

An essay on vaccination : its actual value and attendant dangers : containing also A succinct history of vaccination from the year 1796 to the year 1866, and remarks on syphilitic inoculation.

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VACCINATION.

BY

J. H. WATSON, M.R.C.S.

1869.



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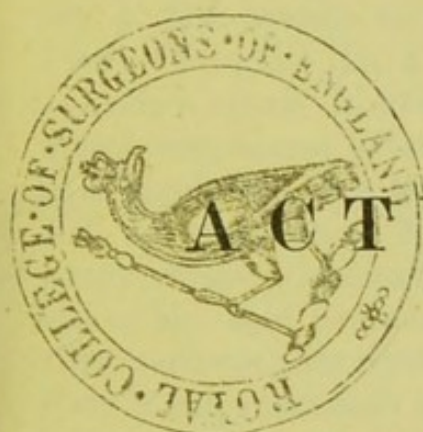
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For J. H. Watson

1862

AN ESSAY
ON
✓
VACCINATION:



ITS

ACTUAL VALUE

AND

ATTENDANT DANGERS;

By J H Watson M.R.C.S.

CONTAINING ALSO

A SUCCINCT HISTORY OF VACCINATION FROM
THE YEAR 1796 TO THE YEAR 1866,

AND

REMARKS ON SYPHILITIC INOCULATION.

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ESSAY ON VACCINATION.

The author of this pamphlet must first preface this very important subject by quoting a letter to the *Medical Circular* of January 4th, 1860, by John F. Martin, Esq., M.R.C.S.E., and L.S.A., of Abingdon, Berks, dated December 24th, 1859. He says—

“SIR—Will you kindly afford me a small space in your *Circular* to say a few words on vaccination and on the present order of the Privy Council. In a certain domestic cookery book (by Mrs. Glass)—known nearly to everybody—are directions how to make hare soup, which commence by stating, ‘first catch your hare,’ &c. &c. Pardon this digression, but as it tends to elucidate these few lines I trust you will forgive me. Now it is as clear as the sun at noonday that every surgeon knows fully well how to perform vaccination without the aid of the said Council’s instruction. I say first catch your patient; then perform this neat little operation. It is here the difficulty manifests itself, inasmuch as the parents or guardians of children will not bring them, or send them, much less allow of their being vaccinated. The poor have a great dislike to vaccination, and the Privy Council should issue a peremptory order for all persons having the care of children to comply with their order, otherwise to be visited with a fine, as well as to be excluded from other benefits arising from Poor-law relief. All such persons would then come forward and save the vaccinator much time and an infinity of trouble. Picture, Mr. Editor, a poor unfortunate surgeon, travelling over many miles, in frost or snow, in hot or rainy weather, and then to be told by parents that their child or children shall not be vaccinated. Imagine the operation done, and the case successful, what then? Why, he is rewarded with half-a-crown, having travelled sixteen miles, and paid for turnpikes (two). It is too bad, but it is no less true; the remuneration is not enough, and while things are thus carried on little good will be done. Why are we paid so illiberally? why such parsimony observed?”

The above letter is one amongst many which are, or might, be written to show the inadequacy of hitherto systems, and the deplorable failure of putting into universal practice the only antidote we possess to the fearful pest of small-pox. Statistics have shown, *sine dubio*, the VALUE of successful vaccination, and from these it may be clearly shown that it is one of the greatest boons conferred on suffering humanity. The *dangers* attending this nice little operation bear no proportion whatever to the benefit it confers. Great care is, of course, most requisite in selecting the subject from whom it is proposed to vaccinate others, and a friendly appeal to the parents of

such child will elicit *facts* as regards the healthy condition of themselves and progenitors, assisting most materially the opinion of a duly qualified operator. It is far better that every medical practitioner should *collect* and *preserve* for himself alone a due supply of fresh lymph, and never, on any occasion, *borrow of his neighbour*. The best, and only safe, plan is to apply, when necessary, to *one* grand central *depot* for lymph, when the surgeon has exhausted his own supply; the advantages of which are obvious, as should any untoward result ensue it would be easy to trace back the obnoxious matter, should such a misfortune occur. Such a *depot* already exists—viz., “The National Vaccine Establishment.” The author—for one—has for many years obtained his fresh supply from that source, and never remembers any ill resulting from its use. It will sometimes be found that scrofulous sores break out in children, simultaneously with the cicatrices produced from *pure* vaccination, or very soon subsequently, and these, as may be expected, will be imputed by mothers to impure ichor, although it may be well known that a strumous habit has long existed in the family.

The next most important consideration to securing a healthy supply of vaccine lymph is to find the means of carrying out a scheme for the general adoption of vaccination. As yet all experiments in that direction have failed. A partial appreciation of a law will not affect the public weal; it will only benefit the few; consequently the pest will ever be bred and fed, and slay and deface its many, many victims.

Upon reference to another letter in the *Medical Circular*, of 12th December, 1860, I find one medical man complaining thus—

“SIR—By an Act of Parliament passed a short time since we are informed that for the future, before the medical student can be fully qualified to practice, he must obtain a certificate to perform the very awful operation of vaccination from one of the public vaccinators, on the payment of one guinea. Why this additional tax on the often slender resources of the medical student? is not the registration fee sufficient? It will be highly inexcusable if the medical students of England do not rise to a man, and, with united effort, boldly and calmly oppose this iniquitous tax,” &c.

Immediately follows a memorial agreed to by the students of Manchester, a paragraph in which is thus worded—

“The only advantage which this regulation affords to those who obtain the diploma of the college is that they are thereby rendered eligible as Poor-law medical officers and as *contractors* for vaccination; but as, with the present scale of remuneration, few of us are likely to become candidates for such appointments, we beg to submit to the Council that it is unjust for all to be obliged to spend time and money in obtaining this certificate.”

The author makes these quotations to show some of the impediments to the proper carrying out of general vaccination. It has never yet, I repeat, been effectively carried out, and until it is a true computation of its usefulness cannot be made.

Subjoined is a table, by Robert Barnes, Esq., M.D., showing the progress of vaccination since 1854—

	Vaccina- tions.	Births.	Propor- tion.
Sept. 29, 1854, to Sept. 29, 1855.....	2,812.....	4,542.....	·62
„ „ 1855, „ „ 1856.....	3,094.....	4,748.....	·65
„ „ 1856, „ „ 1857.....	3,280.....	4,869.....	·69
„ „ 1857, „ „ 1858.....	3,022.....	4,922.....	·60
„ „ 1858, „ „ 1859.....	2,502.....	4,922.....	·50
„ „ 1859, „ „ 1860.....	2,659.....	5,146.....	·49
„ „ 1860, „ „ 1861.....	2,304.....	4,864.....	·47
„ „ 1861, „ „ 1862.....	2,246.....	5,191.....	·40

Here is, therefore, a proof that the proportions of vaccinations to births has been continuously decreasing. Well, in the face of all this, what is to be done? The authorities of the parish of St. Luke's have recently posted placards about, insisting on compliance to the Compulsory Vaccination Act, with threats of enforcing the fine, in case of refusal or evasion.

A very recent report of Dr. Sutton, the *now* medical officer of health for Shoreditch, states—

“Small-pox had been very prevalent, more or less, throughout the entire metropolis, and that it was with great regret that he was compelled to report to the vestry that vaccination was still very much neglected, *and such neglect tended to propagate the disease.* The majority of the cases had been wilful neglect.”

Before I proceed to discuss more fully the questions before me, I first refer to Dr. Lankester's report from *Medical Press and Circular* of 24th April, this year. He remarks on the subject of infectious diseases, that in some of those cases which came before him there was “evidently gross neglect of the most ordinary sanitary arrangements,” to which he attributed the death. He thinks that the advantage to the public of these inquiries is not yet fully apprehended. It has been found that the inquest, with its consequent verdict, has, in many cases, aroused the neighbourhood, and led to immediate sanitary improvement. During the past year small-pox made its appearance in London. *Several hundreds* have lost their lives *by that epidemic*, which is still extending. This disease, he says, he feels assured, has arisen and spread through neglect of vaccination, and he has felt it his duty to hold inquests when he knew that children had died of this disease without being vaccinated, as he considers that such cases come *as much under his supervision as all causes of death* which might, by

care and forethought, be avoided. Vaccination is important in several respects. Persons who have been vaccinated and who take small-pox are not so likely to die as the unvaccinated. Those not vaccinated take the disease more largely in proportion to their numbers than the vaccinated, and thus become the means of spreading this loathsome and dangerous disease. There is a law of fine for not having children vaccinated, and he suggests, whether, under all these views, persons who violate that law are not liable to a verdict of manslaughter, if it is shown that the children thus neglected die of small-pox.

Here follows a case in point from the same journal of 30th September, 1863. It is headed—

“FATAL NEGLECT OF VACCINATION.

“Dr. Lankester, the Coroner for Central Middlesex, held an inquest lately in Hornsey-road, on the body of Henry Tant Hambrook, one of three children then lying dead in the house of No. 2, Smith-terrace. When a jury had been empanelled, the coroner observed that in this case there were two points for their consideration—first, the fact of the child having died without medical attendance; and, secondly, that the child, who died of small-pox, had not been vaccinated. They would hear the evidence of the father and mother of the child, and also that of a medical gentleman. Samuel Smith Hambrook was then examined. He said he was by trade a carpenter. He was father of the deceased child, who was two years and a half old at the time of his death. On Monday week he left his home to go where he was working. He was sent for on Friday, when he received a message that the child was dead. At that time no one else in the house had the small-pox, but since then two more of his children had died of it. The deceased, Henry Hambrook, had had no medical attendance during his illness, and had never been vaccinated. He thought the child ought to have had medical attendance. The two other children who had since died of the small-pox had not been vaccinated. He had two children now living who had been vaccinated; but he did not have the others vaccinated because he once lost a child through vaccination. Selina Hambrook, mother of the deceased child, was the next witness. She said that the child was taken ill on Monday week, and exhibited small-pox. He went on very favourably till Thursday evening, but died at six o'clock on Friday morning. She sent for Dr. Wilkinson on Friday morning, who came when the child was dead. She had had eight children, two by a former husband and six by her present husband. Of these she had lost two by vaccination. Dr. Richard Wilkinson said he was called to see the child on Friday

morning. The deceased was dead and covered with the eruption of small-pox when he saw him. The child ought to have been vaccinated, and he thought deceased would have had a better chance if he had had medical attendance.

"Dr. Lankester, in summing up, said this was a case of very gross neglect, in the child having been permitted to die without medical attendance. There was also the other point, which the jury ought to take into their consideration, and that was the neglect of vaccination. It appeared that the mother had been served with the usual notice to have her child vaccinated, and for neglecting to comply with the terms of that notice she and her husband were liable to a penalty. They had, in fact, broken the law, and if death resulted from their having broken the law, they were liable to a verdict of manslaughter. It was his opinion that verdicts for manslaughter in such cases would be attended with a very beneficial effect in inducing persons to have their children vaccinated. The jury found that the death had resulted from an attack of small-pox, and that the 'said death was accelerated by the deceased not having been vaccinated, and not having had proper medical attendance.' They also adopted a resolution calling 'the attention of the parish authorities of Islington to the prevalence of small-pox in the neighbourhood, and the necessity of inspection for the purpose of procuring the vaccination of all children in the neighbourhood.'"

It may be in place now to note a paragraph from "a retrospect of the year 1864," in the *Medical Circular*, December 28th, (1864)—

"Thanks to the extensive adoption of sanitary measures, or to the peculiar, though mysterious, operation of meteorological laws, we have been visited but little in Great Britain by epidemic scourges during the past year. Scarlet fever has, indeed, been prevalent in certain *localities*, and in some instances has shown itself in its most destructive aspect; and *small-pox*, although much mitigated in its severity, has developed itself in a sporadic form, as if to indicate that its virulence has not yet worn itself out, and to rouse the dormant vigilance of those who have the power *to abolish this pestilence altogether* by enacting suitable laws in relation to vaccination.

"In reference to meteorology in connection with the prevalence of ordinary disease, it is worthy of notice that, although the past summer was an unusually fine and dry one, the ratio of sickness and mortality was above the average, thus showing that, in all probability, the seeds of disease are neutralised by a moist condition of the atmosphere, but roused into fatal activity under the opposite condition."

Query—Is this *Dr. Richardson's* opinion?

A

SUCCINCT HISTORY OF VACCINATION,

FROM THE YEAR 1796 TO THE YEAR 1866.

BY

W. H. SANDHAM, M.R.C.S., CORK.

Many kings, emperors, and princes, lords, dukes, and earls, patriots and poets, lay and clerical, military, scientific, and literary celebrities have had statues and testimonials erected to perpetuate their memories; many of whom, when we trace back their history, should have been denounced as tyrants and heartless enemies of common humanity, who, to gain a miserable distinction, sacrificed every principle of honour, and placed their heels on the necks of friends since proved true as steel; but there have been grand exceptions. The medical profession of Ireland, and all the world over to a man, must feel individually honoured by the latest, hardest earned, and best deserved tribute to the genius and perseverance in the cause of humanity of the illustrious Jenner—namely, the passing of the Compulsory Vaccination Act for Ireland by Great Britain's Queen, Lords and Commons.

When Dr. Jenner commenced his observations and experiments, the annual mortality from small-pox was—at Naples 16,000, at Paris 20,000, and in England 30,000. Variolus or small-pox inoculation was first introduced into England in 1721-4. “Cow-pock and its anti-variolus powers have been known for ages in the greatest part of Holstein, especially in the eastern parts; but inoculation from one human subject to another was unknown until Jenner's publication.” (Vide “Report of the Medical Faculty of Kiel to the German Chancery of Copenhagen on Cow-pock in the Duchies of Schleswig and Holstein.”)

Dr. Jenner made his first experiment of human vaccination on the 14th May, 1796. Dr. John Redmond Coxe first introduced it into America.—(Vide “Practical Observations dedicated to Jenner, 1802.”) In 1806 the King and Queen’s College of Physicians and the Royal College of Surgeons of Ireland were requested, by direction of his Majesty George III., to transmit to the Royal College of Physicians in London their observations and opinions upon the state of vaccine inoculation in Ireland. They did report, and strongly urged the promotion of vaccination.

The practice of vaccine inoculation was first introduced into Dublin in 1801, the year it was determined there should be but one Imperial Parliament for the British Islands.

The Cow-pock Institution, North Cope-street, Dublin, was established in 1804, under the patronage of the Earl of Hardwicke, and it is from this period we must date its general introduction in Ireland. This institution, in 1804, vaccinated 578; in 1805, 1,124; and in 1806, 1,356 patients. The original “Vaccine Pock Institution,” Golden-square, London, was established and did good work, about the same time as the Dublin Institute. The Committee of the Royal College of Surgeons, Ireland, report that from the 25th November, 1800, to the 25th November, 1806, 11,005 were vaccinated at the Dispensary for Infant Poor, and 2,831 at the Cow-pock Institute, making a total of 13,836, exclusive of those at hospitals and other places where no register was kept.

In 1806 a vaccine club held their meetings at the British Coffee-house, Charing-cross; William Devaynes, Esq., M.P., was chairman, where the *post hoc* and the *propter hoc* were considered, and they advocated vaccination.

The Cow-pock Institution was removed from North Cope-street to 56, Sackville-street, in 1804, under the patronage of

Physicians.	Surgeons.
Joseph Clarke,	George Stewart,
James Cleghorn,	Ralph S. Olse,
Thomas Ivory,	Solomon Richards.

At this institution, from 1804 to 1807, 5,122 were vaccinated.

The Committee of the Carlow Infirmary issued an address pressing on every one to promote vaccination.

CEYLON.—In August, 1802, to June, 1806, 47,523, and in June of the latter year, 2,490 were vaccinated.

INDIA.—From September, 1802, to May, 1805, 429,821 were vaccinated in the Presidency of Madras, of whom 2,816 were subsequently inoculated with small-pox, *which they all resisted*. From September, 1805, to 31st August, 1806, 178,074 were vaccinated.

SCOTLAND.—The Vaccine Institution, Scotland, reports having, from 1801 to 1806, vaccinated 7,140.

JAMAICA.—In 1807, 900 were vaccinated.

NEW ENGLAND.—In 1805, Dr. Spalding, of Portsmouth, New England, writes—"The blessings of the cow-pock spread far and wide through this country."

THE DANISH DOMINIONS adopted it, and in the Island of Ferroe, Iceland, and even Greenland, in 1802, 6,849, and in 1805, 23,185 were vaccinated.—(Vide *Medical and Physical Journal*, 1807.)

SILESIA.—In 1804, 24,319 persons were vaccinated; but, on account of the war in Germany, 17,316 were vaccinated in 1805 in Silesia, all of whom escaped the small-pox, which broke out early in spring and continued for the remainder of the year, and premiums were granted to persons who distinguished themselves in the practice of vaccination.—(Vide *Edinburgh Medical and Surgical Journal*, No. 9.)

Dr. Willan properly says—"None should be inoculators who have not particularly attended to vaccination."

But Spain and Russia outdid all in their philanthropic efforts, at this time, to spread the practice of vaccination throughout the world.

You may read in the *Medical and Physical Journal*, vol. 17, page 247, as follows:—

"On the 30th November, 1803, an expedition sailed from Corunna, by order of the Spanish Court, under the direction of Dr. Francis Xavier Belamis, Surgeon Extraordinary to the King, and several members of the faculty, conveying with them twenty-two children, selected for the preservation of the vaccine fluid by successive inoculations during the voyage, which was undertaken for the sole purpose of establishing vaccine inoculation in all the possessions of the Crown of Spain situated beyond the seas, and in those of several other nations. They touched at the Canary Isles, Porto Rico, and at the Caraccas, when the expedition divided into two branches, one sailing to South America, under the sub-director, Don Francis Salvani, the other, with the director, Belamis, steered for the Havannahs, and thence to Yucatan. There a sub-division took place, the parties taking different routes, that they might propagate vaccination as widely as possible; and, having made extensive circuits, they met at Mexico, whence they proceeded to the Philippine Islands, carrying with them twenty-six children from New Spain. Having propagated the specific in the islands, Belamis established the practice at Macao and Canton; after which he embarked for Lisbon, where he arrived on the 15th August. He stopped at St. Helena, and prevailed on the English to adopt a practice which they had undervalued for eight years.

"The other part of the expedition traversed South America; here were vaccinated 50,000 persons without one unfavourable result. They met at Santa Fe, and, at the end of March, 1805, continued their journey in separate tracts over the remaining districts of the vice-royalty of Lima and on to Guayaquil.

"A correspondent has informed Mr. King, of London, of an expedition being set on foot by the Court of Petersburg, which had, when the account of its progress arrived, propagated vaccination through the vast territories of Siberia and Tartary, and was about to enter the northern boundary of China."

The most remarkable outbreak of small-pox of modern times occurred at Cork in 1855-56, when I (after having advocated house-to-house vaccination in a letter addressed to the *Cork Constitution*) was appointed visiting vaccinator for the city, and Archdeacon Kyle exerted himself beyond all praise to raise funds for benevolent individuals to carry it into effect. My report of that epidemic and the success attending vaccination was published in 1856, and the *Lancet* of the 16th May, 1857, commented on it—

"Some subjects there are which periodically turn up apparently for the sole purpose of affording the credulous and weak-minded opportunities for the display of their feebleness and self-sufficiency. Discredit of vaccination, and of its beneficial effects, is one of these subjects. It would not enhance our opinion of human discernment to recount the absurd and impossible effects that have been gravely discussed as attributable to its use, or to repeat the assertions of the gobemouches, that the benefits of vaccination are illusive, and its protective influence a delusion. For this reason, and on account of its intrinsic interest, we cite one of the most notable illustrations which has lately happened of the incalculable value of the great discovery of Jenner.

"In the beginning of 1856 there broke out in the city of Cork an epidemic of small-pox. It raged throughout the city. The Archdeacon of Cork devoted his energies with noble philanthropy and wise forethought to collecting a fund for the appointment of a public vaccinator to visit from house to house. Dr. Sandham accepted the appointment and fulfilled his task with admirable zeal. On the 8th March, when he began his labours, the disease was raging in every lane and alley. In five weeks he vaccinated 2,474 persons, and in six weeks after the commencement of his mission he traversed the whole city and found no case that needed vaccination. The energetic cause stayed the plague which, during the previous two months, had gradually gained ground in spite of every effort, and attained a frightful intensity. From the report of Dr. Sandham, we learn that of those admitted into hospital one-third of the non-vaccinated died, of cases in the workhouse one-third also died, and the medical officers state that notwithstanding the exposure of all classes to the contagion it never spread amongst any but the non-vaccinated, nor were any of the nurses or attendants affected."

Since my reports and the remarks of the *Lancet*, every man in the French army was vaccinated or re-vaccinated, and without one

unpleasant result. But, as in Jenner's day so in mine, anti-vaccinators are to be found who tell the public, without any proof, that if they get their lovely babes vaccinated they will have horns before they die, or something much worse; so at this time up jumps Mr. John Gibbs, M.P., St. Leonard's-on-Sea, and addresses a letter to the *Brighton Examiner*, attacking me and the Archdeacon of Cork in most unparliamentary language. He says—

“A Dr. Sandham, assisted by an archdeacon, who had better have been trying to save souls, commenced an energetic course of vaccination, and in six weeks ‘stayed the plague.’ This is certainly a marvellous statemant, but plain, common-sense people who do not respect superstition—nor facts—even when clothed with the authority of ‘science’—so called, because it teaches not to know—will ask what it really all means.” Again, Mr. Gibbs writes—“How absurd to expect protection by poking an animal poison on the point of an instrument into the arm!” In fine, Mr. Gibbs argues that every disease to which flesh is heir to is caused by vaccination.

Several controversial letters on the subject from both of us appeared in the *Brighton Examiner* of 1857. I was attacked by Mr. Gibbs, his friend, Mr. T. W. Stowel, M.B., Church-street, Brighton, and a gentleman signing himself “Anti-Vaccinator,” who I suspect to be a Cork solicitor, who may be an authority on legal matters, or be clever at making out a bill of costs, but certainly not an authority to guide the public on the question of vaccination.

However, after seventy years' perseverance by vaccination, notwithstanding the opposition and ridicule heaped upon them from time to time, we have, as suggested by my report, and pressed for by the *Lancet*, and the many authorities quoted in this history, now in full force, “a Compulsory Vaccination Act for Ireland.”

For the benefit of future vaccinators, I will wind up by quoting Dr. Willan's admirable description of perfect vaccination—

“Vaccination is accounted perfect when recent lymph has been carefully inserted beneath the cuticle, in a person free from any contagious disease, and has produced a semi-transparent pearl-coloured vesicle, which, after the ninth day, is surrounded by a red areola, and afterwards terminating in a hard dark-coloured scab. The form and structure of the vesicle is peculiar. Its base is circular, somewhat oval, with a diameter of about four lines on the tenth day. Till the end of the eighth day its upper surface is uneven, being considerably more elevated at the margin than about the centre, and sometimes indented by one or two concentric furrows; but on the ninth or tenth day the surface becomes plane, and in a very few instances the central part is perfect. The margin is turbid, firm, shining and round, so as often to extend a little beyond the line of the base. The vesicle consists internally of numerous little cells, filled with clear lymph, and com-

municating with each other. The areola, which is formed round the vesicle, is of an intense red colour. Its diameter differs in different persons from a quarter of an inch to two inches, and it is usually attended with a considerable tumour and hardness of the adjoining cellular membrane. On the eleventh and twelfth day, as the areola declines, the surface of the vesicle becomes brown in the centre, and less clear at the margin. The cuticle then begins to separate, and the fluid in the cells gradually concretes into a hard rounded scab of a reddish brown colour. This scab becomes at length black, contracted, and dry, but it is not detached till after the twentieth day from the inoculation. It leaves a permanent circular cicatrix about five lines in diameter, and a little depressed, the surface being marked with very minute pits or indentations denoting the number of cells of which the vesicle had been composed." "Cow-pock is described by Mr. King as being on the third day like a fleabite, on the eighth a crystal, on the tenth a pearl, and on the twelfth a rose without a thorn."

"The clear transparent lymph should be taken from the unbroken, uninjured vesicle of a healthy child, at the latest on the eighth day of vaccination, but in warm summer weather may be best on the seventh day. If the lymph is allowed to be so old as to look opaque, purulent, or bloody, or even taken at the proper time mixed with the blood that escapes from treating the vesicle too roughly, it ought not to be used, much less depended upon, and, it is my opinion, once the vesicle is developed and runs its course, as in the description of perfect vaccination quoted above, that this once secures the individual for life—as far as vaccination can do—without any future necessity for vaccination. I am entirely against vaccinating with the scab formed, even in the early stages, by the escape of the clear lymph.

"Cork, 22nd December, 1866."

Much, very much, might be written in favour, therefore, of vaccination; but I will yet add many quotations and references in substantiating my arguments on its behalf. Before I do so, however, it will be well now to speak of its

ATTENDANT DANGERS.

The *Lancet*, of November 16th, 1861, says—

"We have received a polite letter from Dr. Pacchiotti, and the number for October 20th, 1861, of the *Gaz. della Assoc. Med.* Both these refer to a very melancholy occurrence in the village of Rivolta, near Acqui, in the province of Alexandria, Piedmont, no less than forty-six children having more or less suffered from syphilis after vaccination! The facts connected with this unfortunate wholesale contamination are as follows:—

"Towards the latter end of May last M. Cagiola, a surgeon, vaccinated Giovanni Chiabrera, aged eleven months, and in good health,

with lymph obtained in a tube, sent from Acqui. The operation was performed in the ordinary manner, and with, as M. Cagiola affirms, a very clean lancet. On the tenth day after this, forty-six children were vaccinated with the lymph contained in the vesicle of the child Chiabrera; and ten days after these latter operations seventeen other children were vaccinated from the lymph of one of the forty-six infants just mentioned.

“Hence we have sixty-three vaccinated children, forty-six of whom were more or less affected with syphilis within two months after the first operation. In the first series of forty-six vaccinations there were thirty-eight cases of syphilis, besides little Chiabrera, the child vaccinated with the lymph contained in the tube; and in the second series, comprising seventeen infants, seven were affected. The child Chiabrera was in a state of marasmus on the 7th October, and the infant from whom the second series of seventeen had been vaccinated died a month after the operation.

“These facts having come to the knowledge of the Medical Congress at Acqui, from statements made by Dr. Ponza, it was agreed that a committee elected from amongst the members of the Congress should proceed to Rivolta to inquire into these melancholy occurrences.

“From the able report of Dr. Pacchiotti we extract the following particulars:—

“‘The investigations of the committee were considerably aided by the unwearying exertions of Dr. de Katt, practising in the village. It has been found that of the forty-six children affected with syphilis, the cases of only twenty-three could be accurately noted, as the parents of the children neglected to call in medical aid at the proper time. These twenty-three cases were, however, sufficient to enable the committee to come to a clear diagnosis. In the whole forty-six cases, the symptoms of syphilis appeared, on an average, on the twentieth day after vaccination—viz., varying from ten days to two months. Sometimes the vaccine vesicle, just on the point of cicatrizing, inflamed, and became surrounded with a red, livid, and copper-coloured areola, and then spread and suppurated anew. At other times, when the cicatrix was complete, an ulcer would form upon it, the crusts of which would fall off and fresh ones be produced. With some children the vesicles looked bad from the first, and were accompanied by a general eruption, which the country people considered as small-pox, and the characters of which the medical men of the neighbourhood were not always able to ascertain.

“‘On the 7th ult. it was discovered that seven children had died without treatment, and before attention had been directed to this unfortunately fast-spreading contamination three were in danger, and fourteen recovering, after having been subjected to a specific treat-

ment. Thirty-eight at that period were under treatment, which consisted of frictions with mercurial ointment in the groins, axillæ, and on the limbs, with small doses of the iodide of potassium in sarsaparilla syrup.

“ ‘The principal symptoms noted by the committee were mucous tubercles on the verge of the anus and genital organs, sores on the lips and faces, swelling of the lymphatic glands in various regions, syphilitic eruptions of various kinds, loss of hair, secondary ulcerations of the prepuce, deep tubercles of the cellular tissue, gummy tumours, &c. Two children out of the twenty-three were in a wasting condition, and suffering from syphilitic cachexia, while some of the mothers had mucous tubercles on the nipples. In fact, the twenty-three cases are carefully related in the report, all the children having been seen by the members of the committee.

“ ‘As to how the disease came to spread amongst these infants, the committee refrain from coming to a hasty conclusion, and ask for time to solve the mystery, the more so as these facts tend to no less than a complete upsetting of opinions hitherto held as very trustworthy. Thus the belief of two diseases not having the power of developing at the same time upon the same individual falls to the ground, as well as the non-contagious nature of the secondary symptoms of syphilis.’

“ Dr. Pacchiotti, the author of the report, indulges in commentaries on this sad case, and throws out, with extreme humility, various explanations, though trusting completely to none.

“ He invites discussion and reflection on the phenomena which have been observed. Nor does he fail to record that such transmission has been before noticed. Dr. Parola has mentioned in his work, ‘On Doctrines Connected with Vaccination,’ a case reported by Tassani, of Milan, in which a boy, whose father had at the time secondary sores on the scrotum, was vaccinated from a healthy child. From the vesicle of this boy fifty-six children were vaccinated, out of whom thirty-five were, in a few months, syphilitic, and had diseased their mothers. On the other hand, it should be noted, that lymph from eight of these thirty-five syphilitic children was used to vaccinate a second series of thirty-four, and *none* of the latter showed any syphilitic symptoms. Another case, which was brought before courts of justice, runs thus—

“ In 1846 many revaccinations took place in the town of K——, where a surgeon revaccinated about ten families on account of an epidemic of small-pox, and the punctures, in three or four weeks, degenerated into syphilitic ulcers, followed soon afterwards by secondary eruptions. Hübner, in 1852, vaccinated thirteen children, of whom the greater part became syphilitic, though the rest escaped. Experiments have been undertaken by Pitton, Boucher, Ceccaldi, and Lecoq, which prove the transmission of syphilis through vaccination ;

whereas other experiments made by Schreier, Montain, Bidart, and Taupin show, on the other hand, that vaccine lymph obtained from a child, evidently labouring under hereditary syphilis, produced no evil effects upon those vaccinated with it.

"The reporter further alludes to an important thesis of M. Viennois, 'On the Transmission of Syphilis by Vaccination,' and to the chapter on the same subject in the book of M. Rollet, of Lyons, entitled, 'Clinical and Experimental Researches on Syphilis.'"

From the facts related above, Dr. Pacchiotti deduces the following rules:—

"1. Examine carefully the child from whom the lymph is taken.

"2. Try to learn the state of the parent's health.

"3. Choose, in obtaining the lymph, such children as have passed the fourth or fifth month, as hereditary syphilis, in general, appears before that age.

"4. Do not use the lymph after the eighth day of the existence of the vesicle, as the lymph on the ninth and tenth days becomes dull by mixture with pus, which latter may be of an infectious nature.

"5. In taking the lymph with the lancet, avoid hæmorrhage, as there is less danger with pure and transparent lymph.

"6. Do not vaccinate too many children with the same supply."

Now I am acquainted with one medical man who utterly repudiates the belief in the foregoing conclusions. But let us still further seek information *pro* and *con*, for the subject of this essay is one which is very wide and deep, and must not be too hastily or summarily disposed of. I am of opinion that if each and every medical practitioner in this or any other country were asked for his experience, *we* should one and all concur in the belief, from actual experience, that the real benefit obtained by proper and healthy vaccination outweighed in value everything that has yet been tried to ameliorate the condition of suffering humanity,—for be it remembered that there is no scourge to mankind greater and more dreadful than a prolonged ravaging of the epidemic—small-pox. I have vaccinated a great many children and some few adults (the adults by their own desire), and I have never yet met with any untoward result, save in one case of two children, where, if I remember rightly, one was vaccinated from the other, and in both these cases slight swellings of some of the glands followed, and a few sores made their appearance, which, although troublesome for a time, were decidedly not syphilitic, and which yielded to treatment and time. Now, although the mother stated none of the family "ever had a *blotch* before," and of course was very angry that her children became, as she would have it, through vaccination, in such a condition, yet in a very short time afterwards, one after another, three sisters came under my treatment for strumous swellings, &c. It is probable, also, a subject of vaccina-

tion may take cold in a certain stage of the pustules, especially where four punctures should be made close together on one arm and all take, that traumatic erysipelas may ensue, and the child die of coma, &c.

But to pursue the opinions respecting vaccino-syphilisation, I may be permitted to insert a considerable deal of information I am enabled to collect, which I will endeavour to condense as much as possible.

Some Lectures by Henry Lee, Esq., F.R.C.S., on Syphilitic and Vaccino-Syphilitic Inoculations, &c., were published in the year 1863, in reference to which it was said—

“As, perhaps, our most eminent specialist in the department of syphilis, Mr. Lee claims for his utterances our attentive consideration. We have the Rivalta cases discussed over again in this work; but we are satisfied that the evidence collected, after many months’ delay, is not reliable. We venture to say that, now that the sensation has died off, we shall not have such another crop of cases to astonish the world for another ten years. If such poisonings could occur once on so grand a scale, they should occur every month, for it would be impossible, by ordinary care, to avert them. We advise our readers to peruse this work, which, in addition to the Rivalta wonder, contains much valuable information on the subject of syphilitic inoculation.”

Now the following article on the “*Transmission of Syphilis by Vaccination*” is extracted from the *Journal of Practical Medicine and Surgery*:—

“M. Viennois presented to the academy, through M. Depaul, a pamphlet, entitled ‘*Transmission of Syphilis by Vaccination.*’

“M. Depaul passed upon this work a well-deserved encomium.

“The transmission of syphilis by vaccination has been observed from the earliest period of the present century, and has doubtless largely contributed to strengthen in some quarters resistance to the preservative from small-pox.”

The *Journal of Practical Medicine and Surgery*, published, in 1831, a communication from M. Bidart, of Le Pas-de-Calais, who, endeavouring to exculpate vaccination from the various charges brought against it, related two instances of vaccination of healthy subjects with matter supplied by persons infected with syphilis; *in neither case was disease communicated*, hence the author inferred that syphilis could not be propagated in this manner. The Society of Medicine of Paris expressed its concurrence in this opinion in 1839. Somewhat later, however, Messrs. Pitton, Boucher, Ceccaldi, and Lecoq recorded experiments and facts which placed beyond doubt the possibility of the transmission of syphilis by vaccination.

To refer to more recent events, we may mention the great Hübner case, which in Germany has remained memorable among members of both the medical and the legal professions. On the 16th June, 1852,

thirteen children from one village were simultaneously vaccinated on the same day with the vaccine matter supplied by the child Keller, alleged to have been affected with syphilis. Now in some of the children obstinate ulcers broke out in the punctured spots, and genuine syphilitic eruptions made their appearance three months after, whereas others escaped uninjured. How was the infection of the former, or the immunity of the latter to be accounted for? How was it that syphilitic contagion, admitted to be possible in this manner, and actually proved to have taken place in certain instances, still remained an unusual and exceptional circumstance? These cases long awaited an answer, but, thanks to the exertions of M. Rollet, chief surgeon of the Hospital of L'Antiquaille, at Lyons, and the author of a pamphlet published during the present year, entitled "De la Pluralite des Maladies Veneriennes." Thanks also to the active clinical inquiries, and the careful analysis of the cases on record, instituted by one of his most able pupils, Dr. Viennois, these problems, which hitherto seemed to defy the sagacity of the most discriminating observers, appear now to have received at last a satisfactory solution.

"M. Viennois remarks that a careful perusal of the cases of syphilis noticed after vaccination leads to their division into two groups. The subjects on the point of being vaccinated were either already labouring under syphilitic infection or not. Among the first may be classed all the individuals in whom syphilis was latent; in the other, subjects in the enjoyment of perfect health, free from hereditary or acquired venereal disease, and in whom syphilitic symptoms broke out subsequently to vaccination only. The first group is justified by the fact that any eruptive disease may become the occasion of the manifestation of latent syphilis. The second group seems equally legitimate, but in the numerous cases upon which it is grounded are we to attribute the circumstance of syphilitic contagion to the vaccine virus? Assuredly not; were it otherwise, the infant Keller, mentioned above, who supplied the matter with which thirteen other children were inoculated, would have contaminated the entire number, whereas eight only became infected. This was due to the fact that *vaccine matter alone seems incapable of transmitting ought but vaccine*, and to be as powerless to communicate syphilis as any other morbid poison. How are we, then, to account for the instances of genuine contagion of syphilis by vaccination which have been placed on record?"

The explanation, says M. Viennois, is extremely easy.

"The lancet meets in the pustule of vaccine with two kinds of fluid.

"1. The vaccine virus.

"2. An adventitious liquid, blood, when the point of the lancet has penetrated beyond the cavity which contains the vaccine matter.

Now, despite the denial of Hunter and M. Ricord, the blood of persons labouring under constitutional syphilis undoubtedly possesses contagious properties, as it does in all virulent disorders, such as glanders, rabies, rot, small-pox, diphtheria, the plague, &c."

M. Viennois relates five direct experiments performed with the blood of persons affected with secondaries, which confirm the data of analogy. M. Rollet, in his public lectures at L'Antiquaille in 1859, professed and demonstrated that syphilis is not transmitted by vaccine matter, but by its admixture with blood.

"With regard to the symptoms observed in persons to whom syphilis has thus been communicated, they are of two orders, primary and secondary. Invariably the first appearance is chancre of the arm, secondaries breaking out after a time only. When, on the contrary, latent syphilis manifests its presence under the influence of vaccinal fever, no primary ulcer is observable upon the arm, but papular, vesicular, or pustular eruptions give evidence of the existence of syphilitic infection.

"The treatment of the disease thus acquired demands no special notice; the important point is to obviate such transmission by appropriate prophylactic precautions. This is undoubtedly possible, and vaccinators and heads of families may, in this respect, rest perfectly satisfied.

"In all the cases of vaccinal syphilis which he relates, M. Viennois has been struck with the fact, that the operation had always been performed from arm to arm—viz., under the most favourable circumstances for the inoculation of blood. In no instance was preserved vaccine used—*i. e.*, pure, unadulterated vaccine matter. Now, as before stated, pure vaccine virus, even taken from a person labouring under venereal infection, propagates vaccine only; now, therefore, vaccinators are cautioned, and will carefully avoid the addition of even the smallest particle of blood to the vaccine virus.

"The foregoing observations apply not only to the liquid matter, but also to the desiccated crusts. When the latter contain but the secretion in its dry state, vaccine only will be communicated; but should it be mixed with dry blood, and the subject from which it originates be tainted with syphilis, that disease may be transmitted.

"As to vaccination from arm to arm, M. Viennois remarks that the most certain method of avoiding the inoculation of the venereal poison lies in charging the lancet with pure vaccine matter only. Should the operator fancy that any blood has been also abstracted, the instrument should be cleaned, and the vaccine matter sought for elsewhere, or the vaccination postponed. A procedure which seems perfectly safe consists in collecting the vaccine virus in a tube, and carefully ascertaining its transparency; it may then be blown out, and the lancet charged with the fluid. It is further prudent to ascer-

tain the state of health of the parents, and, in case of doubt, to gather the vaccine matter from the arms of children sufficiently advanced in life to be safe from the appearance of congenital secondary disease."

I perhaps need hardly remark the fact, as proved by experiment, that a person who has never been affected with syphilis can be inoculated with that disease by syphilitic blood, as narrated in *British Medical Journal*, 1862.

The *Lancet* of 31st December, 1859, contains two letters which are well worthy of our perusal and consideration. The first is in *Correspondence*. "*Audi alteram partem*." It is a letter to the editor from Mr. Henry, headed "*Small-pox and Vaccination*."

"SIR—In consequence of the prevalence of small-pox, the subject of vaccination has acquired an unusual interest; and as anxiety with regard to its protective influence has been unquestionably occasioned by various letters which have appeared in the *Times* and other newspapers, I would beg to lay my opinion on the matter before the profession through the medium of the *Lancet*.

"Some assert the permanency of the prophylactic influence which it possesses, while others limit this protective power to certain variously assigned periods, and, in consequence, advocate the practice of revaccination as a remedy for the alleged defect. Now, suppose that, as has been asserted, the protective influence of vaccination gradually declines, and eventually wears out, should we not reasonably expect to find that the number of cases of small-pox would increase progressively with the distance of time from the period of vaccination. This is, however, not the opinion of those who are best qualified to judge from their opportunities and experience.

"Many children take small-pox one, two, or three years after vaccination; nor do I believe the first ten or fifteen years possess any peculiar immunity from the disease. This is, in fact, my own experience, and that of many medical practitioners; although the public in general may naturally have formed a very different opinion, from the fact that the death of one adult would excite more observation and cause more alarm than a far more widely-spread mortality in children from the very same malady.

"*Jenner ascertained that the vaccine, though it protects the constitution from small-pox, leaves it still, to a certain extent, susceptible of its own action.* It is well known that persons who have been vaccinated, after resisting the strongest exposure to small-pox, have, notwithstanding, on revaccination, exhibited perfect vaccine vesicles.

"Some assert that when the re-insertion of vaccine lymph in one who had been already vaccinated produces a well-marked vesicle, a proof is thereby obtained that the anti-variolous influence had worn out of the system, and that the individual had so become susceptible of small-pox. The inference is, however, very far from conclusive.

By similar reason we should infer, that when vaccination succeeds in one who had previously had small-pox, this would be a direct proof of his liability to a second attack of this disease.

“With respect to the renewal of vaccine, which has been often suggested, I am strongly under the impression, and this is, indeed, the opinion of the medical profession in general, that the integrity of the lymph can be preserved, by a due selection, for ever.

“Re-vaccination can be required only when doubts are entertained of the correctness of the first vaccination. Having, during a period of twenty-five years, vaccinated many thousand persons, both at the dispensary and in the course of private practice, I can state very decidedly that vaccination protects the human constitution from the infection of small-pox, not merely for a few years but for life. I have, unquestionably, seen small-pox after vaccination, but the disease was deprived of its sting, and I have never yet met with a single case which proved fatal under these circumstances. Numerous cases are on record of a recurrence of small-pox either through inoculation or casual infection after a supposed security from the disease; and such facts should silence the clamour which has been raised at the occurrence of small-pox after apparently successful vaccination. Cow-pox and small-pox may, to this extent, be alike fallible as protective agents.

“I would, however, beg to suggest that practitioners should, as far as possible, review their early vaccinations, and wherever a doubt exists with regard to the correctness of any of them, to re-vaccinate. But with regard to the practice of a systematic revaccination, I feel not only persuaded of its inexpediency, but I should view such a course of procedure with real apprehension. I should greatly fear that it would prove injurious by causing less attention to be paid to the first vaccination under the impression that any irregularity in it could be rectified at its intended repetition. Such dependence upon a future operation might naturally lead to careless and imperfect vaccinations, and the consequent failures which would result would leave persons, especially where proper vesicles had not been produced (as often happens), in a constant state of doubt and alarm.”

The next letter is from Mr. G. Cleveland, and is as follows:—

“SIR—Having perused in the *Lancet* of the 26th ult. some papers relating to small-pox and vaccination, I am induced to offer a few further observations on this important subject, should you consider them worthy of insertion in your journal.

“In the first place I fully coincide with the remarks of ‘A Public Vaccinator’ in utterly repudiating the idea of the necessity of Government inspection in order to insure efficient vaccination, my opinion being that the present prevalence of small-pox is to be attributed almost entirely to the neglect or non-performance of vaccination, rather than to its inefficient performance.

"I therefore, secondly, concur in what Dr. Gore says, in the same number of the *Lancet*, only, if he will allow me, I would substitute for his question—'What is the cause of the failure of vaccination?'—this, viz., 'What is the cause of the continued prevalence of small-pox?' and which I would answer as he does: 'The principal one is the *non-enforcement* of the Vaccination Act, and non-enforcement of the penalties for *non-compliance*.' I cannot see that it is either fair or just to charge the prevalence of small-pox amongst the unvaccinated to the failure or inefficiency of vaccination. I believe most public vaccinators will agree with me that the so-called *Compulsory Vaccination Act of Government* has proved, in its operations, a nuisance—a perfect farce, and, I might say, a dead letter, the poor being more prejudiced now than ever against vaccination; and as they find from experience they are allowed to please themselves whether they have their children vaccinated or not, the consequence is that the great discovery of Jenner is becoming year by year more and more neglected, and hence, also, the greater frequency of small-pox.

"However disagreeable it may be to inform against and prosecute parties for non-compliance with the act, it must come to this; and the sooner the Legislature devise some enactment for this purpose, and effectually enforce its being carried out, the better.

"I will only further occupy the space of your valuable journal by subjoining the statistics of a few cases of small-pox which were attended by me in an epidemic of this disease in this town during the winter of 1851-52, all of which occurred in the successive months of December, January, March, April, and May. There were thirty-seven cases in all. *Thirty of this number had never been vaccinated*, and were all children of various ages but one, who was an adult, and who died of the disease. The remaining seven cases occurred amongst adults from twenty to thirty years of age, all of whom had been vaccinated in early childhood.

"Several examples came under my notice of the protective influence of vaccination by children who had been vaccinated, and who escaped having the disease, although living in the same houses where small-pox prevailed.

"The fatal case, already alluded to, was the worst case of small-pox I ever witnessed. It occurred in a remarkably fine young woman of twenty-two years of age, who really looked more like a mummy than anything else, and this unfortunate creature also gave birth, previous to death, to a child (if I remember rightly, at the full period of utero-gestation) which was still-born, and *which was full of small-pox eruption*.

"Lowestoft, December, 1859."

It will be, perhaps, as well now to consider a sketch of

THE NEW VACCINATION ACT.

This bill, introduced into the House conjointly by Lord Robert Montagu, Mr. Gathorne Hardy, and Mr. Hunt, contains in its thirty-six clauses several important provisions. The design of the measure is the establishment of a more efficient organisation for rendering the performance of vaccination not only universal and compulsory, but also more perfect. The guardians of the poor are to be compelled to divide their districts conveniently, and to enter into contract with qualified practitioners, who shall be called "public vaccinators," to carry out the vaccination of the poor. The Privy Council is to be entrusted with the administration of the grant of the National Vaccine Establishment. The fee for vaccination, which varies from one and sixpence to three shillings per case, according to the distance of the vaccination station from the contractor's residence, is to be paid for successful cases only. Provision is made for re-vaccination, and for the disallowance by the auditor of parochial accounts for any payment on account of vaccination not allowed by contracts made. The guardians are empowered to arrange for the attendance of the vaccinators in certain districts which are thinly populated, at intervals not exceeding three months, and to dispense, in this case, with the necessity of parents having their children vaccinated within the first three months of life; the vaccination, however, to be performed before the expiration of the next period.

The registrars of districts are to be compelled, on or within seven days of the registration of the birth of every child not already vaccinated, to give to the person in charge of the child a notice requiring that it shall be vaccinated, and pointing out when and where it can be done; and the vaccination must be performed within three months of the birth of the child, by the public vaccinator, or a private practitioner, the operation by the former not being considered as parochial relief. Postponement of the vaccination can only take place on account of ill-health; and the necessity for this step must be specially certified. A clause directs that children vaccinated by the public officer are to be inspected, and that re-vaccination is to be ordered if necessary. All certificates of successful vaccination are to be sent to the registrar of the district in which the child is born, a duplicate being handed to the person in charge of the child; and, when the operation is performed by a private practitioner, the parent or guardian must send the certificate to the registrar.

There are certain penalties to be enforced; one of a pound for neglecting to have a child vaccinated; another of the same amount for not transmitting the certificate to the registrar, or refusing, in the

case of a medical man, to sign it. False statements are to be regarded as misdemeanours.

The bill is, to some extent, retrospective; for by it justices are given the power to order unvaccinated children under thirteen years of age to be vaccinated.—N. O. W., 26 | 5 | 67.

I cannot quit this part of my subject, without reference to the comments made on the above bill in *The Medical Press and Circular* of 22nd May, 1867, which, indeed, I quote word for word:—

“We do not feel by any means enthusiastic about the measure now before Parliament. Its warmest supporters will probably, on reflection, acknowledge that it is full of serious defects. Compulsion in this country is not easily carried out in anything that bears the slightest resemblance to our infringement of the liberty of the subject, and there are always to be met with partisans who would defend the right of a father to let his child contract and propagate small-pox. (!) We have tried a half measure and found it an egregious failure. Unless we are prepared to enforce a stringent compulsory act we may as well let the matter remain where it is. Passing acts to let them be ignored is a weakness calculated to bring legislation into contempt. Mr. Rumsey believes in *indirect* compulsion, and this is certainly practicable without the intervention of Parliament. Suppose no child were admitted into schools and factories without the marks of successful vaccination on the arms, or a medical certificate that the operation had been properly performed. A little unison among owners of factories and managers of schools would soon effect this. Suppose the heads of families insisted on the same qualification in engaging servants. Such a custom would do more than half-a-dozen clumsy Acts of Parliament, laden with the machinery for producing an inexhaustible supply of useless unpaid-for certificates. If we are to have vaccination by legislative enactment, the first provision should be the employment of the profession with adequate remuneration. To effect this we want a dozen first-class medical men in the House of Commons.”

It will be interesting in this essay to say something of *small-pox in the puerperal state*, most of the information on which part I copy from *Medical Circular*, 1861.

I deem it as well to make this little essay a sort of compendium of facts on the two all-important and now very engrossing subjects of *variola*, and its antidote, *vaccination*.

The following, then, is abstracted from the *British American Journal*, by Dr. Archibald Hall, and headed—“Will a child born after the mother has had small-pox, and contracted after she has conceived, be liable to contract the disease?”

“The number of the *Medical and Surgical Reporter* of Philadelphia,

of date Jan. 26th, contains the following important query, put to the profession in a letter by Dr. Trimmer, of Whitehaven, Pa. :—

“ ‘ Will a child, born after the mother has had small-pox, and contracted after she has conceived, be liable to contract the disease? Would the period of pregnancy have anything to do with the disease? ’ ”

“ These are important questions, and to which the attention of the profession has not been hitherto directed. Indeed, the cases offering which might tend to elucidate them are, if not rare, seldom watched; while the practice of vaccination, as commonly pursued, is seldom accompanied with questions (if the parties are unknown) as to the existence of small-pox in the mother during the period of gestation. Such cases are, however, admittedly rare; and if a chance of making such an investigation did arise, it would be, more than likely, overlooked. A case has lately occurred within my practice which enables me to give some kind of reply to Dr. Trimmer's first question.

“ I imagine it may be laid down as a rule that pregnant women attacked with eruptive fevers are exceedingly apt to miscarry, probably in consequence of the death of the child, although there exist many exceptions. Again, it is well recognised as a fact, that one attack of eruptive fever, by no means, as is commonly supposed, exempts the individual from a subsequent one. I have seen instances of persons pock-marked suffer under a subsequent one, and I distinctly remember of having seen a man who was suffering under a third attack of the same loathsome affection, and parallel observations are very common with regard to rubeola and scarlatina. All that we can affirm with regard to the influence of primary attacks of these diseases is, that the individuals are rendered thereby *less* obnoxious to subsequent ones, but nothing more.

“ With regard to variola, vaccination acts in a similar manner, and not improbably to an equal degree. As regards the foetus, we can hardly suppose that the infant in the uterus should not be influenced by those diseases under which the mother's system is suffering, and that it should not participate in all those protective effects which, if any, a primary attack commonly entails. That this is more than probable, the following case will tend to show:—

“ About four or five months ago I was requested to prescribe for a Mrs. B., aged eighteen, a strong, healthy young woman, pregnant with her first child, and then about the sixth month of utero-gestation. She had been vaccinated when an infant, but was now labouring under a sharp attack of modified small-pox, this disease having been then prevalent in that part of the town in which she resided. There were unmistakable signs of incipient uterine action, and I anticipated premature labour as the inevitable result of the disease. The

symptoms were calmed, however, by the administration of a full dose of the solut. morph. mur. The mother passed through the disease in the most favourable manner, but, as evidence of it, she retains several distinctive marks on her face.

"I was exceedingly curious to ascertain the effects of the small-pox on the child, which I firmly expected to be pock-marked at its birth from head to foot; and my curiosity was gratified on the 16th December, when I was summoned to attend her accouchement. After a perfectly natural labour of ordinary duration, she was safely delivered of a fine boy, whose skin did not exhibit the slightest indications of its having suffered from the disease which had affected its mother a few months previously. There was not a single mark upon its body.

"Now arises the question of susceptibility. When the child was a month old, in consequence of the still existing prevalence of the small-pox in the same neighbourhood, even although the infant was so young, I deemed it advisable, as an act of prudence, to vaccinate it. The operation was accordingly performed on 22nd January. On examining the arm on the 26th, four days afterwards, there was not the slightest appearance of irritation on it. I repeated the operation the same day, and up to the moment of writing, for I have seen the child this day, February 4th, the ninth from the day of re-vaccination, the arm appears as if nothing had been done to it, the operation of vaccination having, therefore, totally failed.

"Now there cannot exist the least doubt as to the genuineness of the vaccine matter employed on these occasions. I had vaccinated two children previously to, and one on the same day as, that I first vaccinated Mrs. B.'s child. In fact, a portion of the same scab had been used in all the cases, and the operation had been uniformly successful on the three other children. Besides, it is commonly believed, and not without reason, that the operation is likely to prove the more successful the earlier the age of the infant. There was everything, therefore, in favour of the operation proving entirely successful in this particular case.

"To what, then, are we to attribute the failures? It appears to me, and the idea had impressed my mind before I saw Dr. Trimmer's questions, that it could *only be attributable to the protective influence afforded by the mother's blood*, when circulating through the infant's system, during its intra-uterine existence, and while the mother was suffering under the disease, operating upon the constitution of the child, and producing its effects, precisely as it is doing on the constitution of the mother. We cannot, of course, explain how this protective agency is exerted, although we can appreciate the positive existence of such a preventive or protective influence in its effects, and I feel bound to consider that in this instance the protective influence of

the attack of variolous disease on the mother prevented the impregnation of the infant's system by the vaccine virus exactly as it would have done in the mother herself.

"I am fully aware that we cannot build up an hypothesis on a single fact, any more than a single swallow can make a summer; but there is so much, consonant with every day's experience, in the idea that the unborn infant should be influenced by its mother's diseases, and partake to the fullest extent in all their effects on her system, that we cannot but admit it as a fact.

"In this case, however, the child did not present the slightest evidence of a cicatrix on any part of its body; and hence arises another curious question, which, however, it is impossible to answer. Could it have had the disease in utero, and the formation of the ordinary pockmarks prevented by the continual application to its surface, or the juxtaposition of the liquor amnii? My own opinion is that it had not the disease, or I should in all probability have had a case of premature labour to manage as the consequence of its death. But if it had had it, it would have been a convincing proof of the truth of the theory, that to prevent pitting in small-pox we should exclude from the pustules all contact with the air.

"If the inference drawn from the foregoing fact be a fair one, the second question submitted by Dr. Trimmer is one of easy answer. I can see no reason why like influences should not be exerted at all stages of intra-uterine existence. There is nothing more common than to meet with cases of abortion, at early periods of gestation, the inevitable consequence of venereal impregnation of the mother's system; and if the unviable foetus is thus influenced in one way why not in another? No corollary, to my mind, can be more clear.

"Since the foregoing was written, and after the manuscript had been placed in the printer's hands, I have learned from Dr. Stranaghan, Staff Assistant-Surgeon attached to the Royal Canadian Rifles, that a case similar to mine had lately occurred to one of the soldiers' wives of the Rifle Regiment, who had been attacked by small-pox between the seventh and eighth month of utero-gestation, and recovered. In due time she was delivered, and when the child (which also had no vestige of the disease about it) was about a month old, in consequence of the prevalence of small-pox among the soldiers' families in the regiment, he thought it advisable to vaccinate it. In this case, also, although there could not have existed the slightest doubt as to the freshness and purity of the vaccine matter employed, the operation utterly failed."

The same journal, of a later date, has the following by Dr. A. H. David:—

"As an addition to the conclusion you arrive at in your paper in the last number of the *B. A. J.* on the question, 'Will a child born

after the mother has had small-pox, and contracted after she has conceived be liable to contract the disease?" I will mention a case somewhat similar to the one you relate, and which corroborates the opinions you express relative to the protective influence the infant derives from the mother going through small-pox, without, however, the child showing any evidence of having had the disease.

"Mrs. K., a young English lady, only a few months in Montreal, contracted small-pox from her brother, who had taken it from a passenger on board of one of the Quebec boats. So mild was it that he did not know what the disease was till I accidentally saw him and told him. He had not been out of the house for some days, but was up and dressed. In fact, his was, without exception, the mildest case I have ever seen. Some days after he got well and was out, I was called to see Mrs. K., on the 13th October, 1867. She then complained of having taken cold, as she thought, and, as she was then eight months pregnant, I merely prescribed a simple diaphoretic. The next day, when I saw her, she was in bed, and a slight eruption appeared to be coming out. The following day, the 15th, I pronounced the disease to be small-pox; she became delirious and very ill, so much so that I informed her husband that I would not be surprised if she should miscarry, and that probably the child would be dead-born, although her term of gestation was nearly ended. Dr. Campbell, of Gt. St. James's-street, saw her with me on the morning of the 17th, and corroborated what I had said. However she went on through the disease favourably enough, although the attack was a severe one, until the night of the 26th—the twelfth day of the eruption—when labour came on, and I delivered her of a fine healthy girl, without a spot or a mark of any sort on its body, much, I must say, to my surprise, as well as to the surprise of the nurse and friends. The lady made a rapid and excellent recovery, and as she had to accompany her husband to England in the February following, she requested me to vaccinate her baby. I told her I did not think it was requisite to do so, but she insisted upon it, and I vaccinated it in January, when it was three months old, but the operation failed. I then vaccinated it again about ten days later, but with no better success, and I have since learned that she has had it tried in England with a like result. I can answer for the genuineness of the vaccine matter I used, as it took well with other children, and I have no reason to doubt that the same may be said of that used by the medical gentlemen in England who tried to vaccinate it the third time.

"I may here state that Mrs. K. had been vaccinated when a child, and the two marks on her arm were very distinct.

"I will now explain the reason why I was surprised at the infant's being born alive and without a spot or mark of any kind, but with as

fine white or roseate skin as any child could have, and it is this, that in all the cases of small-pox in pregnant women that I have met with during the course of a large midwifery practice, both in the country and in this city, they all miscarried ; and the children, with this single exception, were still-born, and all were covered with the eruption. The cases you have published, now amounting to three—yours, Dr. Stranaghan's, and this one of mine—may become of importance on the question of vaccination and re-vaccination, of which we have still a great deal to learn."

Now comes a letter from Jas. L. King, Esq., of Prestonpans—

"SIR—On reading an article in last week's paper, being a quotation from the *British American Journal* on the *above* question, it might have passed unnoticed, but for me remembering that I could direct attention to a case exactly converse in most particulars to the one cited.

"I attended a Mrs. S., in May, last year, who had contracted small-pox in the seventh month of her pregnancy. The disease was of the confluent type ; she was alarmingly ill, and during my attendance I looked upon the case so seriously that I daily expected her to miscarry, fearing that this might only be part of the ills attending upon a portending issue. But, to my great surprise, she overcame the effects of the disease, made a favourable recovery, and went through the whole period of gestation. About two months afterwards (at the full time) she was delivered of a healthy child, whose skin was fortunately exempt from the characteristic blots consequent on the disease, and which so much disfigured the mother's countenance. Until vaccination had been performed, it had become an axiom among the neighbours that this little one would be positively proof against the disease small-pox, and vaccination was regarded as being unnecessary. However, there was no harm that could result from a trial. Accordingly, the child was vaccinated in the usual manner, and which took effect with complete success. I do not need to answer for the genuineness of the vaccine matter, as no one could doubt the characteristic appearance of the pustules, and the marks on the arm, which are perfectly distinct. It would appear, then, that this is a case diametrically opposite to the nature of those cases cited in the *British American Journal*, and may serve to confound and disprove a general opinion entertained on the question of the inertness and failure of vaccination in such cases, and which might be calculated to detract from the value of the unexceptional performance of vaccination upon every little child who is hailed as a new and living specimen of creation."

My next letter is from C. Rice, Esq., May 28th, 1861—

"SIR—A curious case of small-pox having presented itself lately in my practice, I beg to furnish you with the particulars for insertion

in the *Circular*, should you think it deserving a place in its columns, or of use to medical science.

"Mrs. G. Young, married woman, in her second confinement. She had an excellent labour, and was in due time delivered of a fine male child, but which, to my astonishment, was covered with pustules, and which, on near inspection, I found to be small-pox of the distinct type. The complaint appeared to be at its height, as the pustules here and there were becoming slightly black—the preparatory stage to scabbing. The infant appeared otherwise in good health, took the breast readily, and is now lively and well. And now comes what seems to me the peculiarity of the case. Ten days or a fortnight previous to her accouchement the woman became unwell; she had a pain in her back, and, as she expressed it, 'was bad all over.' On this occasion her friends thought proper, in the first instance, to call in a medical gentleman in the neighbourhood, who attributed the symptoms to great anxiety of mind, and derangement of the digestive organs in consequence. He gave her a little medicine and left, with instructions to send for him should she become worse. Almost simultaneously with the symptoms noted, an eruption appeared on the skin, scarcely perceptible to the touch, itchy, but containing no matter; neither was it followed by desquamation, but became hard, like small seeds, many of which she pricked out with a pin during the time of her illness. I had never seen her at this period, nor until I was called in to attend her in her confinement. She told me that she had taken several doses of castor oil.

"Now, two questions arise here—1st. Did this repeated action on the bowels exercise any influence in preventing the proper development of the disease or arresting its progress to maturation? and, 2nd. Was it thrown in on the child *in utero*, and which, when born, presented the disease fully formed, matured, and complete? Other important questions may be suggested in this case, but these, and the train of inductions arising from appearances foreign and without the beaten track of science, I shall leave to the pathologist and the practical demonstrator, whose business it more especially is to explain cause and effect, to unveil the arcana and mysteries of nature in health and disease, and to note her deviations and apparent contradictions."

The last letter I select on this subject is a short one from J. H. Wharton, Esq., Dublin.

"SIR—As the subject of small-pox in the puerperal state has been of late engaging your attention and that of your readers, I think it may not be amiss to forward the following case of interest for insertion, &c.

"Some few years ago, while engaged in discharging temporarily the medical duties of a friend, a dispensary officer in this city, I received a ticket to visit a female patient in his district. Before arriving at

her lodging I found that she had recently been 'delivered,' while labouring under a severe form of confluent variola. Her infant, to my surprise, was wholly unaffected with that disease, and perfectly healthy. I lost no time in vaccinating the latter, though only three days old, and with perfect success. The mother, in due time, recovered, and the infant was saved from impending danger."

In the *Lancet* of October 22nd, 1859, under *Medical Annotations*, there is a very able article on

THE NINETY THOUSAND VICTIMS OF SMALL-POX,

which says—

"The present moment is favourable for the statement of the vital economies of vaccination, and the exposure of the homicidal results of its neglect. Parliamentary petitions, reports of health officers, Privy Council returns, hospital statistics, and other such weighty but disregarded documents, have of late years incessantly attacked the public mind to little or no purpose. An ever-increasing mortality from a disease which human skill can annihilate testifies to the difficulty with which the simplest truths make way amongst the masses, when the appeal is made only to their reason.

"Fear and affection afford easier access, and have more potent sway. When the eye sees and the heart grieves, the understanding is easily convinced. A limited domestic endemic may work more strongly than unassailable logic, backed by distracting rows of figures. The closure of the Small-pox Hospital against the redundant applications, the outbreak of small-pox in poor houses, the notable invasion of some metropolitan parishes, and the palpable waste of some lives beneath our eyes, have awakened general interest in vaccination, and afforded an opportunity which it will be well to improve.

There are a few broad facts in relation to the mortality from small-pox and its preventibility by vaccination, which may be universally made known with considerable advantage. They have long been patent to many persons, and some of them are not stated here for the first time, but recapitulated as capital facts, well pointed, and such as can be driven into the thickest heads.

The number of deaths from small-pox in England, Ireland, and Scotland, in the last ten years, is estimated at 90,000 souls. It has been proved that amongst persons of all ages protected by vaccination, soldiers, sailors, and ship-boys in England, the deaths are only about one in 5,400 annually. Amongst sailors, who are the least exposed to contact with unvaccinated people, the mortality was found to be only one in about 20,000.

In Denmark careful vaccination of the population succeeded wholly in removing the disease, and when this immunity was so far lost that at

the end of fifteen years it reappeared, its poison was so enfeebled as to excite little uneasiness.

Now, at the observed rates of death amongst exposed persons in England, had those 90,000 victims been duly vaccinated, not more than 5 per cent. would have died. We should have saved the lives of 89,675 persons during ten years; and in this calculation no allowance is made for progenic increase.

In no country in Europe (beyond the United Kingdom) which furnishes reports to the Epidemiological Society, is the average mortality from small-pox so high as in England and Wales. It constitutes about $1\frac{1}{2}$ per cent. of the mortality from all causes, and in nine years, from 1848 to 1856, killed 41,290 persons, or 4,587 every year.

In 1857 an alarming increase of 1,659 upon the deaths of the preceding year was noticed by Dr. Farr.

The mortality in England and Wales is three and seven-fold the average of Bohemia or Lombardy. If we could see it surpassed, we must look to the sister kingdoms of Scotland and Ireland, where even the deplorable loss which we suffer is too favourable a standard of comparison, and the mortality of our worst years is habitually exceeded.

In his last report, the Registrar-General for Scotland says:—

“ Bearing in mind that the proportional mortality in London has never during the last ten years attained 3 per cent., we read with amazement and regret that in Aberdeen, in July, 1856, small-pox caused 10 per cent., in Edinburgh $5\frac{1}{2}$ per cent., and in Paisley 5 per cent. of the total mortality. The deaths in Paisley, in October, constituted 7 per cent., and in February upwards of 13 per cent. of the total mortality; while in Leith, the deaths in January and February were no fewer than 28·3 per cent.”

Thus, if we wish to find a country in which the preventible pestilence of small-pox is allowed to rage more freely than in England, we are compelled to turn to Scotland. And if the Scotch should seek consolation in looking out for a nation more negligent and more suffering than themselves, they will find only one in Europe—the people of Ireland.

As much as we are behind continental nations in vaccination—as much as the Scotch are below us—are the Irish people more unfortunate in this respect than the Scotch. Ireland is stated to be the only country in Europe in which the people are left entirely to themselves as to vaccination, and are permitted either to neglect or subject their children to the process as they please.

In an excellent paper, which Dr. William Moore, of Dublin, read at the meeting of the British Association, Aberdeen, “ On the Statistics of Small-pox Vaccination in the United Kingdom, and the Necessity for a Better System of Vaccination in Ireland,” he forcibly

recapitulates these facts, and shows that the mortality of Ireland is nearly three times that of England, twice that of London, and ten or fifteen times greater than that of many continental countries. Ireland alone, amongst European countries, is devoid of a registration of births, deaths, and marriages. This boon, long promised and often deferred, may confidently be expected next session from the hands of Lord Naas, and under the auspices of the Earl of Carlisle. It is this which Dr. Moore wishes to see the base of operation for vaccination. His paper is well arranged, and stored with facts; his scheme good, so far as it goes. At present Ireland suffers more profoundly than any other European country from this horrible and disgraceful scourge; and it is but once in ten years that she can examine her wounds, and judge of their extent.

A quotation from a letter by W. E. C. Nourse, Esq., F.R.C.S., will not here be inappropriate. He says, "have the virus taken frequently from its natural source." Vaccination from the cow would be a most important means both of restoring confidence in the process, and of insuring its efficacy and safety. Our present supply is taken from exactly the wrong source—the towns. Whether with Dr. Gore, we obtain vaccine virus from the cow, or whether by some organisation (I care very little what) we can ensure a constant supply of good recent lymph, taken from healthy children living in the pure air of the country, one thing is certain, that the *country*, not the town, is the proper source from which a supply of vaccine should be offered to the public.

N.B. I have never read "an account" of *the origin of cow-pox*, for which, some years ago, the Imperial Academy of Medicine of Paris appointed a commission.

I will close this part of my subject by copying a letter to the editor of the *Times*, by N. B. Ward, Esq.:—

"SIR—During the last few weeks the question of small-pox and the protective powers of vaccination has produced much excitement in the metropolis and elsewhere.

"Having been a vaccinator of the National Vaccine Establishment for forty years, and having during that period vaccinated above 43,000 persons, I feel justified in expressing my entire conviction that vaccination *properly performed* is as effective a preventive of small-pox as small-pox itself is. Two points of inquiry have always engaged my attention—the one as to the occurrence of small-pox after vaccination; and the other as to the number of persons re-vaccinated. The information given me can, of course, only be considered as approximative to the truth, but I believe that less than a hundred cases of secondary small-pox (none of them fatal) have taken place, and that not more than 3,000 out of the 43,000 have been re-vaccinated, proving to my mind most satisfactorily the delu-

sion of the idea that the protective powers of vaccination are diminished or worn out in the course of time.

"I have no faith in limited protection or in limited liability, and have always imagined that one perfect vaccination was sufficient, but, inasmuch as one cannot always be aware of disturbing causes which might interfere with its efficiency, it is, I think, desirable to have a second vaccination to test the security of the first. But it is of no moment whether such second vaccination takes place after the lapse of a fortnight, or of any number of years. Should the second vaccination present the usual modified conditions observable after the successful vaccination, the patient, I believe, never requires the operation to be again performed, but is safe for life."

I think it will appear, from what has been said, and, indeed, in all future experience—that the actual value of vaccination is immense, and that its attendant dangers bear no proportion whatever to the amount of good conferred upon society at large. I do hope that the consideration now being taken by the Privy Council may result in an effectual and satisfactory administration thereof,—in a mode that will please and do justice to, not only the public, but also the profession, whose services, I regret to say, are too frequently underrated.

There remain two questions yet unanswered, in a direct and conclusive manner, which, I think, might really form subjects for another essay! They are—

First,—Do persons saved from small-pox by vaccination die of any other diseases? or, rather, are persons saved by vaccination from small-pox *more* liable to die of *other* diseases than *unvaccinated* persons,—that is, when the *lethal force* is stopped in one form does it not assume another?

The second question is—Are persons as liable to contract small-pox from others, who, although duly vaccinated, yet take the disease, as they would be from those *not* protected by vaccination?

In answer to the first question, all I can say at present is, that we may have *typhus* fever supervening on *typhoid* fever, but I do not for a moment believe that the design of vaccination is ever frustrated by such a dire result, for I do not believe that two specific diseases can be RAGING at one and the same time in the human constitution, and after what has been said, proved, and inferred, it would be most unfair for me to say that any patient of mine died from scarlatina, typhus, or any other malignant disease because that patient had been *vaccinated*, and did not die of small-pox. It appears to me that it would be just as reasonable to say that a person who lost his life by a railway accident did so because he had just previously been saved from drowning. We know we are all more or less liable to die of any one disease. We know that disease is the consequence of sin, and that the wages of sin is death; but we cannot always say how it

is that one person takes a disease and another does not, although both should be apparently subjected alike to its influences. We are told that one shall be taken and the other left; and we are told in the 15th and 16th verses of the 26th chapter of Leviticus—"And if ye shall despise my statutes, or if your soul abhor my judgments, so that ye will not do all my commandments, but that ye break my covenant; I also will do this unto you; I will even appoint over you terror, consumption, and the burning ague, that shall consume the eyes, and cause sorrow of heart; and ye shall sow your seed in vain.

There is also a remark made in "Scott's Bible" on the 27th verse of the 5th chapter of Numbers, that—"The Jews have a tradition that the adulterer also would die of a similar disease at the same time; which, probably, was not altogether unlike the loathsome distemper with which God has in these latter ages shown His abhorrence of lewdness; yet it was far more immediate in its effects."

The second query, I think, may be pretty summarily disposed of, for it is well known that all persons almost invariably have the disease in a very mild form after having been duly vaccinated, that the disease has, to a very great extent, lost its malignancy, and is comparatively inert in its contagious capacity,—as well as in its virulence,—so that, I believe, the answer may be given, *that the disease acquired by a person UNprotected by vaccination is decidedly of a far more infectious character.*

As to *methods* of vaccination, every one has his own. In the author's experience a few slight scratches with a *sharp-pointed* lancet, quickly performed, is as effectual as any, although *punctures* are sometimes requisite.

A very ingenious instrument, for vaccinating, has been invented, which those can use who choose. It is described in the *Circular* of 7th November, 1860.

Did opportunity permit, I should have much liked to have touched upon a few subjects, such as—Coroner's Inquests, Dispensaries, Sanitary Reform, GENERAL *Re-vaccination*, &c., &c., and to have quoted some remarks by Dr. Willems, a Belgian physician, on "Inoculation for Pleuropneumonia in Cattle." He has tried it, evidently, with marked success,—in 1851.

A comment is made upon his remarks in these words:—"This statement is curious and suggestive of many things in connection with various other diseases."

VACCINATION VERSUS INOCULATION.

The late Dr. Rigby, of Norwich, tried an experiment on his own daughter, æt: ten years. He *vaccinated* the arm and foot of one side, and *inoculated* the arm and foot of the other side. The vaccination succeeded—the inoculation died away.

I may here state that I am one of four children successfully vaccinated in infancy, and not one of us was ever re-vaccinated. We were all particularly healthy, except my brother, who was weakly born, but who lived to manhood, and was killed at sea. My wife is one of nine children, who are all in years, and well, and who were all vaccinated or inoculated, and although, like myself, much exposed to small-pox, never took the disease—save one, a girl—who took the disease at school, and had it very favourably. Another child, much older, slept with her sister and would be (although vaccinated) *inoculated* from her, but did not take the disease.

Before relinquishing my pen I cannot refrain from alluding to Dr. B. W. Richardson's recent pamphlet on "The Poisons of the Spreading Diseases." J. Churchill and Sons, London. He says—"They may be isolated and kept for years," &c. Now I have vaccinated with vaccine virus which I have kept in my possession *nine months*, with perfect success; and I am now particularly interested to know the effect of some matter I have had for nearly a quarter of a century, which I have just used upon a child four months old!!

Not long since (in a case of urgency), I vaccinated a little girl, aged four years,—with two points of matter I took from a scab on the arm of a child I vaccinated *thirteen* days previously. Although there was *no appearance* of matter on the points, yet they produced two regular and good vaccine vesicles. Although this, as a practice, is not commendable, nor generally likely (perhaps) to succeed, yet it was in this case a fact.

I may have said that I am one of four children somewhat young
 raised in Idaho, and one of us was very educated. We
 even all had Latin, except my father, who was very
 poor, but who lived in a small house and was killed at sea. My wife is
 one of nine children, who are all in Texas and well and who are all
 educated or uneducated, but although the mother is a good one, she is
 small and poor, but the father was a good one, who was the
 owner of a school and had a very large family. Another child, much
 older, who with her father and mother is (although a native)
 educated from her father's school in the States.

Before mentioning my son I cannot refrain from alluding to Mr.
 B. W. Williams, a recent graduate of the University of the Pacific,
 Oregon. J. Campbell and John Jackson, his wife, I have met
 he has been and says he was. Now I have concluded with
 you in this which I have said in my previous ones, which with
 great pleasure, and I am very particularly interested in, I have the
 effect of a very small house, but he says a great deal of a building,
 which I have said to you would be a good one.

It is very true, as a matter of fact, I mentioned a little bit of
 how much I have said to you in my previous ones, which with
 of a child I mentioned to you in my previous ones. Although the
 no mention of any of the things I have said to you in my previous
 and good results. Although I have said to you in my previous
 mentioned, and generally like (perhaps) to mention, for it will be the
 case a fact.

A P P E N D I X.

Since writing the above, a new Act of Parliament has been passed, called "The Compulsory Vaccination Act." By this time it is generally known, but it is not so generally known that it is unsatisfactory and partial. We, as a body, do not complain of vaccination being made compulsory, for this is fair for all, but we do complain that since public vaccinators are appointed, chiefly or altogether selected from the parochial officers, we are deprived of equal benefits accruing from this branch of practice! But, on the other hand, I do not see how the Lords of the Privy Council could have done better, for if we were all constituted "Public Vaccinators" (according to the meaning of the act), all persons nearly would require us to vaccinate *gratuitously*. We must, therefore, be content, I think, with the present arrangement, and charge our own patients a fee in accordance with their positions, *ut olim!* In my own practice I find mothers prefer paying me half-a-crown to taking their child to the public functionary.

An extract or two I copy below show that vaccination is not approved by all, either in the profession or out of it. But this is not to be wondered at, seeing there will be opponents to almost any enactment, although intended for the good of all. I hear, at Darlington, in particular, when the small-pox was prevalent a short time ago, that parties went about and personally, and by means of placards, tried their utmost to dissuade parents from having their children vaccinated, who apparently succeeded to a considerable extent, inasmuch as a vast many died of that dread malady who were unprotected by the only prophylactic we possess! Of course, I need here say nothing of general sanitary and sanitory measures being thoroughly attended to, we all know these are most essential at all times, and especially during the prevalence of any epidemic. I believe the fact recorded above was made patent both by Mr. Pease, M.P., and expatiated on by S. E. Piper, Esq., of Darlington, Medical Officer of Health.

I need not in this little summary mention the names of medical men who are in favour of vaccination, suffice it to say that everywhere they constitute *a very vast majority*.

The extracts I refer to are the following:—the first, taken from *The Eastern Post*, headed—

A SURGEON REFUSING TO COMPLY WITH THE VACCINATION ACT.

“At Bow-street, Dr. S., M.D., M.R.C.S., &c., was summoned for unlawfully neglecting to “take or cause” his child to be vaccinated without reasonable excuse. The proceedings were issued at the instance of the Board of Guardians of the parish of St. George, Bloomsbury, under the Act 30 and 31 Victoria, cap. 84.

“Dr. S. pleaded guilty, and stated that his objection to comply with the act was founded on a conscientious belief that vaccination is injurious. During a practice of fourteen years he had seen terrible results follow from the adoption of this system, and the worst cases were those in which the patient had been vaccinated twice and even three times. So far from being prophylactic, it was a great cause of the propagation of disease. He therefore refused to vaccinate his own or any other child. With regard to his own child, a perfect healthy boy, he preferred to accept any ills with which Providence might visit him, rather than by his own act incur others, of the extent of which neither he nor others could have any knowledge.

“Mr. Flowers said he was reluctant to impose a penalty upon any one whose refusal to comply with the act was based upon a scientific objection, but he was afraid he had no power to give force to such an objection. He had only to administer the law, and he must impose a penalty.

“Dr. S. was quite aware of that. He came to court under the impression that the magistrate could only deal with the law as it stood, and until it was altered by legislative enactment he was willing to abide by it. He said the law prohibited inoculation, also under penalties, and yet the present system of vaccination was really a form of inoculation. As a rule the matter was conveyed from child to child, and he could not see how it was improved by being passed through the cow again. There was not a medical man in London who could conscientiously say that he had seen any original matter, even as much as one pustule, for the last forty years.

“Mr. Flowers said he had seen in the *Lancet* an advertisement that matter was to be obtained direct from the heifer, and he had naturally inferred that it was original matter.

“Dr. S. said that was not so. It was produced by vaccinating the heifer from a child, and probably had been passed from child to child

for years. There was no original matter to be found except, perhaps, in some very remote places.

"Mr. Flowers said he was compelled to fine the defendant, but instead of imposing the full penalty of £1 he should mitigate it to 5s. He feared, however, that Dr. S. would be summoned again and again.

"Dr. S. said he had no doubt of it. He was quite prepared for that.

"Mr. Flowers observed that Dr. S. would probably be compelled to have the child vaccinated at last.

"Dr. S. said he did not think so, and paid the fine."

With reference to the above the *Telegraph* says "that the question of the benefits of vaccination raised by Dr. S. at the Bow-street Police-court is, no doubt, as important as it is complicated; and those who impugn the utility, or safety, of vaccination certainly should not be discouraged in their conscientious endeavours to get at the whole truth about the subject. Yet, with every respect for the courage and professional sincerity which such inquiries display, the *Telegraph* affirms the justice of legislation in such matters, and peculiarly approves the conduct of the magistrate who enforces the law. Statistics and the common experience of mankind have hitherto upheld the conviction that vaccination has effectually mitigated the horrors of small-pox. Its virtue may be irregular, its action mysterious and unexplained, but it has certainly had the effect of arresting one among the most awful persecutors of our race. Such being the case, the State unquestionably has a clear right to act upon its provisional experience, and insist that the best known method of saving the world from small-pox shall be universally adopted. The rule for storing petroleum is strictly in point. We do not allow that inflammable oil to be kept in bulk near to crowded habitations, because the private right threatens a public damage. The proprietor of the oil does not, and cannot say, that he will be careful, or that he has a process formaking the combustible safe—he obeys the law, otherwise he is punished."

The following I copy, *verbatim*, from the *Clerkenwell News*, 17th May, 1869:—

"COMPULSORY VACCINATION LAWS.—PUBLIC MEETING IN ST. PANCRAS.

"A public meeting of the inhabitants of St. Pancras parish was held in the Vestry-hall, King's-road, on Thursday evening last, to consider the operation of the present vaccination laws, and to petition for their repeal. There was a very fair attendance, and the various speakers were listened to with great attention. M. A. Garvey, Esq., LL.B., presided on the occasion.

"The Chairman, in opening the proceedings, said the subject they had met that night to consider was one of great importance to the health and happiness of the community. He did not know why he had been asked to take the chair, unless it was that his friends who had got up this meeting thought that he had got some experience in the conduct of public meetings, and would therefore be able to guide it aright. He had not made up his mind with regard to vaccination, nor had he studied the statistics connected with it sufficiently to come to a conclusion on the question. The advocates of vaccination said there was a certain germ in the blood of the human being which developed itself in the form of small-pox, and that if the blood was impregnated with something of a milder or more benign character that persons would be protected from the small-pox, or at least have it in a milder form. They asserted that vaccination was a prophylactic to the small-pox, and kept the individual from ever having it afterwards. In support of these assertions they state that the number of cases of small-pox has very much decreased, and that it is an ascertained fact that deaths from small-pox are considerably fewer than they were before vaccination was discovered. They also allege that persons are very rarely seen now marked with the small-pox, while at the commencement of the present century it was very common. They thus conclude that vaccination greatly mitigates or prevents small-pox, and that the disease is contagious to the whole of the neighbourhood in which a case might occur. Therefore they say that vaccination ought to be made compulsory for the protection of the public. Those who are opposed to vaccination say that there is no such virus in the blood, and that small-pox is caught by persons being in such positions and places as to render them liable to it, and that vaccination cannot be a prophylactic to the small-pox. They assert that in taking the lymph from the arm of one human being and introducing it into the blood of another, they are in danger of introducing some other disease as well, and that the decrease of cases of small-pox are fairly traceable to sanitary improvement. They also maintain that to compel a man to have his child vaccinated when he does not believe in it, to compel him to do that which he does not think is right, is to infringe on the sacred right of an Englishman to reign supreme in his own household. He had put both sides before them, and after they had listened to the various speakers, they could then determine whether they would vote for the petition to Parliament or not.

"Mr. R. B. Gibbs (honorary secretary of the Anti-Compulsory Vaccination League) said it was his lot to address meetings under various circumstances. He was at a meeting the other day at Luton, where a letter was read from a gentleman who was to have taken the chair, asking them to excuse his absence through domestic affliction. He

afterwards ascertained that the gentleman had a child at home who was blind through vaccination, and that he could not attend the meeting as he feared his feelings would overcome him. The gentleman who took the chair subsequently could also mention instances in his own family where vaccination had produced disease. But although their chairman on the present occasion did not seem able to bring forward any case of injury through vaccination in his own family, still he had set the case very plainly before them. It was said vaccination had caused a decrease in small-pox. They must remember that inoculation, which was based on the assumption that everybody must have the small-pox, was believed to do the same thing. Now, when their immediate progenitors found out that it was a great mistake, they left off inoculating, and the marks of small-pox became less. He apprehended that before an Act of Parliament was made to carry out a certain practice they ought to be sure that there was something certain about it. It was a common thing for medical men in the country to say there was no pure lymph in the neighbourhood, and that they would send to London to get some from the cow. They had it on the authority of Dr. Seaton that nine-tenths of the lymph used was humanised lymph. In Italy the evil effects of using this humanised lymph were so fearful that they had actually passed a law that the lymph should only be got from the cow, which was directly opposite to the plan pursued in this country, which was arm to arm vaccination. The people were left altogether in a state of uncertainty. There was no such thing as pure lymph. He had no objection to medical men continuing their search for it, for if they did not find that, they might find something else, like the persons who searched for the philosopher's stone. But all he wanted was, while they were looking for it, to let the people alone. They made the legislature who made the laws, and they ought to be careful to return men who would not legislate for them blindfold. The practice of vaccination was not established on any rational or scientific principle. Yet it was said some time ago by the leaders of the medical profession that it was a protection from small-pox for life. He knew that medical men now denied that such a statement was ever made. But Jenner said positively that it was so. Now it was said a person must be vaccinated every seven years, and some say it is necessary to have it performed every five years. Jenner used to vaccinate his patients every year in order to keep them safe. This was a proof of the uncertainty which surrounded the question. With regard to the matter of compulsion, many great men had opposed as unconstitutional. Wilberforce, the emancipator of the slaves, said it would be absolutely wrong to compel it. Sir Francis Burdett said that the Government had not the power in this country, as in other countries, to compel people to submit to medical prescriptions, and

also added that he doubted whether medical science would be better if it were placed under the care of Government. The speaker then referred to the cattle plague, and the small-pox in sheep, and stated that although vaccination had been resorted to, they were afterwards compelled to use the pole-axe and the knife to put a stop to the spread of the disease. He then informed the meeting that he and his friends stood there that evening in great jeopardy, as they had been threatened with a prosecution for conspiracy to defeat an Act of Parliament. But they did not care for that. This coercive legislation was the growth of the last few years. The poor were told that vaccination was performed gratuitously. All he could say was, that some of the vaccinators made large sums of money out of their gratuitous work. Very heavy bills were sent to boards of guardians for payment. The boast of its being done for nothing was all moonshine, for there was no such thing as gratuitous vaccination. Dr. Lankester, who had held inquests on children who had died from small-pox, and who were not vaccinated, wanted juries to return verdicts of manslaughter against the parents for neglect, and, failing to get them to do so, to return verdicts that they died from small-pox, accelerated by their not having been vaccinated. He should like to know why the coroner did not hold inquests on children who died from small-pox having been vaccinated. In some cases it would be found that vaccination had accelerated the death. If, at any future time, they would like to have another meeting he should be glad to attend and address it. He then read a letter from Dr. S. (mentioned in the previous extract, apologising for his absence, and also from Dr. C., a member of St. Pancras Guardian Board, which was as follows:—

“I am sorry I cannot attend the meeting this evening, and take part in the discussion upon compulsory vaccination laws. My views, however, are generally known upon the subject, and I fancy are beginning to be recognised, both in this and other parts of the world, for I have just received a copy of my essay in German, published at Berlin. It seems to me strange that at the bidding of one man (the medical adviser of the Privy Council) we should be compelled by Act of Parliament to give our children a positive disease in expectation that it will prevent another, which may be very remote, and in all probability never take place at all, and even providing it does, it would be far more rational to treat it upon natural principles.”

“Mr. Whiddon then proposed the following resolution:—‘That this meeting is of the opinion that the practice of transferring disease from one human being to another by means of vaccination is unnatural, and that to enforce such an operation under pains and penalties is a gross violation of parental rights.’ He said the subject of vaccination was one in which he had taken a great interest for the last sixteen years. He had a child which was

vaccinated when eighteen months old, and shortly after it broke out in an eruption, and became one lump of matter, and when he took it to the doctor he was told it was the result of impure virus. He did not know the fallacy of vaccination then, and shortly afterwards he had another child vaccinated. In about a month it lost its appetite, became pallid and thin, and had no strength to stand up, although before the vaccination took place it was a very healthy child. After that he made a vow that whatever happened, even if he should be put in prison, he would never have another child vaccinated. He had kept his word, and had been often threatened with prosecution, but he had always replied that he should be glad to be the first martyr in such a cause. It was a most serious question, and one far beyond that of taxation, as the one only affected the pocket, while the other destroyed health. He did not speak from theory, but from his own experience. He would advise every one not to have their children vaccinated.

“Mr. Halket seconded the motion.

“Dr. Pearce in supporting it, said he looked upon vaccination not so much as a medical subject as a people's question. It ought to be entered upon anew, and an inquiry made into it. He could cite instances in which antagonism and resistance to law had been justifiable. If an agitation had not been entered into against church rates they would not now have been repealed. If they had depended upon the clergy they would have remained unrepealed to this day. He wished the meeting to join this society in resisting a law which was barbarous and unnatural. Parliament awarded £30,000 to Jenner for his discovery before sufficient inquiry had been made into it. He objected on medical and physiological grounds to the infusion of exuvie from diseased animals in a healthy child to protect it from a disease which it might never have. He had never known an aged person healthy who had been vaccinated, but, on the contrary, many aged persons attributed their longevity to having had the small-pox in their childhood. Since vaccination had been practised the mortality had increased, while it ought to have decreased if vaccination had saved so many.

“The motion was then put and carried.

“Mr. Berry then proposed that petitions for the repeal of the present vaccination laws be presented to the House of Lords and the House of Commons, and that Lord Shaftesbury be requested to present the former, and Mr. T. Chambers, M.P. for Marylebone, the latter, and that the chairman sign them on behalf of the meeting. He said he hoped they would all agree to these petitions to Parliament against the Compulsory Vaccination Act. If he had a thousand children he would do all he could to prevent their being vaccinated. If the money spent on vaccination was expended on sanitary improvements, there would be less small-pox.

"Mr. Varley seconded the motion. He considered it un-English and unconstitutional to compel persons to do that in which they did not believe.

"After a few words from Dr. Reed and Mr. Burns in support of the motion, it was put and carried unanimously.

"Mr. John Morrison, of the British College of Health, then proposed a vote of thanks to the chairman, which being seconded, was put and unanimously carried, and the chairman having briefly acknowledged the compliment, the meeting separated."

Another meeting has been held at Whitechapel (in opposition to Compulsory Vaccination), which sent deputations to both Houses of Parliament.

"The Chairman of the meeting said there could be no doubt that small-pox had of late years greatly declined, and that formerly it had acted as a deadly scourge and decimated the population of the country. On that point they were all agreed. They had now, however, to consider, in the first place, whether or not the decline of small-pox was to be attributed to the introduction and prevalence of vaccination. There were a great many of his friends who altogether denied that the decline of small-pox was in any way to be attributed to vaccination. They held that the small-pox virus was of itself becoming weaker and weaker in the course of time, independently of the action of the cow-pox virus as a neutralising agent, and they went further and said that not only was vaccination useless as a preventive of small-pox, but that the practice of it had proved an active agent in the production of several new phases of disease.

"Dr. Pearce said he had, at one time, like so many of his medical brethren, been an advocate for vaccination; but his attention having been called to the subject, more particularly from a case that came before him in his capacity as medical referee to an assurance society, he had devoted his time to a thorough investigation of the subject, and he had long since come to the conclusion that the mortality of this country increased just in proportion as vaccination was enforced. He contended that the great increase of consumption in this country was the result of vaccination, and that in proportion as small-pox decreased, other diseases, such as diphtheria, bronchitis, scarlatina, &c., increased. He then read a variety of statistics, showing that thirty years ago, when vaccination was not so general, a child had a much better chance of living to its tenth year than it had now, when it was liable to many diseases almost unknown before vaccination was introduced. The original lymph of Dr. Jenner was obtained from the greasy hoofs of the horse, and this disease in horses was known to be the result of lung disease. It was not surprising, therefore, that diseases of the lungs were implanted in children thus vaccinated. From a large experience in fever cases, he found that unvaccinated

persons had a much greater chance of recovery than those who had been vaccinated. This was also experienced in the French fever hospitals. They must recollect, however, that while the enormous sum of £350,000 per annum was paid to medical men in this country for vaccination, it would require time and perseverance to overthrow the system.

“Dr. Reed moved the following resolution:—‘That this meeting, being fully convinced that the statement recently made by a police magistrate—namely, that millions of lives have been saved by vaccination, is unfounded in fact, pledges itself to support the Anti-Compulsory Vaccination League in its efforts to procure a repeal of the Vaccination Act.’ As an old physician, he denounced vaccination as one of the greatest humbugs and delusions of the day, which should be exposed and put down for the general good of society.

“Mr. Paterson seconded the resolution, which was carried with a few dissentients.

“A petition to Parliament, praying for a Parliamentary inquiry into the working and effects of the Compulsory Vaccination Law, was then carried unanimously.”

In reference to this meeting, the *Eastern Post* makes the following valuable observations:—

“THE ANTI-VACCINATION AGITATION.

“A singular agitation has been set on foot against the practice of vaccination. The papers have of late opened their columns to letters detailing all sorts of evils which are asserted to flow from the use of the pus of the cow as a preventive of small-pox. Last Monday a public meeting was held in Whitechapel, to pass resolutions condemnatory of compulsory vaccination, and to urge the propriety of abandoning the practice for good and all as not only useless but mischievous. This meeting was attended by clergymen and doctors, who thus lent the weight of their position to a movement which is as unexpected, as we are convinced it would prove disastrous if, by any misfortune, it should achieve even a temporary success.

“The chairman of the meeting, the Rev. Alexander Seton, admitted that which it would have been impossible to ignore—that in former times small-pox decimated the population of the country, and was a terrible scourge, more dreaded than any other disease known to Europe. Of late, this frightful affliction, he owned, had greatly declined, and had been in fact nearly eradicated. This statement was strictly in accordance with the facts, and if the rev. gentleman had stopped there he would have done well. But he went on to intimate that the eradication of small-pox was not due to the introduction of the system of vaccination by Edward Jenner, but to some

wholly fanciful mitigation of the severity of small-pox itself, owing to the virus becoming weaker through lapse of time. Vaccination was, according to him, perfectly useless as a preventive, and was in itself a fruitful source of disease. We take leave to say that a more groundless theory was never uttered, and that the public utterance of it before an audience little able to detect its fallacy constitutes a moral offence against the health of the community.

“What are the facts? Small-pox first became known to the Western races after the invasion of the Lower Empire by the Arabs under the impulse of their conversion to the Mahometan faith. The Arab hordes, which in the seventh century swept over so many Christian lands, brought with them their camels from the desert, and the deadly virus of that animal being communicated to man gave rise to the deadly plague which scourged Christendom without intermission or mitigation until the fortunate discovery of Jenner. Inoculation, indeed, a practice borrowed from the Turks and introduced into England by Lady Wortley Montagu in the early part of the last century, had acted as a palliative, but it was not until 1796, when vaccination was first tried, that any hope was entertained of mastering the evil which had afflicted Europe for a thousand years. During the lapse of ten centuries no one even observed what the Rev. Mr. Seton has now discovered, that the virus was growing weaker and less deadly year by year. The foul camel-poison was in truth as murderous in its effects seventy years ago as when first the semi-savages who overran the East introduced it amongst Europeans. But after the inauguration of the system of vaccination all became changed as if by a magic influence. Upwards of 36,000 persons had been swept off in London alone during the twenty years prior to the introduction of vaccination; in the twenty years subsequent, although the whole population was not, of course, subjected to its influence, the deaths from small-pox had been diminished by 14,000. That is, in twenty years the partial use of the cow-pox had saved in London alone 14,000 lives. And it must be borne in mind that death was not the only calamity that was averted. Incurable blindness, hideous disfigurement, and a whole train of minor evils were proportionately diminished. At the present day, in districts where vaccination is neglected, small-pox breaks out afresh with all its former virulence. When under the pressure of the danger vaccination is reverted to, the outbreak subsides. Yet speaker after speaker at the Whitechapel meeting did not hesitate to assert that vaccination was useless and an evil, and that the virus of small-pox had become milder in its own nature!

“It is not to be denied that there are many evils connected with the practice of vaccination as it is now effected. Diseases, it appears to be clearly proved, can be, and are, transferred with the pus from

an unhealthy to a healthy child. Children who were quite robust before vaccination have become sickly and feeble afterwards. But these are not the necessary results of vaccination; they are the consequences of carelessness. If due attention be given to the selection of healthy children only, as the sources from which the pus is taken for the inoculation of others, it is clear that no disease can be transferred with it. And if, as seems probable, the pus loses a portion of its efficacy by lapse of time, a new supply should be got at shortly recurring intervals from the original source—the cow itself. With these precautions the system of vaccination can be rendered as entirely harmless as it is beyond all question the sole means of encountering and destroying the fearful plague of small-pox.

The deputation above referred to waited upon Mr. A. S. Ayrton, M.P., who said "That he had paid great attention to the statements made and the evidence laid before him, and admitted that disease and death sometimes resulted from vaccination. He was himself opposed to the compulsory law, which he thought a mistake. He thought, however, that further evidence was needed in order to induce the Government to propose the repeal of the law. No doubt it was not always easy to obtain evidence of the facts which did occur under existing arrangements. He would with pleasure present the petition. It was said that deaths which had been caused by vaccination were not unfrequently certified as occurring from other causes."

A deputation from the same meeting waited upon the Right Hon. Earl de Grey, President of the Council, at the Privy Council-office, with the petition for the House of Lords, which was handed to the noble earl by Mr. J. Stephens. The Right Hon. W. E. Forster, M.P., was present, and among those composing the deputation were Dr. Pearce, Mr. R. B. Gibbs, hon. secretary to the Anti-Compulsory Vaccination League, Mr. J. Hilton, Dr. Reid, Mr. J. Watson, Mr. A. Emery, Mr. J. Morrison, and Mr. S. Turner.

"Dr. Pearce said that the recent meeting of the Medical Association at Leeds had supplied increased evidence of the dangers of the compulsory law. The injuries arising from vaccination were now admitted, and this meeting had shown that there was a division in the camp. Jenner had advocated vaccination from a cow inoculated with the greasy-heeled horse. But now the Privy Council doctors ordered an arm to arm vaccination under the Act of 1867. His own experience had shown the danger of introducing febrile matter. Jenner had secured £30,000 for securing immunity for life from the small-pox, yet 83 per cent. of the patients in the Small-pox Hospital at Highgate had been vaccinated. Mr. Simon said that vaccination diminished the mortality among those attacked, but Mr. Marson stated that when the small-pox was severe, the difference in the mortality of the protected and the unprotected was only 2 per cent.

Dr. Copland, in his 'Medical Dictionary,' stated in 1823 that the protection was impaired in from nine to eleven years, and that in fourteen years after vaccination liability to the severe forms of small-pox returned. Re-vaccination had been resorted to, and had often failed. In India vaccination had utterly failed, and there the small-pox made no difference between the vaccinated and unvaccinated. He considered that no disease of a lower animal could be a protection to the higher animal. Jenner attributed failures to the decomposition of the matter; but on inquiry he found that they had had no fresh virus for forty years. Within thirty years only one farmer had seen spontaneous cow-pox. It was not long since two children had fallen beneath the one lancet, they having died in consequence of vaccination by Dr. Allen, of Soho. During the months in which it was performed, there was a terrible mortality of infants, which was set down to erysipelas—a disease which had always been considered a disease of adults. The mortality of infants was on the increase, and there had been no diminution of the general mortality since the introduction of vaccination. Diphtheria was a disease unknown before vaccination. He thought they had made out a case for the Privy Council to interfere, and recommended to Parliament the repeal of the act. Austria and Bavaria had repealed the compulsory laws; in France the Academy had recommended that parents should be left to exercise their own judgment. The compulsory law had been repealed in Prussia, and they were considering there whether the re-vaccination of recruits was justifiable. The other day in the east of London four cases of small-pox had occurred. Two of the sufferers who had been vaccinated died of the disease, while the other two who had not been vaccinated recovered. Fifty years ago we had little consumption, and now thousands died of this disease annually. It was a mistake to attribute the dying out of small-pox to vaccination. Plague and leprosy had died out, and small-pox would have died out but for inoculation. From 1796 to 1825 there had been no epidemic of small-pox, yet 18,000 persons were then vaccinated. When small-pox was epidemic the general mortality was less, for measles, scarlatina, &c., were then less virulent. He recently learned from a South American gentleman that consumption had become prevalent in his country since the introduction of vaccination. In the Northern States of America, where vaccination was general, the race was degenerating, while in the Southern States, where vaccination was not adopted, the people did not deteriorate. He considered vaccination a crime against nature, and a serious endangering of the public health.

After some remarks by Mr. R. B. Gibbs and Mr. Emery,

"Dr. Reid said he felt so strongly on the subject that he was obliged to recommend parents not to have their children vaccinated, and he did

what he could to protect them by giving certificates. It was his opinion that no child was in a fit state to be vaccinated. We should submit to just laws, but there was not a just law which required us to expose a child to immediate danger to guard against a remote contingency. It would be a gracious act on the part of any Government to yield in such a matter.

"Mr. Morris said the doctors of the Privy Council ought to be indicted for poisoning the nation.

"Mr. Watson said his experience with a large family had been that he had buried seven out of eleven, and attributed their deaths to vaccination. Sixteen or eighteen years back one of the finest little boys that could be seen had been vaccinated at eighteen months old, and was covered in a short time with disease and scrofula from head to foot. He died of decline at three years and a half old. He hoped the prayer of the petition would be considered by Earl de Grey and his colleagues, and that the compulsion would be withdrawn.

"Mr. Stephens mentioned the case of a woman, the mother of a child, named Phœbe Faulkner, who had died at four years of age after vaccination. Another child who had not been vaccinated had never needed a doctor. In another family three had been vaccinated and had died, three others not vaccinated were now in good health. He mentioned several lamentable cases attributed to vaccination. He could have got as many such cases as he wished. He considered that the personal liberties of the people were violated by the compulsory act, which was a direct attack upon the personal liberties of the subject.

"Earl de Grey said that he must tell them that he did not agree with their views. The deaths of so many children after vaccination did not prove that they were caused by vaccination. As to the petition, he saw that it was respectfully worded, and he made it a rule when that was the case to present such when asked. He had no objection to present this though he did not agree with the prayer."

On this the *Eastern Post* thus judiciously animadvert:—

"THE PERVERSE AGITATION.

The deputation appointed by the Whitechapel meeting to urge upon the Government the propriety of letting small-pox alone, waited on Mr. Ayrton on Monday, and on Earl de Grey on Tuesday. A number of gentlemen denounced vaccination as the source of all the ills that mortal flesh is heir to. Diphtheria was a disease unknown before vaccination, said Dr. Pearce, with great truth. So was the cholera morbus, he might have added. And so was the cattle plague, not to mention the bank failures of 1866. Another of that learned doctor's arguments was equally brilliant. Adverting to the statement

of Mr. Simon, that though persons who had been vaccinated were sometimes attacked with small-pox the mortality was less in their case than with those who had not been so treated, Dr. Pearson quoted a gentleman who said that when the small-pox was severe the difference in the mortality was quite inconsiderable. This was about tantamount to saying that when a vaccinated person died of the small-pox he did not recover. The small-pox when severe is pretty sure to kill; the advantage of vaccination is that it generally renders the attack less severe, when, from some cause or other, it does not avert it altogether. Dr. Reid did not trouble himself much with reasons; he considered vaccination an evil, and he therefore gave certificates to his patients for the asking—the end quite justifying the means, in his opinion. To the cases of death ascribed by afflicted parents to the vaccination of their lost little ones we will not allude, for we do not desire to wound the susceptibilities of those who suffer, no matter what the real cause of their suffering may be. If the mortality of children be in any instance due to the transfer of disease from a sickly to a healthy child, it is the more sad because it is clearly preventible by proper care on the part of the medical man and of the parents themselves. But if it be true some lives have been needlessly sacrificed, it must be borne in mind that by putting an end to the ravages of small-pox vaccination has preserved from death, and disfigurement, almost worse than death, myriads of children out of all proportion to the number of those who may perchance have fallen victims to the means taken for their preservation.

The *Lancet* remarks:—

“ Mr. R. B. Gibbs is a lecturer against vaccination, and in any given deliverance on the subject he manages to talk a great amount of nonsense. At Whitechapel the other night he thought it a most suspicious circumstance that in Bethnal-green, the best vaccinated district in London, the cholera had been most prevalent! Does he mean that vaccination gave them cholera! If so, Mr. Radcliffe and Sir William Jenner had better immediately reconsider all the hard things they have said about the contamination of the East of London water, to which they unhesitatingly attribute the definite and circumscribed outbreak of cholera. Mr. Gibbs then quoted at great length to show that vaccination did not prevent small-pox, which everybody knows to be untrue, if we practice enough of it. Doctors attend small-pox patients with impunity by re-vaccinating themselves, and for thirty years not one of the nurses of the Small-pox Hospital has taken the diseases, because they are all re-vaccinated. A few medical men threaten just now to rise on the top of the anti-vaccination wave into a prominence which in any scientific direction they are not likely to attain. Dr. Pearce told the Whitechapelians that if vaccination had diminished the deaths from small-pox, it had at the same time

been the means of increasing mortality from other diseases. We implore the public not to believe such statements. If they have any shadow of a scientific foundation, it is in the fact lately made prominent by Dr. Farr, that, though by the beneficent operation of vaccination the mortality from small-pox has been immensely reduced, the infantile mortality of our large towns still continues unabated. Surely that is no reason for bringing back small-pox to complicate the horrors and sufferings of the poor in such places as Glasgow and Liverpool. Typhus and scrofula and rickets are bad enough without small-pox. If these philosophers had any wisdom they would cry aloud for remedies against typhus and scrofula and rickets. They would not decry one of the most beneficent discoveries of the world. How differently does Dr. Farr speak, 'Vaccinate by all means; but at the same time provide streets, spaces, dwellings, water, drainage.' In another paragraph Dr. Farr says, 'Vaccination should be universal to be really successful.' To despise vaccination because it does not save from scrofula as well as small-pox, is as rational as it would be to despise bread because it is not also water."

In conclusion, I have thought it best to add what I intended should have been a Preface, but which was too late for insertion in its proper place. It is as follows:—

Two years since the Ladies' Sanitary Association offered a premium of £100 for the best essay on vaccination. It occurred to the mind of the writer of the above compendium to be one of the competitors, who soon became sensible of the difficulty of writing a treatise on so important a subject, but having once begun *the attempt*, the pervading sense of his inability did not deter him from perseverance, hoping, perhaps, that he might possibly arrive at some conclusion or suggestion that would be of use. The majority of the writers were in favour of vaccination, but there were some opponents.

One of the essays was published by a lady at her own expense, which endeavoured to show both sides of the question, but by no means in a final and decisive way. The author, eventually determining that the trouble and time he bestowed upon *his attempt* should not prove altogether abortive, resolved to attempt its publication, by subscription, with some additions collected from time to time, and in soliciting the co-operation of the faculty and friends, begs to apologise for all "faults and failings." At the same time he hopes that every patron will kindly inform him whether he is also in favour of vaccination or not.

With regard to *compulsory* vaccination, it is earnestly to be hoped that nothing will induce the Privy Council to rescind the law, for it is most desirable it should be—for the "first time"—fairly tried, and moreover it is "fair" to all. There seems to be but one objection, and that is the insisting that the child should be vaccinated before it

is three months old. It had been better if a longer time had been specified, say from four to six months, and this for the reason maintained herein. It must also be admitted that the greatest care should be taken, not only, as has been before observed, in selecting *virus*, but also in selecting and appointing public vaccinators, and perhaps also it may be advisable to appoint a duly qualified gentleman as inspector over all.

The writer is very anxious to glean all the information possible before the book is printed, which accounts for the length of the Appendix, in which, it will be seen, are several extracts from various journals up to the present time. Many of the objections to vaccination will be there seen, some of which may be well founded, whilst others are frivolous. In one case a father told a magistrate that he objected to vaccination on principle. The ill effects of it had been made manifest to his own family, and he had declined to have his child vaccinated because he believed it would not be beneficial. Another parent said she was desirous not to have her child vaccinated, a former child, a girl, who was perfectly healthy before being vaccinated, having immediately afterwards become covered with eruptions over the whole body, and for fifteen weeks she had to carry it to and fro from Guy's Hospital, when it died. She also objected to the child being vaccinated at the present time because it was suffering from a scalded arm.

In a third case the mother said she was a widow with six children, and on receiving the usual notice went to the parish medical officer, who told her that the operation could only be performed on Monday, and that being a day when she always had to leave home for work, she had been unable to take the child.

I will not presume to say that I have herein exhausted the subject, but, as I have remarked, I have endeavoured to collect all the information I could (thus far) to show both sides of *the* question. It will also be seen that I have an additional motive *in publishing*.

Any further observations and statistics I must leave to others of greater ability. Should what I have collected and said prove of any utility towards elucidating this apparently semi-mysterious affair, I shall feel that my task has not been altogether "labour in vain."