

Is the efficacy of cow-pox in preventing small-pox the same now as thirty years ago?

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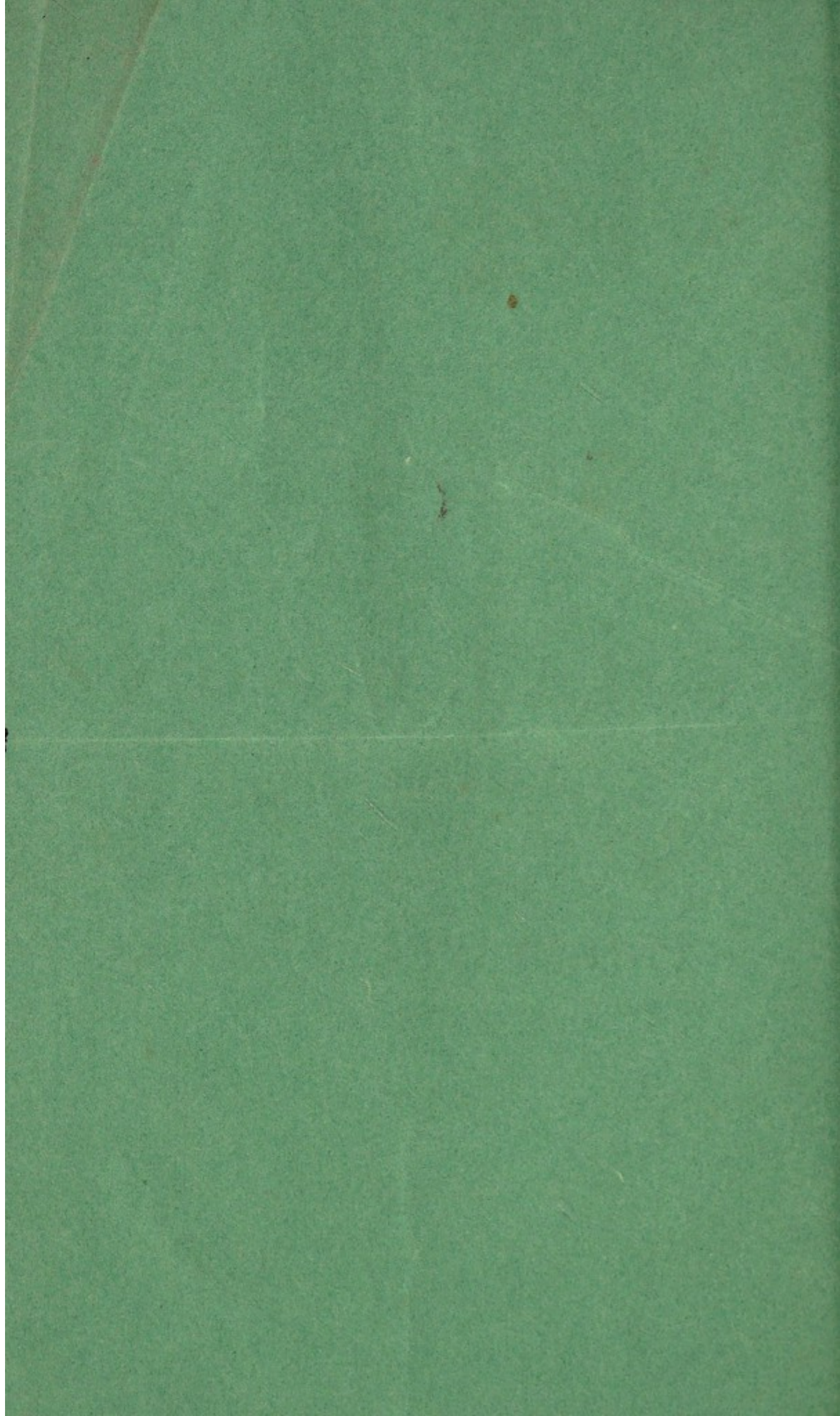


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Robert Lutz



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EFFICACY
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“VACCINATION.”

To the EDITOR of the CARLISLE PATRIOT

SIR,—Entertaining as I do, on general grounds, an aversion to obtrude myself on the notice of the public without strong and adequate reasons, and feeling, moreover, a special disinclination to have recourse to the public press as a medium of conducting medical discussions, I am only induced by what I conceive to be tolerably weighty personal and public considerations, to depart on this occasion from my usual rule.

It will be remembered that about two months ago, at the Annual General Meeting of Subscribers to the House of Recovery, when offering some remarks on the efficacy of vaccination in preventing small-pox, I took the opportunity of stating that I was one of those who believed that the stock of vaccine lymph in present use is not so efficacious in preventing that disease as it formerly was. This I am still disposed to maintain; and could I not confidently pledge myself, as I now do, to lay before you a few satisfactory arguments in support of that opinion, nay, even to supply you with proof of its accuracy, as far as *their* admissions are proof of such accuracy, from the writings of some of those who affect to disbelieve it, I should not have indited one word on the subject. Lest my motives and opinion respecting the value of vaccination, be misunderstood, so as to prejudice the remarks I am

about to offer, allow me to premise that I hold in the highest estimation that invaluable boon to our race; I recommend and practice on every opportunity both primary or infantine, and secondary or adult vaccination: while my object is to arouse attention to the best method of keeping up a good supply of the virus in order to render the operation as effectual as possible, and thus (for how else can it be accomplished?) to secure to it the full and ready confidence of all classes.

On reading the Report of the Committee of the Dispensary lately presented by them to the general meeting of subscribers, and reported in your last number, I was surprised to find a large portion of the document to consist of dogmatical and self-complacent remarks on this question,—one that has hitherto been very imperfectly considered by the medical practitioners *at large* of this country, and can scarcely as yet be said to be even *sub judice*. It is true that some, occupying high stations in the medical world, speaking *ex cathedrá*, and who ought to have been entitled to the name of medical authorities, but *are not*, have expressed an opinion (scarcely, however, conclusive, as will be seen) on the subject: others have come to a diametrically opposite decision, and each party has acted accordingly. The Dispensary Committee step forward at this early epoch, and offer an unasked, unexpected, and peremptory adjudication of the question, declaring that one of the views regarding the nature and operation of the cow-pock virus is “not only unphilosophical, but contradicted by its history.”

Doubting no less the possession of data and means on the part of the Committee to enable them to arrive unassisted at such a result of their enquiries, than I deny the right and propriety of their thus expressing it, I again glanced over the semblances of argument there produced, and at once recognised the positions taken up on this subject in an essay lately written by a physician in the metropolis, whose medical writings are remarkable for any thing rather than perspicuity and consistency. The line of argument and the expressions used in these two productions are in many respects so ludicrously similar, that one might have supposed the Committee had had access to the Essay al

luded to, or were, at all events, enlightened by the same "philosophy," as the following extracts will show. So great, however, is the discrepancy between the dicta of these two authorities on another point, and that a vital one, that we are at liberty either to conclude that the coincidences of argument and expression, where they do occur, are quite fortuitous, or that one party has misunderstood and given a blundered version of the views of the other. First, for the points of correspondence :—

COMMITTEE'S REPORT.

"The idea that the vaccine virus has become deteriorated by transmission through the system of so many thousands of persons, is not only unphilosophical, but contradicted by its history.

"An opinion has been entertained that cow-pox gradually loses its influence, &c. This is a question exceedingly difficult to decide, for years must elapse before it can be answered beyond the possibility of doubt. If there be such a limitation of it's," &c., &c.

"The practice of re-vaccinating, however, at distant intervals, may be resorted to with propriety, as the operation is simple and attended with no risk, and the security of the individual is thereby rendered doubly sure."

DR. G. GREGORY, OF LONDON.

"It has been repeatedly urged that the vaccine virus deteriorates by passing through a succession of human bodies,—such a notion has neither reason nor analogy in its favour."

"no doctrine so resolutely * * as that of a gradual decay in vaccine influence, in proportion as life advances. Years must elapse before this question can be answered beyond the possibility of doubt or cavil. In the meantime, however, we are warranted in saying that if such limitation does," &c., &c.

"The practice of re-vaccinating at distant intervals from the date of the primary process, is one from which no harm and much benefit may be expected. The operation is simple and free from risk. If no effect follows, the security of the individual is rendered doubly sure."

Another or two exact coincidences of the Committee's Report, with the remarks of an Edinburgh Reviewer, might be added, but those already given must suffice. Let us next examine, briefly, into the real "philosophy and history" of the thing. The Committee say (also at second hand)—"the notion of the vaccine poison becoming deteriorated or enfeebled, is contrary to the usual physiological laws which regulate the actions of animal poisons." The *rabid* predilection for the word "poison" here displayed, is rather remarkable: the employment of the term on this occasion is of questionable propriety, and is certainly not calculated to prepossess the public on behalf of vaccination. The Latin word "virus" so often used, may certainly be thus translated; here, however, as in many other instances, it is used in quite a different sense from that in which it is applied to the poison of a venomous reptile, or of a mad dog. It is incapable of producing death, or of leaving any evil consequences behind it; and, with very few exceptions, indeed, it operates on the human frame with the greatest mildness. But waving further allusion to this subject, let us ask, what is the analogy between cow-pock virus, and the morbid germs of some other diseases mentioned in the Report? To these, the application of the term "poisons" may be less objectionable, though it would be rather difficult to define, and still more to demonstrate, the poison of measles, scarlatina, and some other diseases capable of communication without contact; while the "poison" of itch, as has long been believed and lately confirmed beyond doubt, is an insect. The cow-pock virus is a fluid that operates mildly on the human subject (as just stated), to whom it cannot be communicated except by a very careful operation of *engrafting*, often requiring repetition, and in whom it *never yet occurred spontaneously*—but, in every case, by derivation from another source, which source originally, as all know, was the cow. It can also be directly communicated to man from the horse; but in no case has it ever appeared as a primary human disease; in all *human* cases, it is artificially engrafted. In these respects it bears no analogy whatever to the "poisons" placed alongside it by the Reporters. We shall now advance another step, and,

having seen how it differs from other viruses in the mode of its introduction into the human system, shall enquire in what respect, as an *engrafted* human disease, it differs from *natural* human diseases, in its transmission through numerous individuals. Bearing in mind the very peculiar nature and origin of the vaccine disease, we might naturally enough expect that the subsequent history of this anomalous affection—disease—or call it what you will—should present few analogies with that of the human viruses. This idea, however, according to the Committee, “is unphilosophical, and contradicted by the history of the vaccine virus.” “If,” says the Report, “the vaccine virus be capable of degeneration, it is the only animal poison in nature that is so.” It is, indeed, in other respects, a *very peculiar* “animal poison,” as we have seen; and in this respect *also*, it is somewhat peculiar. Do the Committee not know that medical men engaged in weekly vaccinations are at considerable pains to keep up a good supply? Are they not aware, that, whether there be a spurious plague, spurious itch, or any thing else spurious “in nature,” there is—and probably has been from the first week of its introduction—a spurious or “irregular” form of vaccine disease? How the Committee in the face of this fact can deny the tendency of the vaccine virus to undergo deterioration, I cannot conceive. Even vesicles *to all appearance regular*, often afford impure matter now-a-days; “three or four children,” says Dr. Geo. Gregory,—the Committee’s own “chief authority,—“vaccinated from the same source, may exhibit irregular appearances, yet the vesicle itself, from which the lymph is taken, shall shew no apparent deviation from the healthy state.” This is important testimony from the *no deterioration* writers, and must be allowed its full weight when they propound another of their specious arguments, viz., “the cow-pox vesicle of the present day presents the same appearances, and goes through the same regular course, as that which was delineated and described by Dr. Jenner.” This is a kind of easy and loose logic which ought not to satisfy the public, nor those to whom its health is entrusted; the question is, is the efficacy of cow-pox in preventing small-pox, the same now as thirty years ago? The Committee say

it is ; “ although vaccination is not a perfect antidote, it is the best that can be had, and it is just as much so now, as it was in the days of Jenner.” This, as usual, is the echo of an opinion of Dr. G. Gregory’s ; the Committee, however, to do them justice, are more consistent, and true to one line of argument, than he. Dr. Gregory had, of course, very different sources of information, and either had his eyes opened to, or could not close them against, a host of evidence of the opposite kind, whose claims, while unwilling to allow, he yet felt himself bound to mention. Thus, he tells us, that only in 1820, the Report of the National Vaccine Establishment, “ declared that of more than 60,000 persons vaccinated in London and its vicinity in the course of twelve years by that establishment, five only are reported to have been subsequently affected with small-pox.” And although he endeavours to depreciate the value of this testimony, it must be apparent to all, that such an Institution would not deceive the public by stating proportions which bore scarcely any relation to the truth, as he would have us believe.—Such proportion is very different from what the subsequent experience of Vaccine Establishments can supply. But I am pledged to show from the writings of the *anti-deteriorationists* that they admit not only the possibility, but the absolute fact, of the more frequent occurrence of small-pox in vaccinated persons of late times, as compared with the earlier periods of the vaccine era. Gregory speaks of “ the detailed enquiry which the frequency of the occurrence in recent times appears to demand,” and says, in another part of his Essay, “ whatever difficulty there may be in determining the exact proportion in which vaccination fails to impart that perfect and permanent security against small-pox which was its early attribute, it is clear that the cases of vaccine failure are very numerous, for they have forcibly attracted public attention,” &c. What will those who are at all conversant with the subject think of Dr. Gregory’s intelligibility and consistency as an author when, bearing in mind his own admission formerly quoted, respecting apparently regular vesicles containing inefficacious virus, they read, “ So far from believing in any deterioration of virus from successive inoculation, there is reason to believe

that by a careful selection of well-predisposed children, the pock may even be restored from an imperfect to a perfect state, and by proper care, therefore, may be retained indefinitely in that condition?" What will they further think when, keeping the foregoing in view, they again read, "If children are successively vaccinated from each other, all of whom are from various causes ill-disposed to take on the perfect disease, the virus may unquestionably degenerate, and at length wear out altogether. In tropical countries and in confined localities such an occurrence certainly takes place, but this is very different from the notion of a virus deteriorated by the mere influence of *time*."—So that, according to this lucid writer, apparently good pocks may really be inefficacious ones: decidedly irregular ones may be converted into perfect ones: and thirdly, the virus may "unquestionably degenerate," and even "wear out" under specified circumstances. Why, as to this last declaration, it is all that was demanded of these deniers of its deterioration; it is even more. Few that wish to be enlightened on the nature and history of cow-pock, would ever anticipate the account of its retreating and advancing powers, of its harlequin transformations, and its final exit from the stage, as just quoted. The disclaiming of its deterioration by the *mere* effect of "*time*," is a *mere* quibble; no such opinion was probably ever broached in these unqualified terms. It is the transmission of the virus through numerous individuals in various conditions as to health, climate, &c., that is pointed at as the cause of its weakened powers,—a cause that, it would appear, there are some wights hardy enough both to deny and admit.

Other proofs exist of the virus not acting with the same energy on the human frame, as formerly: the recently procured virus, for instance, was found to affect the constitution pretty briskly, whereas it is now commonly remarked, that such constitutional disturbance is scarcely ever seen. Then, again, many thousands of those vaccinated soon after the general adoption of the operation were exposed to the influence of small-pox, nay, were purposely inoculated therewith, yet with impunity. The case is not so now. Instances are not wanting, though they are rare, of even

infants dying of small-pox within three or four years after vaccination. The opponents of the deterioration doctrine are ready to allege that the operation has been imperfect (how strongly must they then see the analogy of the virus to their list of "poisons"!) I am not disposed to deny it. I feel convinced that the matter in present use cannot be depended on with that implicit confidence, that the original virus deserved and received—yet, such as it is, it proves, when attentively selected and introduced, an antidote of no mean powers, and *must*, of course, be assiduously employed with all due precautions, until a *renewal of the stock*. I am aware that by many "good easy people," this proposal is scouted as visionary, or at all events, unnecessary: but if such do not examine, understand, and appreciate the evidence that bears on the important question, it is to be hoped others will, as, in some places, others have done, and proceeded accordingly.

"In tropical countries," says Dr. Gregory, "and in confined localities, such an occurrence, (deterioration and even 'wearing out' of the virus) certainly, takes place." How strikingly analogous is this, to be sure, to the fate of the other "animal poisons"! How likely is small-pox, for instance, to become extinct in tropical countries, &c. ! Again, being *analogous* to cow-pox (!), "subject to the same laws," how fearfully it must have raged 25 years ago, in certain tropical countries, simultaneously with the triumphant progress of vaccination! The reverse, of course, of all this, is known to be the fact. We have seen how affectionately Dr. G. and others cling to the old stock of virus, which is asserted to be capable of indefinite renovation, without recourse being had to its original source: let us also consider his *positive objections* to renewing the supply from the cow, for (will it be believed?) he actually entertains objections against that proceeding. The proposal to renew it is not only "*specious*," as he sneeringly remarks, but is "*philosophical*," as even the Dispensary Committee may be brought to own. It could, moreover, be very easily carried into effect, were the powers of the legislature, and the dormant energies of the sinecurists of the National Establishment, aroused and engaged on its behalf. Not content,

however, with making the expediency of that proceeding a mere matter of opinion, Dr. G. actually endeavours to prejudice the public against the use of virus fresh from the cow. First, he says, "there must always be a doubt as to the purity and genuineness of the new stock, until the experiment of variolous inoculation has been subsequently made, which parents are very seldom disposed to allow." So it would be more difficult now-a-days than 30 years ago, to test the efficacy of recent cow-pock matter by small-pox inoculation? It is much to be feared that a larger proportion of the humbler classes would now be found agreeable to have small-pox inoculation practised than formerly, whether as a test or otherwise. It is a matter of notoriety that many are disposed to return ^{to} it, and can only be induced to continue their confidence in vaccination, on the strongest representations being made to them of its superiority. Dr. Gregory admits, as an *undoubted certainty*, that the use of the present virus does not prevent the very frequent occurrence of small-pox in a more or less modified form; yet would forego the advantages which he cannot deny, *might* result from employing a new stock of virus, lest he should not be able to practice small-pox inoculation as a test! Secondly, he says, "further, the true vaccine lymph, as first taken from the cow, is frequently very acrid, producing glandular swellings, &c., &c." Observe, this is said of the *true* lymph: how little then has it, to use the words of the report, "become deteriorated or enfeebled"! How unimpaired are its energies since its first abstraction from the cow! Your readers will thus see that the very difference between the qualities of recent and long humanized lymph, which I maintain does exist, is taken by this writer as a ground of objection to the occasional renewal of the supply.

In Italy, and in the East Indies, the stock of vaccine virus was some years ago renewed, from the *suspicion*—if not the conviction—that the old stock had become nearly inefficacious. Speaking of Italy, Dr. Gregory says, "there was no perceptible difference between the course of the old and new lymph." I will not here charge him with unfairness: he should, however, if he knew it, not only have stated the "course" of the lymph, but its ef-

fects as a perservative. In India, according to a reviewer of the Indian vaccinator's essay, the prophylactic power of the new matter was "proved to be complete" in several instances: and he expresses a hope that Mr. Macpherson's operation of recurring to the new virus will be adopted by others, notwithstanding that the constitutional effects resulting from the recent cow-pock in India are much more severe than those produced by what the reviewer calls "the mild and benign^{at} eruption" occurring in English cows, and from which Jenner drew his supply, but which Gregory would not dare to use. He is compelled, however, to make the following avowal:—"More recent experiments in India tend to shew that the measure may, on some great occasions, be adopted with advantage," but with what reluctance is it extorted from him! He adds,—"but it is clear, even from these statements, that recurrence to the cow is not lightly to be recommended, nor adopted without great and multiplied cautions." Dr. Gregory's organ of caution, to speak phrenologically at least, if not "philosophically," must be preternaturally large or energetic, to induce him thus to interpose imaginary difficulties between the British public, and their accomplishment of a most important object, and one fraught with no possible danger, to the advantage—nay, necessity of which, it is to be hoped, they will not long remain insensible. Had the cautious gentleman been a contemporary of Jenner's, it is extremely probable he would have continued *an inoculator of the small-pox*.

Another real or supposed feature of vaccination is alluded to in the report, viz:—The gradual loss of its protective influence in any given individual, as that individual becomes older. To this, neither in the report nor in Gregory's essay, does there occur any strong opposition: although there be no "analogy" to support it, its possibility is not denied, and accordingly re-vaccination at distant intervals, is recommended in the same words, as a practice involving no risk. Believing, as I do, in the gradual deterioration of the general stock, from whatever combination of causes, I am also disposed to believe, with Gregory, and others, that even recent virus may at length cease to afford to an individual the full protection it gave

him for the first few years. Dr. G's words are, in one place, "the early experiments of Jenner and Woodville sufficiently proved, that for two or three years at least, after vaccination, the human body is unsusceptible of small-pox by inoculation": in another, he shews "how much more frequent small-pox after vaccination is among adults than children": and says, in a third, "we are strongly disposed to believe that the susceptibility of small-pox does return in many cases, more especially when favoured by certain concurrent circumstances. Of these, the most energetic hitherto ascertained are, change of climate, and the period of puberty."

It appears highly probable from all that has been advanced, that the present tendency of small-pox to increase its inroads, might be materially lessened by the adoption of two measures:—

I. Having recourse, after a certain limited interval, again and again to the original source of cow-pox, aided by the sanction and authority of government, and its interdiction of the use of old virus, where recent could be procured.

II. The re-vaccination of individuals even under these circumstances, more particularly when approaching maturity, or about to change their climate.

In conclusion, I beg to state, that had not the opinion respecting the gradually decreasing efficacy of cow-pock matter, on which I ventured a few remarks at a meeting before alluded to, been so summarily dealt with in their Report by the Dispensary Committee, bespattered with illogical and therefore "unphilosophical" attempts at argument—not indeed original, but culled from various kindred sources—and a copy of its condemnation, thus sealed without evidence or pleading being heard in its favour, sent to the public press as well as handed to the supporters of that useful Institution, very few considerations indeed, should have induced me thus to trespass on your columns, and on the patience of your readers. And although I regret that the Dispensary Committee have been so ill-advised as to frame *two-thirds* of their Report of "shreds and patches" of medical controversy, to the exclusion of the usual notice of accidents and other surgical cases, I shall

consider that an object of no small importance has been gained if, by what has occurred, the attention of the public be awakened to the subject, and all professions and classes be ultimately induced to join their efforts towards providing a remedy, if such can really be found, for the defects that attach to vaccination. I am, Sir,

Your obt. Servant,

English-street, Feb. 23rd, 1836.

WM. ELLIOT.



