

theories have been advanced, some of which have been ably advocated by officers of health throughout the country. In my report to the Sanitary Committee on the mortality in the borough from the zymotic diseases during 1877, I gave it as my opinion that 'summer' diarrhœa depends upon the pollution of the air by the escape of sewer gas from badly-constructed and ill-ventilated sewers. My observations during the last eighteen months upon sewer air, and the microscopic organisms suspended in it, have convinced me that sewer air is the chief cause in the production of the disease, as no other condition, in my opinion, satisfactorily accounts for our high urban diarrhœa death-rates. I may be pardoned if I now venture to discuss the various theories at present advanced with the view to explain the cause of the disease.

1. *Artificial feeding.*—This pernicious custom, it will be admitted by all, is unfortunately but too prevalent amongst the mothers of the present day. The very exigencies of life seem to favor its increase amongst the poorer classes of the population; but although I am fully alive to the degeneracy of constitution that results from artificial feeding, and to the mortality that annually arises from the diseases induced by it, still I cannot accept it as the active cause of the *sudden* mortality amongst our infantile population during the summer months. . . . Artificial feeding, however, *in districts where insanitary conditions exist*, exerts a most powerful influence in the spread of the disease by acting as a vehicle for certain atmospheric germs, the introduction of which into the system, as I shall endeavor to show further on, gives rise to the disease.

2. *Maternal neglect, want of cleanliness, and ventilation.*—That the disease may be acquired under conditions where social sanitary measures are strictly carried out in the management of children was evidenced by what occurred in a crèche that has recently been established in this town. The average number of children, for the most part infants, in this crèche during the month of July was about twenty; and although every care was bestowed by trained nurses upon these infants with regard to the preparation of their food, cleanliness, &c., they nearly all acquired the disease.

3. *Ripe fruit.*—The consumption of fruit is much about the same in all manufacturing towns, and therefore fails to afford a solution of the wide variations in the prevalence of the complaint observed in different places. I shall, however, endeavor to prove that the eating of over-ripe fruit assists in the spread of the disease in the same way as artificial feeding—*i. e.*, the fruit forms a succulent and effective vehicle for germs when present. I have induced the disease in my own person on two occasions by the partaking of over-ripe plums. The minute organisms present in these plums, and which unquestionably gave rise to the disease, I shall describe later on.

Meteorological conditions.—Before entering upon this subject, I may state that I consider atmospheric conditions act only as *excitants* of the disease, and this only applies to localities where other conditions are met with that act powerfully as *predisposing* causes, for I feel as-