeper
....			- 1	+ 1	....	....	- 17	Inn, hotel servant
....	- 3	....	- 38	....	- 22	....	- 37	{ Silk, satin, velvet, ribbon manu- facture
....	- 7	....	- 20	....	- 23	....	- 82	{ Agricultural labourer, farm ser- vant
+ 69			-428	+ 32	....	+109	....	Total for above occupations
+ 1			- 20	+ 13	....	+ 15	....	{ Textile worker, factory worker (undefined)
+ 4			- 7	+ 9	....	....	....	Machinist (undefined)
+ 46			-159	....	- 80	....	-126	Other occupations
+120			-614	....	- 26	....	- 2	Total for all occupations

on p. 222.

TABLE I *Contd.*—*Showing for the whole of England and Wales the Number of Occupations in 1851, 1861, 1871, 1881, and 1891, according to the*

Occupation.	Per 10,000 Females 15 and				
	1891.	1881.*	1871.	1861.	1851.
Domestic, in-door servant	2,744	2,933	2,970	2,671	2,237
Milliner, dressmaker, staymaker	732	642	579	673	686
Cotton, cotton goods manufac- ture	555	580	592	634	537
Washing and bathing service.....	130	113	105	120	106
Schoolmistress, teacher, profes- sor, lecturer	245	250	166	150	105
Charwoman	24	22	22	23	24
Tailoress	148	84	59	52	37
Worsted, stuff manufacture	117	124	127	115	145
Woollen, cloth „	106	120	122	106	99
Sick nurse, midwife, invalid attendant, and subordinate medical service.....	18	4	4	5	3
Shirt maker, seamstress	45	92	85	99	97
Shoe, boot, patten, clog maker ...	83	67	51	76	66
Draper, linendraper, mercer	91	67	49	32	16
Grocer, tea, coffee, chocolate maker, dealer	31	20	15	14	8
Lodging, boarding house keeper	4	4	4	2	3
Inn, hotel servant	93	69	61	45	121
Silk, satin, velvet, ribbon manu- facture	46	65	79	138	157
Agricultural labourer, farm ser- vant	30	61	109	222	455
Total for above occupations ...	5,242	5,317	5,199	5,177	4,902
Textile worker, factory worker } (undefined)	35	34	49	27	8
Machinist (undefined)	42	17	67	1	....
Other occupations	1,017	846	808	731	742
Total for all occupations	6,336	6,214	6,123	5,936	5,652

* See note

Females per 10,000 above 15 Years and under 25 Years of Age, engaged in Census of these Years, with the Decennial Increases or Decreases.

under 25 Years of Age.

Increase or Decrease on Previous Decade.								Occupation.
1891.		1881.*		1871.		1861.		
In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	
....	-189	....	- 37	+299	....	+434	....	Domestic, in-door servant
+ 90	....	+ 63	....	....	- 94	....	- 13	Milliner, dressmaker, staymaker
....	- 25	....	- 12	....	- 42	+ 97	....	{ Cotton, cotton goods manufac- ture
+ 17	....	+ 8	....	....	- 15	+ 14	....	Washing and bathing service
....	- 5	+ 84	....	+ 16	....	+ 45	....	{ Schoelmistress, teacher, profes- sor, lecturer
+ 2	....	....	....	....	- 1	....	- 1	Charwoman
+ 64	....	+ 25	....	+ 7	....	+ 15	....	Tailoress
....	- 7	....	- 3	+ 12	....	....	- 30	Worsted, stuff manufacture
....	- 14	....	- 2	+ 16	....	+ 7	....	Woollen, cloth ,,
+ 14	....	....	....	....	- 1	+ 2	....	{ Sick nurse, midwife, invalid attendant, and subordinate medical service
....	- 47	+ 7	....	....	- 14	+ 2	....	Shirt maker, seamstress
+ 16	....	+ 16	....	....	- 25	+ 10	....	Shoe, boot, patten, clog maker
+ 24	....	+ 18	....	+ 17	....	+ 16	....	Draper, linendraper, mercer
+ 11	....	+ 5	....	+ 1	....	+ 6	....	{ Grocer, tea, coffee, chocolate maker, dealer
....	....	....	....	+ 2	....	....	- 1	Lodging, boarding house keeper
+ 24	....	+ 8	....	+ 16	....	....	- 76	Inn, hotel servant
....	- 19	....	- 14	....	- 59	....	- 19	{ Silk, satin, velvet, ribbon manu- facture
....	- 31	....	- 48	....	-113	....	-233	{ Agricultural labourer, farm ser- vant
....	- 75	+118	....	+ 22	....	+275	....	Total for above occupations
+ 1	....	....	- 15	+ 22	....	+ 19	....	{ Textile worker, factory worker (undefined)
+ 25	....	....	- 50	+ 66	....	+ 1	....	Machinist (undefined)
+171	....	+ 38	....	+ 77	....	....	- 11	Other occupations
+122	....	+ 91	....	+187	....	+284	....	Total for all occupations

on p. 222.

TABLE I *Contd.*—*Showing for the whole of England and Wales the Number of 1851, 1861, 1871, 1881, and 1891, according to the Census*

Occupation.	Per 10,000 Females 25 and				
	1891.	1881.*	1871.	1861.	1851.
Domestic, in-door servant	902	845	985	915	897
Milliner, dressmaker, staymaker	331	371	411	462	415
Cotton, cotton goods manufac- ture	258	280	284	279	229
Washing and bathing service.....	164	185	200	227	208
Schoolmistress, teacher, profes- sor, lecturer	137	121	120	111	118
Charwoman	102	100	95	89	82
Tailoress	66	55	50	40	28
Worsted, stuff manufacture	45	52	55	53	58
Woollen, cloth „	51	54	53	53	50
Sick nurse, midwife, invalid attendant, and subordinate medical service.....	48	23	18	20	21
Shirt maker, seamstress	39	79	92	107	93
Shoe, boot, patten, clog maker	33	33	26	56	45
Draper, linendraper, mercer	35	24	19	14	9
Grocer, tea, coffee, chocolate maker, dealer	38	24	22	23	19
Lodging, boarding house keeper	38	29	21	20	23
Inn, hotel servant	35	22	19	15	30
Silk, satin, velvet, ribbon manu- facture	23	35	57	88	96
Agricultural labourer, farm ser- vant	18	31	52	84	125
Total for above occupations	2,363	2,363	2,579	2,656	2,546
Textile worker, factory worker } (undefined)	7	10	18	10	4
Machinist (undefined)	17	8	16	....	....
Other occupations	573	519	542	502	528
Total for all occupations.....	2,960	2,900	3,155	3,168	3,078

* See note

Females per 10,000 between 25 and 45 Years of Age, engaged in Occupations in of these Years, with the Decennial Increases or Decreases.

under 45 Years of Age.

Increase or Decrease on Previous Decade.								Occupation.
1891.		1881.*		1871.		1861.		
In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	
+57	....	....	-140	+70	....	+ 18	....	Domestic, in-door servant
....	- 40	....	- 40	....	- 51	+ 47	....	Milliner, dressmaker, staymaker
....	- 22	....	- 4	+ 5	....	+ 50	....	{ Cotton, cotton goods manufac- ture
....	- 21	....	- 15	....	- 27	+ 19	....	Washing and bathing service
+16	....	+ 1	....	+ 9	....	....	- 7	{ Schoolmistress, teacher, profes- sor, lecturer
+ 2	....	+ 5	....	+ 6	....	+ 7	....	Charwoman
+11	....	+ 5	....	+10	....	+ 12	....	Tailoress
....	- 7	....	- 3	+ 2	....	....	- 5	Worsted, stuff manufacture
....	- 3	+ 1	....	....	....	+ 3	....	Woollen, cloth ,,
+25	....	+ 5	....	....	- 2	....	- 1	{ Sick nurse, midwife, invalid attendant, and subordinate medical service
....	- 40	....	- 13	....	- 15	+ 14	....	Shirt maker, seamstress
....	....	+ 7	....	....	- 30	+ 11	....	Shoe, boot, patten, clog maker
+11	....	+ 5	....	+ 5	....	+ 5	....	Draper, linendraper, mercer
+14	....	+ 2	....	....	- 1	+ 4	....	{ Grocer, tea, coffee, chocolate maker, dealer
+ 9	....	+ 8	....	+ 1	....	....	- 3	Lodging, boarding house keeper
+13	....	+ 3	....	+ 4	....	....	- 15	Inn, hotel servant
....	- 12	....	- 22	....	- 31	....	- 8	{ Silk, satin, velvet, ribbon manu- facture
....	- 13	....	- 21	....	- 32	....	- 41	{ Agricultural labourer, farm ser- vant
....	....	....	-216	....	- 77	+110	....	Total for above occupations
....	- 3	....	- 8	+ 8	....	+ 6	....	{ Textile worker, factory worker (undefined)
+ 9	....	....	- 8	+16	....	....	....	Machinist (undefined)
+54	....	....	- 23	+40	....	....	- 26	Other occupations
+60	....	....	-255	....	- 13	+ 90	....	Total for all occupations

on p. 222.

TABLE I *Contd.*—*Showing for the whole of England and Wales the Number of Females 1871, 1881, and 1891, according to the Census of*

Occupation.	Per 10,000 Females 45 and				
	1891.	1881.*	1871.	1861.	1851.
Domestic, in-door servant	479	453	663	533	470
Milliner, dressmaker, staymaker	218	265	257	216	151
Cotton, cotton goods manufac- ture	87	101	100	89	83
Washing and bathing service.....	297	341	372	412	380
Schoolmistress, teacher, profes- sor, lecturer	53	58	86	100	105
Charwoman	213	215	194	186	177
Tailoress	58	50	42	30	21
Worsted, stuff manufacture	16	20	18	16	20
Woollen, cloth „	21	25	30	39	44
Sick nurse, midwife, invalid attendant, and subordinate medical service.....	102	106	96	106	109
Shirt maker, seamstress	73	110	134	130	103
Shoe, boot, patten, clog maker	17	22	22	36	27
Draper, linendraper, mercer	19	13	12	9	6
Grocer, tea, coffee, chocolate maker, dealer	73	50	51	50	40
Lodging, boarding house keeper	102	86	64	56	61
Inn, hotel servant	10	4	4	3	7
Silk, satin, velvet, ribbon manu- facture	21	37	50	68	65
Agricultural labourer, farm ser- vant	26	47	60	86	107
Total for above occupations ...	1,885	2,003	2,255	2,165	1,977
Textile worker, factory worker } (undefined)	4	5	10	6	3
Machinist (undefined)	6	2	3	....	....
Other occupations	602	598	659	624	659
Total for all occupations	2,497	2,608	2,927	2,795	2,639

* See note

per 10,000 between 45 and 65 Years of Age, engaged in Occupations in 1851, 1861, these Years, with the Decennial Increases or Decreases.

under 65 Years of Age.

Increase or Decrease on Previous Decade.								Occupation.
1891.		1881.*		1871.		1861.		
In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	
+ 26	....	....	-210	+130	....	+ 63	....	Domestic, in-door servant
....	- 47	+ 8	....	+ 41	....	+ 65	....	Milliner, dressmaker, staymaker
....	- 14	+ 1	....	+ 11	....	+ 6	....	{ Cotton, cotton goods manufac- ture
....	- 44	....	- 34	....	- 40	+ 32	....	Washing and bathing service
....	- 5	....	- 28	....	- 14	....	- 6	{ Schoolmistress, teacher, profes- sor, lecturer
....	- 2	+ 21	....	+ 8	....	+ 9	....	Charwoman
+ 8	....	+ 8	....	+ 12	....	+ 9	....	Tailoress
....	- 4	+ 2	....	+ 2	....	....	- 4	Worsted, stuff manufacture
....	- 4	....	- 5	....	- 9	....	- 5	Woollen, cloth ,,
....	- 4	+ 10	....	....	- 10	....	- 3	{ Sick nurse, midwife, invalid attendant, and subordinate medical service
....	- 37	....	- 24	+ 4	....	+ 27	....	Shirt maker, seamstress
....	- 5	....	....	....	- 14	+ 9	....	Shoe, boot, patten, clog maker
+ 6	....	+ 1	....	+ 3	....	+ 3	....	Draper, linendraper, mercer
+ 23	....	....	- 1	+ 1	....	+ 10	....	{ Grocer, tea, coffee, chocolate maker, dealer
+ 16	....	+ 22	....	+ 8	....	....	- 5	Lodging, boarding house keeper
+ 6	....	....	....	+ 1	....	....	- 4	Inn, hotel servant
....	- 16	....	- 13	....	- 18	+ 3	....	{ Silk, satin, velvet, ribbon manu- facture
....	- 21	....	- 13	....	- 26	....	- 21	{ Agricultural labourer, farm ser- vant
....	-118	....	-252	+ 90	....	+188	....	Total for above occupations
....	- 1	....	- 5	+ 4	....	+ 3	....	{ Textile workers, factory workers (undefined)
+ 4	....	....	- 1	+ 3	....	....	....	Machinist (undefined)
+ 4	....	....	- 61	+ 35	....	....	- 35	Other occupations
....	-111	....	-319	+132	....	+156	....	Total for all occupations

on p. 222.

TABLE I *Contd.*—*Showing for the whole of England and Wales the Number of Females 1881, and 1891, according to the Census of these*

Occupation.	Per 10,000 Females of				
	1891.	1881.*	1871.	1861.	1851.
Domestic in-door servant	276	257	605	463	365
Milliner, dressmaker, staymaker	94	110	110	95	58
Cotton, cotton goods manufac- ture	13	18	38	51	54
Washing and bathing service	200	243	325	314	287
Schoolmistress, teacher, profes- sor, lecturer	16	29	67	71	67
Charwoman	129	152	165	163	135
Tailoress	30	26	25	18	14
Worsted, stuff manufacture	3	3	5	10	17
Woollen, cloth „	5	9	22	38	43
Sick nurse, midwife, invalid attendant, and subordinate medical service.....	93	124	134	139	129
Shirt maker, seamstress	93	124	137	121	87
Shoe, boot, patten, clog maker ...	9	12	18	22	17
Draper, linendraper, mercer	9	7	8	8	5
Grocer, tea, coffee, chocolate maker, dealer	63	49	57	58	41
Lodging, boarding house keeper	81	76	60	56	55
Inn, hotel s.rvant	2	1	2	1	2
Silk, satin, velvet, ribbon manu- facture	13	25	35	45	46
Agricultural labourer, farm ser- vant	19	44	66	100	121
Total for above occupations ...	1,148	1,309	1,879	1,803	1,546
Textile worker, factory worker (undefined)	2	2	11	9	5
Machinist (undefined)	1	...	1	...	...
Other occupations	447	517	702	708	699
Total for all occupations.....	1,598	1,828	2,593	2,520	2,250

* See note

per 10,000 of and above 65 Years of Age engaged in Occupations in 1851, 1861, 1871, Years, with the Decennial Increases or Decreases.

and above 65 Years of Age.								Occupation.
Increase or Decrease on Previous Decade.								
1891.		1881.*		1871.		1861.		
In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	
+19	....	....	-348	+142	....	+ 98	....	Domestic in-door servant
....	- 16	....	....	+ 15	....	+ 37	....	Milliner, dressmaker, staymaker
....	- 5	....	- 20	....	- 13	....	- 3	{ Cotton, cotton goods manufac- ture
....	- 43	....	- 82	....	- 19	+ 57	....	Washing and bathing service
....	- 13	....	- 38	....	- 4	+ 4	....	{ Schoolmistress, teacher, profes- sor, lecturer
....	- 23	....	- 13	+ 2	....	+ 28	....	Charwoman
+ 4	....	+ 1	....	+ 7	....	+ 4	....	Tailoress
....	....	....	- 2	....	- 5	....	- 7	Worsted, stuff manufacture
....	- 4	....	- 13	....	- 16	....	- 5	Woollen, cloth ,,
....	- 31	....	- 10	....	- 5	+ 10	....	{ Sick nurse, midwife, invalid attendant, and subordinate medical service
....	- 31	....	- 13	+ 16	....	+ 34	....	Shirt maker, seamstress
....	- 3	....	- 6	....	- 4	+ 5	....	Shoe, boot, patten, clog maker
+ 2	....	....	- 1	....	....	+ 3	....	Draper, linendraper, mercer
+14	....	....	- 8	....	- 1	+ 14	....	{ Grocer, tea, coffee, chocolate maker, dealer
+ 5	....	+16	....	+ 4	....	+ 1	....	Lodging, boarding house keeper
+ 1	....	....	- 1	+ 1	....	....	- 1	Inn, hotel servant
....	- 12	....	- 10	....	- 10	....	- 1	{ Silk, satin, velvet, ribbon manu- facture
....	- 25	....	- 22	....	- 34	....	-21	{ Agricultural labourer, farm ser- vant
....	-161	....	-570	+ 76	....	+257	....	Total for above occupations
....	....	....	- 9	+ 2	....	+ 4	....	{ Textile worker, factory worker (undefined)
+ 1	....	....	- 1	+ 1	....	....	....	Machinist (undefined)
....	- 70	....	-185	....	- 6	+ 9	....	Other occupations
....	-230	....	-765	+ 73	....	+270	....	Total for all occupations

on p. 222.

TABLE II.—*Showing for the more Important Industries employing Female Labour, the Number of Factories and Workshops under the 1878 Act, and the Total Number of Women and Girls Employed therein, according to the Factory and Workshop Return of Persons Employed, 1895; and also the Total Number of Women and Girls returned as Occupied at the Census, 1891, together with the Number Returned as Employer, Employed, or Working on Own Account.*

Industry.	Factory Returns, 1895.					Census Returns, 1891.				
	Number of		Number of Women and Girls Employed in			Women and Girls.				
	Fac-tories.	Work-shops.	Factories.	Work-shops.	Factories and Work-shops.	Total Occupied.	Em-ployers.	Em-ployed.	On Own Account.	Others.
Cotton.....	2,658	1,033	308,121	7,551	—	332,784	127	323,539	591	8,527
Wool	1,590		63,740		—	64,294	86	62,463	115	1,630
Worsted	701		71,902		—	69,629	16	67,905	83	1,625
Shoddy	244		4,832		—					
Flax.....	81		5,192		—	5,592	9	5,330	24	229
Hemp	82		3,282		—	2,333	5	2,157	2	169
Jute.....	14		1,205		—					
Cocoanut-fibre.....	36		607		—					
Silk	527		22,996		—	31,811	32	30,405	156	1,218
Lace (Nottinghamshire) ...	245		2,838		—	14,143	—	—	—	—
Hosiery	300	—	20,879	—	—	30,887	415	27,666	1,361	1,445
China and earthen-ware.....	885		24,411		24,411	21,772	35	21,041	58	638
Glass	359		1,878		1,878	2,105	17	1,984	20	84
Tailoring.....	236	6,519	28,273	26,099	54,372	89,224	929	77,472	5,628	5,195
Hats and caps	175	583	10,592	6,147	16,739	12,585	99	11,873	190	423
Millinery, mantle, stay, cor-set, and dress-making	175	20,765	18,082	116,539	134,621	415,961	21,918	223,357	136,634	34,051
Shirt and linen collar making	93	368	10,049	5,776	15,825	52,943	453	32,614	13,678	6,198
Boots and shoes ...	855	3,684	21,534	10,078	31,612	46,141	1,170	41,644	1,300	2,027
Paper, printing, stationery, &c.	8,144	661	46,637	3,822	50,459	50,476	372	44,952	420	4,732

TABLE III—*Showing for London and Twenty-Sever. Large Towns (Urban Sanitary Districts) the Number of Births, the Number of Deaths of Infants under 1 Year, and the Number of Deaths of Infants under 1 Year in every 1,000 Births, during the Five Years 1889-93; together with the Number of Females above 10 Years of Age in 1891, and the Number of Females Returned as In-door Domestic Servants in 1891 in those Towns.*

Towns.	Number of Births, 1889-93.	Number of Deaths of Infants under 1 Year, 1889-93.	Number of Deaths of Infants under 1 Year, per 1,000 Births, 1889-93.	Female Population above 10 Years of Age, 1891.	Female In-door Domestic Servants, 1891.
London	660,690	102,718	155	1,740,417	238,366
Brighton.....	14,852	2,234	150	53,176	9,828
Portsmouth	23,914	3,498	146	63,803	6,999
Norwich	15,935	2,802	176	42,305	4,382
Plymouth	12,564	2,041	162	35,829	4,224
Bristol.....	33,471	4,891	146	94,946	12,307
Wolverhampton...	13,928	2,582	185	31,436	3,136
Birmingham	74,818	13,295	178	188,773	13,827
Leicester	26,123	5,387	206	70,806	5,157
Nottingham	32,133	5,446	169	89,527	7,147
Derby	14,550	2,259	155	36,508	3,613
Birkenhead.....	16,635	2,826	170	39,428	5,912
Liverpool	89,558	17,264	193	203,022	19,978
Bolton.....	19,046	3,398	178	46,669	2,324
Manchester.....	78,466	14,740	188	201,088	15,523
Salford	35,541	6,887	194	78,007	5,532
Oldham	19,939	3,648	183	53,063	2,341
Blackburn	20,016	4,137	207	49,099	2,322
Preston	19,274	4,695	244	45,179	2,597
Huddersfield	11,292	1,834	162	40,996	2,913
Halifax	11,190	1,900	170	38,481	2,113
Bradford.....	30,828	5,453	177	92,145	5,582
Leeds	61,479	11,071	180	145,899	10,295
Sheffield	56,802	10,227	180	123,779	11,684
Hull	34,758	6,178	178	76,833	7,905
Sunderland.....	24,374	4,257	175	49,505	4,763
Newcastle	32,614	5,488	168	71,274	8,616
Cardiff.....	23,587	3,880	165	46,972	4,995

TABLE IV.—*Showing for London and its Sub-Registration Districts, and for Registration Districts with 100,000 Inhabitants, and for certain Industrial Registration Districts with less than 10,000 Inhabitants in England and Wales, the Number of Deaths of Infants under 1 Year in every 1,000 Births, and the Number of Deaths of Children under 5 Years to every 1,000 Children living under 5 Years, during the Decades of 1871-80 and 1881-90.*

Registration District.	1871-80.		1881-90.	
	Deaths of Infants to 1,000 Births.	Deaths per 1,000 under 5 Years.	Deaths of Infants to 1,000 Births.	Deaths per 1,000 under 5 Years.
England and Wales	149	63·12	142	56·82
London	158	72·76	152	68·16
1A. Paddington	153*	72·14*	143	62·91
1B. Kensington			154	62·86
2. Fulham	161*	65·99*	161	67·53
3. Chelsea	180	74·63	160	73·54
4. St. George Hanover Square	168	77·96	153	71·34
5. Westminster	179	84·98	163	72·32
6. Marylebone	164	81·91	148	74·82
7. Hampstead	136	57·21	117	48·55
8. Pancras	158	72·97	153	66·51
9. Islington	148	66·77	144	61·41
10. Hackney	144	60·86	137	60·43
11. St. Giles	176	92·69	154	79·73
12. Strand	203	99·97	226	109·60
13. Holborn	168	87·33	164	81·63
14. London, City	162	82·48	171	90·03
15. Shoreditch	159	77·04	168	78·47
16. Bethnal Green	160	78·68	157	75·85
17. Whitechapel	181	95·83	173	84·84
18. St. George in the East	181	88·54	182	87·74
19. Stepney	176	85·98	196	99·20
20. Mile End	152	72·47	146	69·05
21. Poplar	156	73·47	148	67·74
22. St. Saviour, Southwark	169	82·91	166	78·97
23. St. Olave, „	154	76·18	156	72·88
24. Lambeth	152	71·96	145	67·22
25. Wandsworth	149	58·31	141	56·54
26. Camberwell	147	58·55	143	59·53
27. Greenwich	148	63·77	147	65·62
28. Lewisham	126	48·47	121	44·61
29. Woolwich	133	61·28	124	50·82
38. Croydon	128	47·99	118	45·49
39. Kingston	113	42·21	115	41·95
77. Brighton	157	62·58	150	61·34
83. Portsea Island	140	59·12	139	57·61
97. Southampton	138	57·87	135	53·60
126. Brentford	139	51·47	136	51·90
129. Edmonton	131	45·84	125	49·10
160. Northampton	173	71·41	166	60·78
176. Luton	174	66·11	154	61·06
186. West Ham	145	55·54	142	57·74
225. Norwich	188	72·29	166	64·04

* During the 6 years 1875-80.

TABLE IV *Contd.*—*Showing the Number of Deaths of Infants under 1 Year in every 1,000 Births, &c.*

Registration District.	1871-80.		1881-90.	
	Deaths of Infants to 1,000 Births.	Deaths per 1,000 under 5 Years.	Deaths of Infants to 1,000 Births.	Deaths per 1,000 under 5 Years.
277. Plymouth	163	75'08	159	71'49
319. Bedminster	142	61'48	128	47'05
320. Bristol	168	78'23	156	69'49
321. Barton Regis	144	62'53	134	52'53
363. Stoke-upon-Trent	189	86'76	190	77'84
371. Wolverhampton	161	73'26	161	65'55
372. Walsall	168	78'43	159	64'29
373. West Bromwich	157	73'53	163	65'61
374. Dudley	171	84'91	166	68'95
385. King's Norton	128	50'90	127	45'81
386. Birmingham	179	86'10	174	74'69
387. Aston	160	70'75	153	59'63
392. Coventry	164	68'09	145	53'88
404. Hinckley	169	68'97	151	54'37
409. Leicester	214	92'52	203	78'23
430. Basford	168	68'40	157	61'00
431. Nottingham	184	79'30	} 174	79'53
Radford	193	81'63		
436. Derby	146	63'91	144	56'47
439. Chesterfield	149	63'76	148	54'70
443. Stockport	182	80'33	179	71'85
444. Macclesfield	152	62'92	145	56'60
448. Congleton	145	57'78	133	47'85
452. Birkenhead	133	62'44	145	60'59
453. Liverpool	217	119'29	219	114'25
454. Toxteth Park	} 161	75'91	{ 165	79'31
455. West Derby				
456. Prescott	146	70'51	157	71'92
458. Wigan	172	87'28	161	73'38
459. Warrington	151	67'61	145	63'13
460. Leigh	159	75'46	155	66'00
461. Bolton	167	78'54	163	66'27
462. Bury	163	75'84	159	64'63
463. Barton-on-Irwell	144	64'07	139	54'15
464. Chorlton	163	77'82	161	70'64
465. Salford	184	95'96	183	85'42
466. Manchester	190*	103'52*	193	92'84
467. Prestwich	165*	78'94*	156	74'71
468. Ashton-under-Lyne	179	83'81	172	71'91
469. Oldham	174	84'79	169	76'35
470. Rochdale	158	77'25	145	58'92
471. Haslingden	160	71'78	153	62'64
472. Burnley	183	80'45	184	77'13
473. Clitheroe	130	52'02	119	44'15
474. Blackburn	191	90'33	178	78'16
475. Chorley	158	67'70	152	58'35
476. Preston	212	97'85	203	86'40

* During the 6½ years from 1st October, 1874-80.

TABLE IV *Contd.*—*Showing the Number of Deaths of Infants under 1 Year in every 1,000 Births, &c.*

Registration District.	1871-80.		1881-90.	
	Deaths of Infants to 1,000 Births.	Deaths per 1,000 under 5 Years.	Deaths of Infants to 1,000 Births.	Deaths per 1,000 under 5 Years.
492. Keighley	165	74'78	146	57'32
495. Huddersfield	156	68'23	153	62'21
496. Halifax	157	72'64	147	58'45
497. Bradford	177	83'71	161	65'15
498. Hunslet	192	88'35	174	74'23
499. Holbeck	196	94'00	179	73'46
500. Bramley	170	74'93	160	64'25
501. Leeds	188	87'47	174	72'58
502. Dewsbury	181	83'27	165	69'16
503. Wakefield	154	69'73	150	62'90
508. Ecclesall Bierlow	151	69'14	159	64'65
509. Sheffield	183	91'22	176	77'67
520. Sculcoates	170	71'53	152	60'48
521. Hull	178	77'89	167	68'80
534. Middlesbrough	152*	70'68	161	68'61
553. Sunderland	166	79'28	160	71'92
554. South Shields	164	79'97	146	62'87
555. Gateshead	170	81'53	159	65'88
556. Newcastle	176	81'71	162	68'32
557. Tynemouth	161	73'87	148	59'44
585. Newport	142	63'15	141	56'34
586. Cardiff	142	60'69	148	59'84
587. Pontypridd	162	78'00	171	70'78
588. Merthyr Tydvil	153	75'18	164	70'19
592. Swansea	141	69'51	141	61'63

* During 5½ years from 1st October, 1875.

DISCUSSION *on* MISS COLLET'S PAPER.

MR. NOEL HUMPHREYS said he must in the first place express his appreciation of the undoubted value of the paper. There were one or two points, however, on which he might say a word in defence of the census statistics. First with regard to the statement of employers and employed, the President would probably be able to throw light upon the object which the census committee had in view when they recommended that this addition should be made to the census schedule. It was an entirely new subject of inquiry, and he should like it to be understood how extremely difficult it was to make people understand how they were to fill up this part of the schedules. It was obvious, as Miss Collet admitted, that there was often the greatest confusion in the minds of persons whether they should put themselves down as "employer" or "employed." The Census Office had all kinds of questions submitted to it as to whether a person who worked at home and was assisted by his wife and family should be treated as an "employer." With regard to the employed there was again a question whether a person who took work from a middleman and did the work at home was working on his or her own account—for which there was a third column—or should be returned as employed. The instructions were very carefully considered, though he would not venture to say they were perfect. Moreover, however carefully they may be worded, there is no assurance that they will be carefully read, and consequently they will be variously construed. He fully endorsed the suggestion with regard to certain proposed additions to the tabulated results of the census, and also the statement that what was wanted was not so much additional information, as that the information given should be turned to fuller account. That was to a great extent a financial question, a question of the amount placed at the disposal of the Census Office by the Treasury. There could not be any doubt that the occupation of women in the future should be returned under two different headings, separate returns being given of the occupations of single and of married women. If he had anything to do with the next census, he should have great pleasure in using any influence he might have to secure the separate tabulation of the occupations of married women. Having some years ago expressed an opinion with regard to the causation of infant mortality, he was glad to find that Miss Collet to some extent endorsed his view. There certainly appeared to be insufficient grounds for discouraging the employment of women, or even of married women, in factories or elsewhere, so long as the conditions under which they worked were properly supervised and safe guarded. Miss Collet had proved conclusively that infant mortality was in the main governed by the home conditions of the people and by the amount of attention devoted to the children by their parents, which was

personal equation rather than the effect of the occupation of women.

Mr. CHARLES BOOTH was extremely glad to hear that Mr. Humphreys looked forward to the next census being carried out more perfectly than it ever had been. He had attempted himself to use the figures concerning the particular question of employer or employed, and although he knew the difficulties connected with them, he found them of great value. This paper was further evidence of the excellent use that could be made of figures of that sort even if they were not ideally perfect. The definition of "employer" and "employed" would be made very much clearer if the Factory Act made it more clear what was meant by "workshops," and what was meant by an "employed person." They might hope that all Government departments connected with these matters would work hand in hand, and that they would have progress all round. He was a strong advocate of a very complete system of registration, which should ensure that whatever industrial establishments came under the control of the Factory Acts, should also be registered, so that more complete and accurate statistics might be collected. Also that it might be more easy under the census for people to know and declare whether they were or were not what was recognised industrially, and for the purpose of the census, as "employed persons."

There was one point with regard to the interesting deductions which had been drawn from the change in the employment of women with regard to the ages of those employed, to which he should like to draw attention. It would be seen that in the years of efficiency there was an increase in the proportion of women employed, but in the years of inefficiency there was a decrease. There was no year of those brought forward in which the number of young women employed from 15 to 35 had not increased. Those were the years which women rightly gave to efficient industrial effort. It was part of a tendency everywhere towards industrial efficiency, which he believed to be the key note of the industrial condition of the present time—that work was done by both men and women in their efficient years. This was also connected with an increase in wealth, because in the inefficient years of childhood the children were most easily supported. They were not only not compelled to go to work, but they were not wished to go to work by their parents so early. There was more wealth and more money to be devoted to the care of the children and to the keeping them at home until their efficient time came. The same thing applied also in old age.

Sir RAWSON RAWSON said it was now just fifty years since the Society appointed a committee to consider the question of the census then about to be taken, and he thought their exertions were of some use in opening the eyes of the legislature to the necessity of modifying the measure as introduced by the Government. At that time the occupations of females attracted but little attention, and were very different from what they were at the

present day. Why should not the Council of the Society after fifty years resume the consideration of the census, more particularly in connection with this question of obtaining more detailed information with regard to the employment of females? He believed they would have the advantage of distinguished experts to guide them in their examination of the question, and that any suggestion that appeared expedient and feasible which emanated from such a committee, and which was ratified by the Society, would receive attention, and might be useful in the consideration of this important question.

Mr. JESSE ARGYLE, after expressing regret that he had not had an opportunity of reading beforehand Miss Collet's excellent paper, said that so far one of the most striking points in the whole paper had not been noticed, namely, the connection between a high infantile mortality and the conditions and surroundings of female workers, as apart from the question of their employment. Miss Collet had put forward good grounds for questioning what had been the generally accepted theory, and he was reminded of a paper read by Mr. Booth some years ago, which lent a good deal of support to her contention. That paper dealt with the whole of the registration districts of London, and showed very clearly that a high infantile mortality as well as a high birth-rate went with conditions of great poverty and over-crowding, and that the poorest and most crowded districts were not by any means necessarily those in which the women were most engaged in industrial occupations. For instance, in St. George's in the East, where crowding was greatest and poverty was very great, there was a high birth-rate and a high death-rate. A high birth-rate meant necessarily a high death-rate, but he did not suppose it would follow that in towns where there were a great many women employed there would be a very high birth-rate. He should think it would be rather the contrary. With regard to what Miss Collet said as to getting fuller and more uniform information from the census, he should certainly say that, although there had been very great improvements in the latest censuses, still something more might be done. He had been greatly misled in going through the figures by the changes made between one census and another without any reference in the tables to show that such change had been made. He did not say there was no reference anywhere, but there was certainly no reference on the face of the statements. It would be very useful if, whenever a change was made in the method of tabulation, a note were added in connection with the table stating the fact. What Miss Collet said about changes in domestic service reminded him that when he was going over the figures for the Irish census for one year, he was startled by the discrepancies in the numbers of the domestic class as between one census and another, caused, as he found by the report later on, by the transference of married women from the domestic to the unoccupied group.

Sir ROBERT GIFFEN said he should like to add his testimony

to that of other speakers, who had expressed their sense of the great value of this paper. Miss Collet had brought great skill and energy to bear in working out the various statistical problems contained in it. The most important fact of all was that the industrial employment of women, in spite of all they heard of the women's movement, had really been diminishing; but on further investigation it appeared that diminution had taken place in industrial employment of a kind which was not desirable, and at the same time there had been an increase of certain descriptions of industrial employment which were highly desirable. One of the instances of diminution which at once presented itself to the mind, was the diminution of employment in agriculture and in mines. It was highly desirable that female labour in such directions should diminish, but at the same time it was desirable that women should have the opportunity of good employment in suitable fields, that they should be properly trained for it; and they should be able to work in a remunerative way whilst they were young and active. The other point which was brought out by Miss Collet's paper was the proof she had given that there had been no justification for the belief, which existed very extensively at one time, that the occupation of women was a cause of infant mortality. It was pointed out that where infant mortality was high, there were sufficient reasons to account for it without ascribing it to the proper occupation of women, and there was not shown to be any connection between the occupation itself and that mortality. It was very important that further investigation should be made—and the want of materials for such an investigation was what Miss Collet mainly insisted upon—as to the effect of different female occupations on the health of the people engaged in them. These were points of great importance socially, and they were much indebted to Miss Collet for the pains she had taken on the subject.

Mr. A. E. BATEMAN said this was a very useful paper, and Miss Collet being a colleague of his in the Board of Trade, he thought it was a great compliment to the department that she should come there and read such an excellent paper. There was only one point he wished to allude to, and that was the question as to whether the wages of domestic servants really fell or rose between 1851 and 1871. He had once before tried to get members of the Society to ransack their old shelves, and see if they could not find "family wages books." He held in his hand a book of this kind which had been kept in his wife's family since nearly the beginning of the century, for the purpose of recording various particulars concerning every servant. He need hardly say there was a good deal of variety; even the good old servants were some of them called "sluts" occasionally, and it was said that one "would not get up in the morning" or was "saucy." The wages in the early part of the century were very much lower than now, and also as a rule they did not have tea and sugar, but they had caps and a certain amount of print for gowns provided by their employers, but that was deducted out of their wages. For the

period from 1851 to 1871 he had taken out the figures for that family. One cook got 16*l.* in 1851, and another cook 14*l.* for the greater part of her period of service, ending up with 18*l.* Housemaids had 11*l.* in 1852, then 11*l.* and 12*l.*, and ended up with 12*l.* and 14*l.* on one occasion. The nurse began with 12*l.* and went on for fifteen years until she became ladies' maid and got raised. It was after 1870 when the index number got up so high that domestic servants shared in the rise of prices between 1872 and 1875. Without more of such records it was difficult to say what the movement of wages had been, and he should very much like a thorough inquiry to be made into the wages of domestic servants from the beginning of the century. They had tried to do something of that kind at the Board of Trade as regards present wages, and in the "London Gazette" of that day there was a report on the wages of cooks and housemaids in London and the provinces, derived from both the registry offices and a great number of other inquiries. He hoped in time he would be able to secure fairly accurate returns, and if any members of the Society could get hold of such wages books as he had referred to, he would be glad if they would communicate with the Secretary of the Society on his behalf.

Miss PETHERBRIDGE said the original work she had done was in connection with library work, and that was three years ago at the People's Palace with Miss James, the chief librarian. Library work, as far as women were concerned, had decreased immensely during the last three years. When she was in the United States three years ago she had done some statistical work amongst the same class of people, chiefly women. There the libraries were mainly staffed by women, and one of the English librarians made the remark that in America women did all the work and the men took all the credit. Salaries were very satisfactory at the present moment. There were five or six women making 500*l.* a year in libraries, whereas the chief librarian at Liverpool, a man who had worked for many years, only got about 500*l.* It had been said sometimes that the rate of living in America was much more expensive; but that was not true, because you could live there from 20*s.* to 25*s.* a week, and you could not live decently in London under that. When women started in America twenty to twenty-five years ago they had to struggle against bad times; they were not welcomed by the men; but as the libraries increased, there were not enough men fitted to take up the work. A library school was founded so as to afford training for the work, and as more women went to be trained than men, the consequence was that when there was a trained woman applying and an untrained man, the woman got the post. She found that stenographers got better prices than in England. A first class typist and stenographer could earn easily 180*l.* a year in Boston or New York. She was struck by the fact that they were highly competent; they took such pains to make themselves capable and efficient, that naturally they were able to command good salaries.

Mr. J. A. BAINES said that in his opinion the rough and ready method of census taking did not admit of a very high degree of accuracy in a census of our complex economic system in England or in any civilised country. His original views, however, had been considerably modified by the use made of our English statistics first by Mr. Charles Booth in his monumental work on London, which could not have been brought to its perfection and completeness without such statistics as the census gave, and also by papers such as that with which Miss Collet had favoured them. Still in the main it would be seen that almost all those efforts would have been of very little use if they depended entirely on the census papers. Great light was thrown on the census figures by extraneous observation, and such special inquiry seemed to show that these figures of occupation by themselves were rather an unsafe guide. They all knew the comprehensive and laborious classification made by Signor Bodio by means of comparative tables based upon international census returns, but he could only use the latter on very broad lines, and he could not make any use of them in arguing on economic questions. It was the same with the English statistics, and one of the most valuable parts of Miss Collet's paper appeared to him to be that in which she had brought the results of her special examination of the Rochdale statistics to bear on the general census figures. The census was no doubt of use, if not with regard to its absolute figures, at least for purposes of comparing one decade with another, assuming that they were compiled and classified on an uniform system. That is, although the actual figures themselves might not give a correct guide to the actual prevalence of the occupation to which they referred, they would indicate the periodic variations in that prevalence. The instances Mr. Argyle had given from the English census, and still more from the Irish, did not appear of material importance, because a special mention of the changes made appeared at the beginning of the volume, where there was, he thought, generally a preliminary fly leaf showing the alteration in method which had been adopted since the previous census. The case referred to in Ireland was well known, and was probably notified in all the volumes. The former plan of classing all women otherwise undescribed as being connected with domestic employment was no doubt very unfortunate. With regard to the special economic value of this paper he had only one remark to make: the increase of factory work, although not an immediate cause of increased infant mortality, had indirectly to do with it, because of course increased attraction to women led to over-crowding, and to the gathering round the factories of a large crowd of women who had to find lodgings as best they could before they adapted themselves to the fresh circumstances. That was the case in all the large towns of Lancashire, although there were great differences in the percentage of mortality. But that was only one out of an enormous number of factors which affected infantile or other mortality. Over-crowding must be taken along with the moral conditions to which Miss Collet referred. The mere fact of being employed in a certain group of factories or occupations could, taken by itself,

not in the mind of any statistician he debited with material effect on infantile mortality.

Mr. M. N. ADLER drew attention to Table IV in the Appendix, showing the mortality of infants especially in London. It was very terrible to see what a heavy death-rate prevailed in certain districts, and to notice the extraordinary discrepancy there was between the mortality amongst infants in certain parts of London as compared with others. It was satisfactory to find that, dealing with London in its entirety, there was a fall of mortality both for children under 1 and under 5 years, within the ten years ending 1890, of nearly 5 per 1,000. But, on the other hand, though there was this fall with regard to London as a whole, there was an actual increase in some instances. He would merely call attention to one district in particular. In No. 12 (Strand) there appeared to have been a mortality for children under 5, for the period ending 1880, of about 100 per 1,000, and this increased by 10 per 1,000 in the following decade. On the other hand there were some districts which, in the decade ending 1880, showed a pretty high mortality, such as Whitechapel with 95 per 1,000; but in the next decade the mortality in Whitechapel went down to 84. He could not understand this great rise in the Strand district. They knew there were courts and alleys which were very crowded, but of late years many of them had been pulled down, and he thought there must be some special cause at work which created this heavy mortality. It was the duty of sanitary officers, and a task for philanthropists, to see if something could not be done to bring the rate of mortality in these overcrowded districts to something a little more approximating that of the contiguous districts and of other parts of London.

Mrs. COHEN said a high rate of infant mortality is obtained in many London mews, and she thought that this was due to the fact that whereas in the street there were dust-bins and municipal provision for removing all refuse, the mews behind these streets had in many cases no such provision. It was supposed that the people would get the refuse from these small dwellings in the mews removed with the manure when the casual farm carts collected it; but the fact was that the distance of agricultural land from London was now so great that the carts were only sent round rarely, sometimes twice a week, sometimes only once a week, and the refuse was removed in a very unsatisfactory manner. Mrs. Cohen's experience of twenty years of keeping horses in a mews in Marylebone was, that the regulation that it was incumbent on the owner of a stable to secure the removal of manure three times a week is a dead letter. She hoped that point would be pressed on the attention of the County Council.

Dr. REGINALD DUDFIELD said that as a medical officer of health he always looked on the mews in his own district as being some of the healthiest parts of the parish, and that infectious diseases were certainly much less frequent there than in the purely

residential streets. The removal of manure, to which the last speaker referred, should be undertaken not less than three times a week, and if it were not so removed it was entirely the fault of the local authorities. In every district it was directed by bye-law that all manure should be taken away at least once a week. To medical officers of health the most interesting part of the paper was that which dealt with infant mortality. The subject was one of extreme complexity. The author had adverted but very briefly to two or three points which he should like to see emphasised. He had found in his own observation that artificial feeding had a great influence on infantile mortality, more especially in connection with the prevalence of infantile diarrhoea in the summer months. Miss Collet had not given the deaths year by year, but in groups of years. It was a well known fact that the value of statistics based on groups of years was to a certain extent impaired, inasmuch as the grouping of years smoothed away the effects of epidemics. In the present case there was no indication as to the effects of diarrhoea epidemics. Again, where married women were largely employed in factories there came the question of the crèche. The children lost their mother's care during the day and were taken to the crèche. Such treatment favoured the spread of disease, and must more or less affect the infantile mortality. He should have liked to have seen the question of the mortality among illegitimate children in different parts of the country dealt with by Miss Collet. He feared the Registrar-General's reports did not collate the figures for areas small enough to enable the author to deal with that part of the question successfully, but it was of very material importance. Very great improvement in the details of registration of deaths would be effected if medical officers of health were appointed registrars. They wanted scientific men who would take a little trouble to ask a few questions of people when they came to register deaths, and he believed that if medical officers of health were registrars, not only of deaths but of births—for he regretted to say they did not get any information at all as to the births—they would be able to very materially help to elucidate the question of infantile mortality. In conclusion, he might mention that the Society of Medical Officers of Health had the question of the forthcoming census before them, and he thought it would be a very great advantage if the two societies could see their way to work together. He felt quite certain that his Society would welcome any proposal of co-operation on the part of the Statistical Society, for the medical officers of health were very anxious to get more information, and to have it in a more accessible form.

MISS COLLET, in reply, said she thought Mr. Humphreys was under a little misapprehension of her meaning with regard to the four-group conditions. She was not suggesting that there should be any further inquiry made on the subject, but that simply when using the material afterwards those conditions should be borne in mind. Indoor domestic servants, for instance, belonged entirely to the fourth group. More information was required with regard

to the persons referred to under the heading of Hotel and Inn service. They included the ABC girls and those at dining rooms, &c., who were not at all under the conditions of hotel servants. What she asked would only involve about three more headings with regard to women's employment in the final classification. Most of those returned as *employed* under the heading of "milliners and dressmakers" belonged to the group of persons living at home and working on their employers' premises. But there was one section in it which ought to be removed from it—the shop assistants. Shop assistants were scattered about under different headings according to the material they were selling, just as some years ago textiles used to be divided up according to whether they were vegetable or animal. With regard to the question of infant mortality and the effects of the crèche, in Lancashire they refused to adopt that system altogether, and therefore it did not enter into the causes of the death-rate. As everyone had rather carefully abstained from destructive criticism, it only remained for her to thank the audience for the kind way in which the paper had been received.

The PRESIDENT (the Right Hon. LEONARD H. COURTNEY, M.P.) said it only remained for him officially to tender his thanks to Miss Collet for her very useful paper. Of course originally the census might be said to have been meant rather as a numbering of the people than anything else, then it proceeded to the causes of life and death, and was further developed into some attempt to exhibit the movement of the social system, the transformation of industries and the general growths of social relations. Mr. Charles Booth and the speaker had served on a committee which was charged with advising the Local Government Board before the last census was taken, a committee which was appointed very largely through the action of the Society, which drew up certain recommendations and enlisted the co-operation of other bodies, just as he hoped in the next census the Society might work with the Medical Officers of Health and with any other parties interested. It was partly in consequence of their recommendations, as Mr. Humphreys suggested, that the new attempt at classification of employers and employed originated. There always must be a considerable degree of difficulty in getting answers to questions which were intended to obtain the domestic facts of social life. He remembered quite well Mr. Carlyle, some thirty years ago or more, when a great agitation was raised as to the distress prevalent in the metropolis, saying that to talk of the 80,000 distressed needle-women was absurd, they might as well call them distressed astronomers. In fact inquiries of the persons generally interested would not always be attended with success; yet they had obtained some facts which were of the greatest value, and he looked forward to the development of the art of census taking, and still more to greater exactness in the answers to census papers such as would give a constantly increasing value to the results arrived at. Sir Robert Giffen had referred to one fact brought out in a recent census of which Miss Collet gave the figure. Her figures showed that the

women employed in agricultural work had decrease from 207 to 21 per ten thousand. That meant really a transformation of society. A gradual withdrawal of women from laborious out-door work was part of the movement which Miss Collet was tracing, and the introduction of women in a more skilled and recognised way into the occupations of life. The truth brought out most effectively by her paper was that the work of women was becoming more and more organised. Miss Petherbridge had brought forward the fact that in the United States women and girls started under the influence of new ideas as to their relative duties in the world. So in active life where formerly there was too much disposition not to train women to work except under the rudest necessity, and where women were encouraged to look forward to marriage as the only vocation in which they could occupy their lives, there was now a new morality which he was glad to think was spreading more and more in each generation, and bringing women to understand that they had some work to do, and that they ought to train themselves for it. With regard to the critical question of the effect on infant mortality of the occupations of women, he must confess he did remain a little doubtful and a little unconvinced as to whether the conclusions which had been drawn were not perhaps rather too large. It might be true, and probably was true, that you would not find the worst rates of infant mortality in the places where you found recognised women's labour as most extensively prevailing; but mortality was due to several causes, and the occupation of a woman was only one factor which might operate to affect the mortality of infants. It might be that when women were most organised and most at work, you would find the other conditions of life so much improved in the matter of the housing and health arrangements, that the infant mortality there might be less than elsewhere where women were not so fully occupied. But they must compare like with like, and he did confess to a feeling that until labour was more carefully guarded—he would not say by legislation but by social morality—there was considerable danger of the occupation of women having a deteriorating effect upon infant mortality. He did not say it necessarily had, because properly organised occupation contributed to health rather than to weakness. But they could not flatter themselves that as yet there was by any means that organisation which would prevent the mischief which, he apprehended, must in some degree prevail.