

to a limited extent. For many years after its introduction, very little doubt seems to have been entertained, either by the profession or the general public, regarding its efficacy as a protective. But as soon as the virulence of the disease had to a great extent subsided, and epidemics became both less frequent and less fatal in their consequences, some have very naturally been led to reason as to the cause, and to doubt the view that it is due to vaccination. Although the results of vaccination have been generally most salutary without inflicting any constitutional damage, the very nature of the expedient is such as to repel us from its acceptance, if we were not fully convinced of its great value. We naturally shrink from the deliberate infliction of suffering and indisposition such as occurs in the majority of cases of vaccination, and only dire necessity impels us to choose very much the less of two evils. None of us will deny that, if entirely persuaded that the necessity for vaccination had passed away with the very much less frequent occurrence of the disease against which it is generally believed to protect us, that its value had been vastly over-rated as a protective against small-pox, or that its adoption had been the occasion of introducing other diseases, not before existing, we would gravely consider the wisdom of abandoning it. I think, however, that the history of vaccination since its first acceptance in all countries does not by any means justify the conclusion that its discovery was not a great boon to society, and that the necessity for its adoption as a sanitary precaution is as urgent to-day as it ever was.

I purpose to examine some of the objections urged against vaccination, and if possible, ascertain whether or not they are entitled to the consideration claimed for them. The great objection is, that there is no substantial evidence that the principle has accomplished what is claimed for it; in other words, that it is of any value as a sanitary precaution. In support of this position Dr. Newman speaks as follows: "Vaccination *happened* to be introduced just "when the small-pox was on its decrease and "rapidly approaching the lowest point. People "jumped to the conclusion that vaccination was "the cause of the decrease. * * * We

"do not, and cannot, trace the causes of epidemics, nor the causes of their cessation. "They generally die out without any such "checking influence as vaccination is supposed "to have exerted." This, in the most moderate terms, is a novel mode of arguing a question. It amounts just to this. Previously to vaccination, small-pox was a very prevalent, fatal and most loathsome disease; since the discovery and general adoption of vaccination epidemics have become both less frequent and less serious in their consequences. This decline is not due to vaccination, says Dr. Newman and his supporters, but to natural causes such as attach to all epidemics, but which cannot be explained. In other words, Dr. Newman admits that epidemics of small-pox have been very much less frequent and disastrous than before the discovery of vaccination; but he is unwilling to ascribe to it any of the credit. In the absence even of positive evidence of the fallacy of this position, it does not reflect any great credit upon its advocates. We have no right to presume that, because any disease has declined since the adoption of an expedient having in view such decline, the same result would have occurred without such expedient. If we were to adopt such line of argument against sanitary measures in general, we might repudiate many which are now acknowledged to be most effective and desirable. We might as well say, for instance, that, on the supposition that typhoid fever is due to defective sewerage, or to the existence of animal or vegetable poison in drinking water, still the removal of these agencies would not mitigate the virulence or lessen the frequency of the disease, as it would decline of its own accord. The facts in both cases are, in our judgment, alike conclusive.

Now, fortunately for the interests of society, the value of vaccination as a remedial agent against the prevalence and virulence of small-pox, has not been so generally accepted without the exercise of the greatest caution on the part of its advocates. When Jenner first presented it to the public in England, it was regarded as a most inhuman and irrational principle; and it was not until after the most conclusive proof of its efficacy had been presented, that it was finally accepted. No man of science ever had