



FISH-DEALER.



FURRIER.



GROCCR.



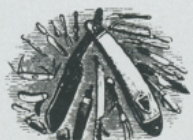
GUNSMITH.



GENTLEMEN'S FURNISHER.



FARRIER.



CUTLER.



FLOUR-DEALER.



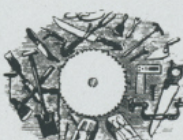
HOSIER.



FRAME-MAKER.



FISHING-TACKLE.



HARDWARE.



HATTER.



COPPERSMITH.



HAIR-DRESSER.



DENTIST.

Charles Booth

OCCUPATIONS
of the people of
GREAT BRITAIN
1801-1881

1886

Charles Booth: 'Occupations of the People of the United Kingdom, 1801–81'

1.1 GENERAL REVIEW OF OCCUPATION CENSUSES

Although it was not until 1831 that any detailed return of the occupations of the people was attempted, there had been in the earliest censuses a rough and ready method adopted of dividing the population into three or four large groups, with a view of distinguishing those who obtained their support directly from the land from those engaged in manufacture, trade or the learned professions. Thus in 1801 we find returns under three headings: (1) persons chiefly employed in agriculture; (2) persons chiefly employed in trade, manufacture, or handicraft; and (3) all other persons not employed in the two preceding classes. This return, it will be noted, is of individuals, but in 1811 and 1821 the number of *families* is substituted for individuals. The occupations are given in the same form, but it is the number of families chiefly employed in agriculture, or otherwise, that are stated. The principle on which the returns are based is, however, the same, and it is one on which I should wish to lay stress, viz., to ascertain the total number *supported* by each of the great branches of industry.

Resuming our review from 1821, we find in the next census (1831) the first attempt is made at any detailed enumeration of occupations; it is, however, of a very limited extent, being strictly confined to males aged 20 years and upwards, engaged in what are called 'retail trades and handicrafts'. The great bulk of the population are still summed up under a few headings as in the previous decades, though particulars are given under these headings of males over 20, and columns added for professional men and domestic servants.

The census of 1841 shows considerable advance in the details given. For the first time, all the principal occupations in the country are recorded, and the whole population is brought directly into the

*From a paper delivered in London to the Statistical Society on 18 May 1886.

tables of enumeration. There are separate returns for every county and for the large towns; the sexes are distinguished, but the ages are only given at two periods, under or over 20 years of age. Important, however, as was the advance made, it was exceeded in 1851, when the model on which the returns are still drawn up was originated. The great feature of this census is the grouping of occupations into seventeen classes with numerous sub-classes, the ages being given in quinquennial periods. The system of classification is as follows:

- Class 1* Persons engaged in the Imperial or Local Government.
- Class 2* Persons engaged in the defence of the country.
- Class 3* Persons engaged in religion, law, or medicine.
- Class 4* Persons engaged in art, literature, science and education.
- Class 5* Persons engaged in household duties, as wives, children, etc.
- Class 6* Persons engaged in boarding, lodging, domestic service and dress.
- Class 7* Persons engaged in commercial pursuits (merchants, bankers, etc.)
- Class 8* Persons engaged in conveyance.
- Class 9* Persons engaged in agriculture.
- Class 10* Persons engaged in breeding, animal tending and fishing.
- Class 11* This class has been, with advantage, largely reduced. It was in 1851 supposed to include all those engaged in the higher branches of mechanical or chemical arts, and embraces artisans and mechanics, book-sellers and printers, the building trades, machine, tool and instrument makers, coach and shipbuilders, chemical manufacturers, dyers etc., and even persons engaged in the public amusement.
- Class 12* Workers or dealers in animal substances, including family butchers and poulterers and all the woollen and silk operatives.
- Class 13* Workers and dealers in vegetable substances, from the brewer to the upholsterer, from the paper manufacturer or cotton spinner to the greengrocer.
- Class 14* Workers in mineral substances.
- Class 15* Unskilled or unspecified labour.
- Class 16* Persons of rank, property or independent means.
- Class 17* Useless or disabled members of society, criminals, paupers, pensioners and others supported by the community; but the returns are very incomplete and misleading, for only those who

failed to return themselves to a definite occupation are here included. The great majority of these classes having returned themselves as following, or having at some period of their lives followed, an occupation, have been returned with the regularly employed.

In the census for 1851 (which like its predecessors is for Great Britain) the separate tables for England and Wales, and for Scotland, contain the occupations summarised and brought within reasonable limits, the smaller divisions of labour being included under some broad or general heading to which they belong, or classed as 'others', but there are also tables for Great Britain which give details of all these minor forms of employment. In 1861 the returns for England and Scotland are no longer given in conjunction, but are placed in separate volumes, and the detailed table with further amplification is given for each country. The consequence is that the tables are rendered very bulky and unwieldy, and this becomes more striking on referring to the returns in the corresponding volume for 1871. Here the pruning knife has been very busy: the tables are reduced to a third of their former size, numbers of small trades are spirited away, and in their place appears a rather formidable item in the word others, for an explanation of which it is necessary to refer to the voluminous report.

Meanwhile, though the broad plan of classification remains much the same as in 1851, huge transpositions of numbers have been made from one class to another; the domestic class in one census includes the larger part of the population, and in the next is reduced by more than half; 350 000 persons in England alone (consisting of the wives and other relatives of farmers, etc.) are taken from the agricultural class of one census and placed in the unoccupied of another; the partially occupied wives are in no two successive censuses classed alike - and generally there is such a want of fixity of principle or method, that even competent authorities have been seriously misled regarding the apparent results. Possibly these changes were to a large extent necessary or unavoidable, but surely attention might have been drawn to them and some explanation given, instead of which there is not even so much as a footnote. The seeker after information is left to grope his way in the dark; if by chance he stumbles on the truth, well and good, if not he but adds his quota to the enormous total of false information before the public.

It was with the idea of remedying to some extent this state of things

that I undertook the compilation of the tables, the results of which are submitted in [Table 1.1]. They do not contain any new or original information, but restate that given in the census in a more uniform and accessible shape.

Table 1.1 Occupations of the people of Great Britain, 1841–81 (in thousands and decimals of a thousand)

		1841	1851	1861	1871	1881
<i>A. Agriculture</i>						
Farmers and their relatives	M	287.2	423.8	410.3	389.6	365.7
	F	22.9	27.8	29.2	31.2	27.7
	All	310.1	451.6	439.5	420.8	393.4
Labourers and Shepherds	M	1073.2	1257.1	1234.7	1042.3	932.6
	F	81.1	198.2	131.5	101.7	84.5
	A	1154.3	1455.3	1366.2	1144.0	1017.1
Nurserymen, Gardeners, etc.	M	58.8	95.3	101.0	121.2	87.1
	F	1.6	2.8	2.3	3.0	3.5
	A	60.4	98.1	103.3	124.2	90.6
Drainage & Machinery	M	—	—	4.0	3.9	6.5
	F	—	—	—	—	0.1
	A	—	—	4.0	3.9	6.6
Breeding & Dealing (Horses & Cattle)	M	33.6	52.0	63.4	68.8	66.8
	F	0.1	1.2	0.2	0.4	0.5
	A	33.7	53.2	63.6	69.2	67.3
<i>B. Fishing</i>						
Fishermen	M	23.4	36.5	39.1	47.1	58.1
	F	0.4	—	1.4	1.4	2.9
	A	23.8	36.5	40.5	48.5	61.0
<i>C. Mining</i>						
Miners	M	188.4	298.1	379.6	432.8	506.6
	F	6.1	6.5	5.3	6.1	6.2
	A	194.5	304.6	384.9	438.9	512.8
Quarrying & Brickmaking	M	39.5	76.5	94.8	103.5	121.6
	F	0.6	2.1	2.6	3.4	3.3
	A	40.1	78.6	97.4	106.9	124.9
Salt & water works	M	1.7	3.6	4.3	5.4	7.2
	F	—	0.2	0.1	—	0.2
	A	1.7	3.8	4.4	5.4	7.4
<i>D. Building</i>						
Management	M	16.9	22.8	35.9	47.9	61.1
	F	0.1	0.8	0.1	—	0.1
	A	17.0	23.6	36.0	47.9	61.2
Operatives	M	361.7	455.2	524.4	641.5	759.0
	F	1.3	0.2	0.9	1.0	2.3
	A	363.0	455.4	525.3	642.5	761.3

		1841	1851	1861	1871	1881
Roadmaking	M	32.4	51.1	58.9	68.3	84.5
	F	—	—	—	—	0.3
	A	32.4	51.1	58.9	68.3	84.8
<i>E. Manufacture</i>						
Machinery & tools	M	59.4	108.1	168.7	211.7	247.9
	F	3.2	4.3	7.9	7.9	10.9
	A	62.6	112.4	176.6	219.6	258.8
Shipbuilding	M	25.9	31.3	53.1	61.5	72.6
	F	—	—	0.1	0.1	0.1
	A	25.9	31.3	53.2	61.6	72.7
Metal workers	M	204.8	307.3	393.2	468.1	517.7
	F	8.6	24.5	28.6	27.5	30.9
	A	213.4	331.8	421.8	495.6	548.6
Earthenware, etc.	M	25.1	37.4	45.7	53.8	55.8
	F	7.6	12.1	14.0	18.9	21.1
	A	32.7	49.5	59.7	72.7	76.9
Fuel, gas & chemicals	M	6.5	19.6	28.2	40.4	49.4
	F	0.4	1.9	1.9	4.5	4.6
	A	6.9	21.5	30.1	44.9	54.0
Furs, leather, glue, etc.	M	35.0	48.9	51.8	54.5	54.6
	F	2.6	6.8	9.0	10.9	14.1
	A	37.6	55.7	60.8	65.4	68.7
Wood, furniture & carriages	M	166.7	202.7	226.0	238.4	248.5
	F	4.9	9.2	15.4	21.5	20.8
	A	171.6	211.9	241.4	259.9	269.3
Paper, floorcloth & waterproof	M	9.9	15.4	17.1	24.4	29.7
	F	4.1	11.1	14.3	17.9	29.9
	A	14.0	26.5	31.4	42.3	59.6
Textiles & dyeing	M	450.8	575.2	523.8	489.3	457.6
	F	334.0	606.7	657.7	691.8	695.6
	A	784.8	1181.9	1181.5	1181.1	1153.2
Dress	M	390.2	452.7	425.7	409.7	391.2
	F	206.5	526.1	606.4	608.8	671.2
	A	596.7	978.8	1032.1	1018.5	1062.4
Food, drink & smoking	M	96.5	139.2	154.3	168.1	179.2
	F	8.5	13.5	17.2	20.9	33.2
	A	105.0	152.7	171.5	189.0	212.4
Watches, instruments & toys	M	21.2	25.4	35.4	38.8	45.3
	F	0.8	1.3	3.0	3.1	3.6
	A	22.0	26.7	38.4	41.9	48.9
Printing & bookbinding	M	24.8	35.0	48.0	65.7	84.9
	F	2.1	4.5	7.7	10.6	16.8
	A	26.9	39.5	55.7	76.3	101.7
Unspecified: Engineers & firemen, mechanics, machine minders & unspecified manufacture	M	34.5	14.5	35.1	73.2	146.2
	F	13.3	—	8.1	34.3	22.7
	A	47.8	14.5	43.2	107.5	168.9

		1841	1851	1861	1871	1881
F. Transport						
Navigation & docks (not seamen abroad)	M	114.4	263.9	302.4	340.9	379.3
	F	1.3	10.2	7.3	12.5	9.3
	A	115.7	274.1	309.7	353.4	388.6
Railways	M	2.3	28.7	60.3	96.5	157.3
	F	—	0.1	0.1	0.3	0.8
	A	2.3	28.8	60.4	96.8	158.1
Roads	M	53.7	87.3	119.3	143.1	190.9
	F	1.5	2.5	2.9	2.9	1.5
	A	55.2	89.8	122.2	146.0	192.4
G. Dealing						
Raw materials	M	25.2	42.6	57.7	75.9	66.1
	F	1.7	1.3	4.3	6.1	3.2
	A	26.9	43.9	62.0	82.0	69.3
Clothing materials & dress	M	38.1	51.6	75.3	79.1	85.4
	F	4.7	9.9	18.7	26.9	39.5
	A	42.8	61.5	94.0	106.0	124.9
Food, drink & smoking	M	172.7	267.2	300.7	356.7	395.5
	F	33.3	55.9	69.7	77.9	84.0
	A	206.0	323.1	370.4	434.6	479.5
Lodging & coffee houses	M	2.5	6.3	6.5	7.6	10.5
	F	9.3	21.9	23.2	32.9	41.1
	A	11.8	28.2	29.7	40.5	51.6
Furniture, utensils & stationery	M	26.6	39.4	54.2	65.3	77.5
	F	2.9	5.6	9.2	12.8	17.8
	A	29.5	45.0	63.4	78.1	95.3
General dealers & unspecified	M	65.2	84.6	105.3	145.0	168.3
	F	17.6	34.8	37.8	58.3	58.0
	A	82.8	119.4	143.1	203.3	226.3
H. Industrial service						
Commercial	M	48.0	52.2	77.7	135.7	251.0
	F	0.2	0.1	0.5	2.0	7.9
	A	48.2	52.3	78.2	137.7	258.9
General labour	M	345.5	365.3	348.3	556.5	623.8
	F	14.5	8.9	4.7	8.7	3.8
	A	360.0	374.2	353.0	565.2	627.6
I. Public service & professional						
Administration	M	23.4	55.6	67.5	75.7	81.6
	F	1.0	2.5	4.1	6.5	10.2
	A	24.4	58.1	71.6	82.2	91.8
Army & navy, exc. those abroad. Up to 1871, inc. artificers & labourers in govt dockyards. In 1881, these were transferred to their trades.	M	51.8	94.3	141.9	144.8	132.8
	F	—	—	—	—	—
	A	51.8	94.3	141.9	144.8	132.8

		1841	1851	1861	1871	1881
Police & prisons	M	15.1	18.3	27.5	34.9	39.5
	F	—	—	0.7	0.8	0.7
	A	15.1	18.3	28.2	35.7	40.2
Law	M	34.1	37.5	39.0	44.4	50.3
	F	—	—	—	—	0.1
	A	34.1	37.5	39.0	44.4	50.4
Medicine	M	31.6	38.2	40.8	46.3	52.1
	F	16.6	28.7	29.6	33.7	41.1
	A	48.2	66.9	70.4	80.0	93.2
Art & amusement	M	15.8	25.6	27.3	34.4	38.8
	F	1.0	2.8	4.2	6.9	12.4
	A	16.8	28.4	31.5	41.3	51.2
Literature & science	M	0.8	2.2	3.5	6.7	8.9
	F	—	—	0.3	0.3	0.5
	A	0.8	2.2	3.8	7.0	9.4
Education	M	26.1	34.1	40.1	42.8	59.2
	F	33.2	71.3	89.2	105.8	143.0
	A	59.3	105.4	129.3	148.6	202.2
Religion	M	23.4	34.3	40.9	44.6	50.0
	F	—	0.9	3.4	5.7	7.7
	A	23.4	35.2	44.3	50.3	57.7
<i>J. Domestic service</i>						
Indoor	M	228.8	105.0	96.0	110.2	106.5
	F	885.6	899.1	1117.5	1361.2	1404.7
	A	1114.4	1004.1	1213.5	1471.4	1511.2
Outdoor: in the	M	10.4	38.3	66.1	81.3	185.6
census, public and	F	0.4	—	1.0	1.2	1.2
private coachmen,	A	10.8	38.3	67.1	82.5	186.8
and domestic and						
market gardeners						
confused. 1881						
figures exaggerated						
or earlier ones						
understated.						
Extra	M	16.1	18.3	21.4	24.9	31.2
	F	71.8	198.5	246.8	264.4	291.6
	A	87.9	216.8	268.2	289.3	322.8
<i>K. Indefinite</i>						
Presumably occupation	M	384.8	113.1	92.6	138.6	284.1
not described	F	—	—	—	—	—
	A	384.8	113.1	92.6	138.6	284.1
Grand total	M	4524.5	6688.6	7368.8	8201.8	9163.6
	F	1807.4	2816.8	3240.1	3654.7	3887.2
	A	7231.9	9505.4	10608.9	11856.5	13050.8

1.2 THE OCCUPATIONS OF THE PEOPLE CONSIDERED

In examining the returns for the different divisions of the kingdom, it must be premised that, owing to the different method of tabulation as to ages and the imperfections of the returns, the figures for 1841 do not, so far as England and Scotland are concerned, offer a very safe basis for comparison, and have not therefore been used in this paper. They are, however, given in the tables, while the incomplete ones for 1831 also appear in the more detailed tables, a copy of which is deposited in the library of the Statistical Society.

England and Wales

Between 1851 and 1881 the whole population increased 12 per cent in the first decade, 13 per cent in the second, and 14¼ per cent in the third. At the same time the dependent women and children (those not returned as employed in any way) increased from 53 per cent of the whole population in 1851 to 55 per cent in 1881, almost the whole of this increase lying with the children. The employment of girls under the age of 15 was as follows:

1851	205 000
1861	224 000
1871	254 000
1881	210 000.

Their main fields of employment were the textile industries and domestic service. Table [1.2] shows the distribution of female workers over 15.

Between 1851 and 1871, the proportion of women industrially employed declined, while those in education and domestic service rose, a pattern repeated for the whole occupied or self-supporting class. Between 1851 and 1881, the proportion engaged in productive or distributive industry fell from 78.4 per cent to 74.2 per cent, while there was an increase in the service sectors:

	<i>1851</i>	<i>1881</i>
Percentage employed in:		
Public and Professional Service	4.6	5.6
Domestic Service	13.3	15.7

Table 1.2 Changes in the employment of women aged over 15, England and Wales, 1851-81 (in thousands)

Occupations	1851		1861		1871		1881	
	Nos	%	Nos	%	Nos	%	Nos	%
Textiles, etc.	391	16.7	443	16.3	466	14.9	500	14.7
Dress	441	18.8	525	19.4	529	17.0	589	17.4
Others	358	15.2	364	13.4	434	13.9	465	13.7
Industry, total	1190	50.7	1332	49.1	1429	45.8	1554	45.8
Medicine	26	1.1	27	1.0	31	1.0	38	1.1
Education	67	2.8	82	3.0	97	3.1	127	3.7
Domestic service	909	38.7	1128	41.6	1375	44.1	1446	42.6
Others	6	0.3	11	0.4	18	0.6	28	0.8
Independent	150	6.4	130	4.8	168	5.4	200	5.9
Total self-supporting	2348	100	2710	100	3118	100	3393	100

With regard to Domestic Service, it is noteworthy that the increase lies mainly in the women and girls, the indoor men servants having decreased from 74 000 in 1851 to 56 000 in 1881, while the population has risen from 18 to 26 millions – a fact that would seem to indicate a greater diffusion of wealth, and also, perhaps, less ostentation of expenditure of the very rich. On the other hand, the number of public and private coachmen has more than doubled:

1851	43 100
1881	103 700.

Table [1.3] analyses these changes by occupational group. This picture separates the industrial classes into three main divisions, showing the percentage of those engaged in or supported by (1) the production of raw materials, (2) the preparing them for use, and (3) distributing productions finished and unfinished, and it will be at once observed how enormous are the interests of production and manufacture compared with those of distribution, so far as they can rightly be separated at all.

Coming now to a detailed review of the industrial classes, we notice, first, that the production of raw material employs a decreasing percentage. We depend, as is well enough known, more on what we import, and less on what we find at home. The reduction, however, falls entirely on Agriculture, as the percentage in Fishing and Mining have increased. And it is to the present condition of Agriculture that more attention has lately been given than to any other part of our

Table 1.3 Employments of the people by percentage, England and Wales, 1851–81 (sub-totals in brackets)

<i>Occupations</i>	<i>1851</i>	<i>1861</i>	<i>1871</i>	<i>1881</i>
Agriculture	20.9	18.0	14.2	11.5
Fishing	0.2	0.2	0.2	0.3
Mining	4.0 (25.1)	4.5 (22.7)	4.5 (18.9)	4.8 (16.6)
Building	5.5	5.8	6.3	6.8
Manufacture	32.7 (38.2)	33.0 (38.8)	31.6 (37.9)	30.7 (37.5)
Transport	4.1	4.6	4.9	5.6
Dealing	6.5 (10.6)	7.1 (11.7)	7.3 (12.7)	7.8 (13.4)
Industrial service	(4.5)	(4.0)	(6.0)	(6.7)
Industry	78.4	77.2	75.5	74.2
Public and professional service	4.6	5.3	5.5	5.6
Domestic service	13.3	14.6	15.8	15.7
Others	3.7 (21.6)	2.9 (22.8)	3.2 (24.5)	4.4 ^a (25.8)
Occupied population	100.0	100.0	100.0	100.0

^aThe figures here are subject to correction of about 1 per cent for retired persons previously included with their nominal trades.

industrial position. We have to face the fact that for the three decades since 1851, those employed on the land have decreased by 419 000, or 26 per cent. At the same time it is somewhat singular that in 1841 there were fewer persons employed on the land than at present: 1 297 000 against 1 341 000. The returns for 1841 cannot be trusted implicitly; nevertheless it is certain that a great increase (amounting according to these returns to 462 000) must have taken place in the agricultural population between 1841 and 1851. The increase is largely in the numbers of young males and females, suggesting that they were under-counted in 1841 or over-counted in 1851, or else that so great was the impetus given to this industry during the ten years in question, that all the available members of the labourer's family were for the first time pressed into active employment on the land.

Against the losses that followed 1851, mostly in ordinary agricultural labour, must be set the equivalent of the increased use of machinery, before we can say that less energy is devoted to the cultivation of the soil now than thirty years ago. A new class connected with the application of science to agriculture has sprung into being, that points to a change of system, involving improvements, rather than neglect of any kind, as a cause of the decrease in the agricultural population.

Table 1.4 Increase of population, with changes in numbers supported by agriculture, England and Wales, 1801-81 (in thousands)

Year	Population	Increase		Total supported by agriculture	
		Nos	%	Nos	%
1801	8 893	—	—	1713	19
1811	10 164	1271	14 1/4	2695	26 1/2
1821	12 000	1836	18	2698	22 1/2
1831	13 897	1897	15 3/4	2923	21
1841	15 912	2015	14 1/2	3875	24
1851 ^a	17 928	2016	12 2/3	4247	24
1861	20 066	2138	12	4194	21
1871	22 712	2647	13	3746	16 1/2
1881	25 974	3261	14 1/4	3435	13

^aAbout 400 000 persons are stated to have come to England from Ireland, and settled in England, between 1841 and 1851.

The facts as given in the census returns show us that in the last thirty years England has changed from a population about half agricultural and half manufacturing, to one in which Manufacture is double of Agriculture, and we have no reason to suppose that the process of change in this direction is yet ended. This change has been accompanied by an enormous increase in the total population, so that, altogether, support has been found during this period, in other ways than the tilling of the soil, for a new population of 8½ million souls. In this immense figure, those who have failed to obtain subsistence from Agriculture are completely swallowed up.

To state this question more fully, we may go back to the beginning of the present century. Table [1.4] shows that since that time we have had to find new means of support for no fewer than 17 millions of people. In the returns of 1811, 1821, and 1831, only the number of families supported by Agriculture is given, not the number of individuals. For those years I have reckoned 3½ individuals to a family, rather less than the proportion for the whole population.

It would thus seem, from such figures as we have, that of the total increase of 17 millions, some 2 or 2½ millions had up to 1851 been provided for on the land, but that, of these, ¾ million have been since transferred to other industries. How the great bulk of these millions have been provided for, while the numbers supported by Agriculture have remained comparatively so constant, is the question, and

whether the process can continue. The yearly increase of population now is greater than ever; can we expect to provide for the additional millions of the future in the same ways, or must some other means be found?

Our picture of what has happened would be much more complete if we could go back to 1801, but we can only do this by drawing largely upon the imagination. We know that Manufacture was then an adjunct of Agriculture, and that a hundred things were made at home for which everyone now goes to a shop; we know that machinery and commerce have changed this, and we see the end of the period of revolution in the amazing figures of change between 1841 and 1851, when the furthest point of unrestricted competition was reached, and when the reaction towards socialism commenced with the Factory Acts; but it is only of the period since 1851 that the census figures enable us to speak with any accuracy.

We come now to the second branch of the production of raw material, *Fishing*, which has prospered considerably. The whole numbers involved are not large, but those employed have increased 77 per cent, or twice as fast as the total occupied population. The increased numbers employed in this way count up to 13000, and there seems to be no reason why progress in this direction should stop short; on the contrary, a better organisation of the distribution of fish might largely increase the scope of the trade, and it is encouraging to see the good results of the last decade.

Mining, which has also prospered, has increased 68 per cent during the thirty years, against an increase of 39 per cent in the total employed population. The total numbers are large, those engaged in this industry in 1881 being 227000 more than in 1851. Nine-tenths of this increase is due to coal; copper and lead mining have greatly fallen off, and tin has decreased slightly. Iron shows a moderate increase, and the rest is made up of quarrying and brick making, which are included in the same class, and which both show a large increase. The decrease lies in metals of such value as can admit of carriage from places at a distance, where they are dug up more readily than in England; the increase lies in those of so low a value compared to bulk that the cost of carriage provides a natural protection.

Quarrying and brick making may be expected to grow with the general prosperity. It is as to the coal trade that serious questions arise. The output has enormously increased from about 50 million tons in 1851, to about 130 millions in 1881, while those employed in raising it have also more than doubled in number. Little comparative-

ly is exported for sale, the greater part being used at home or burnt by outward bound steamers, and it is to a continuously growing consumption in these ways that we have to look.

We now come to the backbone of the industrial organism we are studying, namely Building and Manufacture, which I venture to bracket as being alike the turning of raw materials into things serviceable, and we find that this remains nearly constant at 38 per cent of the employed population.

The numbers engaged in *Building* have increased 73 per cent, as against 39 per cent for the whole employed population, the addition to the total being 335 000, and well maintained up to 1881.

Manufactures, taken as a whole, have increased in the thirty years 30½ per cent, or 8½ less than the whole employed population, and this comparative falling off is progressive. Nevertheless we have here found support for about 2 millions out of the 8½ millions for which, in all, fresh means of support have been obtained since 1851, whilst the deficiency in proportion to population has been nearly made good by the increasing proportion employed in Building. It must not be forgotten also that, measured by production, our manufacturing energy has increased far beyond the increase of the whole population, and some economic mal-adjustment may be fairly assumed if the community generally can be shown not to share in the benefit.

Looking into the various sections of Manufacture, we shall not be surprised to find a great increase in those engaged in the construction of machinery and tools, which has risen from 1.2 per cent of the employed population in 1851 to 1.9 per cent in 1881, or in numbers from 100 000 to 224 000. Metal workers have similarly gone up from 293 000 to 477 000 (or 63 per cent), the iron and steel trades having doubled their numbers. Smaller branches, like the earthenware, coal, gas, chemical, paper, floor cloth and waterproof manufactures, have all kept pace with the growth of population, and have in some cases increased 100 to 150 per cent. It is in the greatest of all our manufactures, the textile industries, that the decreasing proportion as compared to population shows itself. In 1851 these industries with their natural ally, dyeing, found work for 11.1 per cent of our workers, but in 1881 only 8.1 per cent were so employed. As regards actual numbers there was an increase of 27 000 or 2.9 per cent. Taking the cotton trade by itself, we find the increase has not been far behind that for the whole occupied population, 31 per cent as against 39 per cent, but silk on the other hand shows a decided decline of more than 50 per cent, operating steadily over the whole period. The

workers in woollen fabrics have also decreased upon the whole, but the figures show a peculiar variation:

1851	258 000
1861	229 000
1871	245 000
1881	234 000

Flax and linen manufacture has strikingly fallen off from 26000 to 12000, and is insufficiently compensated by the increase in hemp and jute. Some consolation may be obtained, however, by noting the flourishing condition of these industries in Scotland.

The workers in dress have increased in number by 85 000 during the thirty years, but nevertheless the proportion to population is less than in 1851. The cause of these comparative decreases is to be found in the greatly increased use of machinery, which is witnessed by the figures of the unspecified section of manufacture (consisting mainly of the 'workers of machinery', who did not specify the trade for which their machinery was used, perhaps only as the driving power), which has risen from 13 000 to 142 000, or from 0.2 per cent to 1.2 per cent of the employed population. This increase may perhaps largely be set against the decrease in textiles and dress.

Food, drink, and smoking remain constant at 1.6 per cent of the employed; and those branches of mechanics most nearly connected with art, as watch and instrument making, printing and bookbinding, show large increases.

The third division of Industry comprises those engaged in the distribution of merchandise (finished or otherwise), and has two branches, called here Transport and Dealing.

Transport (which includes also all forms of travel) has increased enormously. In 1851 this industry employed 345 000 persons; in 1881 the figures had risen to 654 000, or by nearly 90 per cent. The analysis of this class points to changes in the methods and possibilities of industry which would repay separate study. As might have been expected, the greatest increase is in the railway employés, from 25000 to 139 000, but navigation and docks have fully kept pace with the advance of population. Most remarkable, therefore, under the circumstances, is the very large increase of persons engaged in conveyance by road. Side by side with the gigantic strides which railways have made, there has been an addition of 195 000, or 60 per cent, to the numbers engaged in other forms of transport. Of this

increase road conveyance claims 94 000, or an advance of 127 per cent on the numbers of 1851. The number of those properly in this class who have called themselves *private servants* are not included here, and if added would make the figure still more striking.

Dealing has increased 69 per cent, as against the 39 per cent increase of the total occupied population, a change due largely to the multiplication of small shopkeepers and street sellers. The actual numbers are:

1851	547 000
1881	924 000

The increase is very regular for the several decades. It should be stated, however, that it was in not a few cases impossible to separate accurately the dealers from the manufacturers. This however will have had but very little effect on the comparative percentages, as the possibility of error lies in small compass.

The last division of Industry, called here *Industrial Service*, ought not properly speaking to contain any besides those engaged in banking, insurance and accounts, but the returns of labour are so made and arranged that I have had to include with them in the same division (though under a separate heading) all general labour, or labour not allotted to any particular trade, and of this class of labour there was a remarkable increase between 1861 and 1871; but the returns are not to be trusted entirely, and the most we can say is that a low class of more or less casual labour appears to have increased since 1861 beyond the average increase of the population. Information on this subject would be very valuable, but it is not to be found in the census returns, where skilled and common labour are inextricably confused. The other section covers all commercial clerks, accountants and bankers; and the great and continuous increase here points even more forcibly than is the case with transport to a revolution in the method and management of industry, the effect of which must be far beyond the single fact we are now noticing:

1851	44 000
1861	67 000
1871	119 000
1881	225 000

Note, though, that the increase in the last decade is partly due to a change in the method of enumeration.

The labour section may be taken as devoted mainly to the service of Building, Manufacture and Transport, as Dealing affords little employment for common labour, and Agriculture, Fishing and Mining return their own; but every class of industry shares in the benefit of the commercial system maintained by bankers, accountants and clerks.

The picture we have now completed of the industrial development of England since 1851 and her apparent position in 1881 is, on the whole, one which may be regarded with satisfaction. Nor could any changes since 1881 seriously affect this result. Every line of it shows vitality, and an innate power of meeting changes of circumstances, which seem to give promise of continued prosperity.

Scotland

The growth of the population of Scotland ($6\frac{3}{4}$, $9\frac{3}{4}$, and $11\frac{1}{2}$ per cent for the three decades) has been slower than that of England, and the proportions engaged in each of the main divisions of industry are somewhat different, but the points of similarity are much more noticeable than the points of difference, as is shown in Table 1.5. We see a similar falling off in the proportion connected with Agriculture, a similar constancy in those connected with Building and Manufacture, and a similar increase under other heads.

Table 1.5 Employments of the people by percentage, Scotland, 1851–81 (sub-totals in brackets)

<i>Occupations</i>	<i>1851</i>	<i>1861</i>	<i>1871</i>	<i>1881</i>
Agriculture, etc.	22.7	20.1	17.3	14.2
Fishing	1.5	1.7	1.8	1.9
Mining	4.0 (28.2)	4.5 (26.3)	5.1 (24.2)	5.0 (21.1)
Building	5.2	5.9	6.3	6.7
Manufacture	36.5 (41.7)	35.0 (40.9)	34.7 (41.0)	33.8 (40.5)
Transport	3.6	4.1	4.9	5.2
Dealing	5.6 (9.2)	6.5 (10.6)	7.1 (12.0)	7.5 (12.7)
Industrial service	— (3.8)	— (3.9)	— (4.5)	— (6.2)
Industry	82.9	81.7	81.7	80.5
Public and				
professional service	3.5	3.9	3.8	4.2
Domestic service	10.5	12.0	10.7	11.1
Others	3.1 (17.1)	2.4 (18.3)	3.8 (18.3)	4.2 (19.5)
	100.0	100.0	100.0	100.0

The minor similarities are also very noticeable, and although the figures for the respective countries may provide materials for many interesting inquiries, either of special interest to Scotland, or of comparison between England and Scotland, it is unnecessary to pursue them here. The figures show that the two countries share each other's fortune, and make the union of feeling between them easy to understand.