

Nor is the imputation altogether discredited by many of its inhabitants, who, unable to refute, are content to accept it as a truth, and to make the most they can out of time and opportunity, with a view to secure their own safety, by placing themselves at a convenient distance from it whenever circumstances shall render such procedure practicable. In cases of sickness, it is by no means uncommon to hear it assumed, as an admitted fact, that perfect restoration must be impossible unaided by removal to another atmosphere. Nevertheless, the great bulk of the inhabitants of Manchester do recover from maladies of severest type within its precincts, unassisted by such auxiliaries; and it does not appear, judging from its rate of mortality, that the public health of this city is much less favourably conditioned than that of many other town communities, even where cotton manufacturing influences are altogether unknown.

It is not here intimated that removal from the climate of Manchester, with all the associated advantages of change, is not serviceable to the convalescent. On the contrary, it often proves of the highest value, and in some cases, here as elsewhere, is quite essential; but this is, perhaps, chiefly so in the simple sense of exchange of the air of the sick room and that of the surrounding locality, with which the system of the patient has, by protracted confinement, become surfeited, for an atmosphere totally different, whether in town or country, and

irrespective of any specific virtue supposed to be possessed by that removed to. Nor need imagination stand responsible for the assertion that the Manchester atmosphere not seldom proves as powerfully and as speedily renovating to the convalescent whose malady has for weeks or months held him prostrate amidst the balmy air of the Cheshire meadows, or on the breezy hill-slopes of Cumberland, as the sea-side influence does to one removed from the midst of the town.

It is here purposed to enquire, with the utmost possible brevity, into a few of the principal agencies which render, or are supposed to render, the Manchester populace and its inhabitants generally, unfavourably circumstanced as to sanitary conditions in comparison of those of other towns differing more or less from it in regard to the distribution of social elements, and the character of their several industries.

ATMOSPHERIC IMPURITY AND HUMIDITY.

A smoke-charged atmosphere is undoubtedly objectionable and unpleasant to the senses, and by no means conducive to salubrity; but its influence upon health and the duration of life has probably been erroneously estimated. They who are most exposed to the direct action of coal smoke, such as

engine-stokers, coke burners, kiln-men, smiths, coal-miners, foundry-men, sweeps, and some others, are among the healthiest and strongest of operatives. It can be shown, moreover, that the inhabitants of some manufacturing towns which are notoriously smoky, are, judging from the results of the Registrar-General's tables, more wholesomely conditioned than those of some other first-class towns where the smoke nuisance does not exist. Take for example, the town of Sheffield as compared with York, Wolverhampton with Stafford, and Manchester with Lancaster. Each of these manufacturing towns with smoky atmosphere has a lower death-rate than that of either of its respective county metropolis, which is not so inconvenienced. The average of the collective death-rate *per births* of the Union populations of Sheffield (67·03), Wolverhampton (63·08), and Manchester (72·73), for the ten years ended 1860, is 70·03; while that for York (72·09), Stafford (73·78), and Lancaster (68·53), is 71·32 (to 100 births), yielding a difference in favour of the salubrity of the manufacturing over that of the aggregate of their respective county Unions, represented by 1·29 per cent.* The disparity for the town populations alone, is still much wider. The death-rate *per population* is in favour of the county towns to the amount of ·324 per cent—the rates

* In previous editions of this work the town populations alone were used in making this contrast. On this occasion it was thought desirable to employ the entire Unions of each community.

being, for York, Stafford, and Lancaster collectively, 2·251, and for Sheffield, Wolverhampton, and Manchester, 2·575. But results obtained by this process, as already explained, are liable to be fallacious.

Manchester stands on a soil varying in character in different localities. In the centre and on the north-east side of the town this is a tenacious clay, while on the south it is chiefly sand or gravel. All the townships are well drained, and liberally supplied with excellent water. The humidity of the atmosphere may be inferred from the actual amount of rain which falls in the space of a year, as compared with the same phenomenon in other localities. The following statement, embodying results for three years in succession, as contained in the elaborate and comprehensive tables of Mr. Symons,* shows the actual fall of rain at the several stations indicated, during the years 1860-61-62, with the elevation of some of these localities above the sea level, and the name of the authority by whom the information is furnished. Of those stations for which the results, for the three years in question, are complete, the average is given in the last column of the tables. It will be seen that the quantity of rain which fell during 1860 and 1862, but especially during the first of these, was much greater, while that in 1861 was below, the general average.

* "English Rain Fall." By G. J. Symons, Esq.