Vaccination: a letter to Dr. W.B. Carpenter, C.B., &c.;, &c.;, &c.; / by P.A. Taylor.

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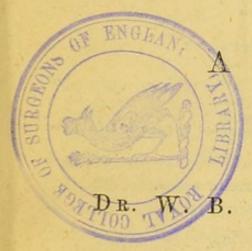
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# VACCINATION.



# LETTER

TO

PRESENTED AUTHOR. CARPENTER, C.B.,

&c., &c., &c.,

BY

P. A. TAYLOR, M.P.

LONDON: · E. W. ALLEN, 4, AVE MARIA LANE, E.C.

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# THE LONDON SOCIETY

FOR THE

# Abolition of Compulsory Vaccination.

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II.—The Diffusion of Knowledge concerning Vaccination.

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# CURRENT FALLACIES

ABOUT

# VACCINATION.

You were good enough to send me, a week or two ago, your pamphlet on "The Morality of the Medical Profession," reprinted from the Modern Review of July, calling my special attention to pp. 38-40, and giving me a friendly challenge "to point out any misstatement in these pages." You will remember that I replied immediately, that I had perhaps never seen, in a short compass, so many statements that were in my opinion open to destructive criticism, that it would be hardly worth while for either of us to enter upon a private discussion, but that I would consider whether I might not usefully make a public reply to your published statements, and on consideration I have resolved to do so in the form of a letter to yourself, to which I hope to give a wide circulation. To this course I am especially urged by the consideration that it is almost impossible to secure any opportunity of fair discussion upon the subject of vaccination, few advocates of that system having, like yourself, the courage of their opinions. The mot d'ordre has evidently gone forth to avoid all discussion with the anti-vaccination fanatics. The small band of medical experts who are paid certain thousands by the State to champion the cause of vaccination put forth from time to time in the public press their little statements, consisting almost exclusively of facts which are not facts, and of statistics cooked into a condition of hopeless confusion. All replies to these statements are for the most part refused. You will remember that the Spectator printed a long letter from you in April last; you may not be aware, and anyhow

would not feel complimented by the fact, that all reply was absolutely refused by that paper. So far do the medical papers carry their terror of discussion, that they actually refuse admission to advertisements of all anti-vaccination literature. This principle of suppression, this conspiracy of silence, has lately been avowed and defended by the *Lancet* in the following naïve and comical deprecation of Dr. Buchanan's sophistical statement:—

"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 revaccination 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." We who are of opinion that the practice of vaccination is a mere delusion, and that there is no evidence whatever to prove that it is any protection against small-pox, have such faith in the force of truth, when not suppressed, and in the common sense of our countrymen, that we desire nothing but free discussion on the question. As the result of that discussion, I desire to express my perfect conviction that compulsory vaccination, at least, is doomed at no distant date.

The pages to which you call my attention contain what you call "the truth about vaccination, which is to be drawn from the returns published by the Registrar-General, the

<sup>\*</sup> Lancet, June 18, 1881.

Asylums Board, and other responsible officials," arranged under eight heads.

The first two are intended to prove the good results of vaccination by showing that the average small-pox mortality in England and Wales was much greater in the twelve years preceding the first year of compulsion (1854), than that of the twenty-five years after 1854; the former period being at the rate of 420 per million living, the latter at the rate of 208½.

Before proceeding to remark upon the extraordinary fallacy contained in this statement, I must observe that even were it correct, its allegation, as a proof of the efficacy of vaccination, strongly illustrates one of those patent failures in logic to which pro-vaccinators seem invariably prone. It is the post ergo propter fallacy. If a diminution in small-pox mortality had followed upon the passing of a Compulsory Act, that alone to a mind of any scientific accuracy would scarcely have been considered proof that the result was solely due to the alteration of the law. In the first place, it would have been requisite to inquire what increase in vaccination the Act had caused; and, secondly, it would have been necessary to note the fact that the history of small-pox shows that it never slavs in an even average of years, but has invariably its years of epidemic and of comparative cessation. Now I observe that the advocates of vaccination note as proof positive of their theory, any sequence of events which seems to be in accordance therewith, while they entirely ignore, or otherwise explain away. any sequence of events which appears to tend in a contrary direction. Your illustration of the years preceding and subsequent to 1854 is most unfortunate, seeing that the sequence of events was altogether in antagonism to your theory; as I will show directly, that there has followed upon the passing of the Compulsory Act a very considerable increase of smallpox mortality.

Your predecessors were more fortunate in the earliest days of the vaccination superstition. At that time small-pox was on the decline, partly probably at least from the diminution in inoculation, to which system Jenner himself declared was owing the prevalence of that disease, and in regard to which

—upheld though it was by the medical profession—Dr. John Clark, writing in 1815, said:—

"It is scarcely to be doubted that more persons have died of the small-pox since the introduction of inoculation than before it was known in England. \* \* \* \* Before inoculation was known it was only occasionally endemic." \*

Whatever was the cause, the fact of the diminution of small-pox was undoubted, and the deaths from that disease within the bills of mortality, which in the last ten years of the century amounted to 18,477, fell in the first ten years of the present century to 12,534. This diminution of smallpox mortality was simultaneous with the commencement of vaccination. Here was a favourable sequence of events, and the vaccinationists of the time did not hesitate to claim for their system all the credit of this diminution. although, of course, at that time the percentage of the population that was vaccinated was too inconsiderable to have any important weight on the general result. As I have already said, your reference to the figures prior to and subsequent upon 1854 is not so fortunate. About 1851-2 the medical scientists of the day took it into their heads to get up a craze about small-pox and vaccination. They declared that the practice of vaccination was greatly neglected, and in this they were perfectly correct, the evidence showing that a quite inconsiderable proportion of the population were paying the least attention to the sacred rite. It was not true (as they stated) that small-pox mortality was assuming dangerous proportions, the fact being that there occurred no serious small-pox epidemic between that of 1838-40 and that of 1871-2. In the three years of the former there died of small-pox 35,833, while in the two years of the latter there died 42,220.

The experts, however, carried their way as usual, in equal defiance of the doctrines of science and common sense, as of the natural rights of parents, and a compulsory Bill was passed.

<sup>\* &</sup>quot;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." (Dr. FARB, M'Culloch's Statistics of British Empire.)

But what was the sequence of events to which you so confidently appeal? Let the following statistics of the three decades included in your proposition give the answer:—

## 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. 16, 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 1849-53, 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 10 years	after the	en-	
forcement of vaccination—1854 to 1863			33,515
In the second 10 years—1864 to 1873			70,458

You will please observe that in pointing out the fallacy involved in your post ergo propter line of argument, I have not the least intention of falling into a like fallacy myself, and I will not assert that this enormous increase of small-pox mortality was caused by the increased practice of vaccination after the Act of 1854. Sufficient for my purpose here is the statement of the fact. But if I were disposed to follow such illogical example, I might make considerable capital by dealing with facts in a similar manner; as for example,—in the last century in unprotected London, the small-pox mortality was, say, two to three thousand per million living, while in 1871, the mortality (still per one million living) was in protected—

Newcastle	 	 	 5,351
Durham	 	 	 4,773
Sunderland	 	 ***	 8,283

&c., &c., &c.

I have been considerably exercised in discovering from what source you obtained the statistics so entirely at variance with the figures which I have given above. I have at length found it in a work lately published by the ingenious Mr. Ernest Hart, and highly ingenious is the table which he gives. It is not difficult to prove from figures any proposition you may have set your heart upon, by judicious selection and unscrupulous comparison. In this case Mr. Ernest Hart's figures just include the serious epidemic, 1838-40, and (necessarily) omit the four years, 1843-46, which do not appear to have been recorded, but which I believe are known to have been low in small-pox mortality. It is evident that by such a process of selection (particularly in relation to a disease which, as is specially the case in small-pox, attacks by fits and starts, and at quite uncertain intervals), such calculations are absolutely valueless; much worse, indeed, than valueless, for as a test of the value of vaccination they are positively, and I fear I must add intentionally, deceptive; for, can any one pretend to believe that vaccination was less rigorously enforced in 1871-2, when, according to Mr. Hart's tables, the small-pox death-rate was respectively 1,024, and 833 per million living, than it was in 1868-9, when the death-rate was only 96 and 72 per million? The only rational explanation, of course, is that in one case small-pox was epidemic, while in the other it was not.

By way of showing what remarkable results can be produced by a careful selection of dates, and not, of course, attaching to them any more value than I give to Mr. Hart's manipulated results, take the following:—The small-pox mortality in London was, in the five years 1853-7, 2,631, or an average of 526 per annum. In the five years 1868-72 it was 11,543, or an average of 2,308 per annum, showing an apparent increase in the virulence of small-pox

of between 400 and 500 per cent.

By way of comment upon your optimist view of the diminution of small-pox since vaccination was made compulsory, I should like to call your attention to the following passage from a letter to the *Times*, written some three months since by Dr. Cameron, the recognised champion of vaccina-

tion in the House of Commons, and which may have escaped your notice:—

"Since 1836 our statistics have been compiled so as to enable us to compare the mortality not merely in small-pox occurring in all classes of vaccinated persons at different periods, but in each separate class of vaccinated persons—in persons, that is, with one, two, three, or four good or indifferent marks. I have gone into these details, and found that not merely has the mortality in small-pox occurring after vaccination progressively increased in the aggregate, but it has increased in each class of cases, and increased enormously in the best vaccinated class of cases."

I am strongly under the impression that Dr. Cameron, if he would pay equal attention to the history of vaccination in its earliest years to that which he has given to its development since 1836, would find that its failure begins from its earliest institution. I have abundant evidence before me of the continuous expression of disappointment, uttered by competent authorities, at the failure of Jenner's anticipations.

I observe that you mention by way of parenthesis in your clause I that the average death-rate from small-pox was estimated a century ago at 3,000 per million living, which leads me to the remark that one of the characteristics of the devotees to vaccination is enormously to exaggerate the prevalence of, and mortality from small-pox in pre-vaccination periods. Your figures, for instance, which I have just quoted, are somewhat exaggerated. I am aware that various estimates of the average small-pox mortality in London were given before the Committee of 1871, but I believe that 3,000 was the highest figure named, and Mr. Seaton, in answer to question 5,765, put it at no more than 2,000. But it must be remembered besides, that these statistics refer only to the London population, living of course under hygienic conditions certainly below the average of the rest of the community. To extend, therefore, these London statistics to the whole of Great Britain would be manifestly to produce a quite exaggerated idea of the national mortality by small-pox. By such a process of calculation so clever a man as Dr. Playfair once declared that vaccination saved the lives of 80,000 persons per annum, in which extraordinary statement was. however, included another fallacy, that, namely, of supposing that the deaths by small-pox were a simple addition to the

general average mortality, whereas as you are of course aware, the years distinguished by large small-pox mortality are by no means generally of the largest general mortality. Thus, take the forty years 1841-80, and we find the following curious result:—

Ward to particulate the		a Dari	Small Pox deaths.	General death rate per thousand.
Three lowest years			1841 1,053 1851 1,062 1855 1,039	24·2 23·4 24·3
Average			1,051	23.9
Three highest years	•••		1863 1,996 1871 7,912 1877 2,551	24·5 24·6 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.

Of this tendency on the part of vaccinationists to exaggerate the small-pox mortality of the pre-prevaccination period, your letter to the *Spectator* in April last affords a remarkable example.

I refer to the following passage:-

"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 a 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.

You will remember that I called your attention to this extraordinary mistake in a private letter, and ventured to suggest that you were bound to correct the misstatement as publicly as it had been made; to which you replied, acknowledging the error, which you said, "had been "made on the authority of an old writer on epidemics generally "without controversial bias." Of course, anyone may copy erroneous figures, but does it not show a little of the animus to which I have referred, to give such a statement ex cathedra as from one who has "studied the medical history of the "last century?" I can only refer to the same animus the extraordinary reason you gave for not making the correction, viz., "that though greatly over the mark as regards London, "the statement was greatly under the mark as regards Paris." I cannot but think that on any other question but vaccination you would have felt bound immediately to correct so prodigious a mistake. Besides, I cannot even guess at your meaning in introducing Paris. Whether you mean that in the last century there were in Paris many six months' smallpox epidemics carrying off more people than now ever die of small-pox in France, or whether you mean to compare the Paris mortality of last century with the present mortality in England and Wales, does not appear, and is certainly of not the slightest importance. As, however, you do mention Paris, I may just note that there died of small-pox in the thirteen months, January 1870 to 1871 inclusive, 12,042 persons; a mortality more than twice as great as occurred in the whole of the previous ten years, and there is this noteworthy fact connected with the year 1871, viz., that there was a perfect furore for vaccination and re-vaccination with

"pure calf lymph." Thousands were vaccinated every week (the mortality increasing month by month), until in December the alarmed medical faculty held their hands, and in two months, that is to say in March 1871, the deaths had fallen again to 230.\*

One further illustration I must give, as showing the special fallacies of pro-vaccination logic, consisting in the too facile admission of favourable facts, and of the unwarrantable conclusions drawn even from those facts. After alluding to an enormous alleged small-pox mortality in Iceland, upwards of a century ago, you proceed in your letter to the Spectator as follows:—

"Compare this with the case of Malta, with which I took pains to acquaint myself during my scientific visits to the Mediterranean in 1870 and 1871. I was then assured by one of its principal physicians that, notwithstanding the freedom of communication between Valetta and all ports in the Mediterranean, the large population of the island had been for many years totally exempt from small-pox; the liability to which had been (as he believed) practically extinguished by the universality with which vaccination had been there practised for many years, under the rule of a benevolent despotism."

Now, it happens rather curiously that a letter appears in the Westminster and Chelsea News of July 16th, written in hot defence of vaccination, and signed "Surgeon-Major," in which I find the following passage: "At Malta, in the years "1870 and 1871, I was in medical charge of Royal Artillery, "in number all told of about 430. Small-pox broke out in a "very severe form in Valetta and Vittoriosa, the towns in "which the troops were chiefly quartered." So that it would appear that during the very period of your scientific inquiries, as the result of which you were convinced that Malta "had "been for many years totally exempt from small-pox," it had then actually broken out in a very severe form, and you were easily convinced that it had been practically extinguished by the universality of vaccination; which is about as logical as it would be for me to assert that Leicester had been exempt from small-pox because it had so greatly neglected vaccination. "Surgeon-Major" does not record the loss suffered by the Royal Artillery from the disease, which would have been interesting, as no doubt every man of them had been vaccinated.

<sup>\* &</sup>quot;Variola," by C. Spinzig, M.D., 1878.

But these stories of stamping out small-pox by vaccination, have really become too stale for repetition. Within the last twenty years, there is hardly a country of which this boast has not been made. Ireland, Scotland, Sweden, are special instances of this; and what did it mean? Simply that at the time the boast was made there was no present epidemic. Within a very few years the epidemic swept over Europe, and then, in spite of ever-increasing vaccination, the epidemic was more fatal than before.

Dr. Wood, of Edinburgh, stated in his evidence before the Vaccination Committee that there were very few unvaccinated persons in Scotland, while Dr. Playfair said in the House of Commons on the 6th July, 1870: "There could "not be the slightest doubt that compulsory laws, where properly applied, as in Scotland and Ireland, were perfectly equal to stamp out small-pox in a country." Yet almost immediately after this, in 1871, a fearful epidemic raged in Scotland, during which, according to the Lancet, the deaths from small-pox were equivalent to an annual mortality of thirty-six thousand per million. "Leith, Dundee, Edinburgh, "Perth and Aberdeen," says the Lancet of February 17th, 1872, "are suffering most severely from the epidemic."

Ireland has also been the boast of vaccinators, and Sir Dominic Corrigan, then M.P. for Dublin, boasted in the House of Commons that vaccination had stamped out small-pox in Ireland. Since then there have been frightful epidemics in Dublin, Belfast and Cork. In Dublin the mortality from small-pox during 1871-2 was three times as great as the mortality of London in the worst epidemic of this century; in Cork the mortality during the quarter ending June, 1872, was ten times greater than in London.

While in regard to Sweden, which had for some time previous to the last epidemic been the boast of vaccinators, Rektor P. A. Siljeström asserts, in his Essay on Vaccination in Sweden, that "at the present time (1873-4) Sweden is "suffering from small-pox as never before in the memory of "man."

Referring back for a moment to the enormous mortality in Iceland, and which probably is greatly exaggerated, Dr.

Simon only refers to the alleged mortality as "according to "reports;" but whatever it may have been, what in the world has this to do with the efficiency of vaccination? It can prove nothing beyond the bare fact that the epidemic raged with terrible severity in Iceland. But that this would have been otherwise had the practice of vaccination been universal there, there is and can be no tittle of evidence to prove. Indeed, any such mortality as you suppose to have taken place, can afford no basis for discussion in regard to the results of vaccination, being altogether outside any experience we have of small-pox, whether in vaccinated or unvaccinated periods.

Thus, in unprotected London in the last century, the mortality was 2,000 to 3,000 per million living; in unprotected Iceland it was, you believe, at the rate of 360,000 per million living, but it is, of course, impossible to draw from such figures any argument in favour of what you term protection. You believe, in harmony with your foregone conclusion upon the matter, that vaccination would have saved Iceland, while with strange inconsistency you declare that so violent was the epidemic that even those who had had small-pox before took it afresh! Even believers would acknowledge how little protection cow-pox could have afforded under such conditions.

I observe, however, that in one of your letters to me, you hold that the protection from vaccination is equal to the protection from a previous attack of small-pox. But this is only one of the wonderful diversities amongst the upholders of vaccination. Dr. Marson, for instance—no mean authority—stated in his evidence before the House of Commons Committee—

"Q. 4,220. Do you consider that small-pox itself is as great a protection as vaccination?—A. Yes, much greater, as you see from the returns; and in the first table which I gave, the number was less than one per cent. of small-pox after small-pox, whereas it was fifty-three per cent. of small-pox after vaccination."

I come now to your Third proposition, viz.: "that in many "localities, whether urban or rural, in which vaccination has "been efficiently carried out, small-pox has not appeared for "many years." This is so flagrant an illustration of the post

ergo propter argument, to which I have had so often to refer, that I will waste few words in replying to it. As in your eyes vaccination is the only protection against small-pox, or to use your own words, "without vaccination we suffer " under the universality of the liability to small-pox in an "unprotected population," so, of course, you assume that where there has been no small-pox, there has been efficient vaccination. But I will cap your statement with an opposite one that shall be equally true, and say that in many localities where vaccination has been much neglected, small-pox has not appeared for many years, and I will give, by way of illustration, the town which I have the honour to represent in Parliament. Some zealous pro-vaccinationist put forth, I think about a year ago, the statement that Leicester, one of the least vaccinated towns in the country, was naturally one which suffered under the heaviest infant mortality, the inference, of course, being that they died of small-pox. I immediately caused inquiry to be made, and was informed that for some time there had occurred only two cases of small-pox, and that in both cases the children had been vaccinated!

Now, just compare for a moment these cases of Leicester and London. You claim for the inhabitants of the metropolis that those who are vaccinated are, to the unvaccinated residuum, in the proportion of 300 to 1. I take this from your letter to the Spectator. Leicester, on the other hand, has in the last two years (1879-80) vaccinated not much more than half the infant population; the birtles being in those two years 9,556, while the vaccinations have been 5,652; and yet there has not been a single death from small-pox! Of course, I am aware that this proves nothing for or against vaccination, but, at any rate, it proves as much as the negative testimony which you, again and again, quote as proof upon your side.

I now come to your Fourth proposition, viz.: "That its "epidemic visitations have been most severe where there is a "large unvaccinated residuum, and where revaccination has not been systematically carried out;" or, as you phrase the same idea somewhat more definitely in your letter to the Spectator—"That it is to the survival of a small unvaccinated residuum in this

country that we owe the lingering of small-pox in our midst, seems to the medical mind the plain teaching of experience."

Now, this is a most remarkable and important observation. It states as a fact that which, if there were any truth in vaccination, experience would certainly have confirmed. happens, however, to be the very reverse of the truth, as shown in the statistics of small-pox. Had the prophecies of Jenner been fulfilled, there can be no doubt that long before this time small-pox epidemics would long since have ceased to afflict so thoroughly vaccinated a Europe. The disease, if not actually stamped out, as continually promised, would have existed only amongst the "small unvaccinated residuum." So absolutely is this the reverse of the fact, and so entirely does the fact correspond with the belief of those who hold that vaccination is no factor whatever in the question of small-pox mortality, that the statistics prove beyond question that when there is no epidemic, people do not die of small-pox, vaccinated or not vaccinated; and that when there is an epidemic -vaccinated or unvaccinated-people do die of it. You are probably acquainted with the name of Dr. Vogt, I believe, without doubt, one of the most distinguished statisticians in Europe, and whose scientific study of the statistics of small-pox mortality of which he has arranged and classified 400,000 cases, has made him a convert from the errors of vaccination. From his work I extract the two following tables, showing beyond all question that small-pox is as absolutely a question of epidemic or non-epidemic years as it ever was. Vaccination can be no element in these statistics, because there can, of course, be no important diversity from year to year, nor much from city to city. The first table taking the fourteen years, 1864-77, gives the highest and lowest number of deaths per 100,000 inhabitants in the following cities :-

DEATHS PER 100,000 INHABITANTS, 1864 TO 1877 INCLUSIVE.

		Lov	vest Yes	Highest Year,		
Munich	 		0		***	93
Stockholm	 		2			132
Frankfort	 		0		***	140
London	 		2			242
Antwerp	 	***	2			321
Cologne	 		1		***	336
Liege	 		2			341
Breslau	 ***		1			371

		Lo	west Ye	Highest Year.		
Prague	 		15			398
Vienna	 		7		'	517
Paris	 		1			572
The Hague	 	***	1			1,410
Rotterdam	 		1			1,428
Hamburg	 		1			1,544

The second table gives the variations in the mortality from small-pox in various cities (in the same fourteen years) in various years. I will only give two years, 1870 and 1872, but a similar diversity is found in every year of the series.

# DEATHS PER 100,000 INHABITANTS IN

	1870.	land the same of	1872.
Munich Stockholm Frankfort London Cologne Prague Berlin Trieste Rotterdam	1 80 140 242 336 15 631	Paris Prague London Vienna Rotterdam The Hague	6 398 54 517 5 1,410
Hamburg	4 - 11		

You can hardly fail to recognise that these figures utterly overthrow the convenient opinion, that the lingering of small-pox in our midst (if you call it lingering, when 45,000 persons are carried off in one epidemic in England and Wales) is due "to the survival of a small unvaccinated residuum."

While on this part of the subject, I must say a word upon a reference you make to the case of the United States, although it does not appear in the pamphlet now under discussion, but in a private note to me. You say "the history "of the small-pox in the United States, according to the testimony of Dr. Martin, has afforded abundant examples during "the war, and the epidemic of 1872-3, of local most severe "outbreaks at once arrested by compulsory vaccination. What "better proof can be afforded?" I am surprised that any person of so high a reputation as Dr. Carpenter, can deem this statement proof of the efficiency of vaccination. The statement itself is eminently vague and loose, but were this otherwise, proof would still be wanting that other elements besides that of vaccination were not in action. And, now look at the reverse of the picture. There died in New York

of small-pox in 1875-6, 2,263 persons, or just one-seventh of the total deaths by small-pox in that city since statistics have been kept, viz., since 1804, and this with a continually increasing proportion of vaccination to births. What better dis-proof can be afforded!

I now pass on to your FIFTH proposition: "That in the "recent epidemics, the death-rate among those set down as vac-"cinated is only one-fifth that of the unvaccinated, viz., 8.8 per "cent., as against 44.4 per cent." In making this astounding statement, I am of course aware that you are merely repeating the latest dodge-I can really find no other name for it-of the vaccination specialists. If we take the most general survey of the statistics of small-pox mortality, the utter absurdity of this statement must strike everyone but those impervious to reason through the force of a foregone 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 a quite 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 Hand-book of Vaccination, 1868, p. 191:—

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 eighteen per cent., whereas 1 low, in what you consider as "unprotected" England—that is to say, the unvaccinated portion of it—the mortality is forty four per cent., or almost treble! Nay, I have seen statements by even more courageous disputants than yourself, that the mortality of the "unprotected" now amounts to sixty or even eighty 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 badfaith. To decide whether persons who have died of smallpox have or have not been vaccinated, with any degree of scientific accuracy is an impossibility, as is acknowledged and recognised by those who have had sufficient means of observation, and who have no foregone conclusion to uphold. Lancet long ago deprecated this piece of quackery. 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 a hundred re-"cruits who were vaccinated, only thirty-eight 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 in the system 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 declares the contrary, 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.

So much for the reliance to be placed upon these figures; but if they were true they would prove absolutely nothing. Dr. Buchanan, in his report a few weeks ago, tried to make some capital out of similar statistics, by adding the extraordinary statement that it was acknowledged on all hands that the only distinction between the vaccinated and the unvaccinated existed in the fact itself. It would be an interesting psychological inquiry whether a statement could be imagined too absurd for a medical officer of the Local Government Board to venture upon. The distinction between the vaccinated and the unvaccinated is twofold, and the fact must be perfectly well known to all who have paid the slightest attention to the subject. The unvaccinated class consisting, first, of those who, being in feeble health, the doctors dare not vaccinate, and secondly, of that portion of the population

<sup>\*</sup> Notes on the Small-pox Epidemic at Birkenhead, 1877 (p. 9.) By Fras. Vacher, M.D.

<sup>&</sup>quot;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 be vaccinated, but no marks could be seen, very frequently because of the abundance of the eruption. In some cases of those which recovered, an inspection before dismission discovered vaccine marks sometimes 'very good.'"

living in the slums of London, and unreachable by your 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. It would not be unfair, I think, to compare the "unvaccinated residuum" with the whole population of the metropolis in the last century; they are, like them, unvaccinated, and probably live under hygienic conditions much upon a par with that of the whole population of London in the last century. And the result as shown in mortality by small-pox singularly bears out this view of the matter, seeing that, according to Dr. Buchanan's own figures, the mortality from this disease of the unvaccinated residuum is much about the three thousand per million of the last century. I must say that your own hypothetical deduction from the figures, based upon this impossible division of the mortality into "vaccinated" and "unvaccinated," is too amusing to omit, and too extravagant to answer. I mean your calculation, that had vaccination now been as unknown in the metropolis as it was in the last century, the ten thousand deaths you record from small-pox would probably have risen to a hundred thousand. And this, when of course you are aware of the multitude of recorded facts of the deaths of the vaccinated by small-pox, of which to give here but one single instance: of course you are aware that every man both in the army and navy is vaccinated or re-vaccinated on entering the service, and doubtless as an interested observer of the effect of vaccination on small-pox, you are equally aware that in several cases the crews of Her Majesty's ships have suffered severely from this disease, while the average mortality in our universally vaccinated army is, I believe, actually greater than that of the whole-and not entirely vaccinated-civil population of similar age.\*

But, from the mind of an ardent vaccinator, all facts that

From 1859 to 1876 there were 1,306 cases of small-pox in the army with 94 deaths, and 686 cases in the navy with 42 deaths. (Vide Appendix to "The Truth about Vaccination.")

<sup>\*</sup> Every soldier and sailor is re-vaccinated; the result is that small-pox is almost unknown in the army and navy, even amid surrounding epidemics. (Tract of the National Health Society.)

tend in an antagonistic direction to his favourite theory, seem to slide like drops of water from the plumage of the swan, leaving no mark behind. But for its uselessness, I might fill any number of pages with the records of the failure of vaccination.

One more illustration I must give, because, being official, it cannot be held to be the creation of fanatical imagination, and taken by itself, it is amply sufficient alone to settle the question of compulsory vaccination. It is taken from the Report of the Small-pox and Vaccination Hospital, for the year 1866. "The ratio of vaccinated cases to the whole admissions of small-pox patients has gone on progressively increasing—thus:—

"Proportion of vaccinated cases to the total admissions:

Sixteen years—	185153 p	er cent.
Epidemic	1851-2	"
"	1854-67+0 1859-6078·0	"
	186651.0	" "

I think it is probable that subsequent returns would show a still more enormous ratio of vaccinated to unvaccinated cases. One would have supposed that upon seeing such a statement, the most ardent vaccinationist must have exclaimed, Cadit questio.

Your proposition number Six supplements and extends your number five; and whereas in number five you declare the mortality by small-pox to be enormously greater amongst the unvaccinated than amongst the vaccinated, so in number six you subdivide once more, and declare that the mortality amongst the vaccinated again varies in enormous proportion (ten to one) as between those whose arm-marks show evidence of "thorough vaccination" and those whose arm-marks are "very defective"—that is to say, you adopt unhesitatingly the new doctrine, that vaccine protection depends upon the number of marks, a theory which I observe has been carried to a quite heroic issue by a surgeon at Bridgwater, who has ensured the health of a child submitted to his tender mercies, by registering on its person twenty-five insertions of diseased matter; nay, I see that the gentle insertion of lymph at the

point of a lancet no longer satisfies the enthusiasm of the vaccinationists, and the mot d'ordre now appears to be: Excoriate the arm in several places the size of sixpence, and rub in the cow-pox matter. Before exposing, from official statistics, the fallacy of this many-marks theory, I must stop in my course to remark: There goes the last shred of the "illustrious Jenner's" vaccine theory. Jenner taught, first, that one operation was an absolute preservative from small-pox for life; second, that one insertion of lymph was sufficient for the purpose; third, that the lymph to be employed was not to be that known as spontaneous cow-pox, which he said was a mere local eruption, and non-protective against variola; and fourth, that it was impossible to communicate other blood diseases through inoculation of vaccine matter. I need not inform you that every one of these propositions is now repudiated as untrue, if not, indeed, scouted as ridiculous, which places the whole affair in this truly absurd position. If we had no Vaccination Acts on our Statute Book, the history and statistics of Vaccination would prevent the possibility of their present enactment, and thus they exist really as a tradition handed down from the time of the "immortal Jenner," whose every theory upon the subject is now rejected.

And now for the theory which says that the more marks the greater the protection. A few illustrations will suffice to show the ridiculous fallacy of this 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):—

Take, again, another table, age 30 to 40:-

One mark			 	16 per	cent.
Two marks			 	20	22
Three ,,		***	 	21	22
Four "	***		 	23	22
Five ,,			 :	8	11

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

						317 384 447		
orts,	1871-	7, giv	e:-					
 e					1, 1,	259		
Fulham Hospital Report, 1878, gives:								
ore					***	149 156 202		
Iospi	tal Re	eport,	1870-	2, give	es:—			
					1,			
	orts,  ce tal R  core Hospi	orts, 1871-  tal Report,  ore  Hospital Re	orts, 1871-7, give tal Report, 1878,	orts, 1871-7, give:—  tal Report, 1878, gives  ore  Hospital Report, 1870-	orts, 1871-7, give:—  tal Report, 1878, gives:—  Core  Hospital Report, 1870-2, give	orts, 1871-7, give:—		

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.

I now come to your statement number Seven. It is the rechauffé, a little modified from the veteran, but not venerable canard, put forth some ten years ago under the patronage of the College of Physicians, which was as follows:—

"For more than thirty years all the nurses and servants at the Small-pox Hospital, who had not previously had small-pox, have been re-vaccinated before entering on their duties; and not one case of small-pox has occurred among these persons, although living in an atmosphere of concentrated infection."

It is impossible to imagine a statement more thoroughly imbued with the suppressio veri and the suggestio falsi; but it has admirably done its work. I have met with its repetition at every turn, usually accompanied by the remark: "There, what have you to say to that? Surely that must "settle the question." Its utter falsehood has been exposed again and again, but to little purpose, for it upholds a theory which is accepted without inquiry by the great majority of the community. Let us examine this famous story in a little detail.

(1.) There is nothing very remarkable in the fact that

nurses and surgeons, presumably in good health, and taking every due precaution, should escape the infection of small-pox, just as, for the most part they do, of other fevers for which no vaccination is prescribed. Of course, I do not presume to give this as an opinion of my own, I only repeat it as a recognised medical theory. Dr. Mason Good, in his "Study of Medicine," 3rd edition, vol. II., p. 103, says:—

"By a long and gradual exposure to the influence of febrile miasm, the human frame becomes torpid to its action."

The Medical Times and Gazette (Oct. 1873) has the following:—

"The personnel of Bicètre (where 8,000 soldiers, suffering from small-pox were treated), nearly two hundred in number, suffered little from small-pox, one only dying from it. Of forty medical attendants none took the disease, in spite of the negligence of most of them with respect to vaccination. Still more remarkable was the complete exemption of forty nurses who lived in the centre of the hospital and attended the patients day and night."

Dr. Lionel S. Beale in his work on "Disease Germs," 2nd edition, pp. 322 and 323, says:—

"The fact of the escape of the attendants of the sick, in spite of their continual exposure, ought to suffice to relieve the alarm of the most timid, and prove to them that exposure does not imply contraction of disease. The body in its normal state of health has the power of resistance; and the fact that many members of the medical profession and nurses, although exposed time after time to the influence of contagious disease, reach old age without having suffered from a single attack, ought surely to encourage and afford a justification to those who, having determined to devote themselves to the service of the sick, must be continually exposed to contagion."

Wilson Phillip, M.D., in his "Treatise on Fevers," 4th edition, page 177, says:—

- "One powerful means of fortifying the body against infection, on many accounts deserves attention, viz., the frequent exposure to contagion. It is well ascertained that those who are frequently exposed to contagion become at length, in some measure, hardened against its effects. Thus nurses and physicians often escape infection."
- (2.) Numbers of the nurses at the small-pox hospitals had already had natural small-pox, and presumably, therefore, had not been re-vaccinated.
- (3.) A number of patients on recovery from the disease were retained as nurses, and of course, were not re-vaccinated.
- (4.) Some of the nurses did take small-pox! After this last fact had been sufficiently hammered into the

consciences of the vaccinationists, they were driven to the admission: "Well, it was only a very few who took small-"pox." And then ensued the most disgraceful element in the affair. Those who had previously averred that in no case had any nurse, re-vaccinated as every one of them had been, taken the disease, now declared that in every case where a nurse had taken small-pox, inquiry had been instituted, and it was found that by some accident or other they had escaped revaccination? Comment is not needed; the truth, or rather the reverse, stares one in the face. It is quite comical to note the precisely opposite testimony on precisely the same question, with reference to the Dublin Small-pox Hospital:—

DUBLIN SMALL-POX NURSES.—At a meeting of the Surgical Society of Ireland on 1st March, 1872, Mr. Frank Thorp Porter, M.R.C.S., read a paper entitled "The Correlation of "Varicella and Variola," and referring to his experience in the Small-pox Hospital of the South Dublin Union, he observed:—

"With reference to re-vaccination, I have no faith in it. Not one of the 36 attendants at the South Dublin Union sheds has taken small-pox. Only 7 of the number were re-vaccinated, and as the remaining 29 enjoy the same immunity, wherein is the necessity of the operation? I have known gouty inflammation, abscess of the breast, and angioleucitis to result from the operation. I cannot, in the face of such facts, approve of it, and moreover the sense of the profession is against it. It is only to be employed when there is no evidence of the success of infantile vaccination, and even then it seems to do more harm than good, at least, so far as I have seen."

It is by canards such as I have mentioned that the faith in vaccination is maintained.

I will give another illustration of this false dealing with public opinion. Some four or five years ago there was a violent outbreak of small-pox at Harwich, a town whose sanitary condition forms, probably, a tempting nidus for epidemics. It is said that the mortality was at the rate of 7,000 per million of the population. Some judicious friend to vaccination sent the round of the press a statement whose moral was: "See the awful results of anti-vaccination "theories." This led to special inquiry, when it appeared that this heresy had never invaded the town, but everybody

had been "protected" in regular course, and that some 85 per cent. of the deaths were of vaccinated persons. I might tell precisely similar stories in respect to Leeds and other places, but I must stop somewhere.

I come now to your Eighth and final proposition, in which I understand you to pour ridicule upon the practical danger incurred of transmitting other diseases through the medium of the vaccine lymph. You say, "Even now the number of "known cases of the kind referred to may be counted by tens, "although at least sixteen millions of vaccinations have been " performed, since vaccination was made compulsory." I must confess to feeling somewhat shocked at such a statement as this, which, you must excuse my saying, would seem to imply a deliberate ignoring of the facts brought to light upon this painful subject within the last few years, for the sake of protecting a pet theory. You must surely be aware that not tens, but hundreds and thousands of persons in this country have mourned the death, or ruined health of their children through the results of vaccination. You cannot be ignorant that Sir Thomas Watson has described the danger as a "ghastly risk." Did you never hear of M. Ricord, an ardent advocate of vaccination, but who declared, that let there be but one authenticated case of inoculated syphilis and vaccination must be abandoned. The simple truth is, and every unprejudiced mind will recognise it, that from the moment when it could no longer be concealed that any blood disease could be communicated through vaccination, compulsion became atrocious tyranny :--

Even Dr. Warlomont says:—"In any country where it is obligatory upon parents to have their children vaccinated, the State is under a moral obligation to furnish families with a vaccine which is beyond the risk of all suspicion of containing constitutional (diathesic) adulterations."

And everybody now knows that no vaccine "beyond the risk of suspicion" can exist. You, of course, have heard the name of Mr. Brudenell Carter. Hear what he says upon the subject (see Medical Examiner, 24 May, 1877):—

"I think that syphilitic contamination by vaccine lymph is by no means an unusual occurrence, and that it is very generally overlooked because people do not know either when or where to look for it. I think that a large proportion of the cases of apparently inherited

syphilis are in reality vaccinal, and that the syphilis in these cases does not show itself until the age of from eight to ten years, by which time the relation between cause and effect is apt to be lost sight of."

You must surely have heard of the famous D'Orcia case, where 29 children out of 38 vaccinated were thus infected; of the case in Prüm, Germany, where 30 children were infected in a similarly terrible way. Have you observed that within the last few days it has been reported by the French papers that 58 French soldiers in Algeria were syphilised by inoculation from a single infant. Has the following passage from Mr. Hutchinson come under your observation? "There can be no doubt that the danger of "transmitting syphilis is a real and a very important one." One of the present medical officers of the Local Government Board is, as you are aware, Dr. Ballard, who stated in his prize essay that—

"There are numerous cases on record to prove that the vaccine virus and the syphilitic virus may be introduced at the same spot, by the same puncture of the vaccinating lancet."

By the way is it strange,—or is it the contrary of strange?—that the man who wrote that sentence—sufficient by itself to overthrow compulsory vaccination—should since have been appointed to a Government post as the paid advocate of the vaccination theory! Has the following passage, from a letter of Dr. Cameron to the *Times*, ever come under your observation?

"In France, where the chief of the National Vaccination Service clung less closely to this theory [the impossibility of communicating syphilis] he saw the danger much earlier, and in 1867 published a list of upwards of 160 cases of syphilitic infection through vaccination, which had been brought under his notice in little over a year."

I think I have sufficiently shown that you are one of those who properly fall under the rebuke of Dr. Depaul, the Director of the French Vaccine Institute, who lately declared that "vaccinators made too light of the risk of transmitting "serious maladies in the process of vaccination."

A ghastly confirmation to these various statements is given in a Parliamentary Return moved for by Mr. Hopwood, in which is contrasted the deaths of infants under one year old, per million births, of nine diseases liable to be communicated through vaccination, with the deaths by all other diseases, in the years 1847 and 1878, with the following terrible result, viz.: that while the total mortality (under one year old), as between 1847 and 1878, had diminished 12,000 per million births, the mortality from these nine diseases had increased from 55,213 to 81,280. In further corroboration of this view I will quote the words of Dr. Farr (see 37th Annual Report of Registrar-General):—

"Syphilis . . . was, as far as it was recorded, twice as fatal in the five years 1870-74, as it was twenty years ago. Its most fatal recorded forms occur in children under one year of age. Thus, of nearly 2,000 deaths ascribed to syphilis (in 1874) 1,484 were babies under one year of age."

I observe you add that even "tens" out of the 16,000,000 would vanish under calf-vaccination. Of course, you are perfectly aware that it is not yet a settled question whether what is called spontaneous cow-pox is (contrary to Jenner's opinion) protective against small-pox. Professor Simonds, Principal of the Royal Veterinary College, is (or was in 1879) distinctly of an opposite opinion. Speaking at the London Conference on Animal Vaccination, he used these remarkable words:—

"In his experience among animals for forty years, he had never seen a case of cow-pox, and he did not believe that any form of variola belonged to the bovine race. Sheep were afflicted with pox, but not cattle. They heard of cow-pox, but who ever heard of bull-pox? And was it credible that a disease should be confined to cows and never attack bulls and steers? Let any one point out an affection of females that did not extend to the males of the same species."

If this be so, you must fall back upon one of the old methods, and must inoculate your calf either with human small-pox, or with horse-pox. In the former case, you come under the statement of Sir Thomas Watson, that by the use of this lymph, "there must have been a vast amount of "mitigated small-pox spread about;" if you fall back upon the horse, you will be liable, I suppose, to such horrible outbreaks as that of glanders, under which thirty-eight children are supposed to have suffered in Italy.

The following is from the Lyon Medicale, of June 22nd, 1879:—

<sup>&</sup>quot;On April 26th and 28th, the local doctors vaccinated with this lymph (animal lymph) thirty-eight children, all aged less than twenty months. Whilst they were awaiting the incubation of the vaccine pustules, they

soon perceived that they had inoculated one of the most horrible of maladies, and that they were the involuntary authors of a real massacre of the innocents. The gentleman who sent these particulars to the Gazetta d'Italia betook himself to San Quirico. He saw the victims. He observed vast phlegmons laying bare the muscles and penetrating into the joints, accompanied by eclamptic symptoms. To him it appeared to be very probably an epidemic of glanders."

But even supposing you are able to inoculate with "spontaneous cow-pox," what is to secure against the transmission of bovine disease? I take the following from a letter sent by the Guardians of Ashton-under-Lyne to the President of the Local Government Board a few months since:—

On December 13th, 1879, Mr. Simon wrote:—"When a given (animal) body is possessed by one of these constitutional diseases (scrofula, syphilis, &c.), no product of that body can be warranted safe not to convey the infection;" and Dr. Creighton, of Cambridge University, gives the history of twelve cases of Bovine Tuberculosis in human beings,—the disease being a more rapid form of consumption than that peculiar to man. (October No. of Journal of Anatomy and Physiology.)

As the new lymph will be obtained from bovine animals, in whom this tuberculosis is hereditary, and occurs in 4.75 per cent. of any given number of cows, the Guardians are anxious to know, if the Local Government Board is prepared to take the responsibility of introducing another formidable disease (Bovine Tuberculosis) to man

by means of the system of vaccination.

Nothing, perhaps, more distinctly marks the utter empiricism of the vaccination theory than the absolute diversity of opinion upon every possible point between different professors of the system. There is but one point on which they agree, and that is that everyone who wants to be safe must be vaccinated; but as to the manner and the matter there is the most absolute diversity. A. will declare that the practice of B. is useless or dangerous, and B. will return the compliment to A., but both will insist upon your being vaccinated none the less! It will, perhaps, amuse you, and certainly will amuse the public, to hear what Dr. Shorthouse thinks of your immortal calf-lymph. In a letter published three or four years ago he wrote:—

"Some crazy enthusiasts recommend that lymph be taken direct from the cow. They cannot surely have seen those frightful pictures of the disease so produced which were published by Mr. Ceely, of Aylesbury, some thirty years ago. Mr. Ceely carried out numerous experiments at the instance of the Provincial Medical Association. Those experiments were carefully and minutely observed, and their results faithfully and graphically recorded. Those observations and experi-

ments are illustrated by a great number of beautifully-executed plates, drawn from life. Some of the pictures are something frightful. There is one which shows the back of the hand and arm of a youth who got inoculated accidentally whilst milking a cow, There is another which depicts a corroding ulcer on the thumb of a man who got inoculated in the same manner. If these enthusiasts inspected the pictures, I think they would be induced to pause before they advocated the practice of inoculation direct from the cow."

I have now responded to your challenge to point out what seemed to me misstatements in pages 38-40 of your pamphlet. I have done so at far greater length than I had anticipated, while I feel that I have not half exhausted what I should like to say upon the subject. To go further would, however, be to stray from the text upon which I started, and I therefore close this long epistle.

A word or two, however, I must add by way of postscript, in reference to the attitude of the medical profession generally upon this question. I am convinced that one of the chief causes of the general faith in vaccination amongst the middle and upper classes is their firm belief that the medical profession, who surely ought to know more about a medical question than the laity, are almost unanimously convinced by their personal experience of the protection afforded by vaccination. I am being continually asked by those who cannot refute my arguments, nor disprove my figures: "But how do you account for the opinion, almost unanimous in the profession, in favour of vaccination?" and I must confess that it was by putting this question to myself that my full conversion from the errors of vaccination (not of compulsory vaccination for to that I was always opposed) was delayed for some years after the Committee of 1871, of which I was a member. Now, like other seeming mysteries, the explanation is very simple—as soon as you have got the clue. I have now for a considerable time omitted no opportunity of conversing with medical men upon the subject, and the conclusion to which I have come is, to my own mind at least, both simple and reassuring. A few wholly disbelieve in vaccination, and a still larger number do not feel very certain upon the question, but naturally neither of these classes care to press upon the public an unpopular belief; but

undoubtedly a great majority of the profession do seem to pin their faith upon the Jennerian doctrine. But amongst all with whom I have conversed upon the subject I have found, I think, but two who even professed to base their faith upon their own experience, and certainly when I came to inquire even of those two into the amount and value of that experience, it seemed to me to be nearly worthless. I found, in fact, two excellent gentlemen, who had been early imbued with the traditions of vaccination, and that so strongly that the facts they had afterwards encountered only seemed to make any impression on their minds just in proportion as they seemed to tell for or against their foregone conclusions. In fact, it is clear that the enormous proportion of the profession have neither time, opportunity, nor inclination for the real scientific examination of the results of vaccination. It requires, of course, a scientific accuracy in the notation of an enormous number of facts for a considerable length of time, together with the most careful and scientific comparison with the facts observed by others with equal scientific accuracy, and with due regard to all the other conditions which, if vaccination were true, would still exist contemporaneously. It is not one parish, nor one year, nor one country, even, within which sufficient experience could be accumulated upon which a basis for scientific opinion could be founded.

A physician of reputation, with whom I was conversing on the subject, said to me, at the conclusion of our interview, "I do assure you those statistics have never come under the "cognizance of the medical profession. It is clear to me that "further inquiry is quite necessary; and, anyhow, compulsion "must go."

By the history of small-pox, so far as it is known, and especially by its history as illustrated by official statistics during the last eighty years in Europe and the United States, the system of vaccination has, in my opinion, been proved a delusive superstition.