

OVER-DENSITY OF POPULATION IN CITIES.

The question as to the dangers, (*Scientific American*), both to life and health, that result from an overcrowding of the population in large cities, has lately received a new treatment at the hands of the learned Dr. Farr, by the labors of whom the subject has been reduced to a science of almost mathematical exactness. In a paper entitled "Density of Proximity of Population, its Advantages and Disadvantages," recently presented to the Congress at Cheltenham, England, by this excellent authority, the statistics shown are somewhat startling, and put forth in such a way as to prove exceedingly interesting and instructive. Dr. Farr's principle is this: "Observe the effects of the population-density; as a rule, the greater this density the shorter the duration of life; and this life-duration is seen to follow a ratio appreciable by simple arithmetic."

That man by his very nature is gregarious in his habits, and that, following the dictates of his nature, it is his wont to congregate in dense communities, is a fact so well known, and one that has been so often commented upon, as to appear trite in its repetition. We cannot, perhaps, expect to accomplish much in the way of changing his habits in this respect by moral suasion, the best we can do being to exhibit the results that modern science has arrived at in its investigations of the subject of overcrowding, not so much to the sufferers themselves from this state of things, as to the authorities whom they have elected to look after their welfare. The gist of the matter is given by Dr. Farr in the following words: "The nearer people live to each other the shorter their lives are," and the relations of this proximity to the duration of life are ascertained to be as follows:

"In round numbers, where we stand on an average 400 feet off from each other, we live on an average 50 years; where we are 300 feet off, we live 40 years; where we come within 60 feet of each other, we live but 30 years; and where we are but 20 feet off, we live but 25 years. It does not seem likely that by extending our interspace beyond the 400 feet we could prolong the average of life beyond 50 years; but it is very clear that if we contract the interspace beyond the limit of 20 feet we must rapidly reduce the mean of 25 years to 20, to 15, to 10, and before long, so to speak, to nothing. That is to say, there is a certain population-density with which, in the ordinary circumstances attending such a condition, human life could not be sustained at all; and from this melancholy zero there rises a scale of progression, obeying, of course, a recondite, but intelligible mathematical law, whereby we may measure off in a moment, according to the number of lives per acre, the number of years of life." Again, from Dr. Farr's actual figures we learn that "during the decennial period from 1861 to 1870 inclusive, the death-rate of certain of the most favorably situated districts of England, taken at per 1,000 of the population, proved to be 17 per annum, 16, and even so low as 15; whereas in certain other places it stood at 31, 33, and even 39 per 1,000 per annum. He then tells