

ANTI- VACCINATION.

I HAIL with satisfaction Dr. Carpenter's remonstrance against my Bill for the abolition of compulsory vaccination as a powerful aid towards its success. I say this in no disparagement whatever of my learned opponent's powers of argument, and if on this question they appear to me weak, inconsistent, and illogical, I attribute this entirely to the weakness of the cause he champions. Be this as it may, Dr. Carpenter's attack, made as it is by one who is universally recognised as the leading representative of vaccination, affords that opportunity for free and open discussion the lack of which has been, in my opinion, the only cause of the continued national faith in what I believe to be an exploded fallacy and a baseless superstition. Besides, it appears to me that the very basis of Dr. Carpenter's thesis involves a remarkable recognition of failure, and that its very statement is sufficient to shake the faith of the stoutest believer in vaccination; for it amounts to this, that Dr. Carpenter has to put forth an explanation as to the causes of the enormous mortality from small-pox which, to use his own words, 'doubtless furnishes a strong *prima facie* case *against* the protective power of vaccination;' and this after three-quarters of a century of the practice of Jenner's nostrum, a practice continually extending, until in this country, and in several of the European States, it has reached a height so great that a mere fraction of the population escape its infliction. Lest I should be thought to exaggerate, I will quote Dr. Carpenter's own words in his letter to the *Spectator*. He says, referring to the Metropolitan area, 'If the proportion of the vaccinated population to the unvaccinated residuum be 300 to 1, and this may be safely asserted to be rather within than beyond the mark,' &c. &c. &c.

If Jenner could ever have imagined such favourable conditions for the 'protective' system, he would clearly have held with fervour that the perfect stamping out of the small-pox was about to become an accomplished fact, and yet the acknowledged champion of the system now appears in the field, not to rejoice in the extinction of small-pox but to explain the reason why in an almost universally

protected Europe there has occurred an epidemic of small-pox thus referred to by Dr. Carpenter :—

The United States have been traversed (in the years 1874-6) by an epidemic of small-pox which will be long remembered there for its peculiar virulence and the widespread mortality it occasioned. This epidemic was clearly the same as that which had prevailed with somewhat of the same severity not only in this country, but also over the greater part of Europe two years previously, and hence there can be little doubt that the high rate of mortality by which it was everywhere characterised must have been due to general rather than to local causes.

And what an explanation it is when we get it! Dr. Carpenter gravely informs us that the reason why so many people died from small-pox in the epidemic of 1871-2 was the unusually malignant type of the epidemic. But we used to be assured that one great excellence in vaccination consisted in greatly diminishing the virulence of the attack in those whom it could not wholly save. In a letter I have lately received from the venerable Dr. Buchanan of Glasgow, as ardent an advocate of the system as Dr. Carpenter himself, he says, 'The great glory of the immortal Jenner does not consist in his having extirpated small-pox, which is as rife as ever, but in his having converted the most loathsome and fatal affection with which God in His wrath ever afflicted the human race into a trifling and mild disease.' Under which King, Bezonian ?

Now if Dr. Carpenter is correct, and vaccination is only effective against the milder forms of *variola, cadit qucestio*; it is clearly not worth while to undergo the now recognised risks and dangers of vaccination for the sake of protection against so harmless a disease as that known as 'discrete,' to which of course the famous Sydenham referred when he declared, 'If no mischief be done, either by physician or nurse, small-pox is the most slight and safe of all diseases.'

It is altogether an illusion that small-pox became a mild disease consequent on the introduction of vaccination. It was a mild and a severe disease a century ago and two centuries ago, as it is at this day. Dr. Wagstaffe, physician to St. Bartholomew's Hospital, stated the fact accurately in 1722, when he wrote, 'There is scarcely, I believe, so great a difference between any two distempers in the world as between the best and the worst sort of small-pox in respect to the dangers which attend them. So true is that common observation that there is one sort in which a nurse cannot kill, and another which even a physician cannot cure.'

Dr. Carpenter, having thus explained (!) why tens of thousands of 'protected' persons were carried off in the late epidemic, explains further that so far from vaccination having failed to contend with this epidemic, 'its protective power . . . has never been so conspicuously manifested.' Surely this is an illustration of the *petitio principii* in its most aggravated form. Dr. Carpenter's argument amounts to

this : (1) We know that vaccination is a very great, if not a perfect, protection against small-pox, and that where it does not wholly protect it greatly modifies its severity; (2) therefore, however frightful the virulence, and however great the rate of mortality of the late epidemic, its ravages must have been much greater had not Europe been protected by an almost universal vaccination.

Dr. Carpenter puts the ground on which I base my Bill on too narrow a basis, viz. 'the failure of vaccination to prevent or contend with the present small-pox epidemic' I propose to abolish compulsory vaccination, because I hold compulsion to be utterly indefensible, and of course the more indefensible because I hold vaccination itself to be wholly a delusion. Now it is somewhat remarkable that in Dr. Carpenter's article there is not a word about compulsion as apart from the question of the advantage of vaccination. As a defence of the existing system this is, I think, a serious omission. The two questions are quite distinct—that is, it is quite possible to believe in the excellence of vaccination, and yet to hold that compulsion is both unjust and impolitic. The reasons for this are obvious. There is nothing new in the principle that systems of medical treatment are not properly a subject for the intervention of State rule ; the reverse principle, in fact, that majorities should be all-powerful in matters which have been hitherto left to the exercise of the right of private judgment, is new, and in many of its illustrations most unfortunate (as I think) in its results. Upon this question of vaccination Sir Robert Peel declared that he would be no party to compulsion. George Canning said in the House of Commons, in 1808, that he 'could not figure any circumstance whatever that could induce him to follow up the most favourable report of its infallibility which might be brought forward with any measure of a compulsory nature,' while Sir Francis Burdett declared that 'Government in this free country cannot compel people to submit to the prescriptions of physicians or the operations of surgeons,' and that fine old country gentleman and Tory, the late Mr. J. W. Henley, declared it as his opinion that 'priestly despotism is bad, but medical despotism is intolerable.' This certainly was the view which I ventured to take when I sat upon the Select Committee on Vaccination in 1871. At that time I put absolute faith in the tradition of the excellence of vaccination, as do now, I fear, equally without study of the question, the great majority of English men and women. But I was not the less impressed with the wrong of compulsion, in regard both to its injustice and impolicy, and I proposed a clause which should exempt from the necessity of vaccinating their children all who should sign a declaration that they objected on principle to vaccination; such declaration to be made valid by a stamp for a small amount, not by way of punishment, but as a security that vaccination should not be neglected on no better grounds than ignorance or apathy. Holding to that opinion, I have

naturally and gradually been led to study the statistics of the question, and have thus been brought to the conclusion, much to my own surprise, that the whole theory is absolutely overthrown by the statistics accumulated since its introduction.

It is clear that the only ground upon which the intervention of the State can be justified is that of protection to society, just as nobody is permitted to create in his own house a nuisance dangerous to the health of his neighbours. But this is not a principle that can be applied to vaccination as a protection from small-pox, because it is obvious that the sounder the theory upon which Government intervention is called for, *i.e.* the certainty of the protection afforded by vaccination against small-pox, the more evident is it that the danger involved in neglect is not a danger to society, but only to those who deliberately prefer the alleged risk of infection to what they consider the evils of vaccination. To speak of the unvaccinated residuum as forming centres of infection to a protected population is simply ridiculous. It would be, moreover, extremely impolitic. There is no surer way of exciting opposition than by legal enforcement in a matter where every one feels that he has a right to decide for himself. As Lord Redesdale said in the House of Lords in 1814, 'If vaccination deserved to be established, it would establish itself by its own merits, and all attempts to force it on the people would only tend to create opposition to the practice.'

The compulsory law, moreover, acts as a piece of class legislation in its worst form. It is the comparatively poor who fall under its persecution. No government would dare to propose absolute compulsory vaccination. All that is done is to fine those who refuse to submit. This has made thousands who abhor the practice submit, while in very many cases it has involved braver men and women in absolute ruin to their homes; while the fine, even were it levied on the wealthy, would be a matter of the smallest consideration to them. But practically, as every one will understand, even this slight inconvenience does not attach to the wealthier classes of the community. Doctors do not betray, and guardians do not prosecute, persons whose position in society renders their heresy in regard to vaccination an excusable eccentricity. Did the Holy Inquisition ever invent a more infernal torture than that inflicted upon the father or mother who, having seen their elder children sacrificed in health or life on the altar of vaccination, are driven to the alternative of seeing their younger children subjected to the same risk or to their own utter pecuniary ruin? For, be it remembered, there have been cases in which persons have been subjected to repeated prosecutions, to the number of twenty, thirty, and even forty times.

But far beyond and above even all these considerations stands in ray mind this: that from the moment when it was recognised, as it now is, that any taint in the blood of a person from whom the lymph

is taken is communicable to the person into whose system the diseased matter is conveyed, from that moment compulsion became an execrable tyranny. On this part of the matter I shall have more to say presently. It is, surely, significant enough that Dr. Carpenter, in his defence of vaccination, passes over without observation this most grave and terrible portion of the subject.

I published last year a letter to Dr. Carpenter in answer to one by him in the *Spectator*, which I have good reason to believe has not been without effect upon many persons under whose notice it has come.¹ I remember being much struck by an observation reported to me of some one who had taken the trouble to read the pamphlet. 'But are Mr. Taylor's figures correct? Because, if so, we have all been in a dream for three-quarters of a century.' The *Story of a Great Delusion*² forms a curious study—an examination as to the manner in which a baseless superstition established itself, with some difficulty, it is true, and from the moment of its establishment grew and flourished in public estimation more and more, until any one who should venture to express a doubt of its absolute truth became the mark for contempt and ridicule, while year by year was added up the unmistakable evidence of its failure by the invincible logic of facts and figures. Such an inquiry, I say, affords more satisfactory provend for the cynic than the philanthropist.

It is worth, perhaps, a little space to look at vaccination in this view. The strength of the opinion in favour of vaccination lies (1) in the universal tradition of its success, and (2) in the belief that the almost universal medical opinion of the world testifies to this success. Now the history of vaccination is in fact one of continuous failure rather than success. By this I mean that there are abundant and continuous evidences of failure; *i.e.* that numbers of persons who had been vaccinated died of small-pox. This proves, indeed, that Jenner's promise of perfect immunity was altogether falsified. It does *not*, of course, prove the fallacy of the present fashionable theory that vaccination, though not a perfect, is a certain, or rather uncertain, safeguard; and those who believe in its virtues as almost a sacred creed have it, of course, open to them to say that but for vaccination many more would have died. Still, I think, to candid minds the chain of continuous evidence will not be without its effect.

Mr. Birch, surgeon of St. Thomas's Hospital, says in 1804, 'Every post brings me accounts of the failures of vaccination.' He adds that Jenner, to avoid the perplexing appeals that were made to him daily and the messages that were perpetually sent requiring him to visit untoward cases (that is, of small-pox patients who had been

¹ *Current Fallacies about Vaccination*. E. W. Allen, 4, Ave Maria Lane, E.C.

² The title of a work now in the press, by a gentleman who has deeply studied the subject of vaccination.

vaccinated), retired from London. In 1807 Lord Henry Petty stated in the House of Commons, 'It appeared by the Report of the Royal College of Physicians that the deaths by the small-pox had increased since the discovery of vaccine inoculation.' And again, in 1809, the same noble Lord observed that 'unless he (Dr. Jenner) was completely blinded by conceit, he must have recognised that the general faith in vaccination exhibited in 1801 had been much shaken by the experience of the succeeding seven years.' 1807 seems to have been a bad year for vaccination; Jenner's biographer says, 'The eruptions which attended many of the early cases of vaccination in London were unfortunately propagated in different parts of the country.' In 1808 I find Sir Francis Burdett protesting against any help being given to what 'appeared to be a failing experiment.' I have an interesting work before me, dated 1809 and written by Thomas Brown, surgeon, Musselburgh, upon the subject of vaccination. In his dedication to Alexander Monro, M.D., Professor of Anatomy and Surgery in the University of Edinburgh, F.C.P. and F.R.S., he writes, 'It is with extreme regret that, after nearly nine years' experience in the practice of vaccination, I am under the painful necessity of confessing I have almost arrived at that point which your superior information in the laws of the animal economy, your acuteness of perception, and your accurate observation enabled you to attain at the commencement of the practice.' In the body of the work he explains what this view is in the following *naive* confession: 'I am now perfectly satisfied, from my mind being under the influence of prejudice and blind to the expression of the fairest evidence, that the last time the small-pox was prevalent I rejected and explained away many cases which were entitled to the most serious attention, and showed myself as *violent and unreasonable* a partisan as any of my brethren in propagating a practice which I have now but little doubt we must ere long surrender at discretion.' Nor was his experience a slight one, for he says, 'I have no hesitation in confessing that I became an early convert and advocate for the new practice, and it is now eight years and a half since I have uniformly advised and practised vaccination; in which period I may safely say I have vaccinated upwards of twelve hundred.'

Baron (Jenner's biographer) says, 'In 1818 there were numerous complaints of the bad quality of the lymph and the prevalence of small-pox after vaccination.'

In the *Monthly Gazette of Health* (1820), edited by Dr. Reece and other eminent medical men, is an acknowledgment (p. 439) that 'cases of small-pox after cow-pox are become so common as no longer to excite any interest.' Finally, coming down to a later period, I find Mr. Ernest Hart, in his Report to the Parliamentary Bills Committee of the British Medical Association on Vaccination Penalties, saying, 'So fatal and prevalent was small-pox in the early part of the present

reign that a Committee had been appointed in 1838 to inquire into the present state of vaccination in England;' while in 1853 the *Lancet* (May 21) observes, ' In the public mind extensively, and to a more limited extent in the profession itself, doubts are known to exist as to the efficacy and eligibility of vaccination.'

This kind of testimony might be quoted *ad infinitum*. I do not offer it, of course, as conclusive testimony, but it may serve to open the minds of candid inquirers who have hitherto placed implicit faith in the tradition of the success of vaccination historically considered.

Let us now see how far these individual witnesses to the failure of vaccination are confirmed by the statistics since 1837, when the distinctive registration of deaths came into operation in England and Wales. It would appear that at that time vaccination was not growing in public favour, and about the year 1852 it was resolved by certain medical experts and scientists to make a vigorous attempt to obtain that which they had so long desired, viz. an Act for compulsory vaccination. A statement was addressed by Dr. Seaton to the Epidemiological Society and ordered to be printed by the House of Commons, May 3, 1853, stating (as was quite true) the extent to which vaccination was then neglected, and asserting what was not true, viz. the great increase of small-pox, and pleading for legislative enforcement of vaccination. The Act was easily passed; there was little discussion or interest on the subject; very likely not above a hundred persons really studied the effect of such a measure; and in this negligent sort of manner we became saddled with a law which has, in my opinion, been productive of a vast amount of individual suffering as well as of great injury to the public health. And with what practical result? Let the following figures show :—

London Small-pox Deaths.

1851-60.....	7,150
1861-70.....	8,347
1871-80.....	15,543

Or, to put it in another form, take the following extract from a paper read before the Manchester Literary and Philosophical Society (*Proceedings*, vol. xvi. No. 9) by Joseph Baxendell, F.R.A.S.:—

As the best test of the value of vaccination, I have discussed the small-pox statistics of London—the best vaccinated city in the kingdom—and compared the results for the five years 1840-53, before vaccination was made compulsory, with those for the five years 1869-73, when compulsory vaccination had been twenty years in operation. In the former five years, when vaccination was voluntary, and the number of vaccinated persons probably did not amount to 10 per cent. of the total population, the death rate from small-pox in London was .292; but in the latter five years, when vaccination had been strictly carried out for twenty years, and the number of vaccinated persons was 95 per cent. of the population, the rate was .679 (of the total mortality), thus showing the extraordinary increase of 132.5 per cent.

Or take the deaths in England and Wales:—

Deaths from small-pox in the first ten years after the enforce- ment of vaccination—1854-63	33,515
In the second ten years—1864-73.....	70,458

But these figures pass like the idle wind, producing no effect whatever upon the mind of the enthusiastic advocate of vaccination ; and this for the obvious reason that he bases his proof of the efficacy of his system upon the bare assertion of his foregone conclusion. Under this system all facts are equally useful to them. If small-pox is not prevalent, what a glorious illustration of the protection afforded by vaccination ! While if an epidemic is upon us, carrying off its thousands, they equally congratulate us upon having been saved from a still greater mortality by the universal application of their (*ex hypothesi*) all but perfect prophylactic !

Thus it is taken as the strongest evidence in their favour, that in the first years of the practice of vaccination there was a great decrease in small-pox mortality, although at that time so few persons were vaccinated—probably not 2 per cent.—that no perceptible effect could have been produced, and also while other conditions were in action sufficient to account for the diminution in the mortality without reference to vaccination. Dr. Farr says, ' Small-pox attained its maximum after inoculation was introduced : this disease began to grow less fatal before vaccination was discovered ; indicating, together with the diminution in fever, the general improvement in health then taking place.'

Now compare this credulity as regards the effect produced by vaccination in the years 1800-1810 with their incredulity as to its failure, when by compulsion they have raised the ratio of vaccination from, say, 50 per cent. in 1850 to 90 or 95 per cent. at the present time, or, according to Dr. Carpenter (in London), to 99-2/3 per cent.

(300 to 1); and this contemporaneously with the tremendous outbreak of 1871-2, in regard to which Dr. Carpenter has undertaken the not very easy task of explaining the figures without damaging vaccination.

In further illustration of this strangely illogical and unscientific state of mind, which is enabled to turn all facts, however inconsistent with the protective powers of vaccination, into arguments in its favour, Dr. Carpenter attributes unhesitatingly to vaccination ' the almost complete extinction within the last two years of small-pox in the nineteen great towns whose aggregate population (about 3-3/4 millions) equals that of the metropolis.'

What sort of reasoning is this ?

In London, where the unvaccinated are declared to be only one in 300, there has been in these very two years a serious epidemic. Therefore vaccination is a protection. In the nineteen other large

towns, where the amount of vaccination is certainly much less than this proportion, there has been 'almost complete exemption' from small-pox; and again, how excellent a protection is vaccination ! All roads lead Dr. Carpenter to the same happy conclusion.

Again, when Dr. Carpenter is reminded that in Leicester (one of the nineteen towns), where vaccination has been greatly neglected, the exemption from small-pox has been as complete as in the other (thoroughly vaccinated) towns, while in smaller places, such as Keighley, Dewsbury, and other places, where, as Dr. Carpenter remarks, 'the anti-vaccination feeling has been for some years so strong that a considerable percentage of the present juvenile population (perhaps even amounting in some places to one-third) is now unvaccinated,' a like exemption from small-pox has prevailed, he can only treat with lofty scorn the folly that can see in such facts any cause for doubt as to the efficacy of vaccination. Where the unvaccinated do *not* die, Dr. Carpenter's confidence in his theory seems but the more confirmed: and when, as in 1871, thousands of vaccinated persons died of small-pox in London, Dr. Carpenter is driven to the conclusion that the protective power of vaccination 'has never been so conspicuously manifested,' and that the lesson taught by that experience is the necessity for the 'more thorough and satisfactory enforcement of the compulsory clauses of the Vaccination Acts.'

Surely nothing like this reasoning has been heard since the days of Dr. Sangrado, who, when Gil Blas represented that all his patients died, 'as if they took a pleasure in dying merely to bring our practice into discredit,' replied, 'Why, truly, child, if I was not so sure as I am of the principles on which I proceed, I should think my remedies were pernicious in almost all the cases that come under my care;' and, further, when Gil Blas suggested a change of method, the excellent Doctor observed, 'I would willingly, but I have published a book in which I have extolled the use of—Vaccination ?'

We are further informed that Gil Blas at once recognised the force of this answer, and rejoined, 'Certainly ; you must not give your enemies such a triumph over you; perish rather the nobility, clergy, and people, and let us continue in our old path.'

The loose habit of Dr. Carpenter's mind is vividly illustrated in his treatment of Scotland. He writes :—

The great and continued fatality of small-pox in its principal towns during the four years 1871-4 may be fairly attributed in part to the very unsanitary condition of large parts of them, and in part to the existence of a much, larger proportion of the unvaccinated residuum than survived in England, the compulsory clauses which took effect in England in 1854 not having been introduced into Scotland until 1865.

Here we have the prevalence of small-pox in 1871-4 attributed to two causes—first, to the unsanitary condition of large parts of the Scotch towns; and secondly, to the existence of an unvaccinated

residuum. The first cause is a permanent factor of zymotic disease, sometimes yielding small-pox and sometimes other forms of fever, but the second cause, the unvaccinated residuum, is a figment of Dr. Carpenter's imagination. Compulsion as applied to vaccination was a superfluity in Scotland, the 'long-headed people,' as Dr. Cameron styles them, having, in common with the Irish, consented to the practice almost without exception. Thus we read in Dr. Seaton's *Handbook of Vaccination*:—

The Registrar-General for Scotland was able to report to Parliament that of 221,980 children born in that country between the day the Act came into operation (January 1, 1864) and December 31, 1865, there were only 5,382 respecting whom the entries required by the Vaccination Act had not been made in the registers; a result which he justly regarded as for all practical purposes complete.

If, therefore, the vaccination of Scotland was complete in 1865, and, as the returns prove, was maintained complete, how did an unvaccinated residuum come into being in the severe epidemic of 1871-4? Having assumed the defence of vaccination, Dr. Carpenter appears to consider it his duty to find facts where facts are not. Small-pox having fallen off in Scotland since 1874, he unhesitatingly ascribes the decline to vaccination; but if vaccination is preventive, why was it not equally operative, when equally existent, prior to 1874? He forgets the common phenomenon that after a severe outbreak of any fever there usually follows a quiescence of that form of fever, a fever of another fashion taking its place. 'There have not been,' says Dr. Carpenter, 'more than two small-pox deaths a year, either in Glasgow or Edinburgh, since 1877, though other fevers have been rife.' Just so. Other fevers have been rife, having taken the place of small-pox; and where is the gain? As Mr. Edwin Chadwick has taught us, we should fix our attention firmly on the general zymotic death-rate; and if that be not reduced, of what consequence is the special form of mortality?

But Dr. Carpenter is indeed a bold man to refer to Scotland at all. Prior to 1871 there had been an absence of epidemic small-pox for several years, and the aggregate mortality for the six years 1865-70 was but 876. Dr. Lyon Playfair (July 1870) triumphantly declared in the House that 'there could not be the slightest doubt that compulsory laws, when properly applied, *as in Scotland and Ireland*, were perfectly equal to stamp out small-pox in a country.'

Ah! luckless speech and bootless boast.

In 1871 epidemic small-pox reappeared, and in the next four years, 1871-4, the deaths by small-pox amounted to 7,260! Since then there has been no return of epidemic, and Dr. Carpenter can once more point blandly to Scotland as a crowning testimony of the triumphs of vaccination. That vaccination can only subdue small-pox when absent derogates not a little from its usefulness. It is said

that in certain Indian tribes the medicine men used, on occasion of an eclipse, to gain a temporary credit by boasting that they had stamped out the sun, but they naturally lost credit when it was found that the sun invariably reappeared on the ensuing day.

It is no easy task to grasp and answer a style of argument such as I have quoted. It is so flimsy that to cut through it is as hard a task as Richard found it to sever a scarf of lace. It is, nevertheless, a great improvement upon the ordinary *tactique* of the pro-vaccinationist, which is simply to assert the fact which he is bound to prove. That in this I speak without exaggeration the following extract from that high medical authority the *Lancet* will show. In its issue of June 18, 1881, it says, in relation to a statement put forth by Dr. Buchanan, Medical Officer of the Local Government Board :—

These facts, after full allowance for all errors in the estimates used for the calculations, afford grounds for the strongest special pleading in favour of vaccination. We doubt, however, the expediency of any such special pleading. *It is beyond dispute that efficient infant vaccination followed by efficient re-vaccination at adolescence practically confer immunity from fatal small-pox.* It is wiser, we think, for the Department having the control of vaccination simply to take its stand upon this ground, and to accept the recent small-pox epidemic in London, so far as regards the deaths of children, as evidence of a failure of the vaccination system as at present carried out.

The *Lancet* is, indeed, wise in its generation. By this *petitio principii* it renders the sacred cause of vaccination absolutely secure from any argument however crushing, from any facts however overwhelming. Does any vaccinated person die of small-pox, it only proves that, if an infant, the vaccination, if an adult, the revaccination, was not 'efficient.' When Doctor Sangrado's patients died, that excellent prototype of the vaccination experts of the present day employed the like irrefutable argument—the bleeding and hot-water treatment had stopped short of the point when it would have been 'efficient.'

And now let us consider for a moment whether the general statistics of small-pox mortality for the last hundred years afford any testimony whatever in favour of the efficacy of vaccination.

Prior to the year 1837, as I have said, there was no discriminative register of the mortality in England and Wales. Prior therefore to that time our pro-vaccination friends have full scope for recording such enormous small-pox mortalities in the ante-vaccination times as tradition may have handed down, or the requirements of their theory render desirable. Thus Dr. Carpenter, with, I am sure, the most perfect good faith, killed off by vaccination in Iceland more souls than there were to die ; and in regard to the metropolitan area (to which I am about to refer, because registration records *were* kept in the last century and were known as the bills of mortality) Dr. Carpenter made in his letter to the *Spectator* the following astounding statement:—

None but those who have studied the medical history of the last century have the least idea of the ravages then committed by small-pox. The 'esteemed contributor' to the *Modern Review* obviously considers the death of 44,000 persons from small-pox in England during the three years 1870-2 (at the rate of 14,666 per annum), 'in spite of compulsory vaccination,' a conclusive disproof of its efficacy. But he is clearly ignorant of the fact that a hundred years ago the small-pox mortality of London alone (with its then population of *under a million*) was often greater in six months' epidemic than that of the *twenty millions* of England and Wales is now in any whole year.

Probably so astounding a misstatement, on a simple question of figures, was never before put forth by a man of scientific reputation and of the highest personal character ; and I can only account for it in this case by the inordinate appetite shown by the advocates of vaccination for statistics however erroneous, for arguments however illogical, and for *canards* however incredible, which seem to tell in favour of their pet fanaticism. It is enough to say in evidence of this, that the highest mortality in any one year in London in the last century was 3,992, whereas the deaths in London in 1871 were 7,912, and the deaths in England and Wales in the epidemic 1870-2 were 44,840.

The average annual small-pox mortality within the bills of mortality during the last century is estimated to have been between two and three thousand per million living, while in these days, when everybody is protected by vaccination, the most prudent amongst us, let us hope, with five wounds in each arm, and the operation repeated every third year, and with almost boundless improvements in sanitary and hygienic regulations, what do we find ?

In 1871 the deaths from small-pox were, per million living:—

Newcastle	. 5,351	Liverpool	.
Durham.	. 4,773	Wolverhampton	.
Sunderland	. 8,283	Leicester	.
London .	. 2,430	Portsmouth	.
Norwich	. 3,040		

Or, looking abroad to places in most of which vaccination has been carried to the highest extent, the result is still less reassuring:—

Berlin .	. 6,310	Paris .	. 5,720
Breslau	. 3,710	Prague	. 3,980
Buda-Pesth .	. 3,280	Rome .	. 3,090
Cologne	. 3,360	Rotterdam .	. 14,280
Hague..	. 14,100	Trieste	. 6,980
Hamburg	. 15,440	Vienna	. 5,170
Liege .	. 3,410		

I have not unfrequently been told by friends interested in the question, 'We are puzzled by the variety of the statistics presented to us. Dr. Carpenter gives us certain figures, and they have a plausible and reasonable air, and then you give us a number of statistics

which appear overwhelming on the other side ; and not having studied the matter for ourselves, we find it difficult to make the two agree. The next time you write, do not only give us your own statistics, but take those given by Dr. Carpenter, and show their fallacy or unfairness.' There is much sense in this, and let us now see if we can detect the mode in which Dr. Carpenter, while doubtless quoting correctly his figures, yet so selects or adapts them as to seem for a moment to throw some doubt upon the tremendous results indicated by my figures—not mine, by the way, for they are official, and, as far as I know, neither selected nor adapted.

Here is a table (which, unlike Dr. Carpenter's, includes the exceptional) exhibiting at a glance the mean annual death-rate from small-pox per million living in England and Wales from 1838 to 1879:—

Five years—1838-42.....	571
1843-46.....	No returns published
Three years—1847-49.....	3 0 3
Five years—1850-54.....	279
Five years—1855-59.....	199
Five years—1860-64.....	190
Five years—1865-69.....	1 4 7
Five years—1870-74.....	433
Five years—1875-79.....	3 4 4

Dr. Carpenter's figures are placed in different form, but I think he would fully admit the correctness of the above figures. It is not in dispute, therefore, between us that there has been for about a century a continuous decline in small-pox mortality; but while he attributes this wholly to the results of vaccination, I maintain, on the contrary, that there is no evidence whatever that vaccination has had anything to do with it. The decline commenced before vaccination was practised, and, as will be seen by the above figures, it bears no character of relation to the gradual increase in the practice of vaccination, which, commencing about 1800, with perhaps 1 per cent., has continued to the present time, when it is said to have reached 90 or 95 per cent. And the broad fact remains that having reached a completeness of vaccination which Jenner evidently would have considered sufficient to stamp out the disease, we have to encounter, in the eightieth year of the triumph of vaccination, an epidemic acknowledged by Dr. Carpenter to be one characterised by 'peculiar virulence' and 'widespread mortality.'

Considering the enormous advances that the last century has seen in our sanitary arrangements, there seems nothing more natural than to attribute to this improvement the diminution of the small-pox mortality, to which indeed it seems fully adequate. Probably the hygienic conditions of the worst slums of London now are no worse than were those of all London when in the last century 4,000 persons

perished in one year. But to this Dr. Carpenter opposes the observation that 'those who attribute the whole of this beneficial change to sanitation have to account for the fact that no *corresponding* decrease has taken place in the mortality from other diseases of the same class.' Now Dr. Carpenter has alluded to Dr. Farr as an unrivalled authority on this subject, and this is what Dr. Farr says on the matter: 'Small-pox attained its maximum after inoculation was introduced ; this disease began to grow less fatal before vaccination was discovered, indicating, together with the diminution in fever, the general improvement of health then taking place.' And again, 'Fever has proportionally declined since 1771. Fever has declined in nearly the same ratio as small-pox.' It is clear that Dr. Carpenter has little faith in sanitation as affecting small-pox. He says, 'To maintain that this disease is to be extinguished by any sanitation that is practically possible shows an enthusiastic credulity,' &c. &c. &c. This is certainly opposed to the views of many distinguished men. Mr. Edwin Chadwick, C.B., in his opening address to the Health Congress lately held at Brighton, said

that cases of small-pox, of typhus, and of others of the ordinary epidemics occur in the greatest proportion, on common conditions of foul air, from stagnant putrefactions, from bad house drainage, from sewers of deposit, from excrement-sodden sites, from filthy street surfaces, from impure water, and from overcrowding in foul houses; that the entire removal of such conditions by complete sanitation and by improved dwellings is the effectual preventive of diseases of those species, and of ordinary as well as of extraordinary visitations, &c.

Dr. Carpenter, on the other hand, apparently believes that 'the healthiest subjects, living under the most favourable conditions,' are equally liable with others less favourably conditioned to be infected with small-pox. In his letter to the *Spectator* he asserts that 'every unvaccinated person retains his full congenital liability not merely to take the disease himself and to have it in its severest form, but to become the focus of infection to others.' A focus of infection to the protected! Dr. Carpenter does not explain what he means by 'full liability,' but of course the implication is that few persons would escape in an unvaccinated community in a period of epidemic; and I observed lately in one of our leading medical journals a statement showing that there are really persons to endorse so extravagant an opinion—how extravagant a single illustration will prove. The statement to which I refer was (I really think it must have been written by Dr. Carpenter himself) that 'about 90 per cent, of persons in an unvaccinated community exposed to small-pox will catch it. From a third to a half would die, and the rest would be marked for life.'³ Now, as I have already said, the heaviest mortality from small-pox registered during last century in unprotected London in any one year was under 4,000. All concurrent testimony places the ratio of deaths to cases at a little under 20 per cent. We have,

³ *Lancet*, February 11, 1882.

therefore, about 20,000 cases and no more ; that is to say, that the ' full congenital liability' resulted—assuming the population to have been three-quarters of a million—in the fact that 20,000 persons did take small-pox and 730,000 people did not. The panic which it would appear the object of the advocates of vaccination to produce by such statements as the foregoing might be further alleviated by the well-known fact that the years distinguished by large small-pox mortality are by no means those of the largest *general* mortality. Thus, take the forty years 1841-80, and we find the following curious result:—

London		Small-pox deaths	General death rate per thousand
Three lowest years.	1841	1,053	24.2
	1851	1,062	23.4
	1855	1,039	24.3
Average		1,051	23.9
Three highest years	1863	1,990	24.5
	1871	7,912	24.6
	1877	2,551	21.9
Average		4,153	23.6

Or, to give another not less striking illustration, the deaths by small-pox in London in 1796 (the highest of that decade) were 3,548, and the whole number of deaths was 19,288. In 1792 the small-pox deaths were 1,568, and the total mortality 20,213.

Dr. Carpenter endeavours to increase alarm by quoting a number of illustrious personages who were struck down by small-pox in the last century as proving that no favourable conditions of life can protect from small-pox, but he should remember that we have had recent evidence that palaces may be very dangerous residences, and that it is probable the palaces of last century were not, to say the least of it, more sanitary than those of the present.

I have already quoted statistics showing the diminution of small-pox mortality during the present century, but there is this peculiarity about them well worth noting, viz. that the average decline arises from the small mortality in the non-epidemic years—of course by far the larger number—while as regards the periods of epidemic each one has shown an increase on the previous one : thus, vaccination was made compulsory in 1853; an additional Act was passed in 1867, and a still more stringent one in 1871 ; since 1853 we have had three epidemics :—

Epidemic	Deaths from small-pox in England and Wales
1857-8-9	14,244
1863-4-5	20,059
1870-1-2	44,840

I am afraid Dr. Carpenter will not be disposed to accept the conclusions to which I think these facts naturally lead, viz. that the diminution of small-pox in non-epidemic periods marks the natural improvement in general health arising from improved sanitary conditions, while the enhanced fatality of the epidemic periods marks the evil accomplished by a general rush to the dangerous quackery of re-vaccination. Further on I shall offer additional evidence in support of this hypothesis.

Naturally dissatisfied the advocates of vaccination must be with the broad facts to which I have adverted, viz. that after eighty years of trial, and when the system has arrived at what must be recognised as complete development, small-pox is no nearer being stamped out than before Jenner's name was heard of, while the proportion of mortality to cases remains singularly identical, as witness the following tables:—

Before Vaccination	Date	Authority	Cases	Vaccinated	Deaths	Deaths per cent.
	1723	Dr. Jurin quoted by Dr. Duvillard	18,066	None	2,986	16-53
	1746-63	London Small-pox Hospital	6,456	"	1,634	25-30
	1763	Lambert quoted by Duvillard	72	"	15	20-8
	1779	Rees' Cyclopaedia	400	"	72	18-0
				24,094	—	4,707
After 40 to 80 years of Vaccination	1836-51	Mr. Marson's Hospital Report.	5,652	3,094	1,129	19-97
	1870-72		14,808	11,174	2,764	18-66
	1876	Metropolitan Hospitals	1,470	4,236	338	23-0
	1871-77	Homerton Hospital (Dr. Gayton)	5,479	1,056	1,065	19-43
	1876-80	Dublin Hospital (Or. Grimshaw)	2,404	11,412	523	21-7
	1876-80	Metropolitan (Jebb)	15,171		2,677	17-6
			44,984	31,872	8,496	18-8

Under these circumstances it is not surprising that within the last few years an attempt should have been made to ignore the general statistics of the question, and to attempt to show a protective influence in vaccination by pretending to discriminate the victims of small-pox as between the vaccinated and the unvaccinated. This latest dodge (I can really find no other name for it) of the vaccination specialists is warmly taken up by Dr. Carpenter, and in fact forms one of the chief arguments in his article. Apparently Dr. Carpenter has brought himself to believe that ' while the general death-rate of the vaccinated is only 7.8 per cent. that of the unvaccinated is 44.6 per cent., or *nearly six times as great.*' And again,

' While the death-rate of vaccinated *children* was only 6.5 per cent., that of the unvaccinated reached the terrible figure of 47.8 per cent., or *more than seven times as great.*'

If we take the most general survey of the statistics for small-pox mortality, the absolute incredibility of this statement must strike every one but those impervious to reason through the force of a fore-gone conclusion. The recognised average mortality in small-pox cases is about 18 per cent. This is accepted on the best authorities we have, as being true of 'unprotected' England in the last century, and the same sort of average is maintained in the present century. I have a long list of hospital reports before me, both at home and abroad, and although there are naturally considerable variations, the general average mortality is maintained with quite a singular exactitude. Medical men will not, I think, deny this statement, although they certainly do not press it before the public, and the result of my observation upon the matter is that the public are quite astonished when the fact is brought before them. It may, however, be well that I should add distinct medical testimony to the fact.

I find the following in Dr. Seaton's *Handbook of Vaccination*, 1868, p. 191:—

Dr. Jurin writing early in the last century laid it down as the result of his investigations that of persons of all ages taken ill of natural small-pox, there will die of that distemper one in five or six. . . . From returns made to the Epidemiological Society in 1852, by 156 medical practitioners in various parts of England who had kept numerical records of their small-pox experience, it appeared that the proportion of deaths to cases which they had met with in the natural form of the disease was 19.7 per cent.; or as nearly as possible one in five.

Now what is it we are asked to believe, as the result of this pretended subdivision of small-pox mortality at the present time into the vaccinated and unvaccinated? Why, that the mortality in the last century in 'unprotected' London was 18 per cent., whereas now, in what you consider as 'unprotected' England—that is to say, the unvaccinated portion of it—the mortality is 44 per cent., or almost treble! Nay, I have seen statements by even more courageous disputants, that the mortality of the 'unprotected' now amounts to 60 or even 80 per cent.! And it must be remembered, in comparing the present with the last century, that our general sanitary and hygienic conditions have been immensely improved, and that the hideous medical maltreatment of small-pox in the last century has been altogether relinquished for a more natural system.

But when we descend to the practical details of this pretended subdivision of small-pox mortality, we have to deal with something-worse than want of logic, and to which I hardly know how to give a milder name than *positive bad faith*. To decide whether persons who have died of small-pox have or have not been vaccinated, with any degree of scientific accuracy, is an impossibility, as is acknow-

ledged and recognised by those who have had sufficient means of observation, and who have no foregone conclusion to uphold. The *Lancet* long ago deprecated this piece of quackery. The permanence of the vaccine marks is known to be quite uncertain. As an illustration I may quote an observation of the Earl of Morley in a debate in the House of Lords in June last, when it was proposed to prevent fraudulent re-enlistment in the army by an extension of the practice of vaccination. He said, 'But would the practice be efficacious? He feared not. . . . It appeared that out of 100 recruits who were vaccinated, only 38 were marked.' And this failure, be it remembered, was within the probably short period between vaccination and re-enlistment.

Again, it is notorious that in the case of persons dying of confluent small-pox it is quite impossible to detect the vaccination marks. And, moreover, the whole statement is tainted with suspicion from the commencement. Admission has in some cases been made by medical men themselves that their fear of damaging the cause of vaccination has been too strong for the accuracy of their returns. It is, in fact, quite in harmony with those who avow a foregone belief such as requires no proof and declines all argument, that they should take for granted that a child who dies of small-pox has not been vaccinated, even when the parent vouches for the fact, and, as a matter of fact, numerous instances have been found on critical inquiry, in which the same child has been registered as 'successfully vaccinated,' and in the death register as died of small-pox 'unvaccinated.' The following medical notes speak volumes as to the mode in, which this division into vaccinated and unvaccinated is carried into practice. In the case of the Birkenhead epidemic I cannot for a moment doubt that an enormous proportion of the 292 registered as 'unvaccinated' and 'unknown,' had duly undergone the operation in infancy as by law enforced:—

Notes on the Small-pox Epidemic at Birkenhead, 1877 (p. 9).

By Fras. Vacher, M.D.

	Vaccinated	Unvaccinated	Unknown
	223	72	220
Died.....	12	53	28

As regards the patients admitted to the fever hospital or treated at home, those entered as vaccinated displayed undoubted cicatrices, as attested by competent medical witnesses, and those entered as not vaccinated were admitted unvaccinated, or without the faintest mark. *The mere assertions of patients (!) or their friends that they were vaccinated counted for nothing, as about 80 per cent, of the patients entered on the third column of the table were reported as having been vaccinated in infancy.*

Dr. Russell's Glasgow Report, 1871-2.

P. 25. Sometimes persons were said to lie vaccinated, but no marts could be seen, very frequently because of the abundance of the eruption. In some cases of those which recovered, an inspection before dismissal discovered vaccine marks sometimes 'very good.'

But supposing, just for argument sake, the correctness of Dr. Carpenter's figures, they would still afford no proof that the unvaccinated died because they were unvaccinated, for there is another specialty which applies to the unvaccinated residuum, and that is, that while the vaccinated include an enormous proportion of the well-to-do classes of the community, the unvaccinated consist for the most part, first, of those whom, being in feeble health, the doctors dare not vaccinate, and secondly, of that portion of the population living in the slums of London, and unreachable by vaccination officers, and under each condition the ' unvaccinated residuum' is marked out to fall under any existing epidemic in larger proportions than the more favoured vaccinated class.

I must just notice in passing another similar attempt to show that there is some connection between vaccination and small-pox, by declaring that the effect produced by the former on the latter is precisely regulated by the number of marks upon the arm. Jenner declared that one mark was sufficient, but no matter for that, and I fancy that physiologists have usually held that blood-poisoning could be produced by a single inoculation as well as by a dozen. But this, however, is no question for me to discuss, and fortunately it is quite unnecessary, seeing that, as it happens, official statistics are sufficient to overthrow the allegation.

I find in the ' Metropolitan District Asylums Report' the following table of deaths under five years old from small-pox. The percentage of deaths is (of those reported as having any vaccination marks at all) :—

One mark.....	22 per cent
Two marks.....	28 „
Three „.....	18 „
Four „.....	0 „
Five „.....	16 „

Take, again, another table, age thirty to forty :—

One mark.....	16 per cent.
Two marks.....	20 „
Three „.....	21 „
Four „.....	23 „
Five „.....	8 „

Take, again, the number of cases admitted in various hospitals. The Deptford Hospital Report for 1879 gives the following:—

One mark.....	317
Two marks.....	384
Three „.....	447

Homerton Reports, 1871-7, give :

One mark.....	1,042
Two marks.....	1,259
Three or more.....	1,261

Fulham Hospital Report, 1878, gives :—

One mark.....	149
Two marks.....	156
Three and more.....	202

Metropolitan Hospital Report, 1870-2, gives :—

One mark.....	1,124
Two marks.....	1,722
Three and more.....	1,6/7

Such figures as these would really seem to show that the vaccination authorities boldly make whatever assertions fit in with their theories, relying upon the probability that the public will not trouble itself with hospital reports.

Dr. Carpenter in his article quotes other statistics, furnished by Dr. Gayton, giving quite different results from the figures above. Perhaps Dr. Carpenter will say that his figures may be taken as at least neutralising mine, but this would not be fair, for the obvious reason that, if *his* view were correct, it could not be contradicted—although, of course, the proportions might differ—by any correct statistics, while, if my view be correct, namely, that the number of marks is no factor in the question, we should expect to find, according to the doctrine of probabilities, the greater mortality would sometimes be found on the side of the few marks, and sometimes of the many. I have neither time nor opportunity to test Dr. Carpenter's new figures upon the subject, but I frankly confess that, without impugning anyone's desire to be accurate, I am not able to put full faith in the scientific accuracy of Dr. Gayton's returns.⁴

While I am putting pen to paper, I receive a report of a speech delivered within the last few days at Eastbourne, by Mr. W. J. Collins, M.B., B.S., B.Sc. &c, containing the following passage; and I stop to ask myself whether the statistics quoted do not as definitely settle the question of compulsory vaccination, as I could do were I permitted to occupy an entire number of this Review.

The report of the Highgate Small-pox Hospital for 1871 says: 'Of the 950 cases of small-pox, 870, or 91.5 per cent. of the whole cases, had been vaccinated,' while that for the last year informs us there were 491 cases and of these only 21 were not vaccinated. In Bromley last summer there actually occurred an epidemic of small-pox in which everybody attacked had been previously protected. Dr. Nicholson, writing to the *Lancet*, observes: 'There were 43 cases treated in the Bromley Hospital between April 25 and June 29. Of confluent small-pox

⁴ In justification of a moderate amount of scepticism I may say that I have been favoured with a communication from Mr. M. D. Makuna, late Medical Superintendent of the Fulham Small-pox Hospital, in which he informs me that the information supplied to Dr. Carpenter for his article in this review in respect to the nurses at that hospital is wholly incorrect. Mr. Makuna adds: 'I must say that as long as indefinite statements are made simply to bewilder the public, these questions must remain a public nuisance.'

there were 16 cases; of discrete, 14; of modified, 13. All the cases had been vaccinated—3 re-vaccinated.' (F. Nicholson, L.R.C.P. *Lancet*, August 27, 1881.)

So much for the first point, on which, as I have said, the general faith in vaccination for the most part depends, viz. the tradition of its historical success. I come now to the second point, viz. the supposed universal belief of the medical profession in the efficacy of vaccination. This, I am convinced, is one of the chief causes of the blind faith in vaccination amongst the middle and upper classes, who naturally accept the opinion of their medical advisers upon what they consider a purely medical question. Upon this point I am warned by the length to which my paper has already run that I must content myself with asserting what I could prove on indisputable testimony, viz. that the unanimity of the medical profession in regard to vaccination is very far indeed from being as complete as is generally supposed. For lack of space I must likewise omit to recapitulate the overwhelming evidence as to the other dangers attending vaccination, which very strangely Dr. Carpenter altogether passes by.

Dr. Carpenter concludes his article by kindly providing me with a Report to the House, to be drawn up by me as imaginary chairman, of a supposititious Select Committee, after the unanimous testimony of the medical witnesses has proved the fallacy of all my views upon the subject. Dr. Carpenter would certainly not expect that I should so ostentatiously 'write me down an ass' as to follow his suggestion, and I only notice it to add the hope that, so far as *compulsion*, at least, is concerned, we shall not have the question referred to a Select Committee. On every sound principle upon which, at any rate in the long run, English legislation is based, compulsory vaccination stands condemned, and should suffer summary execution without further reprieve.

P. A. TAYLOR.