

excrement" He says also, "the result of an investigation relating to 25 towns, with an aggregate population of 60,000 inhabitants, was to show the exemption which local populations obtain from cholera, typhoid fever, and other endemic bowel affections, in proportion as the local soil, air, and water are kept free from excremental pollution; a result so confirmatory of much other evidence previously collected of the same etiological question, that henceforth apparently not even the most unwilling witness can deny the relation of the cause and effect in that matter." Dr. Parkes, in his work on Hygiene, 1873, says that "the prevalence of typhoid fever stands in a close relation to the imperfection with which sewage matters are removed;" and speaking of the specific cause of typhoid, he sums up a collection of evidence in these words:—"Fecal effluvia, and fecal impregnation of water, are the channels by which this specific cause reaches the body of a susceptible person."

It will be observed, that the difference of opinion as to the exact nature of the contagium is quite beside and beyond the simple and all-important fact just stated,—all-important, that is in a sanitary point of view,—namely, the essential connection of fecal pollution with the occurrence of every outbreak or single case of typhoid fever. Whether the poisonous emanation has the action of a ferment according to the older notion, or is an independent animal existence of a fungoid or even lower kind, and whether these fungi, or microzmes, live and grow and die in the body or are merely vehicles of the contagium, these are questions upon which I am not competent to speak. Nor is it necessary for my present purpose. What it is of practical importance to know is, that the detritus of Peyer's glands contains the contagium. This detritus is thrown off in the excrement. The contagium thus passes into the air or into water, and by breathing, air-swallowing, or drinking is conveyed into the system.

I now come to a very important inquiry connected with the origin of typhoid fever, namely, whether in a case of fecal pollution of air or water, the presence of evacuations from a typhoid fever patient is necessary in order to produce the specific disease we are considering. It is evident that the medical officer of the Privy Council (see recent reports) and Dr. Parkes incline to the belief that the presence of typhoid evacuations is necessary; though both admit the many difficulties which oppose themselves to such a hypothesis.

I may say at once that this seems to me to be a view