

DENSITY OF POPULATION.

Respecting the actual density and existing distribution of the population of Manchester, and the relative salubrity of its different districts, some notion may be gathered from the following statements derived from the Registrar-General's tables, representing the average results for the ten years ended 1860.

Manchester (with the Chorlton Union), including the borough of Salford, with their suburbs, contained, in 1861, a population of 518,902 persons, occupying an area of 29,007 acres, being at the rate of 17·88 persons to the acre. It has a death-rate per births of 72·71—that is to say: for every 100 births, there occurred, in the ten years ended 1860, an average of 72·71 deaths; and per population 2·593 per cent. The average death-rate per birth for the whole of England during the same ten years was 65·06, and per population 2·098, showing for Manchester an excess of 7·65 per cent by the first process, and of ·495 by the second, above the general average; but the density of population for the whole of England is only ·54, being somewhat more than one person to every two acres. So that, were each individual—man, woman, and child—to be placed in the centre of his apportioned space of 1·86 acres, they would

probably be barely within hearing distance of each other when shouting, provided the atmosphere were still.

The three component Unions of Manchester, however, exhibit results very different from each other as regards their rates of mortality, and presumably also as to their relative salubrity, as represented below:—

	Area in Statute Acres.	Population in 1861.	Persons to the Acre.	Deaths to 100 Births.	Deaths to 100 of Population.
Manchester .	12,628	243,988	19·32	81·53*	3·047
Chorlton . .	11,549	169,579	14·68	61·92†	2·071
Salford . .	4,830	105,335	21·81	67·82	2·380
Total .	29,007	518,902	17·88	mean 72·71	2·593

But the preceding figures afford only a very inadequate notion of the actual condition of the crowded parts of the town, as the sparseness of the population occupying the outlying townships, and herewith incorporated, tend to modify the general results, and consequently to conceal the real state of the centre. In order, therefore, to expose these relations more clearly, it may be convenient to render the results for the outside townships and those for the town proper, separately.

The out-townships of Manchester are Newton, Cheetham, Failsworth, Blackley, and Prestwich; those of Chorlton—Didsbury and Gorton; and

* This includes the fatalities in the Workhouses, Hospitals, and Asylums, one of the latter being a County Asylum.

† This item includes the Workhouse fatalities for the five years ended 1855.

those of Salford—Pendleton and Broughton. The items representing their respective populations, densities, and death rates, stand as follows:—

	DISTRICTS.	Area in Statute Acres.	Population in 1861.	Persons to the Acre.	Deaths to 100 Births.	Deaths to 100 of Population.
Manchester.	Newton . .	1,924	19,311	10·04	59·19	1·993
	Cheetham . .	1,652	21,731	13·15	54·25	1·437
	Failsworth . .	2,335	6,312	2·71	55·83	1·864
	Blackley . .	1,056	4,939	2·52	57·14	1·741
	Prestwich, W.A.	3,281	6,285	1·91	58·27*	1·930†
Chorlton.	Didsbury W .	5,948	5,904	1·00	74·66‡	2·920 §
	Gorton . . .	3,531	7,000	1·98	55·67	1·546
Salford.	Pendleton . .	2,650	24,448	9·22	59·91	1·804
	Broughton . .	960	9,885	10·30	52·25	1·195
Total . .		23,337	105,815	mean 4·36	57·83	1·731

W. signifies Workhouse; A. Asylum.

From this table it may be seen that the suburbs are very differently circumstanced in some essential points as compared with the entire mass; the density

* The average death-rate affecting the permanent inhabitants of these five out-townships is 56·91; but including the Workhouse fatalities (furnished by Mr Parker, Clerk to the Guardians), amounting in ten years to 178, it is 57·83. The deaths in the County Asylum, situate in the Prestwich township, cannot with fairness be included.

† Including the Workhouse deaths for all the five townships.

‡ This rate for Didsbury, the average for the five years ended 1855, before the Union Workhouse was removed to this district, is undoubtedly high, especially considering the sparseness of its population, which is less than one to the acre. The whole township is flat, tolerably well wooded with hedge-row timber and plantations, and the soil remarkably productive. The high rate of mortality of this suburb it may be difficult to account for; but it is certain that in some parts the drainage is extremely defective.

§ Including the Workhouse deaths for half the decennium.

|| These are estimated numbers. The actual figures may be a little higher or lower, but probably not widely different from those assumed.

being at the rate of 4·36 persons to the acre, the average death-rate being, to 100 births, only 57·83, and to 100 of population, 1·731.

Deducting the sum of 105,815, which represents the aggregate suburban population, from 518,902, there remain 413,087 inhabitants for the town proper, including the two boroughs. These are confined to a space of 4,770 acres, or 86·60 persons to the acre, and have an average death-rate per births of 76·50, and per population of 2·814 per cent.

The respective results for the three townships composing this central mass are thus stated:—

	Area in Statute Acres.	Population in 1861.	Persons to the Acre.	Deaths to 100 Births.	Deaths to 100 of Population.
Manchester Township	1,480	185,410	125·28	86·25	3·431
Chorlton „	2,070	156,675	106·10	62·46	2·123
Salford „	1,220	71,002	58·20	71·24	2·744
Total . . .	4,770	413,087	86·60	mean 76·50	2·814

Of these three groups the Manchester township appears to be the most densely peopled, and at the same time the most insalubrious; a coincidence which would naturally lead to the conclusion that overcrowding may have an important share of influence in the production of a high death-rate. Such inference would appear to be further supported by a comparison of the above figures for Manchester with the items of the third line for Salford, which presents a death-rate of 15 per cent per births lower than that of Manchester, and an acreage population lower by more than one-half. But, looking at the second line, which represents the corresponding conditions for

Chorlton, and comparing them with those of Salford, it will be seen that the death-rate for Chorlton—a much larger community—is, per births, 8·78 per cent, and per population ·621 per cent below that of Salford, while its density is 47·90 per acre greater. Over-crowding therefore, cannot, in this instance at least, be regarded in the light of a destructive evil, and it probably becomes so under certain degrees of aggravation only; especially when conjoined with other maleficent influences. This notion appears to be sustained by the results of a further analysis of the preceding groups.

The township of Manchester, consisting of five registration districts, may be conveniently divided into two portions,* namely: the *upper*, including the districts of St. George and Ancoats; and the *lower*, comprising London Road, Deansgate, and Market-street. Of the 1,480 acres which constitute the area of the entire township, the several districts occupy portions varying in extent, but by no means equally proportioned to the number of their occupants. The exact amount of space for each is not stated in the Registrar-General's tables; but their boundaries being marked on the local map, may possibly afford a means of estimating their several areas approximately.

The *upper* division, in 1861, contained 104,038 inhabitants, occupying an estimated area of 700

* In the previous editions, the results for each of the five districts were rendered separately; the present plan is adopted for the purpose of simplification.

acres, being at the rate of 148·62 persons to the acre. Its annual death-rate, per births, was 72·57 per cent, and per average population, 3·019.

The *lower* division, in 1861, contained 81,372 inhabitants, occupying an estimated space of 780 acres, representing a density of 104·27 persons to the acre. Its annual death-rate, per births, was 90·22 per cent, and per average population, 3·232 per cent, exclusive of the populations and events within the large Workhouse and the General Hospital.

The analogous conditions of the sub-districts of Salford (which borough needs not to be further particularised on this occasion) and Chorlton, will be sufficiently exposed in the following table, showing the population, acreage density, and death-rate of the respective districts. The results represent the average for the ten years ended 1860:—

		DISTRICTS.	Area in Statute Acres.	Population in 1861.	Persons to the Acre.	Deaths to 100 Births.	Deaths to 100 of Population.
Manchester.	Upper District.	St. George	700	104,038	148·62	72·57	3·019
		Ancoats					
	Lower District.	Market-street	780	81,372	104·27	90·22	3·232
		London Road Deansgate					
Salford.	Chorlton.	Ardwick . .	500	40,752	81·50	58·11	2·155
		Hulme . .	870	71,128	81·75	61·75	2·631*
		Chorlton-on-M.	700	44,795	63·99	62·47	2·125
		Greengate	1,220	{ 37,534 33,469 }	58·20	{ 63·82 74·24 }	2·871 2·931†
		Regent Road					
			4,770	413,087	86·60	76·50	

* Including the deaths in the Union Workhouse for the first half of the decennium. † Including the Workhouse population.

Here also the circumstance of agglomeration, as an agent of insalubrity, would appear to hold a place very different in importance from that which is usually assigned to it. In fact, the most healthy—the *upper* district of the Manchester township—is at the same time by far the most densely crowded; for whilst it contains a population of more than 44 per acre greater than that of the *lower*, its death-rate is considerably below that of the latter. And viewing the results for the other townships from first to last in succession, the density will be observed to decrease in a certain ratio as the rate of mortality increases.

Certain conditions of distribution—occasioned by the occupation of large spaces of ground by manufactories, warehouses, and other establishments not tenanted as dwellings, and therefore not included in the census results—will necessarily tend to concentrate the inhabitants and to augment the density. The *upper* district is perhaps less occupied in this way than the lower. It contains, however, many manufactories and machine works; and in addition to these, the spaces occupied by the extensive storehouses and locomotive engine works of the railway companies, and those covered by the chief gas establishment of the town, may be safely reckoned at one-sixth of the entire district; thus raising the actual population density to at least 178 to the acre.

The *lower* district is yet more peculiarly

influenced in this way. Probably not much less than one-third of its entire space of 780 acres,—but to be within the mark, say one-fourth at least, is occupied by warehouses and closed shops, railway premises, hospitals, wharves, &c., untenanted during the night—(except the Hospitals and Workhouse, which are not included in this estimate). So that its population density, instead of being 104 as given, must be more than 139 persons to the acre.

Still is the circumstance of overcrowding insufficient to account for the high death-rate in the *lower* district; for it must be again instanced, that the *upper* district possesses a density of population of at least 39 per acre above that of the other, even as compared with the latter elevated estimate, and yet has a lower rate of mortality per births of 17 per cent, and per population of .213 per cent.

Further. In regard to the relation which agglomeration holds to the co-existence of a high death-rate, it may be remarked that the *upper* division of the Manchester township (St. George and Ancoats), has *increased* in population from 94,810 in 1851, to 104,038 in 1861, augmenting its density by 13 persons to the acre; yet has its death-rate experienced an amelioration during the same time by 2 per cent, namely: from 74, the average for the first half of the decennium, to 72, that for the second half. The decrease *per average population* bears a nearly corresponding ratio, *i.e.*, 3.177 per cent for the first, and 2.907 for the second half.

A different kind of change is found to have taken place in the *lower* division of the township (comprising London Road, Deansgate, and Market-street), this having experienced a *decrease* of population in ten years amounting to 10,804, that is, from 92,176 in 1851, to 81,372 in 1861, diminishing its density by 14 persons to the acre. Yet, notwithstanding this sanitary gain in respect of agglomeration, its death-rate *per births* has decreased only .66 per cent, although, when estimated *per average population*, the change in its favour is greater. The latter result, however, as already intimated, does not always, and especially here, exhibit a faithful representation of the facts.

SANITARY CONDITION OF THE OPERATIVES.

It is popularly believed, especially by those residing at a distance and engaged in other pursuits, that the various employments in cotton manufactories exercise a peculiarly pernicious influence upon the health and bodily growth of those engaged in them; and that the manufacturers who encourage, and increase their wealth by such means must in justice be held accountable for some imaginary but incalculable amount of misery and fatality which their system is the medium of inflicting. There cannot be a fairer opportunity of testing the truthfulness or fallacy of these assertions than is afforded by the results furnished in the tables of the

Registrar-General, bearing on the rate of mortality of the upper and south districts of the town, which contain the dwellings of, at a rough computation, not less than four-fifths of all the factory operatives of the *borough* of Manchester.

This mass of population, amounting to 260,713 persons, is naturally divided by the river Medlock into two groups, one occupying the north-east or right bank, the other the south or left bank of this stream. The two divisions are somewhat differently circumstanced in several respects; but especially in regard to the nature of the soil upon which they are respectively situated, their relative density of population, and the social condition of the inhabitants who occupy them.

The north-east portion of these is the *upper* division of the township already noticed. Its soil is everywhere a dense clay, formerly much used for brickmaking; but the whole district, now crowdedly covered by buildings, is considerably elevated above the river level, and well drained throughout. At least nine-tenths of the houses are small cottage tenements, occupied by operatives. Many of these dwellings, especially such as have been erected within the past few years, are comparatively commodious and healthy, being provided with both front and back doors, by which means a thorough ventilation is secured. Each dwelling is abundantly supplied with excellent water and in some, though by no means in all instances the