ærogenes, which is suffered to inhabit the upper bowel and assist in the breaking up of the milk sugar, and the bacteria coli commune, which is found in the lower bowel.

In the fæces of diarrhœa enormous numbers of bacteria are found, and notably certain forms are found to predominate in certain forms of diarrhœa. None of these bacteria grow in ordinary hydrant water, but all flourish in milk. I might say that one variety predominated and was found almost constantly in enteritis and cholera infantum. In the latter a liquefying bacillus was found which, when cultivated and injected into the veins of rats, caused death by purging and vomiting.

It is well known that certain diseases are communicated to others by milk, viz., typhoid, diphtheria, scarlet fever, etc., but a pre-existing case has always been supposed. Late investigations would seem to indicate that animals themselves may have these diseases. There appears to be no doubt that cow-pox in cattle is a similar disease to small-pox in man.

Lately epidemics of scarlet fever have occurred in which the suspicion existed that the contagion came from the cows themselves, who were suffering from a disease resembling scarlet fever. These outbreaks were at Hendon and Wimbledon in England. Prof. Klein reported to the local government board that the cows were suffering from a disease similar to scarlet fever. This was afterwards denied by another expert. The matter is still *sub-judice*, and whatever the result, it teaches us to be careful of our milk supply. Again, Louis Park states that a disease resembling diphtheria has been found in calves. He also states that diphtheria has been transmitted from farms and dairies in good sanitary condition and carefully kept, where there was no pre-existing diphtheria. In such cases it was natural to look to the cows themselves as the source of the disease.

An extensive literature has sprung up lately in regard to tuberculosis in milch cows. It is claimed that ten per cent. of all cows suffer from tubercle, and twenty-five per cent. of cows kept in towns. To impart the tubercle bacillus to their milk, the udders must be affected, and this is very likely to be in some cases. Hence the evident danger, especially in milk from town or city fed cows, to infants whose organs are still in an undeveloped condition and therefore very susceptible to disease. Park states that five per cent. of the mortality of children under five years of age, whose diet presumably is chiefly milk, die of tuberculosis of the abdominal cavity. He adds:—"The present amount of knowledge on the subject of animal diseases is so limited and unsatisfactory that until dairy cows are under sanitary control, or until these diseases are better understood, more care must be taken with milk as an article of infant dietary."

I would like to sketch rapidly the course of milk from the time it leaves the cow until it reaches the consumer, to give an additional motive for sterilization. Dirty milking methods, diluting the milk with water from the barnyard pump, cans not too scrupulously clean, put into the cans while still warm—thus having a suitable temperature for bacterial growth, and then a rapid and rough ride on a wagon to the train or through the town, and lastly, the delivery through the city by dirty milk boys. The driver stops before a house, takes off the can lid and fills his measure. During this time the wind is carrying mud from a neighboring waste heap, or from the street, and deposits it, loaded as it is with dangerous bacterial life, in and around the milk can. Ask Dr. Prudden, of New York, or Louis Park, what this street dust chiefly consists of, and they will answer, organic debris from powdered horse droppings. After the milk is taken into the house, it is allowed to stand in open vessels and it very rapidly absorbs gases of different kinds.

We will now consider briefly the changes that sterilization produces in milk:

1. It kills all germs.

2. Sterilized milk forms in the stomach fine flaky curds, which are easily digested. Cow's milk, taken pure, curdles into a putty-like mass. This has always been a difficulty in feeding infants with cow's milk, even in winter time, and various means have been adopted to prevent the formation of this indigestible curd. Sterilization effectually answers the purpose.

Escherich claims that there is no practical difference between sterilized cow's milk diluted in proper proportions, and human milk, the chief change being made in the curd.

3. A recent article in the *Medical News*,