

should be considered less favourably circumstanced by either process in comparison with those of the county and cathedral unions in a sanitary point of view, seeing that their density is nearly six times greater, and their reputed higher death-rate (per population) so fractionally small, while per births it is 1.72 per cent more favourable.

Respecting certain anomalies which appear among the results of the second table, such for instance as the want of correspondence noticeable between the death-rate per births and that per population, a few remarks, by way of explanation, may not be out of place, although the question has already been discussed in the preface. A notable example, however, may be adduced of the uncertainty and inconstancy of the death-rate estimate per population, by contrasting the results of two cathedral towns, both similarly circumstanced as regards the absence of cotton manufactories.

The population of Exeter amounted, in 1851, to 32,823, and in 1861 to 33,742, having experienced an *increase* in 10 years of 919.

The population of Ely in 1851 was 22,896, and ten years later 21,910, having experienced a *decrease* in 10 years of 986.

The number of births in Exeter amounted, in the decennium, to 8,776, and the number of deaths to 7,931, showing that only 845, equal to 9.628 per cent of those born had been reared; while in Ely the number of births was 7,907, and of deaths only

4,775, showing that 3,134, being 39.618 per cent of those born, had been brought to maturity. Yet the death-rate per population for Ely, notwithstanding this large disparity is, according to the Registrar-General's figures, only a trifle, *i. e.*, .171 per cent, lower than that for Exeter, a result altogether disproportionate and fallacious.

For, if the sum of natural increase, with the addition of those who must have left the town in the ten years (*i. e.*, 3134+986), be added to the *average* population of Ely; and if the difference between the actual and natural increase (*i. e.* 74) be deducted from the *average* population of Exeter, elevating the first and reducing the second, each to its normal value, the disparity will be much wider in the contrary direction, and doubtless nearer the truth. Thus:—

	Death-rate per population.
Ely .....	1.629 per cent.
Exeter .....	2.388 „

These proportions correspond very nearly with those afforded by the process per births:

	Deaths per births.
Ely.....	60.33 per cent.
Exeter .....	90.37 „

#### NOTE ON DEATHS FROM TYPHUS.

The total number of deaths from Typhus registered in England during the ten years ended 1860, amounted to 167,762, being at the rate of 1 to 1,132

inhabitants, and 1 to every 38 births, per annum. These were distributed over the eleven divisions in the following order:—

DIVISIONS.	Average Population, 1851-61.	Deaths from Typhus.		
		Total in 10 years.	Proportion to Population, per year.	Proportion to Births, per year.
I. London .....	2,583,112	21,444	1 to 1,264	1 to 40
II. South-Eastern...	1,738,039	14,996	1 ,, 1,159	1 ,, 36
III. South-Midland..	1,264,960	12,810	1 ,, 987	1 ,, 32
IV. Eastern .....	1,128,231	10,845	1 ,, 1,041	1 ,, 33
V. South-Western..	1,819,488	14,968	1 ,, 1,209	1 ,, 38
VI. West-Midland...	2,286,569	19,726	1 ,, 1,159	1 ,, 41
VII. North-Midland..	1,252,215	10,465	1 ,, 1,196	1 ,, 41
VIII. North-Western.	2,711,989	25,664	1 ,, 1,057	1 ,, 39
IX. York .....	1,902,294	16,042	1 ,, 1,186	1 ,, 43
X. Northern .....	1,060,249	8,167	1 ,, 1,298	1 ,, 47
XI. Welsh.....	1,249,965	12,447	1 ,, 1,004	1 ,, 33
	18,997,111	167,762	1 to 1,132	1 to 38

Of these eleven Divisions, the highest death-rate from Typhus in the ten years ended 1860 occurred in the South Midland, being, as compared with births, 1 to 32; the lowest was in the Northern Division, namely: 1 to 47. In the North-Western Division (Cheshire and Lancashire) it stood at 1 to 39, and in comparison with this there are five in which it was higher, and five in which it was lower. The average for the five Divisions (four of which are almost purely agricultural) having a higher death-rate from Typhus than Cheshire and Lancashire, is 1 in 34, and the average of the five with a lower estimate, is 1 in 42.

When compared with population, it appears that in three of the Divisions was the death-rate from

Typhus higher than in the North-Western (Cheshire and Lancashire), and in seven lower. For the three in which the rate was higher (two of which were the South Midland and Eastern, comprising eleven agricultural counties), the average was 1 to 1,011; and for the seven in which it was lower, the average was 1 to 1,202—that for the North-Western being 1 to 1,059.

The same fatalities are further subdivided among the forty-four constituent counties and parts of counties comprised in the preceding Divisions as below: Division I. (London) being already disposed of.

## II.—SOUTH-EASTERN.

	Average Population, 1851-61.	Deaths from Typhus.		
		Total in 10 years.	Proportion to Population, per year.	Proportion to Births, per year.
1. Surrey (extra-metrop.)	237,892	1,751	1 to 1,301	1 to 37
2. Kent (extra-metrop.)..	515,146	4,464	1 ,, 1,154	1 ,, 37
3. Sussex.....	353,220	2,906	1 ,, 1,216	1 ,, 37
4. Hampshire .....	429,350	4,172	1 ,, 1,029	1 ,, 32
5. Berkshire .....	202,429	1,633	1 ,, 1,240	1 ,, 37

## III.—SOUTH MIDLAND.

6. Middlesex (ext.-met.)	168,965	1,096	1 ,, 1,544	1 ,, 45
7. Hertfordshire .....	175,707	1,511	1 ,, 1,156	1 ,, 37
8. Buckinghamshire ...	145,431	1,428	1 ,, 1,018	1 ,, 33
9. Oxfordshire.....	170,740	1,780	1 ,, 948	1 ,, 31
10. Northamptonshire ...	222,456	2,615	1 ,, 851	1 ,, 29
11. Huntingdonshire ...	57,772	680	1 ,, 878	1 ,, 29
12. Bedfordshire .....	135,142	1,624	1 ,, 832	1 ,, 29
13. Cambridgeshire .....	186,789	1,986	1 ,, 941	1 ,, 31

## IV.—EASTERN.

	Average Population, 1851-61.	Deaths from Typhus.		
		Total in 10 years.	Proportion to Population, per year.	Proportion to Births, per year.
14. Essex .....	361,916	3,769	1 to 960	1 to 31
15. Suffolk.....	335,771	2,897	1 „ 1,159	1 „ 37
16. Norfolk .....	430,541	4,168	1 „ 1,033	1 „ 33

## V.—SOUTH-WESTERN.

17. Wiltshire.....	238,481	2,214	1 „ 1,077	1 „ 34
18. Dorsetshire.....	179,644	1,426	1 „ 1,261	1 „ 39
19. Devonshire .....	579,348	4,863	1 „ 1,192	1 „ 35
20. Cornwall .....	359,242	2,626	1 „ 1,369	1 „ 46
21. Somersetshire.....	462,771	3,832	1 „ 1,207	1 „ 36

## VI.—WEST-MIDLAND.

22. Gloucestershire .....	431,549	3,228	1 „ 1,337	1 „ 41
23. Herefordshire .....	102,958	640	1 „ 1,604	1 „ 46
24. Shropshire .....	254,956	1,668	1 „ 1,531	1 „ 45
25. Staffordshire .....	700,043	7,288	1 „ 966	1 „ 39
26. Worcestershire .....	276,843	2,036	1 „ 1,361	1 „ 45
27. Warwickshire.....	520,245	4,814	1 „ 1,081	1 „ 39

## VII.—NORTH MIDLAND.

28. Leicestershire .....	239,784	2,289	1 „ 1,047	1 „ 39
29. Rutlandshire .....	23,875	146	1 „ 1,662	1 „ 50
30. Lincolnshire .....	402,187	3,236	1 „ 1,243	1 „ 46
31. Nottinghamshire ...	309,084	2,793	1 „ 1,107	1 „ 39
32. Derbyshire .....	277,283	2,209	1 „ 1,259	1 „ 43

## VIII.—NORTH-WESTERN.

33. Cheshire .....	445,655	3,526	1 „ 1,264	1 „ 42
34. Lancashire .....	2,266,333	22,147	1 „ 1,023	1 „ 38

## IX.—YORK.

35. West Riding.....	1,417,015	12,519	1 „ 1,132	1 „ 43
36. East Riding .....	263,022	2,326	1 „ 1,131	1 „ 38
37. North Riding .....	202,257	1,287	1 „ 1,576	1 „ 51

## X.—NORTHERN.

	Average Population, 1851-61.	Deaths from Typhus.		
		Total in 10 years.	Proportion to Population, per year.	Proportion to Births, per year.
38. Durham .....	476,902	4,082	1 to 1,168	1 to 47
39. Northumberland ...	323,296	2,489	1 „ 1,300	1 „ 44
40. Cumberland.....	200,384	1,101	1 „ 1,821	1 „ 59
41. Westmoreland .....	59,666	296	1 „ 2,016	1 „ 60

## XI.—WELSH.

42. Monmouthshire ...	187,053	2,240	1 „ 835	1 „ 34
43. South Wales .....	653,589	7,151	1 „ 914	1 „ 31
44. North Wales .....	409,123	3,198	1 „ 1,280	1 „ 37

For these forty-four counties, the average death-rate from Typhus, *per births*, was 1 to 39. That from the same cause in Lancashire was 1 to 38. In twenty-two counties the estimate was higher than that of Lancashire—the average being 1 to 34; and in twenty-one counties it was lower, yielding an average of 1 to 45.

The average death-rate from Typhus *per population* for the forty-four counties was 1 to 1,206. That for Lancashire was 1 to 1,023. There are ten counties in which it was higher by this process than in Lancashire—the average for these being 1 to 914, and thirty-three in which it was lower, the average for them being 1 to 1,299.

The rate of mortality in Manchester from Typhus (which disease, as popularly believed, makes fearful ravages annually amongst the poor of this and towns of similar character), and that of other towns differing from it in regard to the nature of

industries, agglomeration, proportion of the toiling element, and their social condition, is represented in the following tables. The comparison between the twenty-two of the principal manufacturing Unions and the forty county and cathedral Unions is, for the sake of uniformity, still maintained. The averages are only for the five years ended with 1860, because, previous to 1856, the towns and unions were not particularised as to their respective fatalities from Typhus.

Table representing the rate of mortality from Typhus in twenty-two of the principal manufacturing Unions of Lancashire, Cheshire, and West Yorkshire. The population with which the comparison is made in this instance is not the average, but that given in the census of 1861, in each case.

	Population in 1861.	Deaths from Typhus.		
		Total in 5 years.	Proportion to Population, per yr.	Proportion to Births, per yr.
1. Stockport .....	94,360	414	1 to 1,139	1 to 40
2. Macclesfield .....	61,543	251	1 ,, 1,226	1 ,, 42
3. Wigan.....	94,561	575	1 ,, 822	1 ,, 31
4. Warrington .....	43,875	109	1 ,, 2,012	1 ,, 75
5. Leigh .....	37,700	134	1 ,, 1,407	1 ,, 50
6. Bolton .....	130,269	539	1 ,, 1,208	1 ,, 45
7. Bury .....	101,135	395	1 ,, 1,280	1 ,, 43
8. Manchester .....	518,902	2,346	1 ,, 1,106	1 ,, 39
9. Ashton-under-Lyne.,	134,753	481	1 ,, 1,400	1 ,, 48
10. Oldham .....	111,276	451	1 ,, 1,234	1 ,, 42
11. Rochdale .....	91,754	341	1 ,, 1,345	1 ,, 43
12. Haslingden .....	69,781	282	1 ,, 1,237	1 ,, 39
13. Burnley .....	75,595	293	1 ,, 1,290	1 ,, 44
14. Blackburn .....	119,942	639	1 ,, 938	1 ,, 33
15. Chorley .....	41,678	159	1 ,, 1,311	1 ,, 45
16. Preston .....	110,526	586	1 ,, 943	1 ,, 43

	Population in 1861.	Total in 5 years.	Deaths from Typhus.	
			Proportion to Population, per yr.	Proportion to Births, per yr.
17. Huddersfield ...	131,336	575	1 to 1,136	1 to 41
18. Halifax .....	128,673	427	1 ,, 1,506	1 ,, 53
19. Bradford.....	196,475	900	1 ,, 1,091	1 ,, 41
20. Leeds .....	227,514	1,043	1 ,, 1,091	1 ,, 38
21. Dewsbury .....	92,883	293	1 ,, 1,585	1 ,, 58
22. Sheffield.....	128,951	711	1 ,, 907	1 ,, 35

The next table exhibits corresponding items for forty county and cathedral Unions.

	Population in 1861.	Total in 5 years.	Deaths from Typhus.	
			Proportion to Population, per yr.	Proportion to Births, per yr.
1. Guildford .....	29,330	104	1 to 1,410	1 to 40
2. Canterbury.....	16,643	87	1 ,, 956	1 ,, 18
3. Maidstone ... ..	38,670	131	1 ,, 1,478	1 ,, 44
4. Chichester .....	14,775	69	1 ,, 1,070	1 ,, 28
5. Winchester.....	26,607	103	1 ,, 1,291	1 ,, 33
6. Hertford.....	15,301	46	1 ,, 1,663	1 ,, 45
7. Abingdon .....	20,861	126	1 ,, 828	1 ,, 28
8. Buckingham ...	13,756	96	1 ,, 716	1 ,, 23
9. Northampton ...	41,160	219	1 ,, 923	1 ,, 31
10. Oxford.....	20,037	75	1 ,, 1,336	1 ,, 41
11. Huntingdon ...	20,518	127	1 ,, 808	1 ,, 28
12. Bedford .....	38,072	194	1 ,, 981	1 ,, 31
13. Cambridge .....	26,861	82	1 ,, 1,638	1 ,, 47
14. Chelmsford ...	32,765	228	1 ,, 718	1 ,, 21
15. Ipswich .....	37,881	156	1 ,, 1,214	1 ,, 38
16. Norwich .....	74,440	381	1 ,, 977	1 ,, 31
17. Salisbury .....	9,039	13	1 ,, 3,476	1 ,, 110
18. Dorchester.....	24,773	82	1 ,, 1,510	1 ,, 48
19. Exeter.....	33,724	144	1 ,, 1,171	1 ,, 30
20. Bodmin .....	19,691	38	1 ,, 2,459	1 ,, 84
21. Ely .....	21,910	145	1 ,, 755	1 ,, 27
22. Taunton .....	35,601	123	1 ,, 1,447	1 ,, 42
23. Gloucester .....	34,950	129	1 ,, 1,354	1 ,, 44
24. Hereford.....	39,287	112	1 ,, 1,753	1 ,, 45
25. Shrewsbury.....	25,784	96	1 ,, 1,343	1 ,, 36

	Population in 1861.	Deaths from Typhus.		
		Total in 5 years.	Proportion to Population, per yr.	Proportion to Births, per yr.
26. Stafford .....	24,474	76	1 to 1,610	1 to 47
27. Worcester .....	30,969	109	1 ,, 1,420	1 ,, 40
28. Warwick .....	44,047	124	1 ,, 1,776	1 ,, 49
29. Leicester .....	68,190	372	1 ,, 916	1 ,, 32
30. Oakham .....	11,112	86	1 ,, 1,543	1 ,, 48
31. Lincoln .....	47,063	258	1 ,, 912	1 ,, 29
32. Nottingham ...	75,765	357	1 ,, 1,061	1 ,, 33
33. Derby .....	51,049	216	1 ,, 1,182	1 ,, 41
34. Chester .....	58,501	277	1 ,, 1,056	1 ,, 30
35. Lancaster .....	35,297	140	1 ,, 1,260	1 ,, 42
36. York .....	59,968	210	1 ,, 1,428	1 ,, 45
37. Durham ... ..	70,274	399	1 ,, 881	1 ,, 32
38. Newcastle .....	110,968	545	1 ,, 1,013	1 ,, 32
39. Carlisle .....	44,820	145	1 ,, 1,890	1 ,, 51
40. Appleby .....	15,411	32	1 ,, 2,408	1 ,, 63

With reference to the information furnished by the preceding tables respectively, it is noteworthy that the aggregate results are very nearly alike, but the general issue is in favour of the manufacturing group—notwithstanding the telling effect which the numbers for Salisbury, Bodmin, and Appleby, each with a small and sparse population, exercise in favour of the second group as regards the death-rate per population. But the death-rate per births is still more largely in favour of the manufacturing Unions. Thus:

	Population in 1861.	Deaths from Typhus.		
		Total in 5 years.	Proportion to Population, per yr.	Proportion to Births, per yr.
22 Manufacturing Unions .....	2,743,482	11,947	1 to 1,148	1 to 44
40 County and Cathedral do...	1,459,834	6,402	1 ,, 1,140	1 ,, 38





