

Plague, a contagious disease / [Anon].

Contributors

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paign, took her home to her father's, showing her by the way, her brother, her lover, and the officiating priest, hanging by the neck, in a cluster. Our readers may imagine the claspings and writhings of hands, the sobs, the tears which must be allotted to the description of such a scene; and allow us to hasten to the *denouement*. Dorotea and her mother die: the father sallies forth to avenge his wrongs, and has the satisfaction, soon after this narrative, but of course not without Don Esteban's assistance, of dipping his sword in the heart-blood of Dunier. To crown the wonders of this *real* story, Raymundo, whom we left on the gallows of Villacastin, joins our hero soon after in perfect health. His brave soldiers, it seems, suspecting his fate, had entered Villacastin, put Dunier's corps to flight, and returning victorious, cut down their captain, whom they restored to animation by a process exclusively known to the scientific Spanish *guerrillas*!

But who, after all, is this Don Esteban? Can our readers be so unacquainted with *real histories* of this kind, as to suspect him of being a vulgar foundling? Have they not guessed that he is the unknown child of the Marquis of Moncayo? Such he is declared by his barbarous uncle, Don Facundo, on his death-bed; an appalling scene, which prepares that of the happy nuptials of Don Esteban with his cousin Isabella, a dispensation from the Pope in due form having been obtained.

We will not conclude without earnestly recommending the Spaniard, whoever he may be, who has laid the groundwork of Don Esteban, to procure better advice and assistance when he next ventures on composition. Unpleasant as our observations must be to him, they have not been written with half the severity with which literary deceptions of this kind should be visited. Disguise and fiction are certainly allowable, when convenient to an author in order to instruct or amuse his readers. But such assurances of reality as are prefixed to this book, make the deception practised not only an offence in literature, but in morals. The glaring improbability of the story may indeed operate as a warning to the least suspicious reader, not to take too literally the promise of giving him only facts. But a stranger has no means of detecting falsehoods in the description of scenery or manners; and Don Esteban has taken at least as much liberty in this, as in the narrative part of his work.

- ART. IX.—1. *The Progress of Opinion on the Subject of Contagion.* By William Macmichael, M.D. 1825.
2. *Report from the Select Committee on the Doctrine of Contagion in the Plague.* 1819.
3. *Second Report from the Select Committee appointed to consider of the Means of Improving and Maintaining the foreign Trade of the Country.* Quarantine. 1824.

DE FOE thought the events of the plague in London, in 1665, so full of fearful interest, that he wove them into a fictitious narrative, which does not however exceed in the distressing nature of its details the representations handed down to us by eye-witnesses. Dr. Hodges, who remained on the spot when Sydenham fled, and who, by appointment of the government, visited the sick from morning to night for many months, was clearly not a man of strong intellect, but he has left us an account of what he saw and heard, which, although rhetorical and affected in style, it is impossible to read without shuddering, and which we will not extract, because we might be accused of desiring to interest the feelings of our readers in the opening of a most important inquiry, when it is and ought to be our intention only to appeal to their judgments. This scourge of the human race has been believed, by the most judicious physicians who have witnessed its ravages, to be communicated from person to person, that is, to be contagious. Quarantine laws were therefore instituted. ‘*Before this,*’ as Lord Holland has remarked, ‘the plague frequently devastated every country in Europe; but *since* then its returns have been comparatively rare.’ Before the year 1665, Sydenham remarked that the plague visited this country *only* once in forty or fifty years; since that calamitous year this happy land has known nothing of its ravages; and so many generations have lived and died in security, that the clause in the Litany which implores preservation ‘from plague and pestilence,’ has lost perhaps some of that intense earnestness with which it must once have pressed on the hearts of the congregation in prayer. In this blessed, yet dangerous ignorance of the public mind, certain persons have started up, who affirm that the wisest of their forefathers, and the most experienced of their contemporaries, have been, and are, all wrong upon the subject—that the plague is not contagious—that quarantine laws ought to be abolished; and the public, and even our legislators, seem inclined to believe them. In these critical circumstances it is a duty, which some one ought to perform, to give a true and faithful account of this momentous matter—to state the reasons which have satisfied the most competent judges that the plague is contagious—to expose the
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ignorance of those who are attempting to mislead the public, and the indiscretion of those who are inclined to believe them.

Some diseases become prevalent because their causes are so diffused as to affect many persons in the same place at the same time; other diseases become prevalent because the bodies of the sick give out a noxious material, which excites them in the bodies of the healthy. The former are called epidemic, the latter contagious diseases. The causes of epidemic diseases may be either deficient food, as in a general scarcity; or heat, or cold, or great vicissitudes from one to the other; or noxious states of the atmosphere, which are not perceptible by our senses, thermometers, or barometers. Some of these are understood, as marsh exhalations; others are involved in great obscurity. The human constitution is a delicate instrument, and can perceive qualities which our philosophical instruments and chemical tests do not enable us to detect.

The noxious matters produced by the bodies of the sick, which propagate contagious diseases from person to person, may be either something visible and substantial, as that formed in the pustules of small-pox, or the vesicles of the cow-pock; or something invisible, the existence of which is known only by its effects, as in the measles, the scarlet-fever, the hooping-cough.

The only way in which we can distinguish those diseases which are prevalent from an extensive cause acting at the same time on a number of people, from those diseases which are prevalent because they are communicated from person to person, is by certain circumstances in the mode of their diffusion. Now the circumstances by which we know that a disease is propagated by contagion, are these; 1st, that those persons are most liable to the disease who approach those affected with it, and that in proportion to the nearness of the approach; 2dly, that those who avoid intercourse with persons affected with the disease, generally or always escape it, and that in proportion to the care with which they avoid them; 3dly, that the disease is communicable from one to another by inoculation. If all these circumstances can be ascertained in the diffusion of a disease, and each with clearness and distinctness, we have all the evidence, which we can have, for believing that the disease is propagated by contagion. The proof is as complete as the nature of the subject admits. But the evidence for the belief that a disease is propagated by contagion, varies very much in degree in different cases; it may amount only to that which creates a strong suspicion—or it may amount to that which creates an absolute certainty. The most decisive single proof that a disease is contagious, is inoculation. Yet there are several diseases the contagiousness

tagiousness of which is undoubted, notwithstanding the absence of this proof; as, for instance, the scarlet-fever and hooping-cough.

But there are occasions when it is necessary to act on the supposition that a disease is contagious, though the evidence for this opinion is far short of proof. The question is sometimes so difficult—life and health are so precious—and the precautions necessary to prevent the communication of the disease, if it should be contagious, comparatively such trifling evils; that a prudent physician will take care to be on the safe side, and use measures as if he was certain it was contagious, although to an indifferent person, weighing the evidence in the scales of mere speculation, it would appear only a bare possibility;—and here is the difference between a science, which makes its experiments on retorts and receivers, things of clay and glass, and a science, the subjects of which are flesh and blood, and health and life; that whereas in the former, the onus probandi lies on him who affirms the proposition, because the disbelief of it leads to no injurious consequence; in the latter, the onus probandi sometimes lies with him who denies it, because the disbelief would occasion the neglect of measures, which are harmless even if they be unnecessary, but the neglect of which may be fatal if they be essential.

Five-and-twenty years ago Dr. Wells published his belief that erysipelas was sometimes contagious. The following is one of several facts which led him to this opinion:—An elderly man died of erysipelas of the face. His nephew, who visited him during his illness, was soon afterwards attacked by, and died of, the same disease. The wife of the old man was seized with the same disease a few days after his death, and died in about a week. The landlady of the same house was next affected with it and then her nurse, who was sent to the workhouse, where she died. Dr. Wells mentioned his suspicion to several medical friends, among whom were Dr. Pitcairn and Dr. Baillie, and they related to him several circumstances which had led them to a similar opinion.

Lying-in women are subject to a disease called puerperal fever. In general it is of unfrequent occurrence, and out of large numbers scarcely one suffers from it. There are times, however, when this disease rages like an epidemic, and is very fatal. At these times circumstances sometimes occur which create a strong suspicion that the disorder may be communicated by a medical attendant or nurse from one lying-in woman to another. We give the following, out of many authentic instances. A surgeon practising midwifery in a populous town, opened the body of a woman who died of puerperal fever, and thereby contracted an offensive smell in his clothes: nevertheless, surgeon-like, he continued to wear them

them, and to visit and deliver his patients in them. The first woman whom he attended after the dissection, was seized with, and died of, the same disease—the same happened to the second and the third. At length he was struck with the suspicion that puerperal fever might be contagious, and that he was carrying it from patient to patient in his offensive clothes;—he burnt them, and not another of his patients was affected.

These are incidents calculated to produce a deep impression on the minds of those who witness them, and to create a strong suspicion that these diseases are, under certain circumstances, contagious. Yet if such evidence as this be contrasted with incidents of an opposite kind, in which free communication has produced no such consequences, and be mixed up with the ordinary history of the diseases, the whole statement would produce little effect on indifferent persons—on cold judges like a committee of the House of Commons.

Few persons believe that consumption of the lungs is contagious; it is a question which requires for its solution long and well-used experience. A physician in early, and even in middle life, is an inadequate judge; but there are English physicians of the greatest experience, the highest eminence, and the least fanciful minds, who are convinced that this disease is sometimes communicated from a wife to a husband, or from a husband to a wife, during the long and close attendance which its lingering nature and strong affection sometimes occasion. It is an opinion, however, which he who entertains can never demonstrate to be true to him who rejects it; yet is it a reason for every precaution which does not interfere with the duties of the healthy to the sick.

In medicine, and all but the demonstrative sciences, there is often light enough to guide our conduct, when there is not enough to gratify our curiosity; and therefore it is that practical men are often compelled to act on evidence, which would sound unsatisfactory in the statement. There is no paradox in saying, that he who can give a striking reason for every measure which he adopts, is, for that very reason, a bad medical adviser; because he must neglect many which are necessary and useful, but the reasons for which at the outset are extremely obscure. We cannot give a stronger instance of the difference between the evidence which is required to satisfy incompetent judges, and that on which physicians are often obliged to act, than that which is detailed in Dr. P. M. Latham's excellent 'Account of the Disease lately prevalent at the General Penitentiary.'

Having thus considered the signs by which we distinguish a contagious disease—the different degrees of clearness with which these signs show themselves—and the necessity there often is to
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act on the supposition that a disease is contagious, although the evidence for it is far short of demonstration—we may now go on to consider whether these signs are discoverable in the history of the plague in a sufficient degree to make it proper for us to act with respect to it on that supposition. Now whoever will carefully examine the accounts of the plague transmitted to us by those who have witnessed its ravages, will find ample evidence of the following truths:—1st. That it is most liable to affect those persons who approach patients affected with it, and that in proportion to the nearness of the approach: 2dly, that those who avoid all intercourse with persons affected with the plague, generally escape the disease, and that in proportion to the care with which they avoid it. There are few facts indeed in medical history for which there is such a mass of evidence as these; or on which the experience of past and present times is so uniform. The most remarkable examples are afforded by the introduction of the plague into countries which had long been free from it, in consequence of intercourse with places in which it was then raging. The clearness with which this intercourse has been often traced is truly wonderful, considering the many temptations which travellers or mariners coming from countries infected with the plague have to clandestine intercourse. Of such histories there are so many on record, that the difficulty is which to select: we will begin with the plague at Marseilles, in 1720.

For *seventy years* the plague had never visited this maritime city, when, on the 25th May, 1720, a vessel sailed into the harbour, under the following circumstances: She had left Seyde, in Syria, on the 31st of January, with a clean bill of health, but the plague had broken out a few days after her departure, and she had called at Tripoli, not far from Seyde, where she took in some Turkish passengers. During the passage, one of the Turks died, after an illness of a few days. Two sailors attempted to heave the corpse overboard, but before they had time to do so, the captain called them away, and ordered it to be done by the comrades of the deceased. In the course of a few days the two sailors who had touched the corpse fell sick, and speedily died. Soon after this, two others of the crew, one the surgeon of the vessel, who of course had attended the sick, were attacked with the same symptoms, and died. These occurrences so alarmed the captain, that he shut himself up in the poop during the rest of the voyage. Three other sailors subsequently fell ill in the same way, were put ashore at Leghorn, and died there; the physician and surgeons of the infirmary certifying that their disease had been a pestilential fever. The vessel arrived at Marseilles, and the crew and cargo were landed at the lazaretto. Soon afterwards, the
disease

disease (at first denied, but subsequently acknowledged to be the plague) attacked another of the crew—an officer put on board the vessel to superintend the quarantine—a boy belonging to the ship—two porters employed in unloading the merchandize—another porter similarly employed—three more porters employed about the merchandize—the priest who had administered the last sacrament to the sick—the surgeon of the lazaretto—and his whole family. Notwithstanding these events, the passengers, having performed a short quarantine of less than twenty days, were allowed to take up their quarters in the town, and to carry with them their clothes and packages. There were anti-contagionists in those days at Marseilles, as there are now in England, and this conduct was the result of their advice. When passengers after a voyage of nearly four months, and a quarantine of nearly three weeks, are at length let loose in a large city, their first employment is to roam about the streets; they have things to sell and to buy, and to see; they come in contact in the streets and in the shops with persons whom they think no more about, and who think no more about them. It is not surprizing, therefore, that the exact traces of the disease should soon be lost, and that it should be often difficult, and even impossible, to follow it satisfactorily in every part of its progress. Of its origin and early advances in the town, the following account is given by M. Bertrand, a resident physician at Marseilles at the time.

‘What is certain, is, that the plague was on board the ship of Captain Chataud; that it was communicated to the infirmary by the merchandize with which it was freighted; and that one of the first who fell sick in the city, had been passenger in the ship, and had only quitted the infirmary a few days, with his clothes and merchandize; and that among the very early victims of the distemper, were the family of a famous contraband trader, near the convent of the Carmes, and those of some other contraband traders, who resided in the Rue de l’Escale and its neighbourhood; that the suburb adjoining the Infirmary was attacked nearly at the same time with the Rue de l’Escale. I leave my readers to make the reflections naturally suggested by these facts.’

We pass over the terrific scenes which the subsequent progress of the plague occasioned in this ill-fated city; though they should be read by every one, if any such there be, who may have to legislate on this subject, and not be duly impressed with its fearful importance. We will not represent in detail the early doubts and obstinate denials that the disease was the plague; the fears of the magistrates to alarm the people; the unwillingness of the people to believe; their terror at its first announcement, and, after a short and deceptive calm, their drunken joy and mad confidence; the contests between the physicians and the magistrates; the in-

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sults offered by the populace to the former; the scarcity of food; the bodies collected in the houses and in the streets, for want of persons to remove them; the fires lighted in the squares and market-places, and before the doors of every house, for the purpose of burning out the contagion, till the whole city was in a blaze; the flight of the people from the town; the immense graves; cart-loads of bodies tumbled into them in the utmost disorder; the shops and public places closed, and the deserted streets; all these form a picture which bewilders the mind by the number and horror of the objects; the mere recapitulation of them produces a sensation of giddiness and sickness.

But out of this confusion, we must select one or two incidents from which an inference may be drawn.

The Hôtel Dieu contained between three and four hundred foundlings of both sexes, besides the proper officers and attendants. At this hospital, a woman who had escaped from the Rue de l'Escaie presented herself, stating that she was ill with a common fever. She was taken in and conducted to her bed by two maid-servants of the house; the next day the two maid-servants fell ill and died in a few hours. The day after, the matron, who, according to the duty of her situation, had visited the patient, fell ill, and died almost as suddenly. The disease spread with amazing rapidity; it destroyed all the children, together with every person belonging to the house—governors, confessors, physicians, surgeons, apothecaries, officers, servants; except about thirty, and even these took the infection, but ultimately recovered.

One of the greatest difficulties was the removal and interment of the dead. At first, carts had been hired to carry them away, and beggars and vagabonds were employed in the service. These soon fell, and those who followed them in their offices, soon followed them in their fate. The magistrates then applied to the officers of the galleys, praying for convicts to carry away the dead—this prayer was granted, and the convicts were promised their liberty if they survived. The first supply amounted to 133; these perished in less than a week. Another hundred were granted. In the course of six days they were reduced to twelve; and thus in less than a fortnight, out of 233, 221 perished.

An official report, transmitted to the Regent, stated that the physicians and surgeons of Marseilles unanimously declared, 'that when one person in a family was attacked and died, the rest soon underwent the same fate, insomuch that there were instances of families entirely destroyed in that manner; and if any one of an infected family fled to another house, the contagion accompanied him, and proved fatal to the family where he had taken refuge.'

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While these horrors were going on in the city, where intercourse was almost unrestrained, some places, in which precautions were used to prevent communication with the infected, escaped either in a great degree, or altogether. When the disease was admitted to be the plague, (and some useful time was lost before that admission was made) the galleys were detached from the shore, anchored in the middle of the port, and separated from the rest of the vessels by a barrier. There were two hospitals belonging to the galleys, one for the crews, the other for the convicts; the former was reserved for the infected, in case the disease should break out, the latter for patients under other diseases. There was a third or intermediate hospital, to which all doubtful cases were sent, until the nature of their disease manifested itself. The galleys were frequently visited by medical men, and on the slightest notice of indisposition, the patient was immediately removed to one of these hospitals. The plague, however, made its appearance, and continued in existence from the beginning of August to the beginning of March; the population of the galleys amounted to 10,000; yet 1,300 persons only were attacked, and about half recovered. We will not speculate on the many modes in which the precautions against intercourse with infected persons may have been evaded, though the particular instance has escaped detection; but we point our readers' attention to the singular difference between the numbers who took the disorder under one system on land, and under another at sea.

A certificate, given by the Bishop of Marseilles, states that 'the plague has not penetrated into the religious communities, who have had no communication with persons abroad, and who have used the precautions necessary to protect them.' Another, given by the first sheriff of Marseilles, states that 'the families which were shut up and had not communicated abroad, particularly the nunneries, had been protected from this scourge; which was introduced into some of them by communications with strange persons.'

Before the commencement of this plague, which certain physicians now call a *modification* of the typhus, the population of Marseilles was estimated at 90,000 persons. Of these, 40,000 perished; but it spread to Aix, Toulon, and various other places in Provence, and destroyed in all more than 80,000 persons. If the foregoing narrative does not satisfactorily prove that the disease was propagated from person to person, we know not what will. The contagiousness of the measles, scarlet-fever, and hooping-cough, certainly does not rest upon stronger evidence; and it will become impossible to prove any disease to be conta-

gious, excepting those which are capable of being communicated by inoculation.

The next plague, which we propose to notice, was that which visited Moscow in the year 1771, and of which a short but lucid history was given by Dr. de Mertens, a physician practising in that city, at the time of the visitation. The plague had not appeared at Moscow for *more than a century and a half*. In 1769 war commenced between the Russians and the Turks; the next year the plague appeared in Wallachia and Moldavia, and many Russians died of it in the city of Yassy. The following summer it entered Poland, and was conveyed to Kiow, where it carried off 4,000 people. At first all communication was cut off between that city and Moscow, and guards were stationed in the great roads. A colonel, attended by two soldiers, set off from Choczin where the plague was raging. The colonel died on the road, but the two soldiers pursued their way, arrived at Moscow, were taken ill at the military hospital, and died soon after their arrival. This was in November, 1770. Towards the end of this month the Demonstrator of Anatomy at this hospital was attacked by a putrid petechial fever of which he died on the third day. The male attendants of the hospital lived with their families in two chambers separated from the others. In one of these one person after another, to the number of eleven, fell ill with a putrid disease attended by petechiæ, and in some by bubos and carbuncles; most of them died between the third and the fifth day. The same disease attacked the attendants who resided in the other chamber. On the 22d December an official statement was made of these facts, and ten physicians, out of eleven, pronounced the disease to be the plague. The hospital, which was placed without the city, was closed, and a military guard interrupted all communication from without; the patients affected with the pestilence, together with their wives and children, were separated from the rest, and the clothes and moveables of those who had died of the disease, and those who were still ill with it, were burnt. The weather became intensely cold, and the traces of contagion being lost in the hospital and in the city, the people passed from a cautious fear to fearless security. The communications with the hospital were re-opened in February, but on the 11th of March, the physicians were again convoked, when Dr. Yagelsky stated that in a large building, a manufactory of military clothing, situated in the centre of the city, and where 3,000 individuals were employed, eight persons had been attacked with symptoms similar to those observed in the patients at the military hospital three months before; that is, with petechiæ, carbuncles, and bubos. The work-people likewise declared, that at
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the beginning of January, a woman who had a tumour in the cheek had gone to the home of one of the work-people who was her relation—that since this time the disease had spread in the manufactory, and 117 persons had died of it. The manufactory was closed and guarded; nevertheless several of the work-people escaped by the windows the following night. We pass over the precautions used to prevent the spreading of the disease, and its abatement—the relaxation of precautions, and the recurrence of the disease. Towards the end of July the mortality amounted to 200 daily—by the middle of August to 400—towards the end of the same month to 600—at the beginning of September to 700—some days afterwards to 800, and at length to 1,000. On the evening of the 5th of September the populace rose, broke open the hospitals, put an end to the quarantine, and restored the religious ceremonies used for the sick—the images of saints were carried with great pomp to the sick, and kissed by every one successively; the people, according to ancient custom, embraced the dead, and buried them within the city, declaring that human precautions were odious to the divinity—they hunted down the poor physicians, broke their furniture and sacked their houses. This riot lasted only a few days, but it was followed by an addition of two or three hundred to the daily mortality—almost all the priests perished. In October the disease began to decline, and at length ceased together with the year. The total mortality was estimated at more than 80,000 persons, exclusive of that in the towns and villages to which it had spread, which cannot have been less than 20,000. These places, however, suffered much less, because the inhabitants, taught by the miserable example of Moscow, readily permitted precautions to be used. Criminals were employed to bury the dead, and when these perished, the poor were hired to do it. To each were given a cloak, gloves, and mask of oil-cloth, and they were directed never to touch a corpse with naked hands, but they paid no attention to this advice. Most of them became ill about the fourth or fifth day, and great numbers perished. The plague committed its greatest ravages among the poor; the nobles, gentlemen, and merchants generally escaping. ‘It was communicated,’ says Dr. Mertens, ‘only by the touch of infected persons or clothes; when we visited the sick we approached them within the distance of a foot, using no other precaution than this, never to touch their bodies, clothes, or beds.’ The physicians, who only inspected the patients, generally escaped the disease; but of the surgeons, who were obliged to touch them, two died in the city, and a number of assistant-surgeons in the hospitals. While the disease was raging in the city, the Foundling Hospital afforded a signal example of the salutary effects of seclusion. It contained

1,000 children, and 400 adults. All communication with the people was cut off, and the plague never penetrated within the building. One night four attendants and as many soldiers escaped from the hospital. These, on their return, were attacked by the disease, but they were separated from the rest of the house, and it spread no farther. Compare the fate of this establishment with that of the Foundling Hospital at Marseilles; the contrast of the two cases is one of the most striking circumstances on record.

The last plague which we shall notice is that of Malta in the year 1813, of which the history has been given by Dr. Calvert in the *Medico-Chirurgical Transactions*, and by Sir Brook Faulkner, both of them eye-witnesses. Valetta had not been visited by the plague for 137 years, when a vessel, called the *San Nicolo*, having left Alexandria where the plague was prevalent, arrived at Malta on the 29th of March, 1813. During the voyage, two of the crew had died of a rapid disease, one with a black tumour on his neck. In consequence of these deaths the hatches were shut down, and the crew kept on deck during the rest of the voyage. Upon the arrival of the vessel, the crew were sent ashore to the lazaretto, the captain and his servant being separated from the rest. The day after, the captain was seized with head-ache, giddiness, and other symptoms of the plague, and died in thirty-six hours. His servant, who had assisted the two sick men during the voyage, was seized with similar symptoms, and died in the same length of time. These circumstances created considerable alarm in Valetta, but the rest of the crew continuing well, and the *San Nicolo* having returned to Alexandria with a new crew, the apprehensions of the Maltese soon subsided. On the 19th of April, however, a Maltese physician was taken to visit a child of the name of Borg, which had been ill for five or six days, and was dying with a carbuncle on his breast. On the 1st of May he was sent for to see the mother of the dead child, who was ill with fever and a painful tumour in the groin; she was pregnant; on the third day of her illness she was seized with premature labour, delivered of a seven months' child, which died directly, and died herself the next morning with another tumour in the other groin. During the illness of the mother, another of her children was taken ill, but recovered. On the 4th of May, Borg, the father of the family, was seized with fever, attended by glandular swellings in the axilla and groin. The physician now reported these circumstances to the deputation of health. Borg, his whole family, and those who were known to have communicated with them, were removed to the lazaretto. The courts of justice, the theatre, and the public places were shut up, and the city was inspected by physicians. When Borg's wife was in labour,

bour, a midwife, who lived in another part of Valetta where there was no appearance of the plague, was sent for to attend her. She came, and having delivered her patient, returned to her home. Several days having passed without her appearance, one of her kinsmen went to her house and knocked at the door for some time, but no one answered. At length he broke it open, went in, and discovered her on her knees by her bed-side. She did not move, and on shaking her, he found that she was dead. It seems as if the poor creature, feeling the approach of death, had sought refuge in prayer, and had died in the very act and attitude. When the body was sent to the hospital, plague spots were found upon it. Her kinsman, on making this discovery, immediately ran to the committee of health, and stated what he had seen, on which he was not allowed to return to his family, but was sent to the lazaretto, where, on the 17th of May, he was seized with the plague, and died in twenty-four hours. A girl, who was accustomed to sleep in the midwife's house, was taken ill with fever and glandular enlargements. Borg and his father died; another of his children became ill with it but recovered. Thus far the disease had been confined to the crew of the vessel which came from Alexandria, and to Borg's family and those who had communicated with them; but soon afterwards the disease began to appear in the town of Valetta. At first the medical men contended that it was not the plague—the people kept their sickness secret, for fear of being removed to the lazaretto, clamoured against the precautions, and did all they could to thwart them. The disease spread not only through Valetta, Floriana, and the adjoining towns, but to many villages.

Whilst the plague was raging in Malta, the efficacy of strict seclusion was exhibited in some striking instances, as at Marseilles, and Moscow. The Augustine convent stands in an airy part of Valetta, near the top of one of the main streets, much above the level of the sea and the greater part of the city, and in a clean and open neighbourhood—its interior accommodations are spacious and airy. When the plague first broke out in Valetta, the strictest precautions were used by the inhabitants of this convent to prevent all communication with the town. At length, however, a servant, contrary to the regulations, went into a part of the town where the disease prevailed, and purchased clothes which were supposed to be infected. Soon after his return he confessed what he had done, on which he was immediately shut up, together with one of the brotherhood who volunteered to attend him. Both of them were taken ill and died of the disease, but no other person in the convent suffered. When the plague was at Malta in 1675, Cavallino, who described it,

states that all public establishments which cautiously shunned intercourse with the community enjoyed perfect exemption from the disease; as did the prisons and monasteries, besides all the vessels in the harbour. In the late plague it was the same—the hospital of St. John of Jerusalem, the prison, and several public offices, and private houses, which early adopted and steadily kept up a rigid system of insulation, were not less fortunate.

In a large building in the town, the ground floor was divided into seven separate apartments, occupied by as many Maltese families, while the upper stories were used as a military hospital for patients affected with common diseases. While the plague was raging in Malta, it penetrated into the ground floor, destroyed the inhabitants of four of these apartments, and in the other three, two only of each family escaped. While this was going on below, the sick tenants of the upper stories were shut in—all communication was cut off—and every individual among them escaped the disease, although it was raging in the habitations round about the hospital, and penetrating from the lower to the upper stories. Dr. Greaves, whose house was within a few feet of the hospital, and on whose authority this fact is stated, related it to Dr. M'Lean when he was at Valetta, and led him over the hospital; but no mention has been made of it by this *impartial* historian.

Thus (to return for a moment to the commencement of the plague) we find it attacking, first two sailors in a vessel which had come from a city where the plague was prevailing; and next, after her arrival, the captain of the same vessel, together with his servant—then the family of Borg, nominally a shoemaker, but really a smuggler—his children, his wife, himself, and his father—the midwife who attended his wife, whilst she was ill with the plague—a young woman who slept in her house—a kinsman who entered her chamber and touched her body—the child of the master of a wine-house near the quarantine harbour, where many persons resorted, and among others the servants of the Health Office who guarded the San Nicolo in the harbour—some of the guards of the San Nicolo themselves, with whom Borg the smuggler had frequent dealings. Whilst the plague was attacking successively the above-mentioned persons, it appears, by official statements, that there were no other individuals affected with it in any other part of Malta. Is the reader unsatisfied with this evidence? That there was any communication between the crew of the San Nicolo and the family of Borg there is no decisive and specific proof, nothing but a rumour that a piece of cloth had been conveyed from the vessel to Borg's house. Great stress has been laid on this; and the belief that the San Nicolo communicated the plague to Malta, in spite of this defect in the chain

chain of evidence, has been loudly scoffed at as unphilosophical credulity. What evidence are we to expect under such circumstances as these? The parties, be it remembered, are a crew under quarantine, and a cunning smuggler—both under penal restrictions which they daily and hourly, but of course secretly, elude by all sorts of frauds and falsehoods. What other evidence, we repeat, of communication between such people so circumstanced are we to expect, unless the Devil on Two Sticks had been employed as a spy, and from his lofty station at night had actually seen the piece of cloth conveyed from the San Nicolo into the boat, from the boat to the shore, from the shore over every inch of ground, till it arrived at Borg's house, and then observed the unfolding of the cloth, and the escape of the contagious vapour? As this is a point of considerable importance, because the same defect in the chain of evidence which is here complained of, will be found in the other histories of the plague which we have laid before our readers, we shall run the risk of tiring them with a few remarks.

We have always understood it to be sound philosophy to require no more evidence, in any case, than the best in degree, and the whole in quantity, which the nature of the proposition, and the circumstances, under which it is presented for examination, render possible to be given. Now suppose that a vessel with the plague among its crew arrives in the Thames, and comes up the river. There is a rumour, but no proof of communication with the shore; however a week afterwards the disease breaks out in the contiguous neighbourhood, in the house of a smuggler and in an ale-house frequented by sailors; and after spreading among the relations and friends of the first sufferers, as well as those who have had casual communication with them, is found in London, where it has not been for 160 years, gets into the houses of deluding doctors and deluded legislators, and carries off thousands and tens of thousands of the inhabitants; if such a calamity were speedily to follow the arrival of a vessel under such circumstances, who would doubt that the disease had been communicated from the vessel to the metropolis, because he could not track every footstep that it had taken; because, in other words, he could not do that, which common sense would inform any unbiassed person the lapse of a single week, a single day or hour, in carelessness and unsuspection, would make it impossible to do? But although the case may strike us more by being brought nearer home, it is not really stronger than the introduction of the plague into Malta; for Malta had been free from it almost as long as London has. Let not the people of London hug themselves in their long im-

munity; Malta had been free for 137 years, and Moscow for nearly 170.

The plague at Malta, in 1813, either arose as an epidemic, from a noxious state of the air, or it was introduced by contagion imported by the *San Nicolo*. Now granting that there is some difficulty to be overcome in either supposition; which is the greater; to believe, that the crew of the *San Nicolo* had communication with the family in which the plague first appeared in Valetta, with which family the captain was intimate, although this communication cannot be proved; or that the air of Valetta, which had continued free from plague for nearly a century and a half, should on a sudden assume a pestilential condition and that by an accidental coincidence, about a week after the *San Nicolo* sailed into the harbour with the plague on board? To find a difficulty in believing the former, but none in believing the latter, is indeed to strain at a gnat and to swallow a camel.

The foregoing accounts afford ample proof of the two propositions which we set out by stating; and, consequently, that the plague is communicable from person to person; but they form not one-twentieth part of the evidence to this effect. It is impossible, in the space allotted to us, to do justice to this part of the subject. We might now content ourselves with stating, that every competent person who had had opportunity of observing this tremendous malady, had come to the conclusion that it was contagious, and that there had been fewer dissentient voices than might have been expected, considering the nature of the subject and the wanderings of the human intellect; but as general statements produce little impression, we shall trouble our readers with a few instances.

Doctor Murdoch Mackenzie resided at Constantinople and Smyrna for twenty years, in the middle of the last century. During this time scarcely a year passed in which there was not some appearance of the plague in one or both of these cities. In 1751 it broke out at Constantinople, raged with great violence, and carried off, as it was estimated, 150,000 people. His observations on this disease he communicated from time to time, by letters, to Dr. Clephane and Dr. Mead, which were read before the Royal Society, and are published in the 47th volume of the *Philosophical Transactions*. The following extract from these letters will show the facts which he observed, and the opinions which he formed on the causes of the plague:—

‘ I can't see any other apparent cause of the virulency of the disease, this year, beside the occasion of greater communication. In the months of February, March, April, and May last, the distemper was so strong at
Cairo,

Cairo, as appears by letters from the English consul there, that no doors were opened for three months. In the mean time there arrived here, in May last, four ships loaden with Cairo goods; which goods and men being landed, spread the infection over all the city at once, after which one conveyed it to another, by contact. In the village where we lived, there died only sixty persons of the plague. The French ambassador's palace, next door to us, in the village, was infected; because five of his people went at midnight to a bawdy-house, where the father Demetry, the mother, and daughter at the same time had the plague, and died of it afterwards, all three; so that two of his excellency's servants were infected by them, one of whom died, and the other recovered, and is still living, after taking a vomit, some doses of the bark mixed with snake-root and Venice treacle, by my advice. We found this last time, and upon all such occasions, that whoever kept their doors shut, ran no risk, even if the plague were in the next house; and the contact was easily traced in all the accidents which happened among the Franks. Comte Castellane had, for three years running, persons attacked in the same room, in the months of July and August, notwithstanding all possible precaution used in cleansing the room, and even white-washing it. At last, by my own advice to his excellency, grounded upon the above theory, he built a slight counter-wall; since which there has been no accident in that room, now five years ago. I could give so many such examples as *de lassare valeant Fabium.*

Orræus, who was physician to Catherine, empress of Russia, and sent to advise during the plagues at Yassy and Moscow, states, that the most common mode of contracting the disease was by contact. Samoclowitz, surgeon to the military hospital at Moscow, who had also extensive experience of the plague in Poland, Moldavia, and Wallachia, before he witnessed its tremendous ravages in Moscow, says, in the preface to his *Mémoire sur la Peste*, 'it is certain that the plague is developed and propagated only by contact.' All the assistant-surgeons who were employed under him, (fifteen in number,) took the disease, and all died excepting three; while the physicians, who walked among the sick without touching them, generally escaped. When Mr. Howard, in the year 1785, went abroad to visit the principal lazarettos in France and Italy, he carried with him a set of questions concerning the plague, drawn up by Drs. Aikin and Jebb, which were to be submitted to the most experienced practitioners in the places which he visited. When he returned, Dr. Aikin methodized and abridged the answers, and the result is given in the celebrated work on the lazarettos of Europe. We have no room for it, and yet it deserves to be read by all those who are in search of information on the subject. 'They all,' says Mr. Howard, 'in the most explicit manner concur in representing the plague as a contagious disease, communicated by near approach to, or actual contact with infected persons or things.'

During

During the *late* war (as we used to call it) in Egypt, now a quarter of a century ago, the medical officers of both the French and English armies had ample opportunities of observing the plague, and they almost unanimously came to the conclusion, that it was a contagious disease. Dr. Edward Bancroft, a man of unquestionable learning and talent, yet prone enough to dissent from received opinions, accompanied the British army during part of the Egyptian campaign. His testimony is particularly important, because, by his essay on the yellow fever, which he believes not to be contagious, he had shown himself fully prepared to adopt a similar opinion about the plague, if he had met with sufficient proofs of it: he thus expresses himself:

‘The facts which prove the necessity of actual contact with some infected person or thing to communicate the plague, are so numerous, and many of them so notorious, that it must be unnecessary for me to enter upon a detail of them, after what Dr. Russel and others have published, and after the experience of the British army in Egypt, which invariably demonstrated this necessity, by showing that all those who avoided contact, invariably escaped the disease, whilst those who did otherwise in suitable conditions, were very generally infected. Nor was there, so far as I have been able to discover, any instance, in the French Egyptian army, of a communication of the disease without contact, though the physicians to that army, who have written on the subject, do not, I believe, positively assert the impossibility of such communication.’

Mr., now Sir James M'Grigor, surgeon to the Indian army in Egypt, during the Egyptian campaign, in his medical sketches of that expedition, gives the following account of the arrangements at the pest-houses, and their result:

‘In the pest-houses of the army thirteen medical gentlemen did duty, who in the Indian army might be said to have had the post of honour. They were Mr. Thomas, Mr. Price, Mr. Rice, Dr. Wayte, Mr. Grysdalé, Mr. Adrian, Mr. O'Farrel, Mr. Whyte, Mr. Dyson, Mr. Anglé, Mr. Moss, Dr. Buchan, and Dr. Henderson. In order to take from our medical gentlemen, in the pest-houses, some of the most dangerous part of the duty, it was my wish to procure some of the Greek doctors of the country to reside in the pest-houses, to feel the pulses there, draw blood, open and dress bubos, &c. The most diligent search was made for those people, and very high pay was promised to them, but we could tempt none of them to live in our pest-houses: a plain proof of the opinion which they entertain of the contagious nature of the disease. The thirteen gentlemen first mentioned, were those only that were directly in the way of contagion, for it became their duty to come into contact with the infected, and seven of them caught the infection, and four died. To the atmosphere of the disease, all the medical gentlemen of the army were exposed, as they saw and examined the cases in the first instance; but, except from actual contact, there never appeared to be any danger.’

The medical officers of the French army came to similar conclusions.

clusions. Desgenettes, chief physician to the French army in Egypt, in his '*Histoire Médicale de l'Armée d'Orient*,' thus sums up his opinion on the subject of the plague:

'The plague is evidently contagious, but the conditions of the transmission of this contagion are not more exactly known than its specific nature. The dead body has not appeared to transmit it—the animal body in a heated state, and still more in a state of febrile moisture, has appeared to communicate it more easily; the contagion has been known to cease in passing from one river to another of the Nile; a simple trench made before a camp has been known to stop its ravages; and on observations of this kind is founded the useful insulation of the Franks, the practice of which has been sufficiently detailed by different travellers.'

Baron Larré, the principal surgeon to the French army, and the distinguished author of the *Memoirs of Military Surgery*, states a similar opinion:

'But however strong,' says he, 'may have been these affections, (moral,) their effects cannot be compared to those which resulted from the communication of the healthy with the sick, or to the effects of contact with contaminated objects. We may be convinced of this truth, by the ravages which the plague made in the year 9, (1801,) among the Fatalist Mussulmen; * * * it were to be wished that, on the first days of the invasion of the plague, its true character had been presented to the army. This would have diminished the number of victims, instead of which the soldier, imbued with the opinion which was at first propagated, that this disease was not pestilential, did not hesitate to seize and wear the effects of his companions dead of the plague. The pestilential germ developed itself in these individuals, who often sunk under the same fate. It was only when they had gained a perfect knowledge of this disease, that many preserved themselves by the precautions which were indicated.'

Dr. Sotira, another of the physicians of the French army in Egypt, relates the following striking circumstance:

'In the seventh year of the French republic, about eighty medical officers died of the plague. In consequence of this mortality, an order was issued to employ Turkish barbers in the pest-houses, to dress the patients, and to undertake all the medical treatment which required actual contact. The result was, that during the next two years, only twelve of the medical officers died of the plague, but half the Turkish barbers caught it.'

Thus far we have drawn our information from medical men, eye-witnesses of the facts which they relate. But as there are many persons whimsical enough to think that medical men are the worst judges, and that the less a man knows on a subject, the more likely is he to come to a right conclusion about it, we will give them the experience and the opinion of the late Sir Thomas Maitland, who witnessed the rise, progress, and cessation of four different

different plagues in the Mediterranean; those of Malta, Gozo, Corfu, and Cephalonia. In a letter to Lord Bathurst, dated Corfu, April, 1819, which is published at length in the *Morning Herald* of June 29th, 1825, and is remarkable for its practical good sense and manly spirit, he states it as his firm opinion, that the plague is taken only by contact. 'I have invariably found, (says he) that preventing contact, stops the disease, and that so long as contact is permitted, it uniformly increases. If the absence of contact stops the plague, the allowing of contact must be the cause of it.' On this belief he acted in organizing measures for the suppression of the disease. Although Sir Thomas Maitland was bred neither as a logician, nor as a physician, it would be difficult for the former to reason better, or for the latter to act more skilfully. In the system of police by which he invariably succeeded in suppressing the plague,

'the exclusive object of the troops was to prevent contact; every family was shut up in their own houses, fed at their own doors, and sent to the lazaretto the moment the disease appeared. The soldiers employed in this service scarcely ever contracted the disease. In the few instances that occurred, and they were extremely few, it was uniformly observed, of each soldier that took the plague, that he was loose in his conduct, and neglectful of the necessary precautions. Those, on the contrary, who attended to these precautions, never took it. They were sent into several villages, many of them with streets but a few feet wide; they did the severest night-duties of all kinds, in these villages; they lived in exactly the same atmosphere as the inhabitants, yet they never caught the disease, though it was raging in the villages; they were stationed within a yard or two of camps and hospitals in which the plague was raging with great violence, and they never caught it; and lastly, they were exposed to all those hard duties, which in all infectious diseases are known to give a pre-disposition to the most violent and fatal type of the prevailing disease, and yet they never caught the plague.'

We pause for want of room, not for want of matter; for we have not produced one twentieth part of the trustworthy evidence on record. On this part of the subject there is a perfect glut of proof, in examining which the mind gets so enured to the most decisive facts, that its sense of evidence becomes blunted, and it often puts aside proofs, as feeble and inconclusive, which, on any other occasion, would strike with instantaneous conviction. But enough has been said under this head, we trust, to make out our two first propositions; namely, that those persons are most liable to the plague, who approach those affected with it, and that those generally escape the disease, who avoid those affected with it. This is enough to prove that it is communicable from person to person: we have no other proof of the contagiousness of hooping cough, scarlet-fever, and, in the experience of the present generation, of measles.

But

But we shall proceed to the third test of a contagious disease, inoculation, and inquire whether the plague can be communicated artificially, like the small-pox and cow-pox. Under this head we must not expect very abundant evidence. People consent to the inoculation of small-pox, because they can generally have it only once in their lives, and because, by so doing, they substitute a disease which is fatal only once in five hundred cases, for a disease which is fatal in one case out of four. There are not the same temptations to submit to the inoculation of the plague; for, even if experience should prove that inoculation diminished the fatal force of the plague as much as it diminishes that of small-pox, it would not afford security from subsequent attacks. We must not expect, therefore, that many persons should have been so rash as voluntarily to inflict this disease on themselves. But a few such there have been, and we proceed to relate their experiments.

During the campaign in Egypt, in 1801, the French troops were much depressed by their dread of the plague. To convince them that their alarms were unreasonable, Desgenettes attempted to inoculate himself with the disease, but to secure himself from the danger of the experiment, he washed the part with soap and water; we will give his own account of this experiment, from the failure of which such erroneous inferences have been drawn:—

‘It was to restore the spirits and exhausted courage of the army, that, in the middle of the hospital, I dipped a lancet in the pus of a bubo belonging to a convalescent patient, and made a slight puncture in the groin and in the neighbourhood of the axilla, without using any other precaution than washing myself with soap and water. I had, for more than three weeks, two little points of inflammation, corresponding to the two punctures, and they were still very tender, when on my return from Acre, I bathed in the presence of the army, in the bath of Césarée. This incomplete experiment, of which I have been obliged to give some details, because of the noise it made, proves little, and does not refute the transmission of contagion, demonstrated by a thousand examples.’

Soon after this, Dr. Whyte, a medical officer in the English army, hearing that Desgenettes had made the experiment with impunity, but not hearing of the precaution which he had used, repeated the former, without the latter, in the pest house at El Hammed, on the 2d January, 1802. He was an anti-contagionist, and wished to verify his doctrine by showing that the disease could not be communicated by inoculation. The experiment and the result are thus related in a letter from Mr. Rice, then doing duty in the pest house at El Hammed, to Mr., now Sir James M. Grigor:—

‘Dr. Whyte came here last night, January 2d, 1802: soon after he came in, he rubbed some matter, from the bubo of a woman, on the
inside

inside of his thighs. The next morning he inoculated himself, in the wrists, with a lancet, with matter taken from the running bubo of a sepoy.

In subsequent letters Mr. Rice states, that 'Dr. Whyte continued in good health on the 5th, and all day on the 6th till the evening, when he was attacked with rigors and other febrile symptoms.' He continued to have shiverings, succeeded by heat and perspiration, much affection of the head, tremor of the limbs, a dry black tongue, great thirst; a full, hard, irregular pulse; great debility and great anxiety. 'He still persisted that the disease was not the plague, and would not allow his groin or arm-pits to be examined.' He became delirious on the 8th, and died on the 9th, in the afternoon.

Dr. Valli was an Italian physician, who resided for some time in Turkey. He distinguished himself by a work on the plague, and has since, we believe, died of yellow fever, to investigate which he went to the West Indies. During his residence at Constantinople, he is known to have made experiments on the inoculation of the plague, and in the *Journal de Médecine*, for May, 1811, we find the following statement, which the editor says he received from one of his correspondents. Valli diluted the pestilential matter with small-pock matter, or with the gastric juice of frogs, or with oil. This compound he called his pommade. If a Mussulman came to consult him for an ophthalmia, he ordered him some of his pommade, to rub upon his eyelids: if another came, complaining of pain in the bowels, he ordered some of his pommade, to rub upon his belly. In this way he gave the disease to thirty persons. These facts M. Valli is said to have communicated to the Medical Society at Geneva, 'and doubtless,' says the reporter, '*he will one day publish them in detail!*' Valli, however, never did publish them, probably ashamed of the result; for it is said that these experiments went to such a mischievous extent, that the Turkish government at length interfered, arrested the pharmacopolist who vended the pommade, burnt his drugs, and cut off his head.

We have now made out our three propositions; the two first by overwhelming evidence; and the last, by all the evidence which the nature of the proposition would lead us to expect, and of which the least that can be said is, that it furnishes strong ground for belief. We pause, therefore, and ask, whether there is not sufficient reason for believing that the plague is contagious, to justify us in acting upon this supposition—to make it unjustifiable to act upon any other. Considering the terrific nature of this disease, one would suppose that the bare possibility of its being contagious would induce us to act on that supposition,
and

and that men would lay down as a maxim, 'Take it for granted that it is contagious, till you are certain that it is not.' But when we consider the immense mass of evidence for the foregoing propositions, the clearness and distinctness with which they are made out, the small number of dissentient voices, and the tremendous importance of the stake at issue, one would suppose it impossible that there should be men not merely incredulous enough to dissent from this opinion, but mad enough to wish to act on their dissent. Yet such is the fact.

'However indisputable the fact of the plague being contagious may be deemed by modern physicians, it may be remarked, that it has been strongly opposed as often as the subject of quarantine has fallen under the deliberation of the legislature; and the public, at such times, have been constantly pestered by an inundation of pamphlets, which, without advancing any thing new, merely retailed arguments which have long before been refuted.'

These are the words of Dr. Patrick Russell, physician to the British factory at Aleppo, about the year 1760, so applicable to the present state of things, that they might seem to have been written to-day and with express reference to it. The Levant Company, finding the quarantine laws inconvenient, resolved, a few years ago, to take a medical opinion upon the necessity of the restrictions which they imposed. They accordingly selected and sent to Constantinople a physician of the name of M'Lean, a gentleman well suited to their purpose, who, although he knew nothing of the disease by experience, was thoroughly convinced that it was not contagious, and consequently that the restrictions were as unnecessary as they were inconvenient. Going out with these previous opinions, which we suppose we must not presume to call prejudices, he found an experience of *seventeen days* sufficient to satisfy his mind, and he has ever since been incessantly active in propagating his belief. Zeal and activity are the virtues of a sect, and Dr. M'Lean with his few followers are entitled to the praise of possessing them; in the shape of petitions to parliament, articles in reviews, paragraphs in newspapers,* and speeches in parliament, they have kept their view of the subject incessantly before the public; and the result has been, that the

* It is amusing to notice the things on this subject produced in the daily papers. The Morning Chronicle for September 7th, of this year, which is now lying before us, contains an account of a sitting of the Royal Academy of Sciences at Paris, in which a M. Lassis, an unbeliever in the contagiousness of the plague, is represented as saying that 'he denied the existence of contagion in every species of disease excepting only the measles and siphylis.'! Then the small-pox and cow-pox are not contagious,—diseases which we can propagate at will, by the point of a lancet, with matter which we can see and feel! Where will the folly of man stop?

legislature has been prevailed upon to reconsider the quarantine laws, and ultimately to consent to a modification of them.

We proceed therefore to inquire what reasons have been discovered sufficiently weighty to set aside the experience of so many generations, and so many witnesses, together with all the inferences and precautions to which they have led. These reasons are to be found in Dr. M'Lean's work 'on Epidemic and Pesti- lential Diseases,' in his evidence before a Committee of the House of Commons, and in a dissertation on the subject by a writer in the *Westminster Review*.*

By way of introduction to the discussion it is first laid down that, on the question of contagion, medical men are the worst judges, and that the best are 'men of general science, whose minds are accustomed to weigh evidence,' but who are unacquainted with, and *consequently* unprejudiced on the subject. The only reason given for this remarkable but very convenient proposition is, that the students of medicine are the slaves of authority, which in after-life, as physicians, they seldom outgrow; but if it be common for the student to be oppressed by the authority of eminent teachers, we shall presently see that it is not impossible for the ignorant to be deceived by the mistatements of plausible reasoners. The question of contagion, like every other, requires two qualifications in those who are to pronounce a judgment upon it; a knowledge of the whole truth as to matters of fact, and a capability of reasoning rightly upon that knowledge:—it requires also something more—a knowledge of the whole truth as to matters of fact on certain analogous medical questions, as well as the reasonings upon which points once disputed in them have been finally settled; in order to compare the difficulties so settled, with difficulties still remaining in the way of any positive theory of contagion. It is obvious that men of science who know nothing of medicine can possess only one of these three qualifications; and a sufficient reason why they must be incompetent judges, is, that although they can appreciate what is neat in point of statement, and plausible or even accurate in point of reasoning, they are no judges whatever of what is true in point of fact. Hence, when they listen to a man who is little scrupulous about the accuracy of his facts, they are entirely at his mercy. It requires no great sagacity to perceive that the real motive for this appeal to those who are not physicians is, not because they are likely to be the best judges, but the most docile listeners—because they are less likely to detect the errors of their teachers.

* See Nos. V. and VI.

It is easy to argue triumphantly about law with a physician, about physic with a lawyer, about theology with either—in short, on any subject with any person who knows nothing about it.

From this introduction we pass to the first argument produced to prove that the plague is not contagious, which is, that it is not governed by the laws of contagious, but of epidemic diseases. This argument, which is announced with great parade, explained most elaborately, and referred to again and again, as the cornerstone of the system, is an attempt to lay down the laws by which contagious, and those by which epidemic diseases are governed, and then, having ascertained by what laws the plague is governed, to deduce whether it is epidemic or contagious. This is amazingly well suited to take in the ‘men of general science,’ the minds ‘accustomed to weigh evidence,’ for it has a logical air which they can readily appreciate, whilst it reposes upon facts of which they are entirely ignorant. If the reader will take the trouble to compress and comprehend it, he will find that it comes to this:—Contagious diseases (as small-pox, measles, and scarlet fever) are very uniform in their symptoms and duration—affect a person only once in his life—the patient under them is not subject to relapses, and they may be propagated at all times and seasons. On the contrary, epidemic diseases are very irregular in their symptoms and length—appear and disappear at certain times of the year—are most prevalent in certain countries, or even neighbourhoods—may affect a person repeatedly in life, and the sufferer is liable to relapses. Now, as the plague is very irregular in its symptoms and length—appears and disappears at certain seasons—is most prevalent in certain countries and even neighbourhoods—can affect a person repeatedly—and as relapses occur to the patient—as the plague has all these qualities in common with epidemic diseases, it is plain that it must be an epidemic and not a contagious disease. Now the first sophism discoverable in this argument is, that the contagious or non-contagious nature of a disease is here made a question of inference to be determined by reasoning, which in truth is a question of fact to be determined by experience. Let any man who has the smallest pretensions to understanding say *which* is the right mode of discovering whether or not a disease is contagious—to find out that it is uniform in its symptoms and progress—that it affects a person only once in life—that when convalescent he is not liable to relapse—and thence to *infer* that it is contagious—or to go among the sick, to observe and watch the way in which it spreads, and thus to *ascertain* whether it was contagious. When Gall first broached his craniological doctrines in Germany, they were ridiculed on the stage—a master is represented hiring his servants according to the shape of their skulls—he feels their

heads—finds the bumps which constitute a good servant—infers that they are sober, honest, and industrious—hires them *without characters*, and in the end finds them drones, profligates, and thieves. Now the mode of proceeding, which in this instance was only an imagined absurdity, is absolutely practised by Dr. M'Lean and his followers in judging of the contagiousness of diseases.

But not only is the question resolved by reasoning which ought to be resolved by experience, but even in the conduct of the reasoning there is a fresh sophism or rather blunder. One class of contagious diseases, the eruptive fevers, is assumed to be the only class—its laws are described, and every disease which is not governed by them is inferred not to be contagious; whereas the question at issue is, whether the eruptive fevers are the only contagious fevers. If to determine whether negroes were human beings, we were to take a particular people, as Europeans, and, describing among their qualities a fair complexion, were to infer that because negroes were not fair they were not human, would not this be begging the question? yet this is precisely the line we adopt when, in a dispute what are contagious fevers, we take the eruptive fevers as the only examples.

Another argument against the contagiousness of the plague is, that it breaks out at a certain season, lasts for a certain time, and then subsides and remains dormant till the favourable season returns. On the other hand we are told, that 'contagious diseases can be propagated at any time, and among any number of persons'—'That a disease depending upon a specific contagion must prevail alike in all seasons, in a pure as well as in an impure atmosphere, amongst the rich as readily as amongst the poor; and that the only influence of these adventitious circumstances would be to render the disease more or less severe.' We could not produce a stronger instance how unsafe it is to trust these discussions into the hands of those who are ignorant of medicine; for no well educated physician could ever have penned such a statement, and no competent judge could ever for a moment have listened to it.

Take the diseases which are unquestionably contagious:—What is the fact with hydrophobia? Sometimes it is so rare, and excites so little attention, that dogs run about without restraint, and the public almost forget that there is such a disease. At other times it is so prevalent, and the bite of dogs is so often followed by this terrific disease in man, that the public are kept in perpetual alarm; the walls are placarded with orders to tie up the dogs, and their appearance in the streets occasions the timid to fly, and the mischievous to follow them with stones and clubs. As the contagion is always in existence, and the animals susceptible to it
always.

always alive, whence comes it that it is more active and diffusive at one time than at another? It is plain that, beside the specific contagion, there is a diffused cause which renders the disease more communicable at one time than at another. Whether it is a peculiar condition of the atmosphere, as is commonly believed, and if so, how it acts, whether by rendering the poison more active, or the bodies of animals more susceptible to it, it is unnecessary for our present purpose to inquire. It is enough to know that hydrophobia, which 'depends on a specific contagion,' is not 'propagated equally at all times,' and does not 'prevail alike in all seasons.' The same fact may be stated, and the same inference may be drawn with regard to the hooping-cough. Parents well know that at one time it is almost a forgotten disease, at another time they can scarcely go into a family without coming in contact with it; and experienced physicians know that it generally prevails in cold damp seasons, as the end of autumn and winter, and is little heard of in the warm dry days of summer. Measles are generally most rife in spring and disappear in summer.

'The scarlet fever,' says Sydenham, 'though it may happen at any time, yet it most commonly comes at the latter end of summer.' 'The measles of 1670,' says the same distinguished physician, 'began *very early*, that is, at the beginning of January, and, increasing daily, came to their height in March; afterwards they gradually decreased, and were quite extinguished in the following July.'

With regard to the small-pox and cow-pox, it is necessary to distinguish between the artificial and the natural propagation of contagious diseases. It is quite true that contagious diseases, which are propagated by inoculation, can, generally speaking, be propagated in this way 'at any time, and among any number of persons;' but leave them to be propagated in the natural way, and it is quite notorious that they spread readily at one time, and scarcely at all at another. The small-pox has been so much restrained, first, by the introduction of inoculation, and secondly, by that of vaccination, that experimentally we of the present day know little of its natural course; but before the introduction of the one, and the discovery of the other, the small-pox used to lie dormant—then appear—rage for a time—and then subside—like epidemic diseases. Sydenham, who lived before the time of inoculation and vaccination, describes the small-pox as at one time appearing rarely, or not at all; then beginning to show itself at the approach of the vernal equinox; spreading more and more every day, becoming epidemic about autumn, abating on the coming on of winter, returning again in the following spring, and prevailing till checked by the subsequent winter. The accounts

which this admirable physician gives of the small-pox in different years read exactly like accounts of an epidemic disease.

Boerhaave, speaking of the same disease, says, 'this disorder is generally epidemical, beginning early in the spring, increasing in summer, abating in autumn, ceasing almost entirely the following winter, to return in the spring, and reign again in the same order.' Van Swieten, who, though a commentator on Boerhaave, wrote from experience, after describing Sydenham's account of the rise, progress, and subsidence of small-pox, adds, 'I have seen many variolous epidemic constitutions, and they agreed in most things with the observations of Sydenham.' Sydenham, Boerhaave and Van Swieten saw the small-pox before inoculation was introduced, when it was propagated in the natural way, and we see that it used to run its course just like epidemic diseases.

Sydenham lived and was practising in London in the year 1665. He saw something of the dreadful plague of that year, and he had frequent opportunities of seeing the small-pox propagate itself in the natural way. Now it is curious, that so far from there being any striking difference between the progress of the plague, and the progress of contagious diseases, as the anti-contagionists assert, he selects these two as strikingly similar in their mode of appearing and disappearing.

'That such a disposition or texture happens to the mass of the air as occasions various diseases at different times is manifest to every one that but considers, that one and the same disease kills an infinite number of men at some certain seasons, and at another time seizes only here and there a man, and goes no farther; and this is very apparent in the small-pox, especially in the plague, the argument of this chapter.'

When Dr. Jenner first disclosed his discovery of vaccination, and every body was anxious to verify it by experiment, the London physicians could procure no matter, because, as they were told, the disease was extinct.

'Unfortunately,' says Dr. Woodville, (the physician to the Small-pox hospital,) 'at the time Dr. Jenner's publication appeared, no cow-pox matter could be procured, for the disease had then become extinct, nor was it expected to return till the spring, the period at which it usually affects the cows. Towards the latter end of January last, I was informed that the cow-pox had appeared among several of the milch cows kept in Gray's Inn Lane, and about four fifths of them were eventually infected.'

This circumstance is not peculiar to London; in Germany the cow-pox is apparently so extinct at one time, and so prevalent at another, that it is the belief of scientific men that it is newly originated; and Pilger, a veterinary surgeon, who is good authority for the purpose for which we cite him, says, 'that in Russia the
disease

disease arises among the cattle when they are driven from Kasau to Moscow.*

It appears, therefore, that contagious diseases prevail much at one time and little at another, and, consequently, that two things are requisite for their ready propagation; the one, the contagious matter itself, the other, a diffused cause, supposed to be a state of the atmosphere favourable to its action. Let it never be forgotten, that this is the case with diseases unquestionably and notoriously contagious, and therefore that when it is found to be the case with the plague it can be no objection to the belief of its being also contagious. Are the anti-contagionists ignorant of these facts? In this, and other instances which we shall have occasion to notice, the error is so extraordinary, that it is really difficult to refer it to ignorance; ignorance so dense is almost incredible. But we go on.

The anti-contagionists, describing epidemic diseases, say,

'People are attacked, not in proportion as the inhabitants of the affected mix with those of the unaffected places; but, in proportion as the inhabitants of unaffected expose themselves to the *air* of affected places. The visits of the sick to unaffected places is [are] followed by no increase of disease; the visits of the inhabitants of an unaffected, to an affected place, is [are] attended with a certain increase of sickness. On their removal from a noxious to a pure air, the sick often rapidly recover; but they do not communicate the disease to the inhabitants of a pure atmosphere; in the history of all the epidemics which have ever prevailed, in all parts of the earth, there is not on record a single example of the communication of the disease from the sick to the healthy in a pure atmosphere.'—*West. Rev.* No. V. p. 145.

Here are, put only in several forms, two propositions: First, that when the people of healthy districts visit the affected districts, they take the disease not from the sick, but from the air. Secondly, that when the sick move from an affected to a healthy district, they speedily recover, and do not give the disease to others. Let us take these propositions, and try them in their application to the plague. If those who come out of a healthy into an affected district, took the disease not from the sick, but from the air, then those who avoided the sick, would be as liable to the disease as those who approached and touched them. Is this the fact with the plague? so notoriously the contrary, that all modern observers have come to the conclusion that absolute contact, either with infected persons or infected clothes, is necessary for the communication of the disease. Hence the security of those who, while the plague is raging, shut themselves up in the very town in which it is raging, and avoid all intercourse with the sick. Why did the

* Handbuch der Veterinärwissenschaft.

religious communities at Marseilles, which practised this seclusion, escape? Why did the Foundling Hospital at Moscow, which was strictly shut up, escape, while the Foundling Hospital at Marseilles, which admitted a patient with the plague, was swept of its population? Why at Malta, in 1813, was the plague kept out of the Military Hospital, although it was raging in the ground floor, while in the houses in the immediate neighbourhood, the disease was not only getting access to the ground floors, but climbing to the very garrets? Why did the French medical officers in Egypt die in crowds, whilst they dressed the patients, and as soon as the task of touching and dressing them was put upon the Turkish barbers, why was the mortality transferred from the surgeons to the barbers? Why did the troops, employed by Sir Thomas Maitland to suppress the plague at Malta, escape the disease, although they were, not only in the same district, but in the same streets in which it was raging? In short, for we might have saved ourselves this recitation of facts, why is the practice of seclusion, or shutting up, as it is called, practised by the European factories in places liable to the plague, an effectual preventive of the disease? If it is said that those persons keep aloof in the healthy districts, then are the healthy and sick districts often separated by a distance only of a few feet—then is the definition of a healthy district, a place in which the healthy shut themselves up?—then is a man able to plant himself in the midst of a sick district, draw round him a magic wand, and say to the noxious atmosphere, so far shalt thou come, and no farther? Moses's out-stretched hand had not more power over the waters of the Red Sea, than is here attributed to human volition over a contaminated atmosphere.

Now for the second proposition, that

'the visits of the sick to unaffected places is [are] followed by no increase of disease. In the history of all the epidemics which have ever prevailed in all parts of the earth, there is not on record a single example of the communication of the disease from the sick to the healthy in a pure atmosphere.'

Our readers will bear in mind that the writer's own description of a pure atmosphere is, the atmosphere of unaffected places; otherwise, if, when the visits of the sick to unaffected places are followed by the propagation of the disease, that fact be taken as a proof of the impurity of the atmosphere, it would be reasoning in a circle—a mere juggle, instead of an argument. Now, taking the proposition in this sense, a more daring and outrageous misstatement was never penned. Excepting only places where the disease is endemic, nearly all the plagues which have ever devastated the world, have followed the visits of the sick to unaffected places—the only difficulty in producing 'a single example,' is the

the difficulty of choosing among a multitude. The plague of Malta, in 1813, followed the visit of the sick, in the San Nicolo from Alexandria, an affected place, to Malta, an unaffected place, unaffected for 137 years. The plague at Gozo followed a visit from Valetta, an affected place, to Gozo, an unaffected place—an elevated, little island, only a few miles long. The plague at Marseilles, in 1720, followed the visits of the sick from Seyde in Syria, and from Tripoli, affected places, to Marseilles, an unaffected place, unaffected for more than half a century. The plague of Moscow, in 1771, followed the visit of the sick from Choczin, an affected place, to Moscow, an unaffected place, unaffected for more than a century and a half. So far from being in want of a single instance, we have no room for the number which press on us; but we will give one which may serve better than any on a larger scale, and in more populous districts, because no stress can be laid on the impurity of the air. When the plague was raging in London, in the year 1665, the visit, not of the sick, but of the clothes of the sick from London, an affected place, to a village on the Peak of Derbyshire, an unaffected place, was followed by the appearance of the disease in the pure air of that remote and elevated spot. Dr. Macmichael has given a full account of this striking fact in his very interesting Pamphlet; but we find the following short mention of it by Mr. Howard, in his account of the principal lazzarettos of Europe.

‘When the plague raged in London, in the year 1665, the infection was conveyed by means of a parcel of clothes to the remote village of Eyam near Tidewell, in the Peak of Derbyshire. In this place it broke out in September, 1665, and continued its ravages upwards of a year, when 260 of the inhabitants had died of it. The worthy rector, Mr. Mompesson, whose name may rank with those of Cardinal Borromeo of Milan, and the good Bishop of Marseilles, at its breaking out, resolved not to quit his parishioners, but used every argument to prevail with his wife to leave the infected spot. She, however, refused to forsake her husband, and is supposed to have died of the plague. They sent away their children. Mr. Mompesson constantly employed himself during the dreadful visitation, in his pastoral office, and preached to his flock in a field where nature had formed a sort of alcove in a rock, which place still retains the appellation of a church. He survived, and the entries in the parish register relative to this calamity are in his hand-writing. In the fields surrounding the town are many remains denoting the places where tents were pitched; and tombs are still existing of large families entirely swept away by this devouring pestilence.’—p. 24.*

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* The anti-contagionists have been in the habit of affirming that the plague had never penetrated into Arabia. We have received the following communication from Dr. Benjamin Babington, who came over land from India, and in whom the soundest sense, and the most cautious observation, are hereditary qualifications. It bears immediately on this part of the subject.—‘The plague had never been in Arabia till the

The statement then is utterly false; but that is not all; it is equally inconclusive; if we were to admit that the removal of the sick to places unaffected with the plague is often followed by speedy recovery, and by no spread of the disorder, we should only admit what is true with regard to diseases unquestionably contagious, as the small-pox. Van Swieten, who saw the small-pox when it was propagated only in the natural way, writes thus:

‘I have sometimes observed large towns to be free from the small-pox, whilst it raged epidemically in the neighbouring villages; and, on the contrary, some large towns universally visited by the complaint, whilst the villages in the neighbourhood remained in health, though the inhabitants of both mixed daily with each other. I also perfectly remember, that I once removed two patients of mine from a place where the small-pox raged to a large town, without propagating the contagion there; and many excellent physicians, with whom I have cultivated a friendly commerce with respect to medical knowledge, testify, that they have observed the same thing.’

A similar fact is mentioned by Sir John Pringle, in his *Account of Diseases of the Army*, where it is stated that ‘the small-pox, being carried into a camp by some new raised recruits, quickly disappeared without becoming general, although it is notorious that other camp-diseases are but too apt quickly to spread themselves.’ Again, the late and learned Dr. Odier, in a letter from Geneva to Dr. Hagarth, says,

‘we have frequently inoculated at Geneva a great number of children in the years during which the small-pox was not epidemic; these children have gone out every day, even after the eruption had broken out; they have been in the streets, and in the public walks; they have communicated freely with other children susceptible of the infection, and, not only the small-pox did not spread, but there did not occur, to my knowledge, any distinct instance of the communication of the disease from one individual to another in the streets or promenades.’

When Sir James M’Grigor was at Bombay, the small-pox was raging in the houses contiguous to the barracks, yet not one adult or child in the regiment was affected by it. In Africa, when the Harmattan blows, no contagion is active, not even that by inoculation of the small-pox.

We pass on to an observation which deserves more attention, be-

middle of 1815, when Mahomed Ali Pasha of Egypt, sent his troops across the desert into Arabia on an expedition against the Wahabees. On this occasion it visited Yambo and Jedda, and crept down the coast as low as Gamfada. Each of these towns lost nearly half its population. When I was at Milo, in the end of 1815, a vessel came into the port having one person on board ill with the plague. This vessel was ordered by the Greek authorities to quit the harbour. She put into Mitylene, where those in command being less cautious, allowed the sailors to land, several of whom had by this time become infected. The disease immediately afterwards broke out among the Islanders, and many fell victims to it.’

cause

cause it is not founded in mistatement; it is this: that the plague, when raging violently, sometimes suddenly abates at the very time when the supposed sources of infection, contaminated persons, or contaminated things, are most numerous. In the great plague of London, in 1665, Sydenham states, that 'the number of deaths which had increased to some thousands in one week in August, decreased and almost stopped at the latter end of November.' It must be obvious to the thoughtful reader, that this circumstance, on which so much stress is laid, is only another instance of a general accident of contagious diseases which we have already weighed and considered, viz. that they are propagated readily at one time and with difficulty at another. This has generally been explained by the supposed existence or non-existence of some quality in the atmosphere favourable to the propagation; if the atmosphere can suddenly assume such a quality, it is easy to understand how it may as suddenly lose it. If some changes are capable of increasing, other changes may be capable of diminishing the prevalence of a disease. There is no more mystery in the sudden diminution than there is in the sudden increase in the number of the sick, and there is no mystery in either to one who duly considers that two things are required for the ready diffusion of a contagious disease; the one, the contagious matter or effluvium; the other, a particular state of the atmosphere favourable to its action.

Other circumstances may contribute to the decline of contagious diseases. A man must have had little experience in medicine who does not know that some persons are more susceptible of disease than others. When a contagious disease first breaks out, it of course seizes the most susceptible subjects—they are the tinder, which take fire readily and burn rapidly. The disease spreads easily and widely as long as this combustible matter is abundant, but as soon as it is consumed the fire burns dimly, and at length goes out. Something too may depend on this, that the contagion may lose its pungency by passing through many individuals, and at length wear out. The vaccine matter fresh from the cow produces a more painful disorder than after it has passed for some time through the human subject by inoculation; and if vaccination be now less effectual than formerly as a preventive of small-pox, it may be because we have neglected too long to vaccinate with matter taken immediately from the animal. When siphylis was first brought from America to Europe, it was so virulent and so terrible, that we can hardly recognize in the descriptions left of it by our ancestors, the comparatively mild and tractable disease of the present day.

The last argument of the anti-contagionists which we think entitled to any notice, is the circumstance, that when the plague is prevalent,

prevalent, so many persons are exposed to the contagion without being affected. This argument is founded upon the supposition, that because almost every body is susceptible to the contagion of small-pox, measles, and scarlet fever, therefore almost every body must be susceptible to the contagion of the plague if it be contagious; in other words, that the laws which govern the eruptive contagious fevers must be the same as govern all contagious fevers. This argument we have already destroyed, by observing that it takes for granted the very point in dispute, that the eruptive contagious fevers are the only contagious fevers. If because many who are exposed to the contagion of the plague escape it, we are to infer that the exposure is not the cause of the plague in those who take it, let us see to what conclusions we shall arrive. Of those who are bitten by a rabid animal, many are not affected by hydrophobia; therefore the bite of a rabid animal is not the cause of hydrophobia. Of those exposed to a cold and variable season, many are not affected with pulmonary inflammations; therefore cold and variable weather is not the cause of pulmonary inflammations. Of those oppressed by the intense heat of the season, many are not seized with the cholera; therefore a hot season is not the cause of cholera. But a truce to this—the causes of disease are not things which invariably produce them, but which produce them sufficiently often to leave no doubt that they are to be considered their causes. Every body is susceptible to small-pox, measles, and scarlet fever; but then, having had them once, he never has them again. Many people are not susceptible, at least for a time, to the plague; but then, having had it once, they may have it repeatedly—singleness of attack is a compensation for universal susceptibility—frequent insusceptibility is a compensation for the liability to repeated attacks. Nature, or rather Providence, abounds in these compensations.

We might now leave the subject, but there are a few statements of the anti-contagionists which it will be useful to notice, not as important in themselves, but as showing the structure of the minds of those who advance them, how little they are to be trusted even in the statement of a fact, and how unfit they are as guides on so momentous a subject. A writer in Blackwood's Magazine, alluding to the anonymous expositor of Dr. M'Lean's whims, says, 'it is true I know *nothing of the subject*, but the Article appears to me to be *quite conclusive*.' It is impossible to put it more happily—the exposition does appear quite conclusive to one who knows nothing of the subject. The most potent arguments are facts, and when the teacher cares little, and the student is totally ignorant, whether they are accurate or no, the business of conviction is an easy task. An instance or two will show what we mean. 'The

'The small-pox secretes a contagious matter which is contained in its pustules—the measles secretes a contagious matter which is contained in its vesicles. Apply a portion of the fluid contained in the pustules of the one and the vesicles of the other to a healthy person, it will excite in the latter the same train of symptoms as existed in the individual in whom the contagious matter was secreted.'—*West. Rev.* No. V. p. 138. And again—'the small-pox is never without its pustules, the measles is never without its vesicles.'—*Ibid.* p. 139.

The writer has good reason for his distaste for medical authorities, and his preference of men of general science for his judges; for here is a fact, one of the main pillars of his argument, which such judges would receive without suspicion, but which every medical man on earth knows to be utterly false. The truth is, that though vesicles *sometimes* occur during the progress of measles, they are by no means the essential or characteristic eruption of the disease; the characteristic eruption of measles is a rash, containing no matter to inoculate with, and no one ever thought of producing the measles 'by applying a portion of the fluid contained in its vesicles.' Dr. Francis Home, of Edinburgh, who, in the year 1759, attempted to inoculate the measles, expressly says, 'there was no matter,' and therefore he was obliged to employ the blood. Again,

'Were epidemic diseases really propagated by contagion, it could not possibly be a matter of controversy; the facts establishing the truth would be so clear, so numerous, so overwhelming, as to place it beyond all question. *No one can doubt, no one ever did doubt, that the small-pox is contagious.* This alone must be sufficient to decide the matter in the judgment of every philosophical mind.'—*Ibid.* p. 147.

Now we beg leave to inform the 'philosophical minds' to whom an appeal is here made, that some one did doubt that the small-pox was contagious; no less a person than the greatest physician England ever produced, Sydenham. He saw the small-pox when its natural mode of diffusion was not interrupted by inoculation or vaccination, as it now is, and yet this great man had no suspicion that it was contagious. In his time a belief in the non-contagiousness of small-pox was not only the medical, but the popular opinion. Gadbury, the astrologer, in his 'London's Deliverance Predicted,' published in the year 1665, says, 'I say then, it (the plague) ought not to be deemed infectious at all, at least not more infectious than *small-pox*, scurvy, pleurisy, ague, gout.'

Mistatements, however, of the kind which we have just noticed, are not matter of surprize, for the argument is not addressed to medical men; it appeals from their judgment to that of men of general science acquainted with the laws of evidence. We come now to a different class, and we suspect that for the future even a knowledge

knowledge of the laws of evidence may be found an inconvenient qualification in the men of science who are to decide the question. For example we are told that

‘ it is the custom in Turkey for the relations of those who died of the plague, to wear the clothes of the deceased, or to sell them at the public bazaar; they are never destroyed, they are invariably either worn by the relatives or sold at the public market; *there is no instance on record of the disease being communicated by these means.* The persons who deal in the clothes are not infected, the persons who wear them remain free from the disease.’—*West. Rev.* No. V. p. 160.

A naturalist who had affirmed that domesticated hogs were infested with a species of vermin which did not infest wild hogs, was asked how he knew it; whether he had combed all the wild hogs in the world? So we may ask whether the anti-contagionists have traced all the old clothes which are worn by the relatives or sold at the bazaar?

When Dr. M‘Lean was examined before the Committee on contagion, he said,

‘ I used to walk into the city of Constantinople, even after I had the disease, and go through the thickest of the people, visiting the coffee-houses and other frequented places; nor was the disease by that means propagated.’

How does he know? did he inquire into the fate of all the people whom he had jostled in the streets, and sat by in the coffee-houses?

If we admit the fact that many people are exposed to the clothes of the sick without catching the disease, it proves no more than the fact that many are exposed to the sick themselves without catching it; and this we have already considered. It is not even of this value to the anti-contagionists, till they have satisfied inquirers on a few preliminary points in each case, which seem to have escaped them as of no importance. Were the clothes of the dead worn during their illness? Were they worn during that stage of the disease which is infectious? To what extent have they been exposed to the air since the death of their owner? A lancet dipped in vaccine matter kept for a few days in the pocket, and then used for vaccination, with all the advantages of intentional immersion in the contagious fluid, and careful insertion under the skin in the act of vaccination, is more likely to fail than to succeed in giving the disease; and hence the importance of bringing together the person to be vaccinated with the person from whom he is to be vaccinated, and performing the operation with fresh matter.

So much for the evidence in support of this sweeping statement that ‘ there is no instance on record of the communication of the disease

disease by these means;' and now let us hear a little evidence against it.

'It is a notion,' says Dr. Russell, 'prevalent at Aleppo, that a plague cannot subsist in the city any considerable time without being imparted to the Jews. Many of that nation are employed as brokers and pedlars in most parts of the town, and numbers who deal in old clothes daily pass through the streets, purchasing their wares from all ranks of people. In this manner it is supposed the distemper is transported to the Jewish district.'

And again, says Dr. Russell,

'if substances tainted by the sick should be conveyed into secluded retreats, and persons happen to be seized with the distemper, can it be ascribed not to contagion, but to terror? and the instances here alluded to are not the creation of fancy, but strictly consonant to repeated experience in Turkey.'

In another place Dr. Russell says,

'I met with *many* instances of the disease being communicated by coverlids, carpets, and apparel purchased from infected houses.'

Dr. Pugnet, who was with the French army in Egypt, states that at Jaffa, an apothecary dying of the plague, his neck-handkerchiefs were divided among, and worn by, fourteen persons: *all these* were seized with the plague, and had bubos in their necks.

The anti-contagionists assert that the plague never was in Holland, although the Dutch have no quarantine laws. That singular but laborious writer Noah Webster has collected accounts of no less than fourteen plagues which ravaged Flanders and Holland at various periods, in one of which, at Delft, in the year 1557, the dead bodies were so numerous that the people fought for the coffins. As to the absence of quarantine laws, if this were true, how happens it that, as soon as England only relaxes her's, and thereby approaches the state of law said to exist in Holland, the several powers of the Mediterranean turn round upon her, and compel every vessel from her ports to perform quarantine before entering their ports?—a conduct which they do not observe towards the vessels of Holland, which undergo no quarantine at all. On inquiring of the Dutch authorities in this country, we learn that the Dutch have quarantine laws, but that, when a vessel arrives from the Levant with a clean bill of health, they are not always strictly enforced. Dr. Granville, who seems to have taken much pains to ascertain the fact, gives the following as the result of his inquiries, in his letter on this subject to the Chancellor of the Exchequer. The Dutch trade in the Mediterranean, in former times, suffered much from the Algerine cruizers; in consequence of which the Dutch merchantmen trading in the Mediterranean were, from the early ages of the Republic, directed to assemble at
Leghorn,

Leghorn, from which port they sailed under convoy to Holland. This arrangement leads to considerable detention at Leghorn, which, although originally intended as a security against pirates, served in point of fact the purpose of a quarantine, Leghorn being, as is well known, the port of all others in which the quarantine regulations were the most perfect, and most rigidly observed. In addition to this, whenever any Dutch vessel quitted a port where the plague was raging, the Dutch consul at that port refused her a '*passé-port de mer*,' without which she was not safe in sailing through the Mediterranean, nor was she admitted into Holland.

It would be an endless task to go through what may be called the collateral absurdities in the reasoning of the anti-contagionists—yet we must mention one or two instances. Thus it is said that the doctrine of contagion is selfish and inhuman, and prevents the due performance of the duties of the healthy to the sick; while the doctrine of epidemic diseases remedies the evil. Yet the same persons say,

'People are attacked (with the plague) in proportion as the inhabitants of unaffected expose themselves to the air of affected places. The visits of the inhabitants of an unaffected to an affected place is [are] attended with a *certain* increase of sickness.'—*West. Rev.* No. V. p. 145.

Is it possible that they should not see that their objection applies more strongly against this doctrine than against that of contagion; for if the latter teaches us to avoid the *sick*, the former teaches us to avoid the *very air* which surrounds the sick. The latter says *only*, do not touch a patient affected with the plague, or the clothes which he has worn; you may go within a certain distance of him—observe his symptoms—prescribe for him—carry him medicine and refreshment. But the latter says, if you go into the chamber, or the house, or the very neighbourhood in which the disease is raging, you expose yourself to danger.

Another absurdity is, that the doctrine of contagion was a popish trick, and never heard of before the year 1547, when it was invented by Pope Paul III. as an excuse for removing the Council of Trent to Bologna. Two learned foreigners, Dr. C. F. H. Mark and Dr. Omodei, of Milan, have just published most satisfactory refutations of this statement. That of the former is entitled *Origines Contagii*; that of the latter is contained in the twenty-second volume of the Milan Annals of Medicine: of both an elaborate analysis is given in the Edinburgh Medical Journal. It was hardly necessary to expend so much talent and learning, as these gentlemen have displayed, upon a notion unworthy of serious refutation. As far back as Thucydides and Aristotle, through a long succession of historians and poets
down

down to Boccaccio, the notion is traced that pestilential diseases are contracted by communication with the sick. Dr. M'Lean is a little sore on this subject, and he has a curious mode of defending himself. When reminded in the Committee of Boccaccio's account of the plague at Florence in 1348, in which the healthy are represented as flying from the sick, to avoid catching the disease, he says,

'It is necessary to ascertain the precise date of its being printed, in order to appreciate the authenticity of the doctrines as being those of the writer, or as being introduced by interpolation of editors or commentators.'

What must be the condition of that man's mind who could suspect interpolation on such a subject?

When Dr. M'Lean was examined by the Committee on the doctrine of contagion, he told them that his opinions were founded on an experience of *seventeen days*; but requested them 'to recollect how little the value of experience might be commensurate with its duration—that the plague was generally fatal in nine cases out of ten—but that he could cure it in *four cases out of five*. When asked to what extent he had tried this triumphant mode of treatment, he said upon *one* patient, and that was himself. When reminded that Dr. Whyte had inoculated himself with the plague, and had died of it, he said 'that he took it' *by a coincidence*. When told that the Turks, who used no precautions to avoid the plague, suffer much more from it than the Christians, who avoid it, he said that he did *not believe it, because he did not see the grounds for it*. When asked upon what grounds he concluded that the Turks and Mahometans suffered less than the Christians, he said, *not from actual observation, but from the nature of things, and because there was no evidence to the contrary*. He said, he would not believe that a person had the small-pox twice, even if he were to witness it; *he should distrust the evidence of his own eyes*. When asked at what periods of the year the plague at Moscow in 1771 had prevailed and declined, he answered, that his impression was that it began *at the usual epidemic season in northern latitudes, and ceased at the usual time*. Being thereupon asked what he called the epidemic season at Moscow, he rejoined that it was the same, or nearly the same, as in this country, *judging from the pestilence in 1771*. So that the plague at Moscow was epidemic because it raged at the epidemic season; and that was the epidemic season, because the plague raged at that time; there is no circle in Euclid, which it would be more difficult to square than this. He denied that Thucydides describes the plague at Athens as contagious; it is true that this is in express defiance not only of that author's positive assertion, but of some details,

details, occasioned by the contagious nature of the disorder; we infer, indeed, from Dr. M'Lean's cautiously worded answer that he would find a difficulty in reading the original; probably, however, he knows Latin, and as he professes to have formed his opinion from a *comparison of interpretations*, we would ask him whether he has ever stumbled on rather a spirited and yet faithful translation of that part of Thucydides by Lucretius; or, if his Latinity be confined to the Pharmacopeia, whether he ever looked at the best English translation by one Thomas Hobbes of Malmsbury. These were a few of the precious statements with which Dr. M'Lean favoured the Contagion Committee, and we know not which to wonder at most, the mind of the man who uttered them, or the patience of the Committee who could listen to them. This gentleman has been described by an enlightened member of parliament, as one of those extraordinary persons who will be pointed out by the finger of the future historian! History has two fingers, which she employs for different purposes in pointing out individuals to the notice of their fellow-men; which of the two she will use, if ever she happen to notice Dr. M'Lean, we will not venture to predict. Judging by his writings and his actions we conclude that he is a man of great self-confidence, zeal, and perseverance; these qualities, when combined with ability, judgment, and knowledge, form the improvers of science, the master-spirits of their age, the benefactors of their species; but when combined, as they often are, with wrong-headedness, and a heap of inaccurate and ill-digested knowledge, they form very absurd, and often very mischievous men. Every age affords examples of both; the latter are not uncommonly mistaken for the former; but time corrects the blunder.

We are tired of refuting errors and exposing absurdities which would require no refutation nor exposure if those, who are to decide, were well acquainted with the facts of the question. We call on our legislators, however, before they consent to abolish the system of quarantine, to pause and reflect on the tremendous importance of the stake; to consider that these barriers were built up by our experienced ancestors, and that we have no experience, who are about to pull them down; that the experienced powers of the Mediterranean behold with astonishment the opinions which have been broached in England on the subject, and in consequence of the relaxations to which our government has already consented, have refused to admit our vessels into their ports without a previous quarantine. We beg them to remember how often, in their own families, they act on the supposition of contagion when the evidence amounts only to a probability; and we entreat them to legislate for the nation on the same principles of wise and humane