

**Report from the Select Committee on Contagious Fever in London /  
ordered, by the House of Commons, to be printed, 20 May 1818.**

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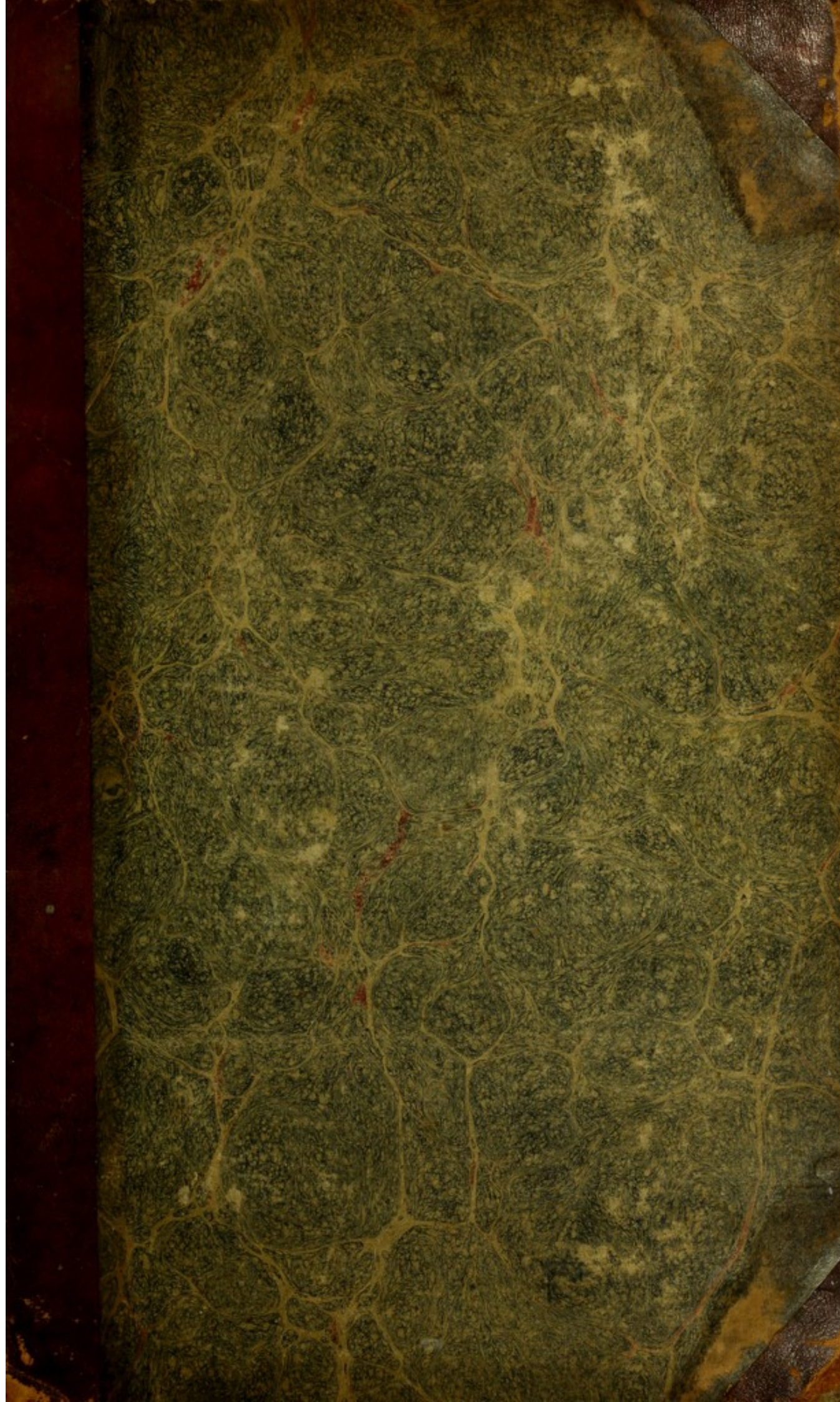
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*James Forbes Young.*



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R E P O R T  
FROM THE  
SELECT COMMITTEE  
ON  
CONTAGIOUS FEVER IN LONDON.

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*Ordered, by The House of Commons, to be Printed,*  
*20 May 1818.*

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# R E P O R T

OF THE

## SELECT COMMITTEE

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## CONTAGIOUS FEVER IN LONDON.



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## R E P O R T.

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THE SELECT COMMITTEE appointed to examine into the state of CONTAGIOUS FEVER in the Metropolis, and into the condition of the Institution for the Cure and Prevention of the same; and who were empowered to report their Observations thereupon to The House, together with the MINUTES OF THE EVIDENCE taken before them;—HAVE agreed upon the following REPORT :

YOUR Committee having summoned before them physicians from the principal hospitals in the Metropolis, proceeded in the first place to inquire into the progress and extent of that contagious fever, which, during the last twelve months, has been so prevalent. In order to obtain correct information upon this subject, they called for a return of the number of patients who have been admitted into a fever hospital constructed in Pancras Road, and entitled a "House of Recovery." This establishment had its origin in the year 1802, a period of great sickness among the poorer classes of society; it having been preceded by a scarcity of food for two years. In the year 1803, 164 patients, and in that of 1804, 185 were admitted into this hospital. The return inserted in the evidence of Dr. Bateman, physician to the institution for the last fifteen years, shows that the minimum of sickness was in 1810, when 30 patients only were admitted, and that the average of the three years preceding 1817, when the present epidemic may be considered to have commenced, was somewhat more than 76 per annum; in the year 1817, 126; and from April in that year to the same period in 1818, no less than 797 persons were patients in this infirmary. Min. p. 10.

Your Committee then proceeded to inquire as to the prevalence of this contagious fever in the different hospitals of the Metropolis.

Dr. Marcet, who is one of the physicians of Guy's, informed them, that in the year 1817 about 50 patients were admitted with cases of fever; and, in that ending April 1818, 253. p. 23.

In the London Hospital, Dr. Yelloly states that the average number of fever patients may be taken at about 30 for the last five years; that in 1817, 97 cases were admitted; and in the first three months of this year, no less than 35. p. 29

Your Committee have no regular return from St. Thomas's; but Dr. Currey, physician to that hospital, says, that the number of fever cases was considerably greater than in the preceding years. p. 38.

At



Min. p. 41.  
p. 42. At St. Bartholomew's, the increase is also stated to be great, but Your Committee have no return of the numbers; for Dr. Roberts informed them, that no register is kept in the hospital to distinguish the different varieties of disease.

p. 43. At St. George's, the same statement is made by Dr. Young; and there, also, no register is kept.

p. 44. In the Westminster Hospital, Dr. Tuthill informed Your Committee that the ordinary average of fever cases may be taken at 25; while, from Lady-day 1817 to 1818, 38 patients labouring under this disease have been admitted.

p. 45. In the Middlesex Hospital, the average number of contagious fever cases is about 60 per annum; and, last year, the number amounted to 120.

Your Committee having thus ascertained the alarming increase of contagious fevers in the hospitals of the Metropolis, proceeded to examine the physicians of some of the principal dispensaries.

p. 35. Dr. Laird, physician at the Public Dispensary of Carey-street, informed them, that in the year 1815, 84 cases of fever were entered in their books; in 1816, 76 cases; and in 1817, 147; and in the four months of the present year, 59 cases of fever have been so registered.

p. 45. Dr. Clutterbuck also states, that for many years past, not above twelve cases of typhus have been admitted on their books, but in the last year there have been above 200.

App<sup>t</sup> No. 2. Your Committee thought fit to transmit a series of questions to the different physicians belonging to some of the dispensaries of London, and to the answers of which they beg leave to refer. Dr. Davies, physician to the London Dispensary, averages the number of cases of fever in the establishment to which he belongs, for a period of eight years, to be about 100 annually; while in the last year they amounted to 309. In the Finsbury Dispensary the mean number of fever cases is 66; but from the 1st of May 1817, to the same day 1818, 168 cases were registered. Mr. Burgess, apothecary at St. Luke's Workhouse, stated that he attends, on an average of common years, about 150 cases of fever; in the last year the number rose to 600.

Dr. Lincoln states, that his parochial patients have increased from the ordinary average of 40 and 50, to 250 and 300.

Your Committee, having thus been informed of the extent of this epidemic, and the severity with which it has fallen on the poorer classes of society, proceeded to inquire into the nature and extent of the means afforded, in the way of medical relief, to those afflicted with this calamity.

The benevolence of some individuals, aided by a considerable grant of money on the part of the Public, have constructed a fever infirmary, called "The House of Recovery," which is capable of containing about 69 patients.

This



This establishment has arisen to its extent and consequence by slow degrees ; it began in a small house in Gray's-Inn Lane, which was capable of containing only a very limited number of patients, and its augmented size is a convincing proof of its acknowledged value, no less than its being necessary to the increasing wants of the metropolis. It is supported by voluntary contributions, the amount of which may be taken at 450*l.* per annum. This Institution possesses besides, a fund of 2,000*l.* in Exchequer bills, and 2,682*l.* in the 3 per cent. consols ; the annual income being thus somewhat above 540*l.* per annum. The expenses of the three years preceding 1816, amounted annually to 573*l.* while those of the year ending April 1818, reached the enormous sum of 1,700*l.* ; to meet this increase of expenditure above income, the generosity of the public was appealed to, and the sum taken as part of the capital stock of the Hospital, and which is now held in Exchequer bills, was subscribed at a public meeting summoned for that purpose ; to this fund must be added a further grant of 1,000*l.* which has recently been paid by the Treasury to this Hospital.

Min. p. 10.

p. 20.

Your Committee have learnt with great satisfaction, the nature of the excellent arrangements which have been adopted in this institution. The zeal and assiduity of its medical attendants entitle them to the praise and gratitude of all who can estimate the fortitude, the risk, and the active benevolence which characterizes the profession to which they belong. But the objects of this institution are not limited to attendance on the sick, and to the removing persons from the sphere of contagion ; a portion of its funds is expended in cleansing the apartments of the poor, who, crowded in close courts and unventilated rooms, are assailed by fever ; this practice is peculiar to this establishment, and in the last year no less than 151 rooms were thus whitewashed. Your Committee refer generally to the evidence of Dr. Bateman, to establish the necessity of a speedy removal of the poor from their own dwellings when attacked with contagious fever, as well as to demonstrate the benefits derived in the last year by the existence of this institution, when, from the crowded state of the hospitals, and their known unwillingness to receive fever cases at all, the greatest danger would have been incurred of the spreading into a larger focus the sphere of this contagious disorder. In one house, the disease continued seventeen weeks, part of the family were attacked with it three different times ; and it was only arrested by the destruction of all the furniture in the apartment. Thus it may be said, the sufferers became diseased through their own contagion ; and Your Committee cannot contemplate without serious apprehension, what might have been the result of this epidemic daily gaining strength, if it had not been checked in its malignant growth by the efforts of the Fever Institution. Your Committee wish also to remark, that this establishment is open to all applicants, at all days and hours. A medical certificate of disease is stated to be required ; but the practice is to admit all who are attacked by the complaint, upon the first application ; and the only impediment thrown in the way has been one which it is the aim of Your Committee to remove, a want of sufficient room for the admission of patients.

p. 23.

p. 46.

p. 17.

p. 13.

Your Committee wish to observe, that a most salutary system is adopted here, viz. the transport of the patients in a litter belonging to the establishment, thereby preventing the use of coaches or sedan chairs ; one of the means by which the contagion is circulated is thus checked, and they hope the other hospitals will see the necessity of adopting some such arrangement.

p. 12.



arrangement. Indeed, from the indifference to contagion which seems to exist in some of these establishments, it is a matter of surprise to Your Committee that more fatal results do not occur.

Min. pp. 28,  
39, 41, 43. Your Committee have learnt with great pain, that in all the hospitals of London a great proportion of patients are weekly refused admission, in most of them from want of room; in one of them (the Middlesex Hospital) from a deficiency of funds. Any plan, therefore, that would lighten the burthen which now weigh down these establishments, would, to the minds of Your Committee, be of great public usefulness. But if the entire removal of cases of fever from all the hospitals, may be considered injurious to them as schools of medicine, the diminution of the number of such admissions might ease the finances of some establishments, and leave room in others for patients suffering under diseases of a different character.

pp. 26, 30,  
38, 41, 43. Your Committee have been informed, that it is the practice in all the hospitals to mix cases of contagious fever indiscriminately with other patients; it has, however, been stated to them by some medical authorities, that, practically speaking, no evil has arisen from their intermixture; but, with due deference to such opinions, the acknowledged fact, that in some hospitals the fever has been generated; that patients admitted under one disease have caught in the hospital another; that the medical practitioners and attendants have been attacked themselves by the disease; and that most fatal effects have been therefrom produced;—All these facts fully satisfy Your Committee that the practice above alluded to, if not altogether abandoned, ought to be resorted to with great precaution, and in a most limited extent. As long as fever cases can be diluted through a large ward, with proper attention to ventilation, scarcely any danger of contagion may arise; but in a period of epidemic, such as existed in the late and present year, when all the hospitals were crowded with patients assailed by the prevailing disease of fever, great hazard must be run, and the experience of this year has demonstrated the danger and evil of the system. As the great preservative against contagion is a free circulation of air, patients labouring under chronic disorders cannot with propriety be subjected to the same treatment, and a system of medical police which is essential in the one case to prevent the spreading of the disease, becomes highly prejudicial on the other; besides, a great prejudice prevails; and Your Committee cannot consider it as unfounded, among the poorer classes of society, who are the main objects of these establishments, against either entering themselves or sending their relations into these hospitals, on account of the hazard of infection to which they are exposed; the events of the last year are not certainly calculated to weaken these opinions, and Your Committee feel assured, that to diminish the number of fever cases in every hospital, by increasing the powers of receiving them in institutions exclusively set apart for that disease, would not only do away the impression on the public mind above alluded to, but contribute most materially to the relief and good arrangements of those hospitals, the wards of which are now exposed to be indiscriminately filled with patients labouring under diseases in all their different stages of suffering and malignity.

pp. 11, 16,  
24, 25. Your Committee refrain from entering more into detail on these subjects; they refer generally to the evidence, which, to their minds, is conclusive. That evidence has demonstrated the extent of the epidemic, the probable chance of its continuance, as well as of its occasional recurrence,



rence, the small means afforded by the hospital to receive patients assailed by it, the great hazard of mixing them with those who labour under diseases of a different nature, the utility of the Fever Institution, both for the cure of the disorder, and for arresting the further progress of contagion; all these facts so made out, have satisfied Your Committee, that it would be highly expedient to extend the public aid to this establishment. And as they see no reason why the capital stock of the hospital should be augmented, they should propose a further grant of 2,000*l.* which, with the 1,000*l.* already made, will enable the institution to increase its means of accommodation to 100 patients. Taking a fair average of the fever cases in the Metropolis, this establishment will thus be enabled to receive a great proportion of the patients who now are sent to the other hospitals; and probably in ordinary times nearly the whole of the fevers of the Metropolis.

App<sup>x</sup> No. 1.

Your Committee feel assured, that in case the fever should continue its ravages undiminished, and the same burthen which lay so heavy on the finances of this institution in the last year should exist during the present, Parliament would consent to provide some additional support; but at present they consider the sum above mentioned as sufficient, and they rely with confidence on the munificence and charity of the public to promote the ordinary annual funds, for the support of an institution so well deserving the countenance of all ranks of society. Your Committee have fully satisfied themselves, that the most beneficial effects have resulted from hospitals exclusively set apart for cases of fever. They refer generally to the accounts, to show the small income of this admirable institution, as well as the increasing demands on it; and though the benevolence of the public has done much to raise this establishment to its useful pre-eminence, yet further aid is still wanted; and your Committee wish to recommend His Majesty's Government to reconsider the grant they have already made.

Min. p. 33.

p. 20.

Your Committee, in recommending this grant of money, are aware of the general impolicy of supporting public hospitals by advances of public money; but the peculiar state of this establishment, its nature and character, the pressure on its funds, which require immediate and large addition to them; and, above all, the diseased state of the Metropolis, in respect of fever, and the probability of its malignity being increased towards the autumn, all these reasons satisfy Your Committee, that a departure from the general principle may, in this case, with safety, be adopted.

From the experience derived from the establishments at Chester, Manchester and Waterford, according to a report which has been laid before them; it appears that not only no hazard of spreading infection has been incurred, but, in point of fact, the number of contagious diseases has been greatly diminished, not only in towns, but in the very district and neighbourhood where houses of recovery have been situated. Dr. Roget, late physician to the Manchester Infirmary, informed Your Committee, that at Manchester no medical officer or attendant in the hospital has been afflicted with the fever generated within its walls; and that in the town itself the number of cases of that disease has diminished to a less degree than the ordinary average prior to the establishment of the institution. Dr. Holme, physician to the infirmary from its establishment to the present period, confirms this statement to its full extent.

p. 19.

p. 33.

Your



Your Committee cannot close this Report without expressing a regret that any hospital in the Metropolis should not possess a register of diseases: they trust this omission will speedily be rectified. And, in their opinion, it would be advisable to register, not only the diseases, but also the name and profession of the patient. It must at all times be a matter of useful knowledge to be able to learn the quality and extent of the different diseases that prevail at different periods; and Your Committee have felt the want of that information, arising out of this strange irregularity, in not being able to ascertain the average fever cases that have occurred for some years past in the Metropolis.

20 May 1818.

## MINUTES OF EVIDENCE.

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<i>Mr. William Lincoln</i>	-	-	-	-	-	-	ib.



## MINUTES OF EVIDENCE

TAKEN BEFORE THE

Select Committee on Contagious Fever in London.

*Mercurii, 29<sup>o</sup> die Aprilis 1818.*

The Honourable HENRY GREY BENNET, in the Chair.

*Thomas Bateman, M. D. called in; and Examined.**T. Bateman,  
M. D.*

ARE you physician to the London House of Recovery?—Yes.  
Do you reside in the house?—No, I do not; I reside in Bloomsbury-square.

How long has that house been established?—The first house was opened in the beginning of the year 1802; this House of Recovery, last September twelvemonth.

Where was the first House of Recovery opened?—In Gray's-Inn Lane.

What number of patients would it hold?—It had only sixteen beds.

What was the motive for establishing that house?—The extensive prevalence of fever for several years previous.

Have you had an opportunity of ascertaining what were the principal causes, at that period, that increased epidemic diseases?—It was preceded by two years of great scarcity.

That house was calculated only to hold sixteen beds, have you a return with you of the number of patients that were admitted in that year?—The following is an account of the number of patients admitted from the year 1803 to April 1818.

*[It was read as follows:]*

## INSTITUTION for the Cure and Prevention of Contagious Fever in the Metropolis.

Years :	N <sup>o</sup> of Patients admitted :	Died :	About one in
1803 - - - -	164 - - - -	13 - - - -	12 $\frac{1}{2}$
1804 - - - -	185 - - - -	17 - - - -	11
1805 - - - -	80 - - - -	7 - - - -	12
1806 - - - -	66 - - - -	6 - - - -	11
1807 - - - -	95 - - - -	14 - - - -	7
1808 - - - -	64 - - - -	5 - - - -	13
1809 - - - -	72 - - - -	11 - - - -	6 $\frac{1}{2}$
1810 - - - -	30 - - - -	8 - - - -	3 $\frac{1}{2}$
1811 - - - -	53 - - - -	8 - - - -	7
1812 - - - -	43 - - - -	6 - - - -	7
1813 - - - -	62 - - - -	11 - - - -	5 $\frac{1}{2}$
1814 - - - -	86 - - - -	13 - - - -	6 $\frac{1}{2}$
1815 - - - -	59 - - - -	7 - - - -	8 $\frac{1}{2}$
1816 - - - -	85 - - - -	14 - - - -	6
1817 - - - -	126 - - - -	10 - - - -	12 $\frac{1}{2}$
1818 - - - -	797 - - - -	62 - - - -	12
	<u>2,067</u>	<u>212</u>	<u>9</u>

Notwithstanding it appears by the return that the fever was considerably diminished till within the last two years, you found it convenient to change your residence from Gray's-Inn to the spot which you now inhabit?—Yes.

Where



*T. Bateman,  
M. D.*

Where is the House of Recovery now?—It is now in Pancras-road, adjoining the Small-Pox Hospital.

Does it form a part of the Small-Pox Hospital?—It is not united to it: it did formerly form a part of that establishment, but it is a distinct part of the building.

Does it form any part of the establishment, in the way of professional attendance, or the attendance of officers living within its walls?—None at all.

Your establishment then is distinct by itself?—It is.

How many beds can you now make up in that establishment?—We have now sixty-nine beds: there are two small rooms where we could accommodate ten more.

So that the Committee are to understand that you can receive between seventy and eighty patients?—At this moment we can but receive sixty-nine, the present wards not being able to receive more.

But the Committee understand you to say, with some alterations you could receive ten more patients?—Yes.

What is the number of patients that you have admitted within the last twelve months?—Seven hundred and ninety-seven.

Have you ever been obliged, in consequence of your hospital being full, to reject persons who applied to be admitted?—We have been obliged to delay their coming in for two or three days, and in one instance we rejected about a dozen.

Were those dozen applications made on one and the same day, or at different periods?—On one day, and from one quarter: it was an accidental circumstance that could hardly happen again; it was an application from the Guardian Asylum, which contains forty young women, more than half of whom were seized with fever in the course of the week.

You mean by fever, this contagious fever which has been so prevalent?—Yes.

What is the object of your Institution, and what are the terms of admission within it?—The object of the Institution is, to receive all poor patients affected with contagious fever as speedily as possible: the only requisite for admission is, a medical certificate that they are affected with a contagious fever; that is brought to the physician, according to the rules of the Institution, who immediately signs an order for the admission of the patient.

Is there a physician constantly resident in the house?—I am the only physician attached to it.

Supposing, then, you are out, and the certificate is signed, if the patient appears at the doors of the infirmary, what becomes of him?—The fact is, I do not sign the order for one in three; for I have always given an order for the matron, when they bring an order signed by a medical man, to admit them at once.

In point of fact, the Committee are to understand that the doors of this Institution are open to the poor of all parts of the metropolis; and the only condition is, that the patient should bring along with him a certificate?—Not exactly along with the patient: we do not receive them in a public carriage, we have a conveyance of our own: a certificate is brought to the house first, and we then send for the patient.

Besides the instance you have mentioned, have any others occurred in which you had not room to receive patients?—No, none.

Then the Committee are to understand, that you have uniformly received those who have come, with just the exception of this instance, and always had room; and never had occasion to refuse admission to a patient?—No, in no instance: but we have two or three times delayed their admission.

In what part of the metropolis, principally, has this fever arisen?—Principally in the eastern and north-eastern parts, Shadwell, Whitechapel, Bethnal-green, the neighbourhood of Shoreditch, the parish of St. Luke's; about Old-street and Golden-lane, Cow-cross and Saffron-hill, near Smithfield, and also St. Giles's; the neighbourhood of Clare-market and Drury-lane, and the parish of St. Clement's; and also very much in the parish of St. George's, Kent-street, and the Borough: there also have been a few patients received from the Haymarket, and the neighbourhood of Holborn and Gray's-Inn Lane.

In fact, this complaint has principally arisen in the narrow streets and lanes of the metropolis, where the poor live associated together in great numbers?—Almost exclusively.

Has it been of a character peculiarly malignant?—Not more so than the fevers I have usually witnessed; very much the same character as during the last 14 years.

Of course, greatly increased in crowded neighbourhoods?—Extremely so in the unventilated habitations of the poor.

Besides



T. Bateman,  
M. D.

Besides receiving persons into the House of Recovery, is there any other object proposed by your Institution, such as relates to cleaning and whitewashing, and assisting to ventilate the habitations of the poor?—We have an officer, called an inspector, who visits all the apartments from which patients are brought, to fumigate them, and to order such of them to be whitewashed where it can be done.

Do you recollect the case of the workhouse of Shadwell, in the year 1812, in which a typhus fever of very malignant character broke out?—Yes, perfectly; I went there on that occasion.

Did the contagion of that fever spread in those crowded courts which are in the neighbourhood of Field-lane and Saffron-hill?—I am not sure that I can speak as to that time; according to my recollection, it has frequently appeared about Saffron-hill when it has not appeared anywhere else.

Did you at this time cleanse, ventilate, or fumigate the apartments out of which patients had been removed?—Yes.

Have you whitewashed the apartments of those patients who have been removed into the establishment during the last year?—As far as could be done, I believe; probably the number is not very considerable, because a great number came from the workhouses.

What do you do when you fumigate; what is it you mean by that term?—We apply the vapours of the nitrous acid.

Do you find the application of those vapours attended with good effect?—I have no doubt of it; I only recollect one instance in which the fumigation appears not to have stopped the contagion.

Have you had many instances of whole families, or greater part of families, being brought into your establishment this year?—A great many; to the extent of eight or nine together.

What is the extent of the establishment of officers in the house?—There are no officers residing in the house.

You must have nurses, or what are called matrons?—There is a matron, and I believe four nurses in the house.

Is there any apothecary who attends in the house, or do you mix up the medicines that you send to the patients?—There is an apothecary who attends daily; after my visit, there is also a porter who resides in the house, and is one of the two men employed to convey patients, and another is hired when wanted.

What is the nature of the conveyance you use to convey the patients to this House of Recovery?—A covered litter carried by two men.

Have you had in your hospital any instances of the nurses or medical attendants suffering from a fever?—Yes; three of the nurses and the matron have suffered, and had a fever, within these last twelve months.

Did they all recover?—Yes.

Have the goodness to describe to the Committee the nature of the litter in which they are carried?—It is a wooden litter, with a moveable lining.

Is the lining linen?—I believe it is.

So that it might be washed after the patient was taken out?—Yes.

That is so in point of fact?—Yes.

Is he conveyed in any particular attitude?—They always lie horizontally, which I believe to be the best posture in which a patient can be conveyed; it is certainly the least fatiguing.

Can you give any information as to the progress or diminution of fever in the metropolis within these few years past?—I have of course attended to the progress for 14 years back; and it has appeared to me, that there always has been in the autumnal season a disposition to the increase of contagious fever, and that it has generally subsided towards December, and prevailed very little during the winter: it generally appears slightly in the spring; but it is chiefly in the autumn that it is most prevalent.

Till within these last two remarkable years, has that species of disease been on the increase or decline?—I should not think regularly, either on the increase or decline; the smallest number of patients that were brought to the house was in 1809; since then, it has been greater than it was that year.

Is the establishment of your institution known so generally throughout the different parishes of the metropolis, that the persons who have the management of poor-houses, as well as the poor themselves, are acquainted with this establishment, so that in case of illness they would apply to you for relief?—I think that was not the case till the present year.

Then,



*T. Bateman,  
M. D.*

Then, do you think that the number of patients which you have received is at all a criterion of the number of patients who wanted relief, or is it not rather a criterion that your establishment was not generally known?—I am persuaded that it is a criterion of the state of fever, because I have been for the same number of years (that is 15 years) physician to a public dispensary which includes the worst districts of Saffron Hill, Gray's-Inn Lane and St. Giles', and during that period fever has prevailed in the same comparative extent in the practice of the dispensary.

Do you think that the establishment of this House of Recovery has been one of the means, and an effectual one, of stopping the further progress of those contagious fevers which you state are produced every year in the metropolis?—I have very little doubt of it, because there appears to me to be less fever among the poor in the practice of the public dispensary since the establishment of that institution, than there was 20 years before; I collect that from the Reports of Dr. Willan, who published Reports of the State of Diseases among the Poor for several years before the establishment of this Institution, as well as from the Bills of Mortality.

Do you think that the extraordinary statement which the Committee see before them as to the diminution of cases, which is extracted from the Bills of Mortality, beginning at the year 1801, and ending in the year 1811, is to be relied on?—I think, in the main, it must be true.

Do you attribute any considerable portion of that great diminution of the disease, which is in a ratio of 2,908 in 1801, to 906 in 1811, to the establishment of this Fever Institution?—I think but a small proportion of that change can have been produced by the efforts of the Fever Institution.

Supposing the Fever Institution not to have been established, and from your knowledge as to the state of the other great hospitals in the metropolis, do you not think, from what you have known as to the extent of the disease during the last year, that the progress of it would have been most alarmingly increased?—Yes, I do, certainly.

You have informed the Committee that the house now holds 69 beds, and that you could by some alterations add 10 more; can you give the Committee any information, supposing the number of persons that are now sent to the different hospitals in London with contagious fevers, were transferred to you, whether you think that the house, with some alteration, would be capable of holding them?—I should think that something less than double the number that the house will now hold would comprise all the patients that were in all the hospitals at the same time.

From what you have learnt as to the average state of cases of contagious fever in the six great hospitals in London, you would think that if there were from 150 to 160 beds in your hospital, it would be sufficient to take in all the average cases of contagious fever in the metropolis?—I should think it would; supposing all the poor people had come out of the hospitals to the fever house, there probably would not have been more than 160 patients in it at the same time.

The Committee then are to understand, that supposing those persons who had been admitted into the hospitals had, instead of going there, come to your establishment, they never would have been, in an average year, more than from 150 to 160?—I mean during this epidemic, and not in an average year.

Can you give the Committee any information as to what would be the amount on an average year?—Taking the same proportion of doubling the number in the fever house, it would not amount to twenty at any one time.

Cast your eye over your statement of the number of admissions for the last ten years, and inform the Committee what is the average number of persons you have had in your house during the whole year?—I took the average, a short time since, for ten years, the number for the whole ten years was 634, which was about 63 annually. I took the ten years preceding the beginning of this epidemic, not including that epidemic.

How many persons have you known at one time before the epidemic, taking an equal number of years?—We have been sometimes several weeks without a patient at all, and seldom had more than four or five at a time. I do not think I remember the whole house being full, before the epidemic, since I have been physician to it.

You have stated, that about 160 patients would be the greatest number, according to the information you have received, at any one period during the epidemic, who would have applied, supposing that you had taken in, not merely those that you did take in, but also those who were admitted to the other hospitals in the metropolis?—I should think so.

Should you think, that if your establishment was increased so that you could



*T. Bateman,  
M. D.*

make permanent beds to the amount of 120, with a power of increasing them to 150 or 160, that your hospital could take in all the cases of fever that are now sent to the different hospitals in the metropolis?—I should think it would, but I have not very recently heard what is the number in the hospitals.

From what you have seen and heard, do you think that the mixture of those fever cases with different diseases in the hospital, is often productive of very bad consequences?—I think it often spreads; I believe so.

Have you not in those establishments that are devoted solely to fevers, a method of management, the great object of which is, to prevent the spreading of the complaint?—We have no such mode of management, except extreme cleanliness and free ventilation.

Is that mode of management applicable in other hospitals where those fever cases are mixed up with patients attacked by diseases of every description, that are placed there?—That is impossible; for it is obvious that patients in chronic diseases cannot bear so much cold as those in fever.

The Committee then are to understand that it is your opinion, that, in the one case, namely, where they are mixed up, new fevers may be created, in consequence of that system of ventilation not being adopted which is adopted in the case of the fever hospital?—Yes.

Have you had many applications from the masters of poor-houses to receive patients in your establishment?—A great many.

Were you ever obliged, except in the instance of the Guardian Society, to refuse such applications?—We have been obliged, in some instances, to delay the admission.

Do you know whether in many of those large poor-houses they have a fever hospital?—I think, only in two; the workhouse of St. Pancras and St. Giles.

Do you happen to know whether in any of those poor-houses the fever has spread to a great degree?—I only know from the reports of patients who came from them, who have stated, that they have spread considerably.

When a patient arrives at your house, what do you do with him?—He is immediately stripped and washed, all his clothes removed, and clean linen put on, and he is put into a clean bed.

What becomes of his clothes?—His clothes are taken to the wash-house, and those that can be washed, are washed, and the others are fumigated.

Do you bake them?—We fumigate them with the acid. I think it is a defect in the institution that the funds have not been adequate to renew them, when required.

Is the Committee to understand by your last answer, that you consider it a great object to destroy the clothes, and to give the patients, on their departure, new ones?—In many cases I think it would be desirable to destroy the clothes and the bedding too, and give them new ones. I have seen some striking instances which would corroborate that statement.

Do you mean by the bedding that which belongs to the institution, or the bedding of the parties from which they have been removed?—I mean the bedding which they have left at home.

You have mentioned, that you have seen some striking instances as to the evil arising from such bedding not having been destroyed?—I allude particularly to an instance to be found in the annual report, which occurred in a family in Hatfield-street, St. Luke's; the fever continued 17 weeks in the family, attacking both the father and the daughter three times successively; it was only arrested after the application of our inspector to the parish officers, who gave them new clothing and bedding.

So that it appears, that in this case the individuals who had the fever more than once, may be said to have caught it from their own contagion?—Most probably.

Is it the practice of your inspector, when he goes to bring a patient from a private family to your establishment, to give directions to that family how they can secure themselves against infection?—The inspector generally goes himself, and commonly applies the fumigation himself, or directs them how to do it; he either does it, or directs the family how to use it.

In the institution of which you have been speaking, has there not been money received in the way of subscription from different workhouses, to entitle them to send contagious fever patients there?—There has been money received, but not to entitle them. Some of the workhouses have given two guineas with each patient, and some of them have subscribed liberally, in consequence of having had patients received from them.

Do you consider that patients from those workhouses or parishes, have thereby a better



better claim to admittance, than any poor person who knocks at your door, and asks for admission, complying with the rules of your establishment?—Not at all. I have rather given the preference to the poor persons, when they have applied.

One of the principal rules is, for the inspector to attend to certain regulations respecting the cleansing of infected apartments, and for purifying or destroying, and replacing infected clothing and bedding; does your inspector do all this?—I think it is a great desideratum in our establishment, if we had funds to supply clothes and bedding. With respect to whitewashing, fumigating, and general cleansing, the inspector does all that he can, and he leaves a paper, which contains printed rules, to be observed in houses where contagion exists.

Is it your custom to limit the admission of patients to certain days?—At all the general hospitals, patients are admitted only once a week, with the exception of accidents.

In the House of Recovery you admit them immediately?—Immediately.

Do you happen to know whether there are any pains taken at hospitals with regard to fumigating and cleansing the habitations of the persons removed?—Certainly not; they pay no attention to the external circumstances.

Is it not probable, in case of typhus fever, that any delay might be fatal to the patient?—It is extremely dangerous, and is one of the causes of the greater mortality of fever in the great hospitals in London, and even in the fever hospital itself.

Can you give the Committee any account as to the mortality arising from fever some years back in the metropolis, whether it was not considerably greater than within those two years of epidemic?—I have no other knowledge of this subject than is to be obtained from the bills of mortality.

Do you bear in mind what the difference is?—No, I do not.

Something very considerable?—Something very considerable; in the last year in our establishment the mortality was one case in twelve and a half.

Under whose direction is your establishment?—Under the immediate direction of a general committee of subscribers, and of two directors, who are elected monthly out of their body.

Do they inspect the hospital occasionally?—I believe they do; but their duty relates principally to the domestic management of the hospital.

What do you mean by domestic management?—The supply of necessaries, such as clothing, bedding and washing, paying the servants, and so on.

Is there any one that attends to see that the different persons connected with the establishment perform their respective duties?—That is the business of the directors.

Is that attendance regular and constant?—It is constant, but not regular; that is to say, not at fixed hours.

Do you attend yourself daily?—Yes, daily.

And of course, in difficult cases, more than once?—I never attended more than once; the apothecary attends in the after-part of the day. I never attend more than once.

But you make it a part of your duty, which is punctually performed, and see all the patients daily?—Yes, most punctually.

Is not the mortality of one in twelve considerably more than may be taken as an ordinary average?—It is not more than the ordinary average that has been observed in the hospitals of this country, but it is considerably more than the average that is stated of the fever hospitals in Ireland; which I believe to arise from the circumstance of the great number of very aged paupers which have been sent in from the workhouses here in a dying state; and from the circumstance that, in Ireland, very slight cases are sent in immediately, in consequence of the very great alarm; in general the cases are sent in earlier in Ireland than in this country.

Have you sufficient conveniences in your establishment for convalescent patients?—No, we certainly want accommodation for convalescents.

The Committee see in the Returns, that the mortality in 1815 was one in nine, and in 1816 it was one in six; is not the comparative mortality less in a year of epidemic than in ordinary years?—It is always so, and I believe chiefly in consequence of the circumstance that, where no epidemic prevails, it is only the very bad cases that are sent to the hospital.

With the permission of the Committee, I would wish to annex to my evidence the Sixteenth Report of the Institution for the Cure and Prevention of Contagious Fevers.

[It was read, as follows:]



T. Bateman,  
M. D.

Sixteenth Report of the Institution for the Cure and Prevention of Contagious Fevers in the Metropolis.

April 24, 1818.

Remained in the house, April 25th 1817	-	-	-	-	16
Admitted since, in typhus	-	-	-	-	760
- - - - - in scarlet fever	-	-	-	-	21
					781
					797
Dismissed cured	-	-	-	-	695
- - - - as improper	-	-	-	-	1
Died	-	-	-	-	62
Remain in the house	-	-	-	-	39
					797
Total number of the Patients admitted since the opening of the					
House of Recovery in 1802	-	-	-	-	2,113

It was stated in the last annual Report, that contagious fever had begun to spread among the poor of the eastern parts of the Metropolis, during the winter, to an unusual extent, and was likely, under the existing circumstances of scarcity and general distress, to become epidemic. It will be manifest, from the numbers of the preceding statement, that this anticipation has been fully verified, and that an epidemic fever has prevailed, and indeed continues to prevail among the poor of this Metropolis, to an extent quite unprecedented in the annals of this institution, and probably much exceeding that which occurred subsequently to the scarcity of 1799 and 1800, which demanded the establishment of a House of Recovery, and gave origin to this valuable charity. In fact, the number of patients admitted in the past year exceeds the total number admitted in the course of the subsequent twelve years. On the present melancholy occasion, the fever was first observed to spread in the close and crowded alleys of the eastern and north-eastern parts of the town, especially in Shadwell, Whitechapel, about Shoreditch, Old-street Road, Clerkenwell, and the filthy receptacles of poverty about Saffron-hill and near Smithfield. In consequence of the over-crowded state of the workhouses in all these districts, and from the necessity under which they were daily compelled to receive inmates already infected, from the streets, or their deserted habitations, those places became early the seats of much contagion; which though greatly checked and subdued by the speedy removal of the infected to the House of Recovery, and other means, was continually kept up or reproduced, by successive importations of the sick from without; for during the summer and autumnal months, especially from July to November, the fever was unceasingly generated in the private habitations of the poor, in the districts already mentioned. It became also very prevalent in the parishes of St. George and St. Saviour, in the vicinity of Kent-street, Southwark; and at length occurred partially in various other parts of the town; so that many individuals were received into the House of Recovery, from the courts about Shoe-lane and Fleet-market, Holborn, Gray's-Inn Lane, Blackfriars, Chancery-lane, Clare-market, and other parts of the parish of St. Clement's, from the Strand and the Haymarket; and in the month of December it reached the parish of St. Giles; that notorious resort of paupers of every description having hitherto nearly escaped the infection. In Somers Town also, and other parts of the parish of St. Pancras, as well as in its workhouse, the contagion has pretty constantly prevailed, and it has even reached Newington, Walworth, Hackney, Hampstead and other places in the immediate vicinity, from which several patients have been sent to the House of Recovery.

The extent and general prevalence of this epidemic fever, will however be still more manifest, when it is added, that from the month of July last to the present time, there has been such a constant influx of the infected from all these districts, that not only the wards of the House of Recovery, appropriated to typhus, but those also set apart for scarlet fever, have been almost constantly filled. During the autumnal months, indeed, the number of admissions amounted to 22 or 23 weekly; and that of the patients in the house generally to about 60, a number nearly equal to the annual average of the preceding 12 years. On two or three occasions, indeed, it has happened that patients have been temporarily excluded for want of room.

The rapid progress and extent of this epidemic, cannot indeed be deemed a matter of surprise, when the circumstances now to be mentioned, indicative of its infectious



infectious character, are considered. It has seldom limited its attacks to one individual of a family in which it appeared, unless that individual were promptly removed, and measures of prevention adopted; and when these have been rejected or omitted, it has not only gone through the whole family, and seized their visitors and attendants, but has protracted their sufferings by repeated relapses, and proved ultimately very destructive.

The following instances of its malignant influence constitute but a small portion of the evidence, which the experience of the past year affords, of the contagious quality of the prevailing epidemic, and of the miseries inflicted by it upon many poor families: for a great majority of the cases brought to the House of Recovery, consisted of two or more individuals of the same family, or occupants of the same house.

A decent poor family of German extraction, residing in Castle Court, Fullwood's Rents, Holborn, applied to the Public Dispensary, when the father was found dangerously ill with fever, from which the mother and eldest daughter were recovering; two little girls having yet escaped it. They declined being removed to the House of Recovery, till the father died; the mother and sister relapsed, and the two younger girls were attacked, when they were admitted into the house. These four were soon followed to the house by two sons and two daughters, who had caught the infection by visiting the others in Fullwood's Rents. After a slow convalescence, and an interruption to their occupations of many weeks, they were dismissed in health.

In another family residing in a court in Saffron Hill, the contagion also seized nine, four of whom were at length sent to the House of Recovery. The mother caught it by visiting her son-in-law, and communicated it to her daughter who attended her, from whom it passed to the father and the four young persons just mentioned, and to a cousin who visited them. In another poor family living in Hatfield-street, St. Luke's, the fever occasioned extreme distress, and ultimately proved fatal to the father and eldest son: after subsisting seventeen weeks among them, one daughter having been three times in the House of Recovery, and the father, perished there, exhausted by a third attack. The fever was only at length arrested in this wretched family by a renewal of their clothes and bedding by the parish, on the application of the inspector of the Fever Institution, whose active exertions in fumigating and lime-washing had proved inadequate to destroy the contagion. From Clerkenwell, a family of six persons, father, mother, and four children, were admitted at the same time; the wife's mother being left at home convalescent; and a second family from the same neighbourhood, consisting of five persons, a man, his wife, and three children, were sent in, in the following month, and soon after a young woman who had kindly given her services to them as an attendant. From the workhouses of Whitechapel, St. Sepulchre, St. Pancras, St. Clement's, and St. George's, Southwark, patients to the number of five, six, and seven, have frequently been received together. One house in Saffron-hill supplied eight patients from its different apartments; one in Tash Court; Gray's-Inn Lane, four; and from three or four houses in St. Giles's, upwards of twenty patients were admitted in the course of a month. The instance in which two, three, and four members of the same family have been taken to the House of Recovery together, or in rapid succession, are extremely numerous. But it is unnecessary to detail any further proofs of the activity of the contagion of this fever; indeed, even under its mildest form, and under circumstances where no defect of cleanliness and ventilation existed, it spread with considerable rapidity, and spared few individuals exposed to its influence. For having appeared in an asylum containing forty young women, it seized nearly the whole of the number in rapid succession, though from the general mildness of the attack, and in consequence of the prompt and judicious treatment pursued by the physician, its symptoms were slight, and soon terminated favourably. A considerable number of these patients were received into the House of Recovery.

It would be impossible to calculate the extent to which such a calamity would probably spread in the crowded population of this metropolis, if no means were practised to check the progress of contagion, if it were allowed to accumulate in every house and alley into which it is introduced; and thus to multiply itself from every successive family that fell sick, as from a new centre. Yet such must be the progress of every infectious fever, unless measures for actually destroying the contagion as it is generated are employed, in addition to the removal of the persons of the sick from the places which they have contaminated: the value of an institution

*T. Bateman,  
M. D.*

(16th Report of  
the Institution for  
the cure and pre-  
vention of Conta-  
gious Fever in the  
Metropolis.)



T. Bateman,  
M. D.

(16th Report of  
the Institution for  
the cure and pre-  
vention of Conta-  
gious Fever in the  
Metropolis.)

then, which is actively engaged in the performance of this important public service, under the present circumstances, cannot be too highly estimated. It is difficult indeed to apportion its due credit to any system of preventive measures, since neither the extent nor the severity of the evil anticipated, can be so well known as if it had been suffered: but when it is considered, that within the last twelve months nearly eight hundred persons, affected with contagious fever, have been separated from those who were in danger of being infected by them, more than thirty of whom were servants from respectable families,—that all their apparel has been purified,—all their apartments fumigated,—and upwards of one hundred and fifty of the latter lime-washed,—and that most of the large workhouses have been repeatedly enabled to clear their wards of infection, as it successively appeared in them,—it cannot be doubted that a very important check has been given to the progress of this public calamity; and that the sufferings which it would have inflicted, have been in no small degree prevented by the continued active exertions of this institution. It surely cannot therefore be necessary to press upon the attention of the public, the urgent claims of an institution thus actively and efficiently occupied in staying the progress, and in mitigating the severity of a pressing evil which may reach the bosom of every family; which indeed has already not been limited to the habitations of poverty, and which is continuing its course with little remission, even during a season usually unfavourable to the progress of fever, and is therefore likely to be again aggravated by the return of autumn.

[The following paper was delivered in, and read.]

Copy of a Letter from the Committee for preventing Infectious Fevers in the Metropolis, to the Secretary of the Treasury, on the subject of the erection of an House of Recovery in Cold Bath Fields.

Sir,

Cavendish Square, March 9, 1812.

WE have to acknowledge the receipt of your letter, accompanied by a copy of Mr. Beckett's, and of the resolution of the magistrates of the Middlesex general sessions. In order to give a satisfactory answer, it will be necessary for us to enter into some detail on the subject.

The misery and mortality attendant on fever have been long severely felt in this metropolis, as well as in Dublin, Manchester, and other populous towns. The deaths from this cause alone (as appears by the Bills of Mortality) have amounted, in London and Westminster, to an average of 3,188 persons every year, during the preceding century; and this has been attended not only with great suffering to those who have thus perished, and with broken health and enfeebled constitutions to many of those who have survived, but it has been the means of preserving febrile infection constantly, in certain neglected parts of the metropolis.

In 1783 the evil was noticed in Chester; and fever wards were established in the infirmary there, by Dr. Haygarth: these were followed by regulations to prevent the spreading of fever, adopted at Bury and Ashton-under-Line; and in 1796, by the establishment of an House of Recovery at Manchester; the effects of which, so striking and so beneficial to that populous town, are detailed in the second, third, fourth, and fifth volumes of the Reports of our Society for bettering the condition of the Poor.

The subject had very early attracted the attention of the society, and in the year 1800 a subscription was opened and a Fever Institution established in the metropolis. A small house was engaged in Constitution Row, Gray's-Inn Lane, and as it immediately adjoined upon inhabited houses in the same row, Sir Walter Farquhar and seven other eminent physicians of the metropolis, were referred to on the subject. Their unanimous opinion (a copy of which we enclose), was given to our society, that there was no reasonable ground of apprehension on the part of the neighbouring inhabitants. The House of Recovery has since continued there for ten years, not only without any inconvenience, but with a removal of those unfounded apprehensions which induced the neighbours, at first, to make two ineffectual applications to the sessions for its removal as a nuisance.

The beneficial effects of the House of Recovery in Gray's-Inn Lane have surpassed all expectation; the early removal of fever patients from their own habitations, and the consequent prevention of infection; the improved method of treating typhus fever; and the cleansing, purifying, and whitewashing the habitations of the poor, in those parts of the metropolis where infection peculiarly prevailed, have nearly annihilated this disease in London and Westminster, and do, at present,



afford reasonable ground to hope, that without gross neglect and inattention, it is likely never again to be a prevalent or fatal disease in the metropolis. The House of Recovery is sometimes without a single patient in it, and there has been seldom more than four or five patients, and never more than seven at any one time, during the last four years. In consequence of these salutary measures, we have the authority of the Bills of Mortality to state, that from an annual destruction of 3,188 lives by this pestilential scourge, (which is the average of the preceding century,) the mortality has been reduced in the year 1811 to only 906; and what is very striking, the reduction has taken place under an increase of population, and has been gradual and progressive from the establishment of the House of Recovery in Gray's-Inn Lane in 1801, as will appear from the following statement of deaths, by fever, during the present century, extracted from the Bills of Mortality:

In 1801	-	-	2,908.	In 1807	-	-	1,033.
In 1802	-	-	2,201.	In 1808	-	-	1,168.
In 1803	-	-	2,326.	In 1809	-	-	1,066.
In 1804	-	-	1,702.	In 1810	-	-	1,139.
In 1805	-	-	1,307.	In 1811	-	-	906.
In 1806	-	-	1,332.				

Impressed with these considerations, we are certainly very desirous of establishing a permanent House of Recovery, for the benefit of the metropolis; and we are most anxious that the protection and preservation of its inhabitants from this fatal and calamitous disease may not depend merely on the duration of the short term in a small house in Gray's-Inn Lane, held at present by a lease to one of our members; but that in this metropolis, as well as in Dublin, Cork, Waterford, Manchester, and other places, a fitting and lasting establishment be formed for the security of the inhabitants. We had indeed flattered ourselves that the large and commodious space of the proposed situation in Cold Bath Fields, insulated as it is on every side, would not only be admitted to be locally and peculiarly convenient, but would be considered as in all respects perfectly unexceptionable.

We cannot help wishing, that before the resolution in question had been adopted, the Faculty had been consulted with regard to the nature and validity of the objection. With regard to the space over which febrile infection may be conveyed in the open air, physicians agree, that it cannot be communicated at the distance of five feet. The proposed House of Recovery is intended to be placed in the centre of the piece of ground contracted for, so as to be at least ten feet from the outer wall of the ground. Taking therefore the dimensions stated by the magistrates to be correct, it will appear that there will be a distance of 43 feet between the proposed House of Recovery and any other building whatever; and that between the proposed House of Recovery and the House of Correction, there will be the distance of 151 feet; from an admeasurement of the ground, however, which we have had made, it will appear that the distances are considerably more.

We shall therefore flatter ourselves, that before any weight is given to the objection to the proposed House of Recovery, on account of local situation, their Lordships will deem it right that some medical opinions should be produced, in order to show that it may be possible for the House of Correction, or the neighbouring houses, to be injured or endangered in any degree by the proposed application of this insulated and airy piece of ground to the establishment of a house of recovery for protecting the inhabitants of the metropolis from the ravages of infectious fever.

We are, Sir,  
Your very obedient servants,

*S. Duncelm,*  
*N. Vansittart,*  
*T. Bernard.*

Copy of the Report referred to in the preceding Letter, being signed by Sir Walter Farquhar, Dr. Garthshore, Dr. Latham, Dr. Lettsom, Dr. Cocke, Dr. Willan, Dr. Stanger, and Dr. Murray, and dated Nov. 17, 1801.

FROM the experience of Chester, Manchester, Waterford, and other places where houses for the reception of persons in fever have been established, we are satisfied that the number of contagious fevers has been greatly diminished, not only in towns, but

*T. Bateman,*  
*M. D.*

(Letter from the  
Committee for pre-  
venting infectious  
Fever in the  
Metropolis.)



*T. Bateman,  
M. D.*

(Letter from the  
Committee for pre-  
venting Infectious  
Fevers in the  
Metropolis.)

but in the very district and neighbourhood where houses of recovery have been situated. From this circumstance, therefore, as well as from our own knowledge, and the statement of those who have the best means of observation, we are of opinion, that the proper and necessary regulations for the internal management of the house in Gray's-Inn Lane Road being adopted, there will be no reasonable ground of apprehension on the part of the neighbouring inhabitants; on the contrary, we believe, that there will be much less danger of the atmosphere in that neighbourhood being infected by the proposed House of Recovery, than there now is in the populous districts of the town, from the prevalence of fever in workhouses, or in the habitations of the poor.

At the same time we cannot help suggesting to the committee, that the present establishment will not in itself be adequate to the general relief of our extensive metropolis, although the measure is, in our opinion, of the utmost importance and necessity, and is imperiously called for by the present situation of this great city; yet we conceive that it cannot be effectually carried into execution without the assistance of Government in aid of private donations, and of such parochial contributions as the good sense or particular circumstances of some parishes may induce them to supply. In a national as well as a municipal view, there is hardly any object of more consequence, or which ought, in our opinion, to be more generally the concern of all ranks of people, of the rich as well as the poor, than the adoption of measures for checking the progress of infectious fever, so as to prevent its diffusing itself from unknown and unexamined sources, and spreading desolation through the whole town, and thereby unavoidably affecting many parts of the kingdom at large. The preservatives against this calamity are now generally and practically known: experience has afforded the most unequivocal and satisfactory evidence in their favour; and while other places within the British Isles, with far more limited resources, have successfully adopted means of remedy and prevention against this evil, we cannot but express our confident hope that the opulent cities of London and Westminster will not be backward in imitating so wise and so benevolent an example.

*Richard Phillips, Esquire, called in; and Examined.*

*Richard Phillips,  
Esq.*

YOU are one of the treasurers of the establishment?—I am.

From what source are the funds derived that support it?—Donations, legacies, and annual subscriptions.

Have you got with you an account of the funds of the society for some years back, and from what sources they arise?—Please to see the following paper, containing a statement of the receipts and expenditure of the Institution for the Cure and Prevention of Contagious Fever in the Metropolis, from 4th Month (April) 1812, to 5th Month (May) 1817.

	Annual Subscriptions and Donations.	Donations under £50.	Total Amount of Annual Subscriptions, Dividends and Donations, under £50.	Expenses of the Institution.	Donations and Legacies, amounting to £50 and upwards, to be invested according to the Rules of the Institution.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1812 - - 1813	468. 13. 0.	21. 0. 0.	489. 13. 0.	474. 4. 0.	—
1813 - - 1814	415. 11. 0.	69. 1. 0.	484. 12. 0.	518. 5. 4½	100. 0. 0.
1814 - - 1815	420. 17. 0.	83. 10. 0.	504. 7. 0.	544. 3. 1.	300. 0. 0.
1815 - - 1816	437. 15. 5.	63. 6. 0.	501. 1. 5.	521. 13. 4.	—
1816 - - 1817	447. 11. 5.	96. 11. 0.	544. 2. 5.	652. 9. 1½	—

#### FUNDS, 1818:

Stock, 3-per-cent. Consols - - - £.2,682. 16. 10.  
Exchequer Bills - - - 2,000. 0. 0.

In



*Richard Phillips,  
Esq.*

In this account of income, is the interest of stock included?—It is.

Can you give to the Committee an account of the income for the year ending with April 1818, when your year ends?—I am not qualified to give that account, having been eight months of that year out of town, and that during the most active part. I have been furnished with an account of the expenditure, which amounts to upwards of 1,530*l.* exclusive of 170*l.* paid for printing, and various other expenses relating to the public meeting on 21st of the 11th month (November) 1817; and for clerks, advertising subscriptions, committee room, &c.

During the last year, when the expenses of the institution were so much greater than in any former year, were any means used to procure an additional sum of money?—Various means were used.

Amongst other means, was there not a meeting held at the Mansion House?—There was.

Was there not a considerable sum of money raised?—There was, either in the meeting, or in consequence of it.

Is this sum of 2,000*l.* held in Exchequer Bills part of that subscription?—It is.

Has not the difference between that amount, and the sum that was subscribed, been expended in the payment of debts, and the removing from the establishment the difficulties under which it laboured?—It has; previous to such exertions, only a few pounds remained applicable to meet the great and increasing expense of the institution.

What are the principal articles of expense?—The chief article is the support of the house.

Do you mean by that, medicine?—Very little medicine is used; that is amongst the least expensive articles; clothing, I believe, is not much.

Bedding?—Bedding of late has been expensive; but house-keeping is the principal expense.

Is any sum paid to the medical attendants?—We pay the apothecary a salary of 30*l.* a year, and a gratuity to the physician of 50 guineas; but this year the gratuity has been increased to 100 guineas, in consequence of extra exertions.

Does the apothecary find drugs?—No.

Then the Committee are to understand, that for the sum of 50 guineas a year on an average, Doctor Bateman gives a daily attendance in that hospital?—Either by himself or assistant, by himself when he is not disabled by illness; it is only within the last twelve months, we have had an assistant physician.

Can you state to the Committee what has been the average of the monthly expenditure during the epidemic?—I cannot; the inspector not being required to furnish me with a weekly account, which is audited by the directors, and during the prevalence of the epidemic, I was absent from London.

*Mr. John Charles Matthews, called in; and Examined.*

WHAT situation do you hold at the Fever Institution?—Inspector and collector.

What are your principal duties?—My principal duties are to attend to the house, and to fumigate and see to the whitewashing of the patients' rooms.

Do you mean rooms within the house?—No, the rooms from which they have been removed.

Have you done that to any considerable extent to them?—Yes, to a very considerable extent.

Can you furnish the Committee with any account of what has been the average weekly or monthly expenditure, during the period of this epidemic?—I think I can; the monthly housekeeper's account I calculate latterly to be of the amount of from fifty to sixty pounds a month, for butchers, bakers, and those expenses attached to it, which we class under the head of the Matron's Account: we have had a very different establishment of late to what we formerly had.

You mean as to the number of persons within the walls as patients?—Yes.

Does that include the article of washing?—That is done in the house; we have a laundry maid to whom we pay wages, and who boards in the house: our regular establishment of nurses is four, which we are obliged sometimes to increase one, two, or three, as we want assistance; but four is our regular establishment.

Has the expense been considerable for the last year, for bedding, sheets, and so forth?—Yes, for sheeting in particular.

What should you consider as the whole amount of your expenditure within the last year, from the 25th April 1817 to the 25th of April 1818?—I believe the

*Mr.  
J. C. Matthews.*



Mr.  
J. C. Matthews.

treasurer is more competent to answer that question than myself, because he has the whole of it under his superintendence: I have only a part of it.

Of an average year, when the number of patients is smaller, that is to say, prior to three years of epidemic, what has been the monthly expenses?—For the matron's account, for the year 1814, £.129. 15s. 4d.; for the year 1815, £.135. 1s. 9d.; for the year 1816, £.160. 8s. 6d.; for the year 1817, £.510. 13s. 8d.

To what date does the last come up to?—To the 24th April.

As inspector, when you visit the houses from which a patient is removed, are you accustomed to leave any paper containing the rules of the Institution?—Invariably.

Is the paper, now lying before the Committee, similar to those you are in the habit of leaving?—It is.

[It was read, as follows:]

**RULES of the Institution for the Cure and Prevention of Contagious Fever in the Metropolis, to be observed in the Apartments of those who are confined by infectious Fevers:**

1st. It is of the utmost importance to the sick and their attendants, that there be a constant admission of fresh air into the room, and especially about the patient's bed. The door, or a window, should therefore be kept open both day and night, care being taken to prevent the wind from blowing directly on the patient.

2d. An attention to cleanliness is indispensable. The linen of the patient should be often changed, and the dirty clothes, &c. should be immediately put into fresh cold water, and afterwards well washed. The floor of the rooms should be cleansed every day with a mop; and all discharges from the patient should be immediately removed, and the utensils washed.

3d. Nurses and attendants should endeavour to avoid the patient's breath, and the vapours from the discharges; or, when that cannot be done, they should hold their breath for a short time: they should place themselves, if possible, on that side of the bed from which the current of air carries off the infectious vapours.

4th. Visitors should not come near to the sick, nor remain with them longer than is absolutely necessary; they should not swallow the spittle, but should clear the mouth and nostrils when they leave the room.

5th. No dependence should be placed on vinegar, camphor, or other supposed preventives, which, without attention to cleanliness, and admission of fresh air, are not only useless, but, by their strong smell, render it impossible to perceive when the room is filled with bad air or obnoxious vapours.

If these rules be strictly observed, an infectious fever will seldom if ever be communicated; but if they be neglected, especially where the patient is confined to a small room, scarcely one person in fifty who may be exposed to it, can resist the contagion; even infants at the breast do not escape it, though, providentially, less liable to be affected than adults.

Since infection originates in close, crowded, and dirty rooms, those who make a practice of admitting fresh air at some convenient time every day, and of frequently cleansing their apartments, bedding, furniture, &c. and washing the walls with quick-lime mixed with water in the room, may be assured they will preserve their families from malignant fevers, as well as from other diseases.

N.B.—The House of Recovery for the reception of patients labouring under typhus fever, is situated in Pancras-road, where applications for admission are to be made.

Do you find a disposition among the poor, as far as they are able, to comply with those regulations?—We find them perfectly willing, but there are some instances of difficulty with them, which requires some explanation; for instance, among the weavers in Spitalfields, a man has a loom in his room, and he sleeps in it with all his family, in which we have recommended whitewashing, that would of course stop his work; there was a difficulty in such a case; others again arise out of the number of Irish people living together, and we have a number of patients of that description, though the case of a refusal to have the apartment limewashed by them seldom occurs.



In general you find that the objection arises from the circumstances or poverty of the parties, and not from any reluctance to comply with the rules?—No, not at all.

Do you find the Irish people live together more promiscuously, and in larger assemblies than the English?—Certainly.

So that you will have many families almost inhabiting the same small habitation?—Certainly.

In what part of the town do they principally inhabit?—In the neighbourhood of Saffron-hill, Gray's-inn Lane, Dyott-street St. Giles's, and also there are numbers of them at the east end of the town, at Whitechapel.

Are those quarters almost always affected by contagious diseases in the autumn?—Certainly more than other quarters.

Do you find in those quarters an unwillingness of the sick to be removed into your hospital?—No, we do not.

In general are they very thankful for the care and attention that they have received?—Yes; I have known a number of instances of that description: there is one instance of a husband who went out of the hospital himself a convalescent, crying; he having objected to his wife coming, the man thereby concluding that he had lost his wife.

What is the furthest limit from which you have taken patients in the metropolis and its neighbourhood?—As low as Stepney on the Whitechapel road, and below Shadwell. I would mention that there have been no limits set to the receiving of patients; we have received them from every part of the metropolis. I will mention one case that would exhaust our funds very much, which is this, formerly when we had to hire porters; we have one now stationary, and in the house; and the expense of removing patients last year amounted to sixty-five pounds, and which would have been nearly double, if we had not had an establishment of our own for the purpose.

Can you state to the Committee what the expense has been in whitewashing and fumigating the houses of the patients who have been removed into the infirmary?—Yes, I believe I can do that accurately; the whitewashing for the last year has been 48*l.* 15*s.*

How many apartments?—One hundred and fifty-one, I believe.

Has much of the fever appeared at such a distance from the Fever House as to make it a considerable inconvenience to send for the patients, and to indispose the patients themselves to go so far from their homes?—From the experience I have had, I should think not.

*Richard Phillips*, Esquire, again called in; and delivered the following Statement.

Monthly admission of Patients into the House of Recovery, since the Annual Report dated April 25, 1817.

*Richard Phillips*,  
Esq.

In Typhus Fever:

April 25	-	-	-	to	-	-	-	May 30, 1817	-	-	-	41.
May 30	-	-	-	to	-	-	-	June 27	-	-	-	28.
June 27	-	-	-	to	-	-	-	July 25	-	-	-	20.
July 25	-	-	-	to	-	-	-	August 29	-	-	-	63.
August 29	-	-	-	to	-	-	-	October 31	-	-	-	108.
October 31	-	-	-	to	-	-	-	November 28	-	-	-	87.
November 28	-	-	-	to	-	-	-	December 26	-	-	-	68.
December 26	-	-	-	to	-	-	-	January 30, 1818	-	-	-	92.
January 30	-	-	-	to	-	-	-	February 27	-	-	-	68.
February 27	-	-	-	to	-	-	-	March 27	-	-	-	56.
March 27	-	-	-	to	-	-	-	April 24	-	-	-	52.

In Scarlet Fever - - - - - 20.



*Jovis, 30<sup>a</sup> die Aprilis, 1818.*

The Honourable HENRY GREY BENNET, in the Chair.

*Alexander Marcet, M. D. called in; and Examined.*

*A. Marcet,  
M. D.*

ARE you one of the physicians to Guy's Hospital?—I am.

Are you on the committee for managing the Fever Institution?—I am, and have been for many years.

Are you in the habit of visiting that institution?—I cannot say that I am in the habit of visiting it regularly, but I have occasionally visited it, with a particular object.

What was that object?—The object was, to ascertain, to the best of my judgment, conjointly with another member of the committee, Dr. Yelloly, the nature of the fever that prevailed, and the nature of the cases that were admitted into that institution.

What was the general character of the fever, and what the description of cases admitted?—The fever in general had a mild character; there were some severe cases, but the great majority were mild fevers, though abundantly well marked as fevers, and, in many instances, evidently of a contagious nature.

What was the description of cases that were admitted?—It appeared to us, upon going round and seeing, I believe, every one of the cases, that they were all of that description of fevers for which the House of Recovery was established, with the exception of a few cases of scarlet fever, which, however, now come within the laws of admission of the society.

Did you make that inquiry and examination in consequence of an opinion having gone forth, that persons were admitted into that institution who had not upon them the disease that it was instituted to cure?—We did; we were appointed a sub-committee for that especial purpose, and the result of our inquiries was, that although there was a considerable proportion of mild cases, yet all of them came within the general denomination of fever.

Is the fever at present in a state of abatement?—Judging from the state of the fever in the hospital to which I belong, the cases of which are better known to me than those in the Fever Institution, it has not suffered any material diminution from its original frequency, during the last two months; though there were strong indications of its abating during the month of February.

Is it not the character of the fever to decline as the summer approaches?—It generally does.

Is it not a fever which generally commences its ravages in autumn?—It commonly does; but I would beg leave to observe, that the prevalence of fever is often influenced by various accidental circumstances; so that this law is subject to frequent exceptions.

From the observations which you have been able to make, and from what you have professionally heard, is it not to be expected that where the disease has continued for some time, that though it may decline as the warm weather approaches, it will revive again in the autumn?—This, certainly, frequently happens.

In the last epidemics of 1801 and 1812, was not that the case?—To the best of my recollection, it was; but as I did not in 1801 belong to any public institution, I cannot speak as to that period from personal knowledge.

Is it not the character of that fever to linger a considerable time about places where it once originated?—It certainly appears very strongly to be so, from a series of reports of our institution, in which the same courts and alleys are continually infected with contagious fever.

Have you ever heard, that in jails, where a fever has originated, that though it may be abated for a time, it is several years before it is entirely worn out?—I have no experience of attendance in jails, but I have understood that to be often the case.

So that, supposing the evidence to be correct, which the numbers now in the institution seem to show, that the fever is less violent at present than in some preceding months, it may recur again in the autumn, with all the rigour that it had some short time back?—It is certainly not an improbable event.

How many persons have been admitted into Guy's Hospital, attacked by this fever, within the last twelvemonth?—A very considerable number, compared to the



the general number of admissions; and, so far as my knowledge of the hospital goes, quite unprecedented.

Can you give to the Committee any account of the average number of admissions for fever, for some years past, into Guy's Hospital, to enable them to contrast it with the admission of patients last year?—The labour of examining the books of the hospital, during a considerable period, being very great, and the time allowed to me being small, I have been able only to carry on this inquiry for the last two years, so as to contrast the last twelvemonth with the twelve months preceding.

Was not that preceding year one in which the number of cases were unusually great, as compared with the preceding years?—Judging from our hospital, the numbers were not unusually great in that year. It might be somewhat greater than the average, but not considerably so.

Will you be so good as to state to the Committee the result of the examination of your books?—The result of that examination will appear by the following tabular statement, which I have divided into monthly reports.

[It was delivered, and read as follows:]

Cases of Fever admitted into Guy's Hospital.

	From May 1816 to April 1817, inclusive.		From May 1817 to April 1818, inclusive.		T O T A L S.
	Men.	Women.	Men.	Women.	
May - - -	1	0	3	2	From May 1816 to April 1817: Men - - - 17 Women - - 19 <u>36</u>
June - - -	6	3	4	3	
July - - -	1	2	5	5	
August - -	2	2	8	5	
September -	0	2	23	12	
October - -	0	1	14	8	From May 1817 to April 1818: Men - - - 132 Women - - 91 <u>223</u>
November -	0	2	13	5	
December -	0	1	20	15	
January - -	1	2	13	10	
February - -	0	1	9	8	
March - - -	2	3	10	7	Guy's Hospital, 30th of April 1818.  A. M.
April - - -	4	0	10	11	
	17	19	132	91	

N. B.—In the above statements, which are taken from the admission books, the fevers occasionally arising in the house by contagion are not included. Of these no less than five have occurred amongst my own patients within the last six weeks, viz. three men, who caught fevers in the hospital while under treatment for various other disorders; one nurse, who died; and one female patient, who was convalescent of a surgical disorder, when she caught the fever in one of the wards, where she is now lying in a critical state.

It appears also, by a reference to the books in the steward's office (as will be seen by the annexed detailed statement,) that, besides the cases of fever above enumerated, there were, between May 1816 and April 1817 inclusive, fourteen cases of fever admitted into the hospital on by-days, on the ground of their being *bad fevers*; and that between May 1817 and April 1818 inclusive, there had been fifteen fevers admitted in the same manner.

This will alter the totals as follows:



# 26 MINUTES OF EVIDENCE BEFORE SELECT COMMITTEE

A. Marcell,  
M. D.

In the year ending 30th of April 1817, In the year ending 30th of April 1818,

There were 36 admissions - - - 238  
- - - 14 additional, on by-days - - - 15

Total - 50 253

Deaths - 13, or about 1 in 4 - - - 16, or about 1 in 15.

Average number of deaths in the two years, 29 in 288, or about 1 in 10.

Fever Patients at this moment in the House, (30th April 1818.)

Men - - - 14  
Women - - - 12

Total - - - 26

STATEMENT referred to in the preceding Answer of Fever Cases admitted into Guy's Hospital on By-days, from May 1816 to April 1818, both inclusive.

W. K. Steward.

	1816-17.	1817-18.
May - - - - -	0	0
June - - - - -	1	1
July - - - - -	3	0
August - - - - -	1	1
September - - - - -	2	1
October - - - - -	1	2
November - - - - -	0	1
December - - - - -	3	1
January - - - - -	0	3
February - - - - -	1	2
March - - - - -	1	0
April - - - - -	1	3
Admitted - - - - -	14	15

Died of fever this year, be- } 13 - - 16 { Died of fever this year, be-  
tween May and April - }

What do you consider as the average number of patients that in common years are admitted monthly, for fever, in the hospital?—There are some months in which none are admitted. As, however, in the year preceding the epidemic, there were only 36 admissions, the average monthly number would only be three; and the year in question is perhaps not the most favourable for a small average, as it immediately preceded the epidemic.

Have you any separate fever-ward in Guy's Hospital?—We have not.

Are the patients suffering under an attack of fever mixed indiscriminately with patients who are suffering under other diseases?—They are, with the exception of the venereal patients, who have separate apartments.

Do you think that arrangement a good one?—That is a difficult question, and which requires a little explanation; experience has certainly shown that fevers may be caught



caught in the wards. At the same time, I beg to state to the Committee, that the ventilation upon the whole is so good, that it very rarely occurs in our hospitals in ordinary times. I have seen this, however, as I have before stated, happen no less than five times in the course of six weeks; but I can partly account for it from some peculiar circumstances. There is in Guy's Hospital a school of medicine, and there are clinical lectures delivered; for the purpose of giving those lectures, patients are selected, and two small wards are appropriated to cases so selected; these wards contain only twelve patients each, whilst the other wards contain thirty-two each. Now it happened that of those five fevers, three originated in the course of three weeks in one of those small wards, showing in a very striking manner, the effect of diminished space in favouring contagion, for these wards are precisely situated in the same manner as the others, being merely separated by temporary partitions. I conceive that it would be a very good plan to have fever-wards in an hospital, provided they were built for that special purpose, and provided they had a police peculiar to themselves, otherwise the danger to the attendants and medical officers would be very materially increased.

Do you think then that it would be advisable to extend the Fever Institution of the committee of which you are a member, to embrace all the fever cases which are now contained in all the hospitals, supposing a place could be constructed in the Fever Institution to receive them?—It certainly would be a most desirable object; at the same time, those hospitals which have schools of medicine attached to them would no doubt wish to have a few cases of fever admitted, in order to give the students an opportunity of seeing the disease, but then they would be so few as not to endanger the safety of the hospital.

Supposing that the great mass of cases were removed from those hospitals, could not a small ward be found in each of those hospitals, which would be sufficiently large to contain cases for the purpose you mention, and where they could also be subjected to that peculiar mode of treatment which you term *police*, so as to prevent infection?—I conceive the idea of small wards to be incompatible with the intended purpose; there must be considerable space in order to remove all danger.

Supposing, for instance, one of those rooms in which the three cases of fever were generated, had been devoted solely to fever cases, should you have considered the size of that room to be sufficient?—Certainly not; for, in order to stop the contagion, I was obliged to break up the ward, and disperse the cases of fever I had in them throughout the house, when the mischief immediately stopped.

Is there not, in cases of epidemic, considerable danger, even in those large wards, by introducing a number of fever patients amongst other patients affected by other complaints, condensing thereby the contagion, so that all would run a chance of being infected by the disease; whereas it might be safe to mix only one or two cases of fever in the large wards?—Certainly; and that is the reason that prevents most hospitals in London from having fever-wards. It is necessary to dilute the contagion in order to render it harmless, and therefore they endeavour to avoid all such accumulation.

Do you not think, that though that argument is excellent in an average state of the disease, yet in cases of epidemic it would wholly fail?—Certainly, in cases of epidemic like the one that now prevails, the want of fever-wards or fever-houses, capable of containing all cases of fever, is very severely felt.

Taking, then, the choice of the least evil of the two, do you not think that more danger of spreading the complaint is created by mixing fever cases along with other patients, than good would be gained by admitting fevers into the hospital at all, for the purposes of giving instruction, in that species of complaint, to the students?—A very few occasional cases, merely as specimens of the disease, cannot be, in my opinion, attended with any danger to the hospitals, and the instruction of pupils is a very essential point.

Supposing there were one or more fever hospitals built in the neighbourhood of London, would there be any inconvenience for the pupils to attend them for instruction?—There certainly would, because the schools are a concentrated system of education, the lectures being given in a systematic and complete series; and it is a very material convenience to the pupils to receive that instruction on the spot: and besides, after attending the lectures in one place, they could hardly go for illustrations to another, at a distance from their respective institutions.

Please



*A. Marcet,  
M. D.*

Please to tell the Committee whether, in your opinion, the wards containing contagious fever in Guy's Hospital can be sufficiently ventilated, without inconvenience to other cases?—The system of ventilation which belongs to a fever, and that which belongs to some other diseases, are in many instances absolutely incompatible.

What number of patients is Guy's Hospital calculated to hold, how many beds?—It holds 400, as near as possible.

What are the days of admission?—The regular admission takes place only once a week, on Wednesdays, at ten o'clock.

What number of patients are there in the hospital now?—It holds 400, and it has nearly that number constantly within its walls.

Are you ever obliged to refuse a patient for want of room?—Constantly, every week; on every admission-day, I should think that at least four or five times the number we receive are disappointed by being refused.

Is the hospital one whose doors are open to every one who applies, if there is room to hold them, or is it necessary to obtain an order from any subscriber?—It is an hospital where no form of recommendation is ever used or required. The instruction which the physician receives when he enters upon his office is, to admit, to the best of his judgment, the most severe cases; and the patients have only to walk in and show themselves.

Is it supported by voluntary subscriptions, or by estates?—It is the peculiar advantage of this hospital to be supported solely by estates, being chiefly donations of the founder, Thomas Guy.

Have any of the students of the hospital suffered from this fever, or any of the medical attendants?—There has been an uncommon mortality among the students, both at Guy's and St. Thomas's Hospital: I have heard of thirteen or fourteen students in the course of the last twelve months: but I do not understand that they all died of fever, though a considerable proportion of them died of that disease. A few of the nurses have also suffered from the fever.

Of what description of classes do the greater proportion appear to suffer from fever?—Fever most frequently occur amongst the poor; but it is my belief, that fevers are more fatal in the higher classes than in the lower.

You have stated the number of patients admitted into Guy's Hospital under the fever; can you inform the Committee as to the mortality?—I can, as to the two years, the account of which I have laid before the Committee: the result was such as to surprise me; I mean in reference to the difference of the comparative mortality in the one year with the other: in this last year, in which we had 258 cases of fever, the mortality was only sixteen, being a proportion of one to fourteen or fifteen; in the former year, in which we admitted only fifty fevers, the deaths were thirteen, which was a little more than one in four; combining the two years, the average mortality appears to have been a little more than one in ten; and this gives rise to a very important remark, which has also been made at the Fever Institution, namely, that in the years of epidemic the fatality of fever is much less than in those in which such epidemic does not prevail.

Have you, in point of fact, rejected at Guy's Hospital any fever cases?—It is the rule at Guy's Hospital, to admit fevers in preference to other cases, from a motive of humanity, to prevent their being carried back to the courts and crowded dwellings, where they commonly originate, and probably spread the contagion very fast; but it has happened once during this epidemic, that one case of fever was actually rejected for want of a bed to receive it; but this is a very unusual circumstance.

Do you admit fevers on by-days, as considering them cases of urgency, treating them as accidents?—We do, when we have beds for them; but it is impossible to answer for spare beds, as a certain number of them must always be kept for accidents.

You always keep some beds for accidents?—We always keep about twelve on each admission-day, which are gradually occupied during the week.

Then you have not rejected more than one case of fever?—No, not to my knowledge.

In that instance, for want of accommodation?—Yes; but I would beg to observe as a general remark, applying to the whole of my evidence respecting Guy's Hospital, that I have spoken from my own knowledge and belief, without consulting with my colleagues upon the subject of the hospital documents, from which I have obtained my results;



results; these probably might be found, if examined with a very critical eye, to require correction in a few instances, because different physicians are apt to use different terms, and because one is not always able to say with accuracy, on admitting a patient, what his complaint will ultimately turn out to be; and the characters of fevers in particular, are not always sufficiently marked from the beginning, to enable the physician to ascertain their precise nature, so that it may happen that a mere symptomatic fever may occasionally be mistaken for a fever of the idiopathic kind, or *vice versa*: this source of error, however, is not likely to occur frequently, or to vitiate the results materially, especially as it applies to one year as well as the other, and therefore cannot affect the accuracy of the comparative statements.

*A. Marcet,  
M. D.*

*John Yelloly, M. D. called in; and Examined.*

TO what hospital are you physician?—The London Hospital.

Are you also one of the committee of the Fever Institution?—I am; and have been so for many years, nearly from its establishment.

*J. Yelloly,  
M. D.*

Without troubling you to answer the same questions which have been proposed to Dr. Marcet, as you have heard them, do you concur in the statement which he has given concerning that institution?—Yes, I do; I was one of a committee associated with him for the purpose of examining some points of management, and the opinion he has given is the same which I have formed. I should beg more particularly to state, that it was referred to the medical committee of the institution of which we are members, to examine into some particular objects connected with the charity. That committee made a report, which, if the Committee think it desirable, is at their service, though Dr. Marcet has stated the principal result of our investigation.

Have you had a great number of fever cases in the London Hospital during the last twelve months?—Yes, we have.

Are you enabled to furnish the Committee with an account of the number, as well as with an account of the number of admissions in preceding years?—I can give the Committee information to a certain extent; I examined the records of the hospital with as much attention as the nature of the subject and the shortness of time afforded me would allow; and from them I have made out an account of admissions in fever since the year 1812 inclusive, up to the present time. For the first five years, the average number of admissions was 30 in each year. The number admitted in 1812 was 40; in 1813, 19; in 1814, 27; in 1815, 38; in 1816, 26. In the year 1817, there were 97 cases of fever admitted; and in the first three months of this year, there have been 35 cases admitted. In the month of January, there were 13 cases; in the month of February, 14; in the month of March, 8; making 35 in the whole.

Can you state to the Committee the mortality in those years?—The average mortality, as far as I could collect it, may be stated as follows; but I may observe to the Committee, that there is a very considerable difficulty in making out a correct statement when there is a great number of books and names to examine, though I should suppose the account may be considered upon the whole as tolerably correct. In the first five years of the series mentioned, the average deaths in fever were about one in five. In the year 1817, the whole number of deaths in fever, (the admissions being 97,) were 13, which is about one in seven and a half. In 1818, that is, in the first three months of 1818, there were 35 admissions and two deaths, which is a mortality of one in seventeen and a half. I should beg to state to the Committee, that as the hospital invariably admits the worst cases, it happens that some of those deaths are of patients admitted under circumstances perfectly hopeless; and also, that in some instances, when patients have recovered from fever, they have, after a lapse of two or three months, died of consumption, or some other complaint. In the number of 13 deaths which occurred during the last year, one took place in the hall, before the patient was taken up to bed; two on the first, and one on the second day after admission. I think it right to mention this, because it would appear in those instances that the cases were quite hopeless.

What are your days of admission at the London Hospital?—We admit patients once a week, on the Tuesday.

Do you admit cases of fever as urgent cases, whenever they are presented at the hospital, and you have room to receive them?—Not invariably. There is a



*J. Yelloly,  
M. D.*

regulation in the hospital against the admission of contagious diseases; but I believe, as far as fever goes, that this is a law not usually acted upon. I have known instances, however, in which the Committee have expressed disapprobation at fever cases being admitted on by-days, considering that the admission of such cases does not accord with the rules of the hospital.

Do you admit patients upon their knocking at the door, or is it necessary to have a certificate of recommendation?—All accidents and cases of extreme urgency are admitted without any form of introduction, on whatever day they may apply; but recommendations from governors are necessary for the admission of other cases. But though it may happen that in the vicinity of the hospital, there is sometimes a difficulty of getting admission tickets, because the governors who reside near it are very much in the habit of exercising their privilege of recommendation; yet as the whole number of governors is very large, the difficulty can never be so great as to preclude a patient from having the usual chance of admission. On by-days the physicians and surgeons may admit, when there is room, such urgent cases as come with recommendations, and cannot without danger be postponed to the regular taking-in day.

Is the hospital supported by its own funds, or by voluntary contributions?—The principal part of the expenses is defrayed by property belonging to the hospital; and it is therefore dependent upon voluntary contributions in a small degree only. The independent property amounts to about 7,000*l.* a year, and an extra 1,000*l.* at the least are reckoned upon, and invariably received, at the anniversary meeting. The hospital was formerly in embarrassed circumstances; but the large sums of money which have been raised by the liberality of the public, and which amounted on one occasion to about 24,000*l.* and on another to about 20,000*l.* have been almost sufficient to raise it to a state of independence.

How many patients do you think the hospital will contain?—About 250.

Have you any fever-wards attached to the institution?—We have not.

In cases of fever do you mix them with other patients?—We do.

Have any instances occurred in that hospital of patients who have had other diseases, catching the fever from other patients who have been received with fever?—I do not recollect any instance till last year, when a patient of my own, who did some friendly offices for a patient who was dangerously ill of fever in the same ward, caught the disease, though the attack was but of a slight description.

Is it your opinion, that it would be advisable to form an establishment to receive fevers generally throughout the metropolis, or to allow of the practice at present existing, namely, of mixing them with other patients?—I should think an establishment which was sufficient to receive all the fever cases very desirable.

Do you think that, supposing all those fever cases were put together, it would not be the means of establishing a species of school for the treatment of fever which would be very beneficial to medical science?—I should think, for the reasons which Dr. Marcet has stated, that it would be very inconvenient to have such a school at a distance from those hospitals where medical education is generally carried on; but I conceive it would be advantageous to the profession and the public, that there should be an opportunity of studying that species of disease as accurately as possible; though I must observe, at the same time, that according to the present plan, there is a very ample opportunity afforded for becoming acquainted with fevers. It is possible that the present plan may be full as beneficial as any that could be recommended for the improvement of the practitioner, or the study of the disease; because in every hospital a physician has frequently fever patients under his care, by which means his attention is more directed to the subject of fever than could be the case if fever cases were not received into such establishments. The hospital is so well ventilated, that, as I have observed, no instance of the propagation of fever in the house has come within my observation till last year; but this year, and in the latter part of last year, several cases of fever occurred, both among the nurses and the porters, some of them very severe, and some fatal. There was a remarkable instance in a very valuable officer of the hospital, the apothecary, who took a fever, and had a very severe and dangerous attack. He recovered from the fever with difficulty, but was carried off some weeks afterwards by consumption.

For the interests of the London Hospital, the Committee would ask, whether that building is not capable of taking in a greater number of patients, if the income of the hospital was larger?—I should think that it is. There might, I should



imagine, at no great expense, be wards made in the upper part of the house, which would allow of an additional number of patients being admitted.

Did it not some years ago accommodate more patients than it does now?—I believe never. I have been physician to it more than ten years; and at my appointment the number contained in it was under 200, and then it was beginning to emerge from its difficulties, by the first liberal subscription, which I have noticed above. I understand the number which I have stated to the Committee, to be the greatest amount which the hospital has ever accommodated.

The Committee understand you to say, that the ventilation of the wards is as complete as you wish it to be?—I believe no hospital is better ventilated, or has larger and more airy wards.

Has no inconvenience been found to other patients from that ventilation?—I believe inconvenience is frequently found from patients labouring under different complaints being exposed to the same temperature; and it appears to me, that the degree of ventilation generally proper in fever, is not, for example, well adapted for complaints in the chest, instances of which are very common in hospitals.

The venereal cases you keep by themselves?—We have no venereal wards; but it is quite impossible for venereal cases to be excluded, although the admission of such cases is discouraged. I would beg to state, that I should conceive it perfectly impossible by any plan, to prevent entirely the admission of fever cases into an hospital, because it would happen, that as complaints are sometimes not very well marked at their commencement, they might thus be introduced, and when once admitted, humanity would prevent their being removed.

But in all cases of confirmed fever, do you not think that it would be advisable to send them to a place peculiarly adapted by its construction to accommodate them?—I should think it would be desirable to do so; but I can scarce imagine, that any case would be actually sent out of an hospital to be forwarded to any other medical establishment. I have mentioned, that the committee for the management of the hospital, are adverse to the admission of fever cases generally; and I would add, that I have occasionally advised the friends to take patients to the House of Recovery.

Have the goodness to inform the Committee, what precautions are taken upon the admission of a patient ill of a contagious fever, to prevent the communication of that disease through the medium of that patient's clothes?—I cannot accurately state the steps of the plan. With regard to clothes, I believe if the clothes are very bad they are destroyed, and the patient is supplied by the hospital, or by the Samaritan Society, which is attached to the hospital, with other clothes; and the clothes which are good are cleansed or fumigated.

The Committee think you have stated, that in those cases in the hospital in which the contagion spread, the persons receiving it were not patients, but attendants upon the hospital?—As far as my own personal observation goes, I recollect only one instance of a patient taking fever; but I have known several instances, as I have already stated, in which the attendants have caught that disease.

Does it not appear as a matter of fact, that patients afflicted with certain disorders of a particular kind, are less susceptible of contagious diseases than those who are not afflicted with any disorder whatever?—I think, upon the whole, that they are.

When patients are brought to the hospital, how do they generally come?—Those who are able to walk, or have not money to defray the expense of a coach, walk; and many are brought by their friends in coaches.

Do you receive persons ill of contagious fever, when brought in a coach?—We do not inquire how they come; we know nothing of the patients till we see them.

Do you conceive bringing patients of that description in a coach, is not liable to produce an increase of the contagion?—I think that when fever is at its commencement, it is not usually capable of being communicated by contagion; but when that complaint is at a more advanced stage, it is generally susceptible of being so propagated; and I have known several instances of persons brought in coaches, where I should have thought it unsafe to succeed them.

Are patients who are convalescents [more liable to take disorders, than those who are ill of any other disease?—I have already mentioned that I recollect only one instance of a patient, in the London Hospital, having taken fever from another patient ill of that disease.

Do you happen to know whether there is a regulation in the Fever Institution, forbidding



J. Yelloly,  
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forbidding the reception of any patient brought in a hackney coach?—I do not know of any such regulation; but the institution is in the habit of sending a kind of chair for patients; and when I have ordered my patients into the House of Recovery, I have always desired that this chair might be sent for them.

Do you know whether contagious fever is generated in any of the poor-houses in the metropolis?—I know that in the workhouse of Shadwell, for several years past, patients with fevers have at various times been sent to the London Hospital, and to the House of Recovery. I was requested in the month of October last, to inspect the Whitechapel workhouse with my two colleagues, the other physicians to the London Hospital, in order to examine into the state of it, and to give our opinion as to the best mode by which fever was to be prevented in it. We made a report to the trustees on the subject. It contained about 600 persons. We found that cases of fever had occurred to a greater or less extent for a very long time, but more especially from the month of February preceding our visit; that they had appeared in every part of the house, but particularly the basement wards; that fever was frequently introduced by new-comers, and that those long resident in the house were frequently the subjects of it, as well as the persons lately admitted; that almost all the children in the house had had fever at one time or other; that few of the nurses had escaped the disease, and that some of the adults, but many of the children, had been attacked with it two, three, or even more times. The advice which we gave under those circumstances was, to do away entirely with the occupation of the basement floor, which was very ill ventilated and damp; to diminish the number of inmates to what the workhouse could with propriety contain, by taking temporary houses in the neighbourhood; to make an effectual separation of well marked fever cases, and of doubtful and convalescent cases; to make the ventilation more complete throughout the house, and adopt a regular system of cleansing and lime-washing at all times, and of fumigation, till the tendency to fever should disappear. I have not yet heard what changes have been made, in consequence of our representation.

You mentioned that there was a society attached to the London Hospital, that bears the name of the Samaritan Society, what are its objects?—The objects of the Samaritan Society are to supply with clothes such patients as may be admitted into the hospital, and are badly provided with them; likewise to furnish trusses to such patients as require them, and to provide some accommodations which the rules of the hospital do not allow. The society likewise supplies those patients who have not the means of returning to their friends, with money to pay their expenses home, and gives them occasionally a little money to assist in supporting them until they are able to follow their usual occupations.

*Peter Mark Roget, M. D. called in; and Examined.*

P. M. Roget,  
M. D.

WERE you physician to the Fever Institution at Manchester?—I was.

How long ago is it since that establishment was instituted?—It was instituted in the year 1796.

How long had it been established before you were physician?—I was physician to that institution from 1804 to 1808.

Was this establishment owing to any particular increase of fever at the time to which you allude?—I understand there was a peculiar increase of fever previous to the year 1796.

Was it part of the plan to concentrate all the fever cases of that town and its vicinity within the walls of that institution, and to remove them out of the other hospitals?—That was the plan.

Has any inconvenience arisen from concentrating together all the cases?—I believe none whatever; I believe no instance has occurred of infection being communicated from that hospital to any person.

Can you furnish the Committee with an account of the number of patients that it has received for any certain number of years?—I have drawn up a table to that effect, containing an account up to the period of my leaving Manchester, that is, from the year 1796 to the year 1808, which I will deliver in to the Committee.

[It was delivered in, and read, as follows:]



TABLE exhibiting the number of patients admitted in the House of Recovery in Manchester since its opening in 1796, to 1808; with the numbers of cures and deaths for each year.

P. M. Roget,  
M. D.

YEARS.	The Number of Patients,				Proportion of Deaths to Admissions.
	Admitted.	Cured.	Dead.	Remaining at the end of each year.	
From 1796 to 1797 -	371	324	40	7	1 in 9
1797 - 1798 -	339	300	16	23	- - 20
1798 - 1799 -	398	360	27	11	- - 14
1799 - 1800 -	364	315	41	8	- - 9
1800 - 1801 -	747	645	63	39	- - 11
1801 - 1802 -	1,070	956	84	30	- - 12
1802 - 1803 -	601	539	53	9	- - 11
1803 - 1804 -	256	215	33	8	- - 7 $\frac{1}{2}$
1804 - 1805 -	184	144	34	6	- - 5 $\frac{1}{2}$
1805 - 1806 -	268	235	29	4	- - 9
1806 - 1807 -	307	258	33	20	- - 9 $\frac{1}{2}$
1807 - 1808 -	188	191	15	2	- - 12 $\frac{1}{2}$
Total from 1796 } to 1808 - }	5,093	4,482	468	- - -	1 in 11

Has no officer of the establishment been affected from the contagion of fever during that time?—Not at all, at any time.

Do you consider that circumstance to have originated from the system of ventilation and fumigation therein established, which according to your opinion has prevented the contagion from being communicated?—I should think it owing partly to that cause, and partly to the great space which the wards of the building contain.

Can you state to the Committee what is the extent of the space to each ward, and the number of beds contained therein?—I cannot from memory.

In point of fact, is that space more considerable than in the ordinary wards of Hospitals with which you are acquainted in London?—From recollection I think it is; but I can only speak vaguely to that point.

From what you have heard of that institution since you have quitted it, can you inform the Committee whether it continues at present to answer the purposes of its establishment, as fully as it did during the time you attended there?—I understand it does perfectly.

Do you know whether there has been any great influx of fever cases within the last twelve months?—I am not able to answer that question, not having sufficient information upon that point.

Were fevers very prevalent in Manchester, prior to the establishment of this institution?—Fever was very prevalent at Manchester prior to its establishment, and the contagion, at all times prior to the establishment of that institution, was constantly kept up. It appears from the reports, that during the eight winter months, from September to May, that is from September 1793 to May 1794, there were 400 patients in one street only ill with fever, on the books of the infirmary.

At where?—At Manchester. In a similar period, from 1794 to 1795, there were 389; from 1795 to 1796, 267; from 1796 to 1797, only 25; this was immediately after the establishment of the House of Recovery, and the numbers from that period have been very small.



P. M. Roget,  
M. D.

To what cause do you attribute this diminution?—I should attribute it principally to the establishment of the House of Recovery.

The Committee understand, by means of the establishment of a House of Recovery, you took the diseased person out of his own dwelling, in which he spread the contagion all around him, and removed him into the hospital, and thereby the contagion ceased?—Certainly. What I have stated with regard to the number of patients as confined to one street, I would wish to be understood as comprising a few short streets in the immediate vicinity of that street; the street I mean is called Portland-street.

Was that street one of the most populous in Manchester?—It was very populous; I can hardly say the most populous in Manchester.

Is the House of Recovery in Manchester, an insulated building?—Yes, it is an insulated building.

Has it any advantage over other hospitals in Manchester?—It is completely insulated; and the premises are surrounded with a wall, and there are no houses adjoining to it; it does not stand particularly high; its situation is at about 100 yards from that very street that I have mentioned, namely, Portland-street.

Were other parts of the town affected by the disease, at the periods you have mentioned?—A great many other parts of it.

But the numbers you have given in, with reference to the winter months, were taken from that one street?—Yes, from that one street only, and a few small streets immediately connected with it.

Do you understand that the number of fevers in Manchester have diminished to a less degree than the ordinary average prior to the establishment of that institution?—I understand that is the case.

Did you find any prejudice on the part of the poor against being admitted into the house?—Not at the period when I was in Manchester; but there had been previously a great opposition made to the establishment of the institution, which opposition and which prejudices are entirely removed.

It seems then to be the opinion of the poorer classes of society, as well as those who entertained prejudices anterior to its establishment, that it has produced all the good which was expected?—It seems to have been the general impression that it has. Occasionally there have been no patients in the house for a period of a week or ten days.

What number is it calculated to hold?—One hundred, besides two small wards for scarlet fever.

Supported by voluntary contributions?—Entirely.

Do you know what is its annual income?—There are statements in the reports before the Committee which will furnish information on that point; it will be found that the expenditure varies very considerably. In the year 1806 it was £.2,089, and in the year 1809 it was £.1,191.

Is this institution connected with the infirmary?—No otherwise than that the medical officers of both institutions are the same, and the medical officers of the infirmary are empowered to admit any patients they may find ill of fever into the House of Recovery; and it sometimes happens that patients are transferred by them from the general hospital, when found to be affected with fever, into the House of Recovery.

It is stated in the reports that the average annual expense of parish coffins was considerably diminished since the establishment of the Fever Institution at Manchester?—It does appear in the reports of the Board of Health, which I have in my hand, that "the benefits of the House of Recovery at Manchester have been felt even in the common yearly expenses of the town, which, in the article of coffins alone, it has reduced on an average, from £.157. 8s. 3d. to £.105. 19s. 6d. while it has at the same time annually lessened the number of home patients of the infirmary, in the proportion of 1,697 to 2,880."—*Proceedings of the Board of Health in Manchester*, page 210.



*James Laird, M. D. called in; and Examined.*

ARE you one of the physicians to one of the dispensaries in London?—I have been physician to the Carey-street or Public Dispensary for more than eleven years; I am also the assistant physician to Guy's Hospital.

*J. Laird,  
M. D.*

What are the objects of the dispensary?—To give advice and medicines to such persons as are able to attend at the Dispensary; advice both medical and surgical; and to visit at their own houses the poor who are prevented by sickness from attending at the Dispensary.

Are the expenses of that establishment supported by voluntary contribution?—Entirely; the funds consisting in annual subscriptions, and in the donations, and legacies of governors, and other benevolent people.

It being a part of your duty to visit the habitations of the poor, have you found them afflicted with contagious fever?—At different times, during the eleven years; but more especially during the last twelve months.

Can you furnish the Committee with an account of the number of cases that have come within your knowledge for the last twelve months, and for preceding years?—There is another physician besides myself attached to the Dispensary. All the different cases which occur are entered in a book which is kept for that purpose; I have looked over that book, and I find an increase of patients for fever in the following ratio: In 1815, 84 were admitted; but in many of those cases we could not trace contagion, they were generally mild. In 1816, there were 76 cases of continued fever, which were also for the most part of a mild character; in some cases, a contagious character certainly did appear. In 1817, there have been 147 cases of fever at the Dispensary, the greater number of these have been from the month of June to the close of the year. And in 1818, to the 27th of April, we have admitted 59 cases of continued fever.

You mean by admitted, that you put them upon the books and attend them at their respective houses?—Yes.

In those last twelve months, has the disease partaken more of a contagious character than in the preceding years?—In the greater number of the cases the fever has shown a contagious quality.

Has it partaken in any degree of a malignant character?—The most severe cases have been generally removed to the House of Recovery, it having been our object whenever a fever manifested itself in our district to send the patients to the House of Recovery, when consent was given.

Have you found any prejudice necessary to be removed from the minds of the poor, before you can get them to consent to go to the House of Recovery?—Not to the House of Recovery more than to any other public establishment.

You mean that there is always a prejudice to be removed from their minds?—Not always: they are in many instances very thankful to be removed there.

From your observations, are you satisfied that the establishment of that House of Recovery has contributed to check the spreading of contagious fever?—I believe it has very much contributed. When we have been able to remove patients into the House of Recovery, there has been a better opportunity for the ventilation of the apartments of the sick, and other proceedings necessary for the checking of contagious disease.

Within the district of your Dispensary, are there not many parts of it in which contagious fever almost always exists?—There have been many months in which the number of applicants to the Dispensary under continued fever has been very limited: thus, in the month of February 1817, it appears from the physician's book of entry, that only one case of continued fever occurred out of 290 applicants; while in the month of September 1817, there were 28 cases of continued fever out of 218 patients.

Should you think that the fever is now on the decline, and less virulent, than in the autumn of last year?—General experience is in favour of the diminution of fever in winter, and of its being most prevalent in autumn; which appears by the following statement:



J. Laird,  
M. D.

				Number of Cases.		
				1817:	1816:	1815:
July	-	-	-	17	9	13
August	-	-	-	15	11	13
September	-	-	-	28	7	11
October	-	-	-	25	5	13
				85	32	50
May	-	-	-	5	10	9
June	-	-	-	11	7	6
November	-	-	-	19	6	5
December	-	-	-	12	3	2
				47	26	22
January	-	-	-	9	4	5
February	-	-	-	1	3	2
March	-	-	-	3	4	2
April	-	-	-	2	7	3
				15	18	12

Should you apprehend that the fever, which is now following the ordinary course, and seems to be abating, would revive with much vigour in the autumn?—It is probable, from previous experience, that this may be the case; but I conceive that no definite opinion can be given upon that point.

Is it not commonly found, that a contagious fever having once broken out, lingers some years to the spots where it first originated, and is constantly in a state of revival?—There are many instances where fevers appear to prevail in particular districts of large towns, for a considerable period of time. I would beg to add, with respect to the probability of fever arising next autumn, that we have, even during the present month, sent several cases from our district to the House of Recovery; and, in reference to that institution, to state a memorandum made by the committee for the management of the public Dispensary, and printed in their annual reports, which is as follows:

“ The committee remark, with peculiar satisfaction, that contagious fevers, formerly very prevalent at all seasons, have nearly ceased to exist within the precincts of this institution. This circumstance is probably to be attributed, in a great degree, to the measures adopted by the Fever Institution in Pancras Road, originally recommended by this charity; by which many of the sources and receptacles of contagion have been purified.” This was published previously to the present epidemic.

Do you consider that the practice adopted by the Fever Institution, not only the moving of patients from their families, and thereby diminishing the spreading of the contagion, but by whitewashing and purifying the apartments, has contributed most essentially to that great object?—I certainly think whitewashing, and other means, are likely to check contagious fever; and those measures cannot be taken until the sick poor are removed from their apartments. I have seen, during the present epidemic, in one court, Castle Court, Fullwood's Rents, in Holborn, three patients in one apartment, lying in three separate beds, sick of continued fever, and that fever, to the best of my belief, of a contagious character. At a subsequent visit to the same room, I saw four patients; the two elder ones, those who had been formerly ill, were now the subject of relapse of fever; and two new cases had occurred in the same family. I urged again the necessity of removal to the House of Recovery, my former recommendation not having been attended to, in consequence of the wife being desirous that her husband, who was apparently near dying, should not be removed



moved from home: I believe that these four poor persons were then immediately removed to the House of Recovery. With respect to the number of cases which have occurred, I beg to deliver in to the Committee the following statement:

*J. Laird,  
M. D.*

	1815.	1816.	1817.	1818.
January - - - -	5	4	9	19
February - - - -	2	3	1	10
March - - - -	2	4	3	19
April - - - -	3	7	2	11 { April 27
May - - - -	9	10	5	
June - - - -	6	7	11	<u>59</u>
July - - - -	13	9	17	
August - - - -	13	11	15	
September - - -	11	7	28	
October - - - -	13	5	25	
November - - -	5	6	19	
December - - -	2	3	12	
	84	76	147	

Few of these cases were decidedly of a contagious character.

Many of these cases occurred in succession in the same family, and were of a highly contagious nature.

This statement further shows, that in the winter months of this year, the contagion has been greater than upon other occasions in the metropolis, that is, in our district; which extends from St. Paul's in the east, to St. Martin's-lane westward, and from the river, our southern boundary, to Great Russell-street and Guildford-street to the north.

What is the number of patients that the charity has relieved within the last few years?—The number has varied, as is shown in our last published report.

State of the Charity, 1st January 1817.

Total number of patients admitted from 1783 (the date of its institution) 80,172. Of these, 20,805 have been visited at their own houses.

The applications for relief have for some time past increased every year, as will appear from the following statement.

In 1811	-	-	-	-	2,904.
In 1812	-	-	-	-	3,008.
In 1813	-	-	-	-	3,337.
In 1814	-	-	-	-	3,400.
In 1815	-	-	-	-	3,424.
In 1816	-	-	-	-	3,571.

From what you have professionally seen and heard, setting aside the epidemic, are the cases of fever greatly diminished from the metropolis?—Previously to the present epidemic, the fever occurred in isolated parts of the district, and did not



*J. Laird,  
M. D.*

appear to spread to any extent; for the last year many persons have been taken ill of the fever in succession, in the same apartment, and in various parts of our district.

Should you not think, that generally speaking, whether arising from the establishment of this institution, or from a better system of ventilating the apartments, or from more cleanly habits being introduced, or from a different species of clothing being worn, woollens being less used, and other causes which might be specified, contagious fever is not known to the same extent in the metropolis, as it was known twenty years ago?—My experience in the metropolis does not extend much beyond the last twelve years, beginning after the close of a considerable epidemic, and extending to the present. During the interval, fever has not been common in the metropolis: but the causes which regulate epidemics are not known with certainty.

Do you know whether the epidemics of which you speak, were the consequence of scarcity of provisions, which had been before?—It has been referred to, as one of the principal causes of the epidemic occurring in the year 1801 and 1802, after the scarce year of 1799 and 1800. It will be remembered, that in 1799 there was a very wet summer, and the harvest was bad.

As a doctor of medicine, is it your opinion that an epidemic may be expected, as the almost certain consequence of scarcity and dearness of provision, lasting the common time that such scarcities have been observed to last, when arising from deficient produce in a bad season?—It has, I believe, generally happened that contagious fever has followed years of scarcity, and amongst the patients labouring under contagious fever last year, many were under circumstances of peculiar distress.

That is the result of your own observation?—Yes, of my own observation.

Is it your opinion that sufficiency of bad provisions is more likely to be the cause of contagious fever, than a deficiency of good, to those who live upon them?—I should conceive that a sufficiency of damaged food, or a deficiency of good food, would both be attended with a deficient supply of nourishment, and that both might act as causes of fever.

The one more than the other?—I cannot speak from any direct observation.

*George Gilbert Currey, M. D. called in; and Examined.*

*G. G. Currey,  
M. D.*

ARE you physician to St. Thomas's Hospital?—Yes.

Can you furnish the Committee with an account of the number of contagious fever that you have had in your hospital for the last twelve months, and for the two preceding years?—I cannot at this moment, because I only received the notice to attend here last night, and it has not been in my power to make out such a list.

Has the number, according to your recollection, considerably increased within the last twelve months?—Considerably more.

How many patients is your hospital calculated to hold?—It holds about four hundred and fifty, I should think, now; there has been some addition made lately; it will hold about four hundred and fifty.

What are your days of admission for patients?—Every Thursday morning.

Do you admit fever cases at any time when they are presented at your doors, or only on Thursdays?—They are admitted, if they come with any thing like a recommendation, on other days; but it is optional with the treasurer, or steward in his absence, to receive them.

Is it an hospital which is open to every one who comes to the doors, or is it necessary to have a recommendation from one of the subscribers?—It is not necessary, if the cases are considered proper by the physician; whether the order has a signature or not, is not material.

In point of fact, have you refused, either from want of room or other causes, any fever patients within the last twelve months?—Certainly not.

When they are received in the hospital, where are they put?—Generally, throughout the hospital, in different wards.

Have you no fever wards attached to the hospital?—None.

Has it ever happened that the disease has either been given to the nurses in the hospital, or to the medical attendants, or to patients, who were in there for other diseases?



diseases?—Never, to any of the medical attendants; occasionally it has spread to the nurses, but very rarely; occasionally it has appeared to be communicated to another patient, but it is very rare.

Is it your opinion that when patients, having diseases of different character and description, are mixed all together, that you have it in your power to adopt such a system of ventilation as is necessary to prevent the contagion of fever, without injuring the other patients that are in the hospital previous?—Perhaps not quite; I should think the ventilation necessary; for some patients might, in some instances, be prejudicial to other patients; for instance, to chronic complaints I should think it would.

Should you think that it would be advisable, if it were possible, to send all fever cases to a hospital similar to that known by the name of the House of Recovery, where fevers are treated solely, than to treat them as at present, when they are mingled with other patients throughout the hospital?—I am not acquainted with the House of Recovery; but I should strongly object for all the patients that we receive, to place the whole of them in one or two wards, because I should think the medical and other attendants more liable to infection than now.

Should you say, that if those wards were fitted up to receive fever cases, and managed by a police peculiarly adapted to fever cases, that would occur?—No doubt the objection would be greatly removed by that regulation.

Should you not think that the danger would be almost entirely diminished?—Experience has been adverse to that: where fevers have been placed in a particular part of the hospital, experience has certainly been against the practice; the disease spreading more than it does now.

According to your knowledge, do you think that the arrangement provided for fever patients is such as is calculated to prevent the spreading of contagion?—Yes, I believe so; that precaution is used which is usually esteemed necessary.

Are you aware that the experiment has been tried to a very considerable extent in Manchester?—No, I am not.

Have you lost in your hospital any nurses or sisters?—This winter we have.

From the disease generated in the hospital?—One sister, from fever in her ward, early in the winter; she died: the disease did not spread, but since Christmas one other sister, who attended upon her, caught it from her decidedly.

Did those sisters die?—Yes, both of them.

Was that the extent of the number?—There were four others, a sister and three other nurses, who appeared to catch it from them, who recovered.

When patients come to you with a fever upon them, do you know how they are brought, by coach or sedan chair, or by what conveyance?—No, I do not.

You do not inquire what way they come; you find them there, and treat them according to their disease?—We do not inquire about it.

Is this epidemic in a state of diminution?—On the decline, as far as I can judge from the number of patients that we have had in the hospital; it has not been of a more malignant character than a low fever generally is.

Has your mortality been greater this year than the preceding year?—I think it has been more.

Do you think more in the ratio of the admittances than in a preceding year?—Agreeable to the preceding answer, I should say yes, because our hospital is always full; therefore the annual number will always turn out nearly the same, for there are numbers every Thursday sent away.

Have you ever been obliged to send away patients with those contagious fevers upon them?—No, we select them in preference to any others; we have the liberty of marking them, and they are always received; we (the physicians) give such a mark, and they are always received.

When a fever patient arrives, what is done with him?—He is carried to a bed in a ward.

What becomes of his clothes?—I do not know.

You do not know whether they bake them, or fumigate them?—I do not know, that rests with the other branches of the establishment.

If an individual is in great poverty, does the hospital furnish them with clothes?—Yes, sometimes; the Lord Mayor's patients are sometimes clothed, but not always.

Have you any institution of the nature of the Samaritan Institution, attached to the London Hospital?—No.

You have stated, that the mortality was greater; do you mean by that, the proportion



G. G. Currey,  
M. D.

portion of deaths to the number of admissions is greater?—The number received into the hospital during the year, is nearly the same; it does not vary much; consequently the mortality being greater, it follows, that the deaths must bear a greater proportion to the whole.

You have told the Committee, that the mortality has been very heavy this year; has that mortality been greater this year than the ordinary mortality in the number of fever cases that have been admitted into the hospital?—I cannot speak to that, if you confine it to fever cases: the report which I shall have the honour to present, will explain it.

Can you state to the Committee, from what neighbourhood the principal fever cases have come to your hospital?—A great many from St. George's parish, which is a parish in the borough; we have them from the poor-house. I thought the disorder was kept up in the poor-house, but they tell me that they were patients just taken in there, and then sent to us; a great many came to us from that place.

[The following Report was delivered in, and read:]

“ Half-moon-street, May 3d, 1818.

Dr. George Gilbert Currey has the honour of laying before the Committee of the House of Commons, a statement of such persons as have laboured under continued fever in St. Thomas's Hospital, as far as his information extends; and he has divided his report into two periods.

First, from the 4th September 1816, when he was elected physician to the hospital, to October 1817. And with regard to the above, it is necessary to explain, that on the 18th September 1817, Dr. G. G. Currey lost one of his colleagues, Dr. Wells, by death; and the other, Dr. Lister, on the following day, by resignation. Being unable to state the cases of patients who had been under their respective care, this period includes only Dr. G. G. Currey's own cases.

Second period, is from October 1817 to the 30th of April 1818, and includes the whole number of fever cases which have been under the care of Dr. G. G. Currey, and his present colleagues, Drs. Williams and Scott.

Statement 1st.

Number of Patients labouring under continued fever,	} 11, all recovered.
under Dr. G. G. Currey's care, from September 4,	
1816, to October 1817 - - - - -	

N. B. The whole number of Patients during this period was - - 363.

Statement 2d.

Ditto - - under the care of Doctors G. G. Currey,	} 126.
Williams and Scott, from October 1817 to April	
1818 - - - - -	

P. S. The Total of Patients - - - 641.

Of these 19 died.

Dr. G. G. Currey begs further to state, that he attended St. Thomas's Hospital, as a pupil, for some years, and was afterwards assistant physician to the hospital during 14 years; and although his duty in the above situation was confined to prescribing for such out-patients as could attend at the hospital, yet he can, from his own knowledge, state, that for ten or twelve years previous to 1816 the average number of fever cases were much below what they had been formerly; which remark applies, he believes, to all institutions of a similar nature.

The Committee will observe that the deaths bear a large proportion to the whole number; this is to be accounted for from the frequently advanced stage of the disease, and the wretched state of the patients admitted; many of them sent to the hospital even from the streets, having undergone every kind of privation, and often dying within thirty-six or forty-eight hours of their admission.

[The following Statement was delivered in, and read:]



## HOUSE of RECOVERY, opened in 1802 :

	1802 to 1803.	1804.	1805.	1806.	1807.	1808.	1809.	1810.	1811.	1812.	1813.	1814.	1815.	1816.	1817.	1818.
Admitted - -	164	176	80	66	93	63	69	29	52	43	61	85	59	80	118	760
Discharged, } cured - -	142	167	71	57	80	55	60	21	43	36	50	73	47	68	99	695
Died - - -	13	17	7	6	14	5	11	8	8	6	11	13	7	14	10	62
Removed by } relations -	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dismissed as } improper -	-	-	1	1	-	1	-	-	-	-	-	-	-	1	-	1
Died, not of } fever - -	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-

*Lunæ, 4<sup>te</sup> die Maii 1818.*

The Honourable HENRY GREY BENNET, in the Chair.

*Edward Roberts, M. D. called in; and Examined.*

ARE you one of the physicians to St. Bartholomew's Hospital?—I am.

What number of patients does that hospital hold?—I think about 360 or 370; the hospital at present being under repair.

When it shall be repaired, how many beds shall you be able to make up?—That is uncertain; it will depend upon the funds; I cannot speak to it; it is not in my department to know any thing about it.

From whence arises the funds to that hospital; is it supported by private contributions or legacies?—It is supported from legacies and estates.

Is it an hospital that requires a certificate to obtain admission?—Generally it is so, but not universally; in the case of fever, the subject of the present inquiry, the rule of the hospital is to receive at any time. Fever cases are received as accidents, beds being preserved for casualties; and the case of fever is considered in that light; we consider them as accidents.

Are you often compelled, for want of room, to refuse patients?—Yes, particularly of late, since our hospital has been under repair.

Do you think, when the repairs are completed, that necessity, namely, of refusing patients, will be done away with?—I suppose not altogether; it is extremely uncertain; one week we may have a great many patients desiring admission, and another week, perhaps, we may be able to receive them all; but it is seldom that we take the whole, particularly of late.

Have you had many cases of fever within the last twelve months?—Yes, there have been a great many.

Have you an account of the number of cases which have been admitted into that hospital during that period?—No, I have no account of them; in truth, we do not keep a register of distinct cases of disease.

Was the number, according to your recollection, much greater within the last twelve months, than the average of any given number of years preceding?—Yes; I have had a greater number of patients than usual; and I understand my colleagues also have had more than usual.

When fever patients arrive at the hospital, have you a separate ward, or do you intermix them with other patients?—No; we have not a separate ward, they are intermixed with the other patients.

*E. Roberts,  
M. D.*



E. Roberts,  
M. D.

Have you instances of patients confined with other complaints, or nurses or medical attendants having caught the fever, which has been generated in the hospital?—I do not know that I could charge my memory with any instance; I never knew an instance of the disease having been communicated, generally speaking.

Are chronic cases mixed with the fever cases?—Yes, all the patients are indiscriminately mixed; they are placed where the beds are vacant; but we generally reserve the ground-floor for accidents, as being more convenient.

When this wing is repaired, and all the wards filled, how many patients do you think the hospital will hold?—About five or six hundred, certainly.

You have an immense fund?—No doubt; but our expenses are very great.

When a fever patient arrives at the hospital, what do you do with his clothes?—There is no particular attention paid to them.

Are they baked?—No; he is treated in the same manner as another patient.

Do you think that the collecting together, in an institution like the House of Recovery, of all the fever patients in the metropolis, would be better for their recovery, as well as for the prevention of the generation of the complaint, within any hospital in which they may mix with other patients?—Speaking not merely as my personal opinion, which may not be so satisfactory to the Committee, but also as that of the medical officers, I would beg to state that the question has been occasionally agitated amongst us, whether the fever patients should not be separated from the rest, and whether we should have fever wards; we have all been of opinion that this would not be so good a practice as now prevails, because we have not perceived that the fever has been communicated.

Are you not aware that recently, in consequence of fever patients being so introduced into some of the hospitals, there has been thereby a fever generated that has been not only fatal to nurses but also to medical attendants?—I cannot speak to that; I do not know any thing of it; there has been one argument used amongst us, that if fever be infectious, it is much more likely to be communicated, if congregated in large bodies.

Would there not be, supposing that the fever patients were assembled together, a plan of fumigating and ventilating the apartments, which is not consistent with other complaints, and which is necessary to prevent the spreading of fever?—I consider ventilation to be extremely useful; I have been instrumental in getting Bartholomew's Hospital ventilated as it now is; I took the subject up and was very earnest about it, and at length have got it adopted, by which means a current of air passes through the ward day and night.

Have you ever found that to be prejudicial to chronic cases?—I have regulated it according to the seasons; more in summer and less in winter: it is very spacious and lofty; the windows are very large.

Have you any account with you of the number of fevers which have been admitted into the hospital?—No, we do not keep a regular register of complaints, so as properly to distinguish them.

Is the number of fever patients so many now as during the last autumn?—Not in my department, at all.

Are they so in the hospital?—I believe not; I believe they are diminished.

You would say then, generally speaking, as far as your hospital is concerned, you consider the fever as declining?—I should think so, certainly.

Is it not probable that it will revive again in the autumn?—It is probable that there will be more cases in the autumn.

From your observation on the description of epidemics, do they not generally last longer than one year; the fever lessening in the spring, and as the summer approaches, and then returning again in the autumn, nearly with the same violence as it possessed originally?—There is a great deal of uncertainty about it; it is difficult to say: I have been physician to the hospital twenty-four years, and have never seen the complaint communicated from bed-side to bed-side, but it may have happened: I have seen people who have taken fever in a hospital, but it has been so rare an occurrence that I do not think I can recollect three instances.

Are you of opinion that fever is not generally communicated?—After what I have said, I should say, I think not, except under particular circumstances; otherwise, if we had a fever case brought in, we might expect that it would be communicated. We sometimes have patients brought in upon deal boards, and in some instances, even come in and die there in a very short time, in a state of the highest putridity: we should expect, if a patient of that description were put into a ward for forty-eight



hours, that ward would be affected; but I never have been able to trace fever from such a cause. I never saw such a thing happen.

Is it your opinion that typhus is not communicated?—I should say not, under particular circumstances; if there was free ventilation, I should suspect not.

Has the fever for the last twelve months been severe?—I think not, from my own observation; most of the patients have recovered.

Can you give the Committee any account of the proportion of deaths that you have had?—I have no mode of ascertaining that; the Committee are to understand that we have patients brought in under various circumstances; there are many who are sent there that die in a few hours.

*E. Roberts,  
M. D.*

*Thomas Young, M. D. called in; and Examined.*

ARE you physician to St. George's Hospital?—I am.

What number of patients does it hold?—I believe, about 220.

Is it an hospital which is supported by private contribution?—Entirely by private contribution, including legacies.

Is it necessary to have a certificate prior to admission?—A certificate of admission is necessary; it should be signed by a governor.

In case a patient were to knock at the door, suppose an accident or fever, would he be admitted?—In case of accident he would; in case of fever not, regularly.

What is the weekly receiving day?—Wednesday.

Are you often obliged to refuse patients for want of room?—Frequently.

When fever patients are admitted to the hospital, do you put them into a separate ward, or mix them with others?—We mix them with the others.

Have you found any inconvenience arising from that practice?—None, materially; there was a doubtful case last summer, supposed by some to have taken a fever from another patient in the hospital; but the two physicians who saw him were not decidedly of opinion that it was so; this was the only instance that came within my knowledge.

How long have you been physician to St. George's Hospital?—Seven or eight years.

And since that period you do not recollect any other instance in which that fever has been generated in the hospital?—No, I do not.

How many cases of fever had you in the last twelve months?—I believe from forty to fifty; I cannot speak positively.

Was it a greater average than in ordinary years?—It was much greater than the average of the ten or twelve last years; but I believe not greater than the average of fifty years.

Do you consider that favourable average of the last ten or twelve years has arisen from fevers having been much rarer in the metropolis than formerly?—Yes, I believe so.

What has been the extent of the mortality, in those cases, during the last year?—I believe one in ten.

Is not that in a less ratio than in ordinary seasons?—I should think it was; the fevers have not, generally speaking, been severe ones.

Can you furnish the Committee with a register of the number of fever cases you have had in the hospital?—No, I cannot.

Is there any register kept in the hospital, whereby a person may procure such an account for any given number of years?—There is none kept.

Have you no fever ward?—None.

Do you think it would be advisable so to extend the House of Recovery as to be able to adapt it to the number of fever cases arising in the metropolis, subjected, of course, to a police of its own?—I think that plan might have its inconveniences; there might be advantages and disadvantages attending it.

What should you consider as its peculiar disadvantages?—I should think it probable, that the disease being more concentrated, it would be more easily communicated to the nurses and physicians, and to pupils.

Are you aware at all of the great result of that great experiment which has occurred at Manchester?—I am not: with respect to the present state of fever, I would beg to observe, I have two severe cases; there are rather more cases than we had last month.

*T. Young,  
M. D.*



*T. Young,  
M. D.*

Has the same number of patients been admitted into the hospital within the last month as usual?—Yes, rather a greater number; on the last admission day I had two cases of fever; on the preceding admission day I had none.

Then from the state of your hospital you would not think fever much on its decline?—No, not much on its decline; it declined in the course of the last two or three months, and has increased again.

In general, do not these fevers exist in the autumn of the year with greater violence than in the spring or summer?—In general.

Then may we not be prepared for an increase of the fever in autumn?—As far as the facts authorize us to judge, we may expect it.

*G. L. Tuthill, M. D.* called in; and Examined.

*G. L. Tuthill,  
M. D.*

YOU are physician to the Westminster Hospital?—I am.

What number of patients does it hold?—There are 85 beds.

Is it an hospital which may be considered as a free hospital?—Certainly.

So that any body who is ill, knocking at the doors, would be taken in, even without a certificate?—If it was an accident, otherwise it requires a recommendation of a governor.

Is it supported by voluntary contributions?—Yes, it is supported by voluntary contributions.

Is a case of fever considered as an accident?—I never knew an instance of fever being refused, though it did not happen to come on a regular day.

What is your regular day of admission?—Wednesday.

Do you generally have a greater number of patients applying for admission than you have beds?—Almost always.

Have you had a greater number of cases of fever last year than usual?—We have had more than usual.

Can you furnish the Committee with an account of the number?—From Lady-day 1817 to Lady-day 1818, there have been 38 cases of fever admitted into the hospital.

Is that a much greater number than an ordinary average?—It is greater. I can furnish the Committee with the numbers for the last four years, which were taken from the books of the hospital; from Lady-day 1814 to Lady-day 1815, there were 24 fever cases in the hospital; from Lady-day 1815 to Lady-day 1816, there were 26 cases; from Lady-day 1816 to Lady-day 1817, there were 15 cases of fever; therefore the number 38 is considerably greater than an ordinary number.

Is the number of the first two years what you would take as an ordinary average?—I think the ordinary average would be 25 in a year.

Out of that number can you state to the Committee what has been the ordinary mortality?—I think it has generally happened in ordinary years that one in ten have died; but this year, in which the number has been greater, the mortality has been less, amounting to about two, in the hospital, out of thirty-eight.

When you have a fever patient admitted to the Hospital, where do you place him; have you a fever ward?—We have not.

You mix them with the other patients?—We do.

Have you ever found any inconvenience to have arisen from that?—Never, that has come within my knowledge; no fever has been generated.

Of course your hospital is well ventilated?—We endeavour to do it as well as we can; but it is a badly constructed hospital, the wards are small.

Would it not relieve you considerably, if all the fever cases which now are taken to your hospital were removed and concentrated together in one establishment?—I do not think that would be the case at all; with respect to numbers it would be a relief; but I do not feel any inconvenience in the present practice.

Do you think, that supposing the fever establishment was regulated after the manner suited to the disease, that any danger would arise from congregating in one mass many patients attacked with fever?—I do not foresee that it would.

*Henry Herbert Southey, M. D.* called in; and Examined.

*H. H. Southey,  
M. D.*

ARE you physician to the Middlesex Hospital?—I am.

How many patients does it contain?—It generally contains from 160 to 170.

Is that the number of beds you can make up?—Yes.



Is it an hospital supported by voluntary contributions?—Entirely so.

Is it one of free admission, or is it necessary to have a certificate?—Accidents are admitted without any recommendation; but a recommendation is required with other cases.

Are fevers treated as accidents?—They are admitted all days in the week with letters of recommendation; I believe, in no instance are they sent away.

The Committee understand you to say, that in no case they are sent away, but that the rule of the hospital is, not to admit fever cases without a letter of recommendation?—Exactly so.

Have you had a great number of fever cases last year?—A greater number than usual.

Can you furnish the Committee with an account of the number?—120 in the whole of the year of 1817.

Is that a greater average than in ordinary years?—Much greater.

What was the average of the three preceding years?—About sixty.

What has been the mortality during the last year?—Less than usual; somewhat less than one in sixteen during the last six months, and taking the whole year, one in thirteen.

Have you a fever ward?—We have no fever ward.

Fever patients then are mixed with the others?—They are.

Have you ever found any inconvenience arisen from that?—Never.

You never have had any fever generated in the hospital?—Not since I have been connected with it; nor before, as I am informed.

Do you think, then, that there is any insecurity in mixing fevers up with diseases of another nature?—I must apprehend the danger to be little, where free ventilation and cleanliness prevail. My own experience would lead me to conclude that the danger was trifling.

Did you ever visit the House of Recovery?—No.

Do you think that it would be attended with any danger, to concentrate together the fever cases of the metropolis into one establishment, thereby relieving the hospital from the burthen of the different cases which arise?—I should think it would be attended with some little additional danger to the medical men and nurses.

Of course it would be a relief to your hospital, in point of numbers?—We have still spare wards, so that we do not want any relief to our number.

Are you ever obliged to refuse cases for want of room?—Not for want of room, but on account of our funds not allowing us to open all our wards.

The Committee understand you to say, that you have wards, but fail in funds to open them for the purpose of setting up more beds; in consequence of which, you are obliged to refuse admission to patients?—Yes, we generally have to refuse patients every receiving day.

*Henry Clutterbuck, M. D. called in; and Examined.*

HAVE you had more fevers than usual, during the last twelvemonth, in your institution?—The number of fevers during the last year, in the General Dispensary, of which I am one of the physicians, has been much greater than for at least ten years preceding; and has probably exceeded the whole number that have occurred during that period.

What do you consider as the mean number of fevers in your institution, in common years?—Formerly, as I have learned from my predecessors in office, fevers made a large proportion of the cases in the General Dispensary; but for the last ten or twelve years in which I have been connected with the institution, they have been remarkably few and mild, and on that account have not been very accurately registered. As far as I can judge, however, from my own registry of cases, I do not think the mean number in those years (with the exception of the last) of fevers, of that degree of severity which has been lately called typhus, can have exceeded ten or twelve.

What has been the number during the last twelve months?—No general register of cases being kept in the dispensary, I am unable to give a precise answer to this question; but, from my own notes, I may venture to state, that there have been at least 200 cases of fever admitted to the institution during the last year.

What degree of severity?—By much the greater number have been mild, and without danger. Some, however, have been severe, and a very few fatal. The number of fatal cases, I have reason to believe, has not exceeded three or four. It is proper to

*H. H. Southey,  
M. D.*

*H. Clutterbuck,  
M. D.*



*H. Clutterbuck,  
M. D.*

add, that some of the cases admitted into the Dispensary were afterwards removed to the *Fever Institution*, and may have died there.

Is it not part of your duty, as physician to the General Dispensary, Aldersgate-street, to visit the poor at their own houses?—It is.

In most of the cases of fever that you have visited, did you propose to the poorer class of people a removal to the *Fever Institution*?—No; we found that the *Fever Institution* was full at the early period of the year.

If the *Fever Institution* had been large enough to have contained the cases of fever that were in daily occurrence, should you not have thought it better to have removed the patients out of their own houses to that institution?—Not under very favourable circumstances; but in many instances where the poor were ill provided with comforts and ventilation, and means of sustentation, I should have thought that advisable.

Were many of the poorer classes which you visited lodging and living in crowded alleys?—Yes; many of them in a very unfavourable situation.

Is it not your opinion that the contagion, in consequence, must have been much greater?—Undoubtedly.

Did any cases ever come to your knowledge, in which whole families were taken ill of the fever?—Yes, I think I may say so.

Then, if the first patient had been removed, the others probably would not have taken the disease?—I think not, if removed early.

Generally speaking, is there not always a degree of typhus fever prevailing in that part of the metropolis with which you are acquainted?—I think, for months together we have had no case of fever in the dispensary, and that, frequently, during the last ten years.

Recently the disease has assumed a very formidable aspect in point of number?—Yes.

Do you think the House of Recovery large enough, in its present establishment, to hold the ordinary average cases of fever that occur in the metropolis?—I should conceive it is large enough to receive all the cases which occurred during the last ten years; but not at all equal to the last year.

Of course the contagion must have been very much spread by the continuance of persons in their own houses?—Undoubtedly.

Were any of those patients whom you attended proposed for admission into the other hospitals of London who take in fever cases?—We always consider that there is an objection on the part of the other hospitals to receive fever cases; but I do not think any were sent from the dispensary.

Generally, is it a feeling among the medical persons attending the dispensary, that fever cases are objected to by the hospitals, that they ought not to receive them?—Generally, I think it is so.

So that you preferred keeping them in their families to sending them to places where probably there was not room?—Certainly.

*John Yelloly, M. D.* again called in, and delivered the following Report, which was read.

#### REPORT on the state of Whitechapel Workhouse.

*J. Yelloly,  
M. D.*

WE, the undersigned, having, on the 14th of October instant, minutely inspected the various parts of the Whitechapel workhouse, in company with Mr. Curtis, the surgeon to that establishment, for the purpose of examining into the state of the same, and giving our opinion as to the best mode by which the occurrence of fever is to be prevented; have the honour to make the following Report:—

1. That cases of fever have occurred, to a greater or less extent, in every ward of the house, particularly in the basement wards, for a very long time past; and more especially since last February.

2. That many of the cases were of persons recently admitted into the house from various parts of the parish; a few consisted of such as came in with fever actually upon them; and a considerable number of such as had been long resident in the house.

3. That almost all the children in the house have, at one time or other, been affected with fever; that few of the nurses have escaped the disease, and that some of the adults, but many of the children, have been attacked with it, two, three, or even more times.



*J. Yelloly  
M. D.*

(Report on the  
State of White-  
chapel Workhouse.)

4. That the wards, with the exception of those on the basement floor, are in general large, lofty, and light; that fumigation with acid vapours are, to a certain extent, employed in them; but that they are all, with one unimportant exception in Sam's ward, without permanent or adequate ventilation; and those on the basement floor are low, ill-ventilated, and damp, as are some of the workshops, particularly that of the boys.

5. That the beds are in general too thickly placed, and the wards too much crowded.

6. That there are no waterclosets, though there are places reserved for them in most of the floors; and but one common privy in the whole house for the men, and one for the women; that the wards are only partially white or limewashed, and some of them have not been done so for several years; that the beds are of feathers or flock, and the bedsteads for the most part of wood.

7. That fever patients are removed to peculiar wards as soon as they are seized with the complaint, and are sent to an intermediate or convalescent ward for some time previously to their return into the house at large; but that there is the same want of ventilation in those wards as the others, and that there is a very sufficient quantity of accommodation for persons attacked with fever, as well as for the sick in general.

WE have thought it necessary to bring these statements to the view of the trustees, as the result, not only of our own observation relative to the present state of the house, but of the information which we obtained from Mr. Curtis, and the other officers of the establishment who accompanied us in our inspection; and we now beg to give our opinion as to the arrangements which seem to us necessary for carrying into effect the object of our consultations.

1. The beds should be placed at a greater distance from each other; and never more than two persons, whether adults or children, should sleep in one bed, in health; nor more than one in fever or other illness.

2. The basement floor should be totally abandoned as a place of residence for any of the inmates.

3. The wards should, as much as possible, have thorough air admitted into them by windows in opposite aspects; and a permanent ventilation should be established in each, independent of the power of any individual to interrupt it. This may at once be done by an opening made over each door, and by ventilations in the windows; and may be still further effected by the construction of permanent ventilations.

4. A part of the workhouse should be set aside for an Infirmary, and not less than one ward for men, and one for women, should be appropriated to fever cases. Into these wards every case of fever should be admitted from any part of the house; but as it does not always happen that such cases are distinctly marked at their commencement, we should recommend that a small ward should be set aside for the reception of doubtful cases, till they exhibit unequivocal marks of their nature, when they can be either sent to the infirmary, or to the proper fever wards. Communication between this and the other parts of the house should, as much as possible, be prevented; and before the fever patients are returned to the house at large, they should be, for some time, as is at present the case, in an intermediate or convalescent ward.

5. A system of limewashing and fumigation, either with nitrous or oxymuriatic acid gas, should be in continual employment over every part of the house, whether it may have been oil-painted or not, till the tendency to fever has subsided, and then limewashing should be regularly repeated at intervals, not greater than six months. For the purpose of allowing this regular and successive process, one male, one female, and one infirmary ward should always be kept vacant, in order to admit the necessary removals.

6. The number of inmates should be reduced to the limits which the workhouse can contain, under the changes recommended above, by removing the extra number to some house to be taken for the express purpose of their accommodation. The removal may either take place of the healthy, giving the sick accommodation in the house; or the sick may themselves be removed to a proper house, giving up the workhouse wholly to the healthy.

7. The workshops should be separate from the body of the house, and should be airy and well ventilated. They, as well as the other wards of the house, should have



## 48 MINUTES OF EVIDENCE BEFORE SELECT COMMITTEE

J. Yelloly,  
M. D.

(Report on the  
State of White-  
chapel Workhouse.)

have fires in them in cold weather, as we believe, indeed, is now for the most part the case.

8. Waterclosets should be placed in some parts of the house; the bedsteads should, as much as possible, be made of iron, and the beds should be filled with straw instead of feathers or flock, and the straw frequently changed.

9. Persons on their admission into the house should be washed in a warm bath; their hair, when long and dirty, cut, and their clothes cleansed. Cleanliness should be steadily enforced both as to the persons and clothing of the inmates, and the bedsteads, bedding and furniture of the apartments, and the clothing of sick persons, and particularly fever patients, should be carefully cleaned, and well aired and fumigated.

10. It would likewise be highly important, in our opinion, for the Trustees to direct, that limewashing and fumigation should be employed for the purpose of purifying such apartments of poor persons in the parish as may have had fever in them; for in this way an important and growing source of febrile contagion will be cut off at a very moderate expense.

In concluding this Report, we beg to add, that the means hitherto so judiciously employed by the Surgeon for checking the progress of febrile disease, have proved ineffectual, principally from the want of ventilation, from the crowded state of the house, and from the constant demands upon it requiring the occupation of improper wards.

London, Oct. 22d, 1817.

Algernon Frampton, M. D.

Isaac Burton, M. D.

John Yelloly, M. D.

To the Trustees of the Workhouse of  
St. Mary Whitechapel.

Martis, 19<sup>o</sup> die Maii 1818.

The Honourable HENRY GREY BENNET, in the Chair.

Edward Holme, M. D. called in; and Examined.

Edward Holme,  
M. D.

ARE you physician to the Manchester House of Recovery?—Yes, I am, and have been since its establishment.

Have any of the nurses or medical people been attacked by contagious fevers, generated in the House of Recovery?—Certainly not.

When first that institution was established, was there a great prejudice existing in the minds of the people in the neighbourhood, that the infectious fevers would be continued by means of it?—Certainly.

Has that prejudice altogether ceased?—Entirely.

Can you furnish the Committee with an account of the number of cases of fever, from the time of its institution?—I can.

[The witness presented the same; and it was read, as follows:]

	Admitted.	Cured.	Dead.	Remain.
From 1796 to 1797 - -	371	324	40	7
— 1797 to 1798 - -	339	300	16	23
— 1798 to 1799 - -	398	360	27	11
— 1799 to 1800 - -	364	315	41	8
— 1800 to 1801 - -	747	645	63	39
— 1801 to 1802 - -	1,070	956	84	30
— 1802 to 1803 - -	601	539	53	9
— 1803 to 1804 - -	256	215	33	8

(continued.)



Edward Hohn,  
M. D.

(continued.)	Admitted.	Cured.	Dead.	Remain.
From 1804 to 1805 - -	184	144	34	6
— 1805 to 1806 - -	268	235	29	4
— 1806 to 1807 - -	311	258	33	20
— 1807 to 1808 - -	208	191	15	2
— 1808 to 1809 - -	260	223	21	16
— 1809 to 1810 - -	278	243	30	5
— 1810 to 1811 - -	172	153	15	4
— 1811 to 1812 - -	140	121	18	1
— 1812 to 1813 - -	126	109	13	4
— 1813 to 1814 - -	226	202	17	7
— 1814 to 1815 - -	379	337	29	13
— 1815 to 1816 - -	185	159	14	12
— 1816 to 1817 - -	172	158	6	8
			631	

From June 1817 to May 6, 1818, admitted - - - 387

Of these there died - - - 32

Discharged, cured - - - 314

Remain in the Hospital - - - 41

387

In the year from 1800 to 1801, there appear to have been 747 cases; from 1801 to 1802, 1,070; from 1802 to 1803, 601: can you give the Committee any reason why the increase should be so great in those three years?—I believe that an unusual scarcity of food prevailed at that time; that provisions were bad and high priced.

Is it your opinion that the fever, generally speaking, has been diminished in the neighbourhood of Manchester, since the establishment of the House of Recovery?—The effect of it in the first years of the establishment was certainly very remarkable, both in the decrease of the number of patients admitted into the infirmary, and the diminution of the poor's rates.

You state that benefit to have been produced to a great extent in the early establishment of the institution; has it continued so at present?—I believe it has; perhaps not in the same degree.

To what cause should you attribute the late alteration?—To a relaxation of the rules originally established.

In what way does that relaxation affect the objects of the establishment?—When the fever-wards were first established, a person was appointed to inspect the houses from which every individual patient was removed, to see that the clothes and bedding were duly purified; or in cases where that was impracticable, that they should be consumed and the value paid to the owners.

Has that practice ceased?—The practice was partially renewed during the prevalence of the late or present epidemic.

And of course has been attended with the same beneficial effects?—I think it has not been carried to that extent that I could speak to it: the epidemic has ceased so far that it is no longer formidable.





QUESTIONS submitted to *B. Davies, M. D.**B. Davies, M. D.*

HAVE you had more fevers than usual, during the last twelve months, in your institution?—I certainly have. In the course of eight years that I have been physician to the London Dispensary, I have never had, in one year, so many cases of fever in it as in the last twelve months. In the Surrey Dispensary, of which I am also physician, I have had a great many cases of fever during the last year. In the Universal Dispensary for Children, of which I am likewise physician, I have had a great many cases of fever in children during the last year, similar to the fever which I have met with in adults.

What do you consider as the mean number of fevers in your institution, in common years?—The mean number of fevers, of different descriptions, under my management in the London Dispensary, during a period of eight years, has been about one hundred annually.

What has been the number during the last twelve months?—In the last twelve months I have had upwards of one hundred and ninety cases of fever under my care, in the London Dispensary; one hundred and twenty cases in the Surrey Dispensary; and ninety-nine cases in the Universal Dispensary for Children.—(The greater part of these occurred between May and November.)

What degree of severity?—The fever I have seen has been a continued fever, of mixed character; not malignant putrid fever, or the worst kind of typhus; not inflammatory fever; but a fever of a typhoid nature, of considerable severity. About one in twenty-two died.

Do you think that any institution capable of receiving the cases of fever arising in crowded apartments, would be for the public benefit?—It is of great importance in the treatment of fever, to remove patients from crowded apartments; but I disapprove of the plan of putting together, in one ward, several patients ill of fever, as is the case in hospitals. I am of opinion, that an institution capable of receiving the cases of fever which arise in crowded apartments, would be beneficial to the public, provided the same could be constructed upon such a principle (and I have no doubt it might) as to preserve the patients separate, by appropriating to each a room having a door and window to it; and that such institution or house of recovery could be established out of town.—(Should it meet with the approbation of the Honourable Committee, I shall be happy to furnish a plan, explanatory of my ideas of the kind of building best suited to answer this purpose.)

QUESTIONS submitted to *Mr. William Lincoln.**Mr. W. Lincoln.*

1. HAVE you had more fevers than usual, during the last twelve months, under your care?

2. What do you consider as the mean number of fevers under your care, in common years?

3. What has been the number during the last twelve months?

4. What degree of severity?

5. Do you think that any institution capable of receiving the cases of fever arising in crowded apartments, would be for the public benefit?

As I am not aware that there has been any variation in the number of fever cases in my private practice, of late years, I mean the following answers to relate to parochial patients only.

1. I have had more cases of fever than usual under my care within the last twelve months.

2. In common years, the number of fever cases have been between 40 and 50.

3. During the last twelve months the cases of fever under my care may be estimated between 250 and 300.

4. They have been almost uniformly of a mild nature, being very rarely fatal when not exasperated by circumstances not naturally accompanying the fever; at the same time the disease has been extremely contagious.

5. The removal of persons afflicted with this fever into a fever hospital, has diminished, in some degree, the contagious effects; but they frequently relapse after their return to their own habitations.

*William Lincoln.*



## A P P E N D I X.

## — No. 1. —

## PROJÉT for the Enlargement of the HOUSE OF RECOVERY.

TO elevate the building, and make Wards over the whole of it ; by which means one half of the present number of patients can be accommodated, more than what the house now contains.

To make a Wing in the further end of the building, of similar height to the present building when raised, which will admit, I should imagine, one half of what the whole house, when raised, will contain.

Present building contains	-	-	-	-	70
When raised, one-half more	-	-	-	-	35
					<u>105</u>
Being added	-	-	-	-	53
					<u>158</u>

## ESTIMATE :—The Fever House of Recovery.

Proposed alteration, in raising the centre part of the building	}	£. 2,500.
an additional story, and converting the wings into rooms		
fit for the reception of 35 patients		

North Place, May 13, 1818.

## — No. 2. —

St. Giles's Workhouse, Broad-street, St. Giles,  
May 5, 1818.

Sir,

IN compliance with your wish, I beg leave to say, in answer to the

1st Query, That the number of Fevers under my care has been considerably more during the last twelve months than any former period.

2dly, About 150.

3dly, Nearly 600.

4thly, Principally *synochus*, or mild typhus.

5thly, Certainly so, within the last twelve months.

I have the honour to be,

Sir,

Your obedient humble servant,

J. Burgess, Apothecary.

To the Hon. H. G. Bennet, M. P.  
Chairman of the Committee to inquire into  
the state of Fevers in the Hospitals.



## — No. 3. —

CASES of Fever have been more frequent in the district of the Finsbury Dispensary, during the last twelve months, than for several years preceding.

The mean number of Fevers annually in the above Institution is 66.

The number, from the 1st May 1817 to 1st May 1818, was 168.

In general, the disease has been mild; occasionally, however, even in houses where the majority of cases were of the above character, it has shown symptoms of the utmost malignancy, and proved fatal. So far as I have had an opportunity of observing, when persons of a higher station in life have become affected, the disease has been generally more severe.

I think that an Institution, into which persons labouring under fever could be immediately, and at all times admitted, upon the certificate of a competent judge of the complaint, would be of public benefit. But if, on the plan of some Hospitals, an order from a Governor must be obtained, and admission delayed to the regular day of receiving patients, which is generally once a week, such an Institution I should consider of little utility, as contagion would continue to spread in families, whilst its source remained amongst them.

I am of opinion that the intercourse of the Medical Officers of Dispensaries with the poor at their habitations, has tended greatly to check the progress of contagious disease: the poor are warned of the danger, and taught the means of avoiding it. Fevers generally begin with a sense of chilliness, and are supposed to arise from exposure to cold; the sick is in consequence loaded with bed-clothes, the external air is by every method excluded, and the inmates at length breathe a pestilential atmosphere.

*H. Lidderdale,*

Senior Physician to the Finsbury Dispensary.

Falcon-square, May 8, 1818.

To the Hon. H. G. Bennet.



# R E P O R T

FROM THE

## SELECT COMMITTEE

Appointed to consider the validity of the doctrine  
of Contagion in the Plague.

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*Ordered, by The House of Commons, to be Printed,*  
14 June 1819.

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MINUTES OF EVIDENCE - - - - -	p. 5.
THE APPENDIX - - - - -	p. 98



## R E P O R T.

THE SELECT COMMITTEE appointed to consider the validity of the doctrine of Contagion in the Plague; and to report their Observations thereupon, together with the Minutes of the Evidence taken before them, to The House;—HAVE considered the matters to them referred, and have agreed upon the following REPORT:

YOUR Committee being appointed to consider the validity of the received Doctrines concerning the nature of Contagious and Infectious diseases, as distinguished from other Epidemics, have proceeded to examine a number of Medical Gentlemen, whose practical experience or general knowledge of the subject appeared to Your Committee most likely to furnish the means of acquiring the most satisfactory information. They have also had the evidence of a number of persons whose residence in infected countries, or whose commercial or official employments, enabled them to communicate information as to facts, and on the principle and efficacy of the Laws of Quarantine; all the opinions of the Medical men whom Your Committee have examined, with the exception of two, are in favour of the received doctrine, that the Plague is a disease communicable by contact only, and different in that respect from Epidemic fever; nor do Your Committee see any thing in the rest of the Evidence they have collected, which would induce them to dissent from that opinion. It appears from some of the Evidence, that the extension and virulence of the disorder is considerably modified by atmospheric influence; and a doubt has prevailed, whether under any circumstance, the disease could be received and propagated in the climate of Britain. No fact whatever has been stated to show, that any instance of the disorder has occurred, or that it has ever been known to have been brought into the Lazarettos for many years: But Your Committee do not think themselves warranted to infer from thence, that the disease cannot exist in England; because in the first place, a disease resembling in most respects the Plague, is well known to have prevailed here in many periods of our history, particularly in 1665-6; and further, it appears that in many places and in climates of various nature, the Plague has prevailed after intervals of very considerable duration.

Your



Your Committee would also observe, down to the year 1800, Regulations were adopted, which must have had the effect of preventing Goods infected with the Plague from being shipped directly for Britain; and they abstain from giving any opinion on the nature and application of the Quarantine regulations, as not falling within the scope of inquiry to which they have been directed; but they see no reason to question the validity of the principles on which such regulations appear to have been adopted.

14 June 1819.



## MINUTES OF EVIDENCE.



## WITNESSES.

Lunæ, 15<sup>o</sup> die Martij, 1819 :

<i>Charles M<sup>c</sup>Lean, M. D.</i>	-	-	-	-	-	-	-	p. 7
<i>Thomas Foster, M. D.</i>	-	-	-	-	-	-	-	15

Mercurij, 17<sup>o</sup> die Martij :

<i>Dr. James Johnson</i>	-	-	-	-	-	-	-	18
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Veneris, 19<sup>o</sup> die Martij :

<i>Dr. William Gladstone</i>	-	-	-	-	-	-	-	23
<i>Dr. Augustus Bozzi Granville</i>	-	-	-	-	-	-	-	29

Lunæ, 22<sup>o</sup> die Martij :

<i>John Green, Esq.</i>	-	-	-	-	-	-	-	33
<i>Dr. John M<sup>c</sup>Leod</i>	-	-	-	-	-	-	-	41

Jovis, 25<sup>o</sup> die Martij :

<i>John Green, Esq.</i>	-	-	-	-	-	-	-	43
<i>Sir Arthur Brooke Faulkner</i>	-	-	-	-	-	-	-	44

Veneris, 26<sup>o</sup> die Martij :

<i>Sir Arthur Brooke Faulkner</i>	-	-	-	-	-	-	-	53
<i>Dr. William Pym</i>	-	-	-	-	-	-	-	56
<i>Sir James M<sup>c</sup>Gregor</i>	-	-	-	-	-	-	-	59

Martis, 29<sup>o</sup> die Aprilis :

<i>Dr. James Curry</i>	-	-	-	-	-	-	-	62
<i>Dr. Robert Tainsh</i>	-	-	-	-	-	-	-	66
<i>Mr. Edward Hayes</i>	-	-	-	-	-	-	-	67
<i>Sir Robert Wilson, a Member</i>	-	-	-	-	-	-	-	69

Martis, 11<sup>o</sup> die Maij :

<i>Charles Dalston Nevvinson, M. D.</i>	-	-	-	-	-	-	-	72
<i>Richard Powell, M. D.</i>	-	-	-	-	-	-	-	73
<i>Algernon Frampton, M. D.</i>	-	-	-	-	-	-	-	74

Jovis, 13<sup>o</sup> die Maij :

<i>Edward Ash, M. D.</i>	-	-	-	-	-	-	-	75
<i>Peter Mere Latham, M. D.</i>	-	-	-	-	-	-	-	76
<i>James Frank, M. D.</i>	-	-	-	-	-	-	-	77
<i>Richard Harrison, M. D.</i>	-	-	-	-	-	-	-	80
<i>Mr. John Jenkins</i>	-	-	-	-	-	-	-	82

Martis, 18<sup>o</sup> die Maij :

<i>John Mitchell, M. D.</i>	-	-	-	-	-	-	-	83
<i>Charles M<sup>c</sup>Lean, M. D.</i>	-	-	-	-	-	-	-	95



## MINUTES OF EVIDENCE

*Lunæ, 15<sup>a</sup> die Martij, 1819.*

SIR JOHN JACKSON, BARONET,

In the Chair.

*Charles M'Lean, M.D. called in; and Examined.*

YOU have been in the practice of medicine for a good many years?—Yes; thirty years.

*Charles M'Lean,  
M. D.*

(15 March.)

Have you any knowledge of the Plague?—I have. In 1815, I employed myself in investigating that malady in the Greek Pest Hospital, near the Seven Towers at Constantinople. After administering remedies to the pestiferous patients of that hospital, and making observations on the disease for seventeen days, I found it expedient, being myself, as I had expected, seized with the malady, and the system of the pest house being incompatible with personal safety, to discontinue my researches. Upon my recovery, I proposed to resume them upon a plan that should better combine personal safety with a prospect of successful investigation: but the Porte did not think fit to accede to my propositions. The inferences supplied by my experiments were, however, sufficient to confirm, in respect to plague, those conclusions against the existence of contagion, which I had previously deduced, in respect to yellow fever, typhus and epidemic diseases generally. If it should be thought that this is but an inadequate experience, I would entreat of the Committee to recollect how little the value of experience may be commensurate with its duration; and that the result of experience in the application of false knowledge, is but dexterity in the practice of error; which is as much worse than mere inexperience, as false knowledge is worse than absolute ignorance. Since the establishment of the doctrine of contagion, I am not aware that any other physician now living has been experimentally in such intimate collision as myself, with what is called The Plague of the Levant; and if the result of my researches should ultimately prove adequate to dispel, in respect to the cause of that malady, the darkness of centuries, they will not be denied to be of unprecedented efficiency. Such of them as strictly relate to the object of the present inquiry, I have thrown into a summary, which I have had the honour of transmitting to the Chairman of the Committee, and to which I beg leave respectfully to refer them; taking the liberty to observe, that, in my opinion, it is only by a distinct consideration of the laws which distinguish epidemic and contagious diseases generally, that it is possible to determine, to which of these classes any particular malady belongs.

You consider the plague as not contagious?—Yes.

Explain how you caught the fever?—By the air. It was in August, the month in which the plague generally prevails most at Constantinople. I was a stranger to the climate, and otherwise under particular circumstances; the deprivation of food, insufficiency of nourishment, and also some degree of irritation of mind, under the idea that the people around me were endeavouring to frustrate my object; and all these might surely be sufficient to account for the occurrence of the disease during the pestilential season, without supposing contagion.

Do you use your words infectious and contagious synonymously?—In reference to what is known to be the general custom, I do so.

Have you ever seen an instance of a plague case imported into England, or heard of it?—Never; and after much inquiry I have reason to believe that it has never happened; as, if it had occurred, it would have been very likely to have been ostensibly recorded. I have reason to believe such an occurrence has never happened either during the existence of quarantine or before.



Charles McLean,  
M. D.

(15 March.)

Nor in any of the vessels that have arrived at the place of quarantine?—No. I was going to mention a circumstance of great inconvenience to a gentleman arriving some years ago in a vessel from the Levant, at Stangate Creek; he was ill of a disease not in the smallest degree suspected. I do not know the precise nature of it; he could get no medical attendance, because none of the neighbouring practitioners would put themselves in contact with him, and place themselves under the necessity of performing quarantine, and deprive themselves of the power of visiting their other patients. He was obliged to remain until the expiration of the quarantine performed by the ship, and a few days after the release from quarantine he died; and his death was attributed to his being obliged to remain in that situation without the comforts and necessities for a sick man, and without medical aid; his name I understand to have been Moncrief, and that he was the brother of Sir Henry Moncrief. No blame is attributable any where for this accident. It is the system alone which is to blame.

Do you consider the plague of 1665 to have been the Levant plague?—Most certainly not.

In the case you mention, of the arrival of Mr. Moncrief, it was absolutely acknowledged not to be a plague case?—I have stated it as I heard it mentioned by the merchants and the secretary of the Levant company; they told me that it was not a plague case, nor even suspected.

Explain what you mean by a contagious disease, as distinguished from an epidemic?—By a contagious disease I understand a disease capable of being communicated from person to person, by contact or contiguity.

Define an epidemic disease?—An epidemic disease I understand to be a disease produced by such causes as are capable of operating simultaneously upon any given portion, or the whole of a community.

What is your definition of an endemic disease?—It is a disease peculiar to a country.

May not epidemic diseases, under certain circumstances, become contagious?—Certainly not.

You say in your work, that your servant who visited the hospital with you was free from the plague?—My servant ran away the first day, whilst I was in the act of setting out to go to the hospital; I had an interpreter with me, who did not leave it, who administered the medicines to the patients.

You say likewise, that your servant was seized with horror when you were first taken ill?—He was obliged to do his duty by my orders, but still the fear of contagion evidently came back upon him frequently: in fact, it had such effect upon him that he was reading his Greek Testament aloud constantly, and going into the churches whenever he went out with me.

You also state, that the plague is capable of being cured in the portion of four cases out of five, by particular treatment?—That was my opinion.

After you were seized with the plague, you say this, "I was now in a situation completely embarrassing, seized with a malady in nine cases out of ten fatal?"—Allow me to observe, that there is no inconsistency there; I suppose scientific treatment in the one case, and no treatment or bad treatment in the other.

Did you operate upon yourself?—Yes, I did.

And produced a cure?—Yes.

One of your definitions of contagious diseases is, that they can only affect the same person once?—Yes, of contagious general diseases.

You allow the small-pox to be a contagious disease?—Yes.

Have you never heard of persons being affected with the small-pox more than once?—I have, but I never believed it, because I saw no proof that ought to satisfy a scientific inquirer, according to my opinion.

Then of course you do not suppose it can ever happen that the small-pox can affect the same person twice?—No, not as a general disease.

May not a contagious disease be at the same time an epidemic one, at particular seasons?—I conceive not; according to my definition they are incompatible.

You have been in Calcutta?—I have.

Do you recollect that there is a certain season of the year in which the small-pox generally breaks out with great violence?—I have heard so.

And that some months afterwards it ceases?—That I am not acquainted with.

You



You know it breaks out with great violence at particular seasons?—I am not much acquainted with the state of the small-pox in the East Indies.

Charles McLean,  
M. D.

(15 March.)

Can you define the plague as distinct from any other fever, by its symptoms?—As must necessarily happen of a disease produced by causes of such diffusive influence, and capable of being so variously modified, its phenomena embrace almost all the symptoms which the living body is capable of exhibiting. But few of these however can occur at once in the same person: and there are none, which can be considered pathognomonic. Most truly therefore, has this disease been called Proteiform. This inference, from the nature of things, is confirmed by facts and observations. "It is as various," says Fra Louigi di Pavia, who attended a plague hospital thirty years, "as the complexions and constitutions of those unfortunate persons whom it attacks;" and if he had not believed in contagion, but had been aware of the proper causes, he would have added, "and as the modifications, proportions and combinations of the causes operating." In general it begins like other forms of fever, with a cold, succeeded by a hot fit; and the fever for the most part, partakes of what have been called in the schools The Nervous (typhus) and the Putrid. The expression of the countenance, and the appearance of the eyes, and of the tongue, are the least variable of all the phenomena. "The surest symptoms of the plague," says Fra Louigi, "are the eyes dusky and turbid, fixed and sparkling; the tongue forked, of a whitish colour, inclining to yellow, with the extremity red, which branches out in a number of small ramifications exceedingly inflamed." In the pest house at Constantinople, I observed that the appearance of the countenance is peculiar. It more nearly resembles the desultory and wandering look, which takes place in the typhus of Batavia, and in the jungle fevers of other parts of the East Indies, than the fatuitous and fixed stare, which I have met with in the yellow fever of the west. The skin and muscles of the face exhibit a tremulous appearance, which, with a certain fierceness of the eyes, and sometimes an involuntary motion of one of the eyelids, as in winking, gives a peculiar expression of countenance; the whole constituting rather a ludicrous wildness of aspect, increased by the efforts of the patient, as if conscious of the insubordination of his features to preserve their composure. Fra Louigi remarks, that the eye of the side on which an eruption begins, becomes smaller than the other; and that in proportion as the eyes turn clearer, and the vision more perfect, the hopes of recovering are stronger. In the Pest hospital, I observed the appearance of the tongue to be very various; "sometimes blackish, sometimes brown, sometimes quite white, and now and then of a flesh red; always, in severe cases, dry and hard, and most commonly covered with a thick crust, generally corresponding with the colour of the organ for the time being. I have also seen it of a glossy grey, resembling the first formation of icicles upon water; and this state, *ceteris paribus*, appeared to promise the most favourable termination. My own tongue, notwithstanding that all the other symptoms of consequence were removed before the twelfth day of the disease, continued of a darkish brown colour, dry, and with a disagreeable bitter taste, especially about the root, till the eighteenth day." The affections of the circulating system, and of the brain and nerves are extremely various, both in respect to their degrees and to the phenomena by which they are indicated. The pulse varies both in strength and velocity in a remarkable degree. The affections of the brain in the earlier and milder stages, are indicated by a rapid and unconnected succession of ideas, a hurried speech, a tremulous and unsteady walk, and a distracted look; the higher degrees are accompanied by delirium, anxiety, languor and melancholy, as well as great muscular debility generally prevail throughout. There is sometimes, at the commencement, a considerable constipation: but *diarrhœa* and *hæmorrhage* indicating a dissolution of the texture of the blood, are also in its progress not unfrequent symptoms, when severe denoting much danger. In the Levant, the plague is usually divided into six kinds. The true, or mother plague, in which the larger glands are swelled; all other tumors are called Carbone, and are divided into five classes, according to the degree of danger which they denote. The disease is to be distinguished by the aggregate of its symptoms.

You have been in Constantinople?—I have.

You know the suburb Pera?—Yes.

That is generally inhabited by Europeans?—By Greeks, and the better sort of Armenians also, and by Turks.

You are aware the plague makes much less ravage in that than in other districts?—I am not aware of that; I am aware that it makes more ravage near the district Tophana.



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You are aware of the methods by which the Frank merchants at Smyrna usually endeavour to avoid the plague?—Perfectly; by shutting themselves up in their houses.

Are you aware that there are many instances of that precaution being found fruitless, and not to prevent the plague?—I understand it is sometimes fruitless, but that it is also supposed to tend to prevent it; and I believe, with truth, not by guarding against contagion in my opinion, but the vicissitudes of the atmosphere.

In what manner do you account for an epidemic disorder being prevented, by simply shutting a house in an infectious place?—I have, in a paper which I presented to the Committee, entered at large into the explanation of those circumstances. I understand that at Malta, where those precautions were taken, they were generally successful; but that at Gibraltar, where the same precautions were taken, they were generally unsuccessful.

Are you acquainted with the state of Smyrna?—No; according to my ideas of the subject, the benefit to be derived from shutting up must entirely depend upon the air in which the house is situated, and the other conveniences enjoyed, and its degree of elevation from the ground. On those circumstances principally, and upon shutting the windows at the most dangerous periods of the day, so as not to allow a thorough draft of air during the pestilential season in the town, depends the prevention not of contagion but of the entrance of the pestilential blasts which cause the malady. English sailors are commonly exempt from the disease, and less liable to it than others.

You say the sailors are less liable; are they not exposed to those blasts?—Yes, when they are ashore; but their constitutions are better able to bear it, and they sleep in better air on shipboard.

Did you ever hear of inoculation for the plague?—I have.

With what success?—I have heard of a gentleman inoculating himself three times and not taking the disease the two first times; but the third time being seized with the malady, by a coincidence, a result as I conceive which would have equally happened whether he had been inoculated or not: the case I allude to particularly, is the case of Dr. White, who died in Egypt.

Have you heard of any patient being inoculated again and again for the small-pox and not taking it, and afterwards taking it by infection?—I do not know of any facts I can speak to.

Do you know the opinion of Dr. White on the subject of the plague?—His opinion was, that it was not contagious; he attended several patients ill of what he supposed to be the plague, but one in particular, from whom he took matter, and rubbed himself without any injurious effect being produced; and this statement is certified by the chief agent of transports and captains of vessels on the spot.

Do you use the words contagious and infectious as synonymous?—I am not aware that I have used the word infection at all; if I have, it is synonymously, understanding that to be the way in which it is generally employed.

Have you understood the Americans are going to abolish their quarantine laws?—I understand the people of Baltimore have either partially or wholly abolished it; but I have no other authority than the newspapers.

Do you consider the establishment of our own quarantine laws of any use?—Not of the smallest use; if it be true that there never has arrived at any one period of time any one person from the Levant, or any other place, actually labouring under the plague; and if it be true, according to the advocates for contagion, that goods, wares and merchandize can retain infection for seven, fourteen or twenty years, it must be apparent, that with respect to goods as well as with respect to persons, a quarantine of forty days can in such case be of no sort of use.

Who are the advocates that maintain that the infection could be retained for so many years?—The medical writers, upon whose works the quarantine laws were originally founded.

Are not the regulations of the Lazaretto system, adopted in Italy, founded upon the idea that the plague is contagious?—Certainly.

Are they found effectual for preventing infection?—By no means. In my work upon the subject I have stated what happened recently at the town of Noya, which was surrounded by lines of circumvallation, ditches, and cordons of troops, and every mode of restriction imposed upon the inhabitants; and the disease continued as it has done at other places subject to plague police, its usual course, and ended at the usual time.

Did



Did the circumstances that occurred at Noya begin in the Lazaretto?—I do not at this moment recollect the circumstance; but I have got an account by me, which can ascertain that point if it should be deemed of any consequence.

*Charles M-Lean,  
M. D.,*

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In the cases where the infection has been communicated, notwithstanding that system, have not the cases that have occurred usually occurred in the lazaretto?—No. In Malta, according to the evidence of the president of the college of physicians, who attended the lazaretto hospital for 15 years, no person employed as an expurgator of goods was ever affected during the whole of that period with the malady; nor in the plague of 1813 was any one of those persons affected; they enjoyed therefore a greater exemption from the disease than the community at large. This I have from the evidence of Dr. Caruhanha, proto-medico of the college, and Dr. Grieves, superintendent of quarantine.

Did you ever hear the plague had been at Marseilles since the great plague?—I have not heard of it; but I make no doubt it has been there partially.

How do you suppose the plague got into the lazaretto?—I am supposing people to have arrived there labouring under it from the Levant.

Not brought by goods?—No; I conclude they must have arrived with the disease upon them, produced by the air which they had left, or that of the ship, or the goods, or the lazaretto itself.

Supposing persons brought into the country, infected with the disorder, do you think the disorder would spread?—I have not the smallest apprehension of that; on the contrary, I should cheerfully expose myself to contact with all persons labouring under disease, or with baies of goods arriving from the Mediterranean, or any other quarter, in which plague or other epidemic diseases are supposed to prevail; assured that I could not, from mere contact, take the disease.

How do you account for one person coming infected to one place, being capable of giving it to others?—That is assuming the fact the Committee are inquiring into, and which I do not admit ever to have happened.

Have you ever known cases in which the plague has prevailed in a lazaretto, and not in the town or district where it was situated?—I think it was stated to have prevailed at Marseilles in the lazaretto and not in the town?

You have not seen that yourself?—No.

How do you account for its introduction into the lazaretto?—By persons coming with the disease upon them, or leaving a port at sea with it upon them, or coming from the air that occasioned it.

Do you mean to say, that other persons got it from the person who arrived?—No; I do not admit that ever to happen.

You do not state that of your own knowledge?—I know nothing of the lazarettos at Marseilles from my own knowledge, only those of Malta.

So that if in the lazaretto at Marseilles there had existed cases of the plague, you assume that individuals labouring under the complaint must have come into it with the complaint upon them?—It is very difficult to answer that question, because the plague may be confounded with so many other maladies; but confining it to the plague, I am not aware that such cases have occurred; that cases have occurred in which it is supposed to be the plague, and stated as such, and not spread, is certainly true.

The symptoms of plague are distinct?—No; they are so numerous, so various, and frequently so indistinct, that the disease may often be confounded with other maladies.

Do you know of any instance where the plague has been marked, where it has not spread?—It is not consistent with my own knowledge, but cases have occurred in the island of Cyprus, at the town of Larnica. A ship being wrecked upon that island, some of the crew being ill of the plague were sent to the town of Larnica, they were visited by the people, some of them died; but the disease was not produced the following year; the disease prevailed in the town of Larnica, and swept off at the rate of 20 or 30 a day.

At what time of the year was this?—In March I think, or April, as far as I recollect.

Are you aware, that in the towns of the East, the Turks suffer in a greater proportion than the Christian population?—I am aware that such has been represented, but I do not credit it, because I do not see the grounds of it; it has been assumed by Christian travellers, that the Turks must necessarily suffer more, since they do not

take



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take precautions that the Christians do; and they have stated the fact upon mere assumption; what means they had of judging, I profess not to know; I do not know that bills of mortality are kept by the Turks.

Had you an opportunity of judging which of them suffered most?—It is matter of obvious fact, that the Turks do not desert their friends when seized with the disease, not feeling that dread of the malady which Christians do; and it is admitted by the advocates of contagion, that dread operates more severely than what they call the true contagion itself; it therefore must operate equally severely under the belief of contagion, whether it does or not exist. And it must operate more severely upon those who entertain that belief, as the Greeks and Armenians of the Levant do, than upon the Turks who do not entertain it. This also has been confirmed by facts; and it is stated by various travellers, that the Turks recover in a much greater number from the plague than the Christians who are attacked with it.

Such being the belief of those who support the doctrine of contagion, how do you account for their uniformly and invariably representing the greatest mortality among the Turks, where there is no dread?—I am not aware that it is so uniformly and invariably represented, but if it be, it is only the opinions of those travellers who are not enabled to judge of the circumstances; for no traveller in the Levant can possibly be in a situation to know any thing at all of the matter, except what is represented to them by Christians believing in contagion, or by the superintendents of the plague establishments.

Those Christians being inhabitants of the country?—Yes; but those have different degrees of belief: the Greeks believe much more in contagion than the Armenians.

You have told us, that the plague is thought to be of six different kinds at Smyrna?—So I understand it to be; I do not state that from personal knowledge.

You have described the mother plague, did you describe the other five?—I have not gone into the particulars; I understand they are different only in degree; I made the account as short as possible, but I can go into it more particularly if the Committee wish it.

Is there any particular symptom in the plague, by which you think it may with certainty be distinguished from any other fever?—The symptom which seems to be the most regular, is, the peculiar appearance of the countenance, and the eyes and the tongue; but that I do not conceive to be distinct from what those appearances are in the severer degrees of the ordinary forms of typhus and yellow fever in other countries.

Have you put much dependence upon the glandular affections, as a distinctive character of the plague?—No.

Nor the carbuncles?—They do not always occur; but when they do, they are more distinctive marks of the disease, in my opinion, than the glandular swellings.

To what extent have you made trials of that method, by which you think the plague may in four cases out of five be cured?—I have only had an opportunity of trying it in an efficient manner upon myself, not being able to try it accurately on the patients in the hospitals; I was not able to apply the remedy at night, from the customs of the people.

Then your opinion of the validity of that method, is drawn from a single experiment?—No; my opinion was drawn from analogy in that case, and the other cases which were successfully treated in the pesthouse, as well as from the efficient manner in which I had, for many years, previously an opportunity of applying the doctrine in yellow fever, and the typhus of various countries: it is principally from analogy in other cases I draw my inference.

Have you ever known the typhus fever that which you could be sure of as the typhus fever, to show the symptoms of glandular affection in the same manner as the plague is seen to do?—I have seen distinct buboes in the groin in the typhus.

In this country?—Yes; I have seen such a thing, but not often.

Did you ever see the carbuncles?—No.

You attribute the origin of the belief of contagion in epidemic diseases, to the date of the Council of Trent?—I consider that to have been the period at which it was first accredited and acted upon, by any public authority, with a view to effect the removal of that council to Bologna.

Are you quite certain it was the plague that prevailed?—It was disputed by the Cardinals, whether it was the plague or scarlet fever. Fracastorius said, It was the true



true plague, and said he had come there to attend other disorders, but not to expose himself to the true plague.

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Do you imagine the Court of Rome could have availed itself of this argument, unless there had been a pre-existing opinion to that effect?—That there might have been a pre-existing opinion, I am not competent to say, I do not know that there was; I am sure there was none among the eminent physicians of antiquity. I am not aware that any statement of it is pretended to have been made, previous to the Decameron of Boccaccio.

Do you imagine the disease prevailing in Florence in 1348, was the true plague?—I have no doubt of it. I have no reason to doubt it; I was going to explain with respect to the Decameron, that it is necessary to ascertain the precise date of its being printed, in order to appreciate the authenticity of the doctrines which it contains, as being those of the writer; or as being introduced by interpolation of editors or commentators. At any rate, it does not signify to the main question, at what time the doctrine of contagion originated, or by whom, and by how many it has been entertained, if its truth can be disproved.

You have stated, you do not believe the notion of the plague being contagious, is alluded to by the physicians of antiquity?—I have.

Do you not conceive the description given of the plague of Athens by Thucydides, is the description of a contagious disease?—No, I do not, so far as I am able to judge of his meaning by a comparison of the different interpretations of him; on the contrary he expressly declares, that he leaves it to others to enter into the cause of the malady, meaning, on his part, merely to state the manner of it. It would be strange that Thucydides, who was the cotemporary of Hippocrates, should have considered plague contagious, whilst the latter imputes it to the air.

Is it from actual observation, that you conclude that the Turks and Mahometans generally suffer less from the plague, or at least are less frequently affected with it than Christians?—No, it is not from actual observation, it is from the nature of things, and because there is no evidence to the contrary.

You have given the Committee your opinion, that the plague is not contagious, the Committee would be glad to know upon what ground you found that opinion?—Upon a great many circumstances. In the first place, the plague and all other epidemic diseases appear at certain periods, generally speaking, and disappear at other certain periods, different in different countries; they also cease generally at the time at which the greatest number of persons are affected, as happened in the plague of London in 1665, in the plague of Marseilles in 1720; and I believe in most other severe pestilences; which seems to me wholly incompatible with the existence of contagion. Also, because they are capable of affecting the same persons repeatedly, of which there is no proof that contagious general diseases are capable of doing.

You admit the small-pox to be contagious?—Yes.

Do you think there is no proof of the small-pox having affected any person more than once?—None whatever, further than assertion; if assertion is to be taken for scientific proof, then I admit there is proof in abundance.

If you should find hereafter well-attested proof that the small-pox had affected a person twice, you would then leave out of your definition of contagious diseases, that they never could affect the same persons twice?—As I conceive it impossible that nature should ever be so inconsistent with herself as to render a few persons capable of being affected repeatedly by a contagious disease, whilst the great majority of mankind are incapable of being so affected, I should in such case, distrust the evidence of my own eyes.

Have you ever heard of instances of several persons being bit by the same mad dog, and some having been affected with the disease that generally follows, called Hydrophobia, and others not?—I am not acquainted with the disease of hydrophobia, sufficiently to give an opinion upon it. I know it is a part of the science of medicine that is yet very obscure.

In the case of the small-pox, which is undoubtedly infectious, has not the state of the air a great influence in checking or promoting the contagion?—I am not aware that it has, it may have a great effect in preventing mortality no doubt.

Do you mean to say, that according to your own observation, the plague is less frequent among the Turks, than amongst the Christians in the East?—There are no data to go upon in forming an opinion; all we can do is to conjecture upon it. The Greeks, Armenians and other Christians in the East, have all pest-houses, the Turks have none; there are no bills of mortality, nor any means of obtaining accurately the



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relative number affected. My experience was not sufficiently long in the Levant to ascertain that point; but I saw or heard nothing to induce me to think the Turks are more frequently affected than the Christians, if so frequently.

Have you ever heard of a very destructive plague that prevailed at Moscow?—Yes.

At what time of the year was that?—I think it began or principally prevailed in July or August, and declined or ceased in November or December. There is a long statement of it by Drs. Samoilowitz and De Maertens; I do not recollect the particulars; but my impression was, that it began at the usual epidemic season in northern latitudes, and ceased at the usual time.

What do you mean by the term epidemic season?—That season in which epidemic diseases most usually occur in any country; the epidemic season I consider in this country to be from July or August to November or December.

You conceive the epidemic season to depend upon the state of the atmosphere?—Yes.

What would you call the epidemic season at Moscow?—It appears to be the same, or nearly the same as in this country, judging from the pestilence of 1771.

Do you believe that the state of the atmosphere at Moscow at that period, in the months of October and November, was less severe in point of cold than it ordinarily is at that place?—I have no data to go upon respecting that particular point.

What do you conceive to be the causes of epidemic diseases?—The epidemic constitution of the air; sudden or extreme vicissitudes of temperature; deficiency of nourishment and depression of the mind, I conceive to be the principal causes of epidemic diseases; and various other occasional causes.

What is the principal epidemic season at Constantinople and Smyrna?—They are very different; the earliest in the year is at Smyrna, it occurs from February and March to June or July; it is considered generally to terminate about the 24th of June. At Constantinople it commences in July or August, and terminates in November or December.

Do you know the time at Cairo?—Much about the time as at Smyrna; it seems to correspond with the rising and falling of the Nile.

Then at Constantinople the period is much the same as in England?—Yes; but I must observe, that they may be occasionally anticipated or postponed, according to those circumstances which produce the cause; if the epidemic state of the air be not intense, but other causes are operating, then the autumnal season is less distinguished for the severity or extent of the disease, over the other seasons of the year.

Having stated the causes that in your opinion led to the plague, what are the causes which operate to produce its cessation?—An alteration in the qualities of the atmosphere, together with the disappearance of the other causes, when these are also operating.

Is that alteration in the state of the atmosphere, a change from heat to cold or from cold to heat, or from both?—It does not appear that it is at all connected with the change from heat to cold, except in as far as sudden transitions are concerned, to illustrate my observation; they commence in England and other countries in hot weather, and terminate in cold; in Egypt and Syria they commence in cold weather and terminate in hot.

When you talk of cold weather in Egypt and Syria, do you mean cold weather as compared with the previous heat, or cold weather as marked by the state of the thermometer?—As compared with the ordinary heat, with the average heat of the year.

So that, if that be the case, the plague might prevail during an intense frost, provided that frost came on suddenly, just as well as it might in a much more moderate degree of cold; supposing in that case also a sudden variation of temperature?—That I could only speculate upon, not having any precise facts to go upon.

In your opinion would a violent frost put an end to the plague?—I do not conceive it necessarily would, unconnected with other circumstances.

Do you think that dryness and moisture, and not heat and cold, are most conducive to the plague?—The excess of either.

Did you ever hear of the plague in India?—I never did.

But there is a great change there in the dryness and moisture, and in the heat and cold?—Very likely; but I have not ascribed the plague to any of those circumstances alone.

Have



Have you ever known or heard of contagion in the East Indies?—I have not among the natives.

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*M. D.*

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Do you conceive the clothes sold out of the pest hospitals, would produce the plague? Undoubtedly they would, if the plague were contagious. They could not fail to produce it; but it is customary for the relations of those who die of the plague in Turkey, to wear the clothes of the deceased, or to sell them in the public bazaar or market place; they are in constant circulation. I used to walk into the city of Constantinople every day, sometimes even after I had the disease, and go through the thickest of the people along with my interpreter, visiting the coffee-houses and other frequented places. They knew we were making experiments in the plague hospital, and none of the Mahometans ever avoided us on that account, nor was the disease by that means propagated. The purveyor and other agents of the hospital, walked every day to the open market to buy their supply of victuals for the hospital; they came openly among the people without any precaution.

These were Greeks?—Yes; but they went among the Mahometans.

Do you not conceive that any peculiar change in the atmosphere would put an end to any epidemic disorder, supposing it to be contagious?—I do not admit that it would, whilst the contagion had subjects to operate upon, that had not become unsusceptible.

You have stated, that in your opinion epidemic diseases cannot become contagious, do you consider the influenza an epidemic disease?—Most certainly.

You are aware of course of the consequences of influenza in the island of St. Kilda?—I cannot say that I am.

*Thomas Foster, M. D.* called in; and Examined.

YOU practise as a physician?—I do.

Have you any information you can give the Committee, upon the subject of the contagion of the plague?—I have no personal observations to make upon the Plague.

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*M. D.*

Have you been in countries where the plague has prevailed?—No.

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Have you read on the subject of the plague?—I have.

Have you formed an opinion?—Yes.

Favour the Committee with your opinion on the subject of the plague?—I conceive under certain circumstances it is contagious; for instance, wherever there be close confinement in a chamber in which atmospheric air is not freely admitted, but if atmospheric air be freely admitted into the chamber of the patient, the attendant will be, generally speaking, free from contagion.

Do you consider that we have had cases of the Levant plague in England?—Certainly not, in my memory.

From your reading or inquiries, do you conceive that the plague of 1665 was the Levant plague?—I should be inclined to think not.

What do you suppose to be the specific marks of the plague, generally speaking?—I should think perhaps the bubo, and that kind of eruptive affections.

And the carbuncle?—Yes; as constituting distinctions from the generality of pestilential diseases.

Did you never know the typhus fever marked with glandular affections?—I have known cases of typhus fever in which glandular affections have occurred; but it would be difficult to connect them as cause and effects with the fever, as they might have arisen from cotemporary causes.

Have you made any inquiry as to the existence of the plague in England, or in quarantine places?—Very frequently.

What has been the result?—That I could never find any evidence of a plague case existing any where here.

Do you consider the small-pox a contagious disease?—Unquestionably.

Do you consider the plague to be of the same class of diseases with the small-pox?—I consider the plague to be attended with a degree of eruption occasionally. I have been induced in a great measure to lay aside the nosological distinctions of diseases, from the observations I have repeatedly made, that there exist too many intermediate diseases, and too many modifications of all to render such nosological arrangements practically useful.

Is it a mark of contagious diseases that they can only attack persons once?—I believe contagious diseases can attack persons more than once.

Have you ever heard of or seen instances of the small-pox affecting persons more than once?—I was personally acquainted with a man who had it three times.

Have you heard frequent instances of a man having it twice?—I have heard very frequent instances of it; but very few were well authenticated.

Have



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Have you known any instances of it well authenticated?—Two or three besides the one I alluded to.

Did the person who had it three times die?—He died (I believe of apoplexy) about three months after the last attack.

You do not consider that a circumstance decisive against its being contagious, that the disease should affect a patient several times?—Not absolutely decisive against the contagious nature of the disease.

Is contagion a modern term, or is it mentioned in ancient writers?—I do not recollect the word contagion occurring in very ancient writers.

Is it not in Hippocrates?—I do not think it.

What do you call infection and contagion?—I consider contagious diseases such as are capable of being communicated by contact and inoculation; but infectious diseases are those that arise from the infecting state of the atmosphere.

You do not think that a person could catch an infectious disorder from another?—I consider that some diseases, which are infectious, may be afterwards communicated by contact.

Do you think a person labouring under the plague, coming near a person in perfect health, could communicate to him the same specific disease, merely by touching him?—With respect to coming near, I consider not, if the air around him was good atmospheric air, but by contact I am not certain; I speak with caution.

Do you think the plague could be communicated by inoculation?—That fact I have no knowledge of.

You would consider it a contagious disease if a person came into a room in perfect health, and was afterwards seized with the disease?—I should think the conjunction of the two causes too marked to be overlooked.

You have said, you place little dependence upon the common nosological distinctions?—Very little.

By what signs do you discover one fever from another?—Fever includes a very large class of disorders; some are continuous.

Do you distinguish small-pox from the measles?—Yes; by the nature of the eruptions.

You say, small-pox and measles are continuous?—They are continuous while measles last.

How do you distinguish the small-pox from the measles?—By the nature of the eruptions.

What do you consider as the distinctive character of the plague?—The nature of the glandular affections and the eruptions.

You consider that epidemic or infectious diseases may become contagious?—Some of them.

Are those signs by which you know the small-pox from the measles, and the plague from both, nosological distinctions of your own?—Of my own, in common with other physicians, in those three cases.

Did you not say, you placed very little reliance on those distinctions?—I mean to say, that during a time of pestilence the fever which attacks one person may vary in its symptoms from that which attacks another, in consequence of constitutional predisposition; further, constitutions being almost infinitely variable, the variety of the fevers becomes endless, and the symptoms apparently confused; but yet there are decidedly marked cases, in which I would venture to give a name to a fever.

And you would say, in these cases both persons had the plague?—In certain cases.

Though the disorder in the two should vary considerably?—Yes.

You should then know the two disorders to be the same, with such a variety of symptoms?—I conceive the symptoms might vary so, as at first to puzzle the most experienced.

Then how could you pronounce that both these persons had the plague?—I could only do so if I discovered symptoms in common with the two.

Would those symptoms which they exhibited in common, be such as to make you pronounce the disease in general to be the same in both?—In the generality of cases.

Are those symptoms the symptoms which you would call the distinctive symptoms of that disease?—They are distinctive symptoms where they occur in a distinctive manner; I consider, from the peculiarities of the human constitution, the same disease becomes so various in its symptoms and character, as to be frequently mistaken.

Do you suppose the typhus fever for instance, in a change of the air, could ever be converted into the plague?—I have no direct evidence from my own observations of what



what I have seen of the change of air in the north of Europe, to expect any change of atmosphere here, which would convert typhus into plague.

Do you think that a person taking one contagious disorder, say the small-pox, from another, might take it with such a variety of constitution as that the disorder when it appeared in him should not be the small-pox but some other fever?—I never saw any thing that warrants such a conclusion in cases of the small-pox, which disease I consider to be most decided in its character of any of our eruptive diseases.

The small-pox was only taken for example; would you say the same of any other contagious fever?—Of the generality of continuous fevers, which can be communicated by contagion.

Would you say that of the typhus and measles?—No.

Would you say that of the typhus and scarlet fever?—I am not aware that a patient predisposed to scarlet fever would be susceptible of taking it.

Have you formed any opinion of our quarantine establishments, from the inquiries you have made respecting the plague?—I have considered the quarantine establishments only as they related to the medical question, in what manner the plague is capable of being communicated; and the result of my inquiries have been satisfactory to myself, that the free admission of atmospheric air into chambers was, in general, a preventive against the propagation of the disease.

Do you conceive that any care respecting ventilation could prevent a sound person from catching the small-pox by persons coming near him?—Not all persons.

You have stated, that in all your inquiries you have never ascertained that the plague has happened?—I have made inquiries in different parts of England and Wales, and even on the shores of France, and I could never find an instance.

Do you conceive there is a necessity for the quarantine laws, having that fact first established?—I am incapable of determining whether this fact of the non-occurrence of plague is to be referred to the active operation of quarantine, or whether we must not refer it to the incapability of the plague being propagated by the general and supposed means.

If the plague has not occurred in the ships arriving at quarantine stations, nor in the Lazaretto's, should you then conceive there was a necessity for those establishments?—I should think it would greatly diminish the necessity.

If it had not occurred for 50 or 100 years, what should you say?—I should be unwilling to deny the absolute necessity, but I should speak very confident on the other side.

Should you attribute our immunity to our distance from the plague country?—I should think the distance one reason; but the principal reason the difference of climate.

Then you would rather infer the plague has not existed in our atmosphere?—I should rather be inclined to suppose the plague has not existed in our atmosphere of late; but whether the atmosphere has not changed of late I do not know; it was the opinion of Sydenham that it did change.

Do you think that any man can have any idea what the change of the atmosphere is, that makes diseases more prevalent at one time than at others?—I made one experiment, which was in some degree satisfactory; the result was, it is not the temperature, nor pressure, nor dampness alone, nor the vicissitudes from one to the other of these states that seems to induce disease, but a circumstance I once noticed induced me to think, that the electricity of the atmosphere was principally concerned therein.

In places which have occasionally been visited by the plague, are you not aware that such places have sometimes enjoyed immunity from the plague, for a long continuance?—I am quite aware of that fact.

Then from the length of the immunity enjoyed by this country, you would not decisively conceive that we never could have it?—Not decisively; but I should say, that the probability varied inversely, as the distance of time from the last occurrence.

Might not that probability also exist in the nature of the precautions used during the time?—It might, if the history of such precautions could be traced; but it appears we have no decided account of such precautions.

Have you any reason to believe that the Levant plague has ever been in England?—There were some symptoms said to exist in the plague of London, which varied much from the general symptoms of English fevers, for instance, the buboes.

Do you not think it possible a ship with the plague on board, might arrive at one season, and at the same time the state of the atmosphere be such as not to spread, and at another time it might be such as to spread?—That is my own private opinion; but I consider the facts on which it is founded, not yet sufficiently matured.

Thomas Foster  
M. D.

(15 March.)



Thomas Foster,  
M. D.  
(15 March.)

If the fact be ascertained, that the plague has never been found on board a ship arriving in this country, or in the Lazaretto, would not that be sufficient to decide the inutility of the quarantine laws?—It would be a very good reason.

Are you acquainted with any authentic account of the plague having been communicated by bale goods?—I have heard it mentioned, but I never heard it authenticated.

Do you think it may be communicated by them?—That depends upon the degree with which they are infected.

Do you suppose that one description of goods is more capable of receiving and retaining infection than others; is it not generally supposed that woollen and cotton goods are?—They are non-conductors of heat, and therefore may perhaps be less liable to emit effluvia readily.

Have you any other reason why they are more likely to receive and retain infection?—Not as to these articles.

But it is supposed that they are more capable of retaining infection?—It is; but I know of no facts to support it.

Supposing other bale goods are capable of receiving infection, how would you ventilate them?—I should conceive that the most difficult of all modes of preventing infection.

Then supposing that such bale goods are capable of receiving and retaining infection, and admitting the difficulty of ventilation in those instances, should you not conceive it would be a very hazardous experiment to remove all precautions with regard to the influx of those goods into England, coming from countries in which the plague prevailed?—I must answer that, by just stating the view I take of this particular branch of the subject, which is, that if bale goods be capable of receiving the infection in the Levant, so as to convey it all the way to London, the short time limited for quarantine would be insufficient to prevent the danger. I think Lucretius's account of the infectious nature of certain diseases worthy of being made a minute of; he thinks the cause of pestilential diseases consists in the infectious qualities of the air, which are capable of exciting the disease on predisposed constitutions; secondly, that those peculiar qualities of the air operate in some instances locally and continually in particular regions, of which he cites examples, and instances diseases which occurred to persons visiting those places; moreover, that unhealthy qualities of the air occur in all places casually, and excite prevailing epidemics and influenzas in particular seasons, which the predisposed soonest fall a prey to.

*Mercurij, 17<sup>e</sup> die Martij, 1819.*

SIR JOHN JACKSON, BARONET,

In the Chair.

Dr. James Johnson called in; and Examined.

Dr.  
James Johnson.  
(17 March.)

HAVE you had an opportunity, by experience or reading, to form an opinion respecting the Plague, and the probability of its being attended with contagion?—I have not personally seen the plague; I have served in the Mediterranean, where I had opportunities of acquiring information.

State your opinion respecting its being contagious?—I have not the least doubt of its being contagious.

Do you consider it as contagious of things as well as persons?—I consider it contagious through the medium of contact, near approximation, or exhalation, and fomites.

In what way communicable?—By actual contact, by near approximation, as by the breath, secretions, exhalations, &c. its activity being dependent on the particular state of the atmosphere.

Then you consider that the articles of cargo can be infected, and thereby become likely to communicate the plague to persons?—I consider the articles of cargo not so likely as clothes; I consider packages not to be near so likely to transmit or bring contagion, as the articles of dirty apparel.

But still you consider, that the plague infection can be communicated by articles of cargo to persons?—It is not very probable, though possible.

Do you mean clothes that have been worn?—Clothes that have been worn.

Then



Then you rather exempt goods?—I think they are not near so likely; because when they are packed and manufactured, they are not likely to have people labouring under the plague about them; and consequently the probability is not near so great.

But still it is probable?—It is possible that some particular goods might by accident bring the contagion.

Specify what goods?—I should think cottons more likely.

Do you suppose silk and wool?—Silk and wool.

Corn do you suppose?—No, I should think not so likely; because I know that in woollen clothes the fomites of other contagions is more generally retained than in any other substances.

Supposing one of the most likely articles to communicate the plague to be infected, such as wool, silk or cotton; do you consider it as easy to purify those articles?—Nothing more, I think, is necessary than ventilation; free ventilation, and opening them out to the action of the sun and air.

What do you think of the interior of bales?—I think it hardly necessary to expose all the interior parts, but that it is going far enough to expose individual bales and packages to the free action of the atmospheric air and the sun.

Do you consider that goods infected with the plague are often purified, and divested of infection?—I think it is extremely seldom that contagion is brought in goods; but that the purification is more frequently a process of safe precaution than of actual dispersion of the contagion.

Should you consider that, as far as respects goods and cargoes, the quarantine establishment may be considered as useless?—No; but I think the laws are too rigid; the time is too long, and probably the process too complicated; but I think the contagious matter is capable of being transported to this country by goods or clothes, and therefore some precaution should be taken, and a certain quarantine necessary.

Do you mean precaution with respect to goods?—Yes; I should think that the free exposure of packages, even if not open, would be sufficient.

What do you mean by free exposure; because if they are not opened, how are they capable of it?—I will put an instance: a box of opium may come from Turkey; I do not see the necessity of opening that, and exposing each cake of the contents. I take that as a single article.

But confine yourself to silk and cotton?—To bale goods it would be judicious to expose them as freely as possible.

Without the universal exposure of the package, should you think it safe, supposing it had been infected?—If it were supposed to be infected, then very free ventilation and exposure should be used; but I think it is rather within the range of possibility than probability, that, under ordinary circumstances, the contagion should be brought to this country by articles of cargo.

Is it not as likely that the seat of infection should be in the interior part, as in the outside?—No, I think not; because the exterior covering may pass through a great many places, and be exposed to various sources of infection, where the interior could not.

Exposed to the counteracting cause?—Certainly.

If that is the case, the outside being prior and at all times exposed to the air, common ventilation would prevent infection on the outside?—It most probably would.

The same cause you adopt for purification would entirely operate as a preventive?—Yes; but suppose infected persons on board, where there are packages; the exterior of these packages, during the time the cargo was lading or conveyed to this country, must be more exposed to contagious matters, and these being placed in the interior parts of the ship, the infection might not be sufficiently dissipated, without a free exposure to the air and sun afterwards.

Have you ever known or heard of a plague case on board ships arriving at lazarettos in Great Britain?—No.

How do you suppose a bale of silk, or woollen, or cotton, would become infected by the plague, in the interior part of it?—Only by those who are employed in packing it having contagion about their clothes, or by being convalescent of the plague; or from the interior component part of the package having passed through dwellings where contagion might have subsisted.

Then, according to the circumstances, is it not more likely that the infection should remain in the interior part of a bale than the outside, considering the outside as exposed generally or often to ventilation?—In respect to the interior part of a package,

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package, I know of no other way in which it might bring contagion, but as I have said; I think it not very probable it would do it that way; these are the *possible* ways in which it might be brought, still considering that it is very improbable: these can only be matters of opinion.

Is it not the opinion of some medical men, that the pestiferous matter does acquire more activity in fomites, than when it comes immediately from the body?—It is the opinion of many that it acquires a concentration of virulence by confinement; but I cannot speak of my own knowledge.

Should you consider that the fact of there not having occurred a plague case at any lazaretto for 50 or 100 years, should be sufficient to inspire confidence to contemplate the doing away quarantine establishments?—No, I do not, because I know that the contagion of plague is very considerably under atmospheric influence; and consequently, that a very long period may occur in which that peculiar constitution of the air is absent which gives activity to the matter of contagion.

Should you not, in that case, consider 100 years sufficient to give a recurrence of all the possible cycles of combination?—Yes, certainly; in all probability such constitution of the air would return in that period; but then the means now taken in quarantine might prevent the introduction of the contagion at such particular junctures.

Considering that no personal case of plague has occurred in the lazarettos, for many years, do you consider these establishments to have been the cause why the plague has not appeared in Great Britain?—It is a very difficult thing to answer that question. I think the great probability is, that no infection, or very little, was brought; and if it was brought, it may have been in so slight a degree, as to have been dissipated by the means used; the probability is, that it seldom or ever reaches this country. I have not an intimate knowledge of the means used in quarantine; but I suppose they are exposure to the air, and such other means as common prudence would dictate.

As you conceive the infection, supposed to be introduced in the bales of goods, is so introduced by the persons packing; is it not your opinion that the internal part is more likely to have infection than the outside?—If any of the interior part comes within the range of infection, during its passage or manufacture, it would certainly be more liable to retain it in the interior than in any exterior part of the package.

From all the circumstances, do you not think the internal part more likely to be infected than the external part?—I rather think not.

Do you consider the atmosphere to have any operation on infection in packages?—No.

I mean the atmosphere where the plague exists?—No, not the general atmosphere; the atmosphere of an infected room is a different thing; but the general atmosphere cannot possibly infect goods.

Then the infection produced by goods, must be personal handling?—By coming within the range of exhalation from infected matter. If an infected bed is in the house, and if a bale of goods was laid on a bed where contagion existed, it might be infected. The local atmosphere of a house or room might be impregnated by the effluvia of an infected bed or person, and that might communicate infection, but not the general atmosphere of the town.

Then you consider the general atmosphere to have no concern in the communication of infection?—Not in the *generation* of it; but in increasing its activity, or lessening its force.

Have you any particular circumstances to adduce as proof, that the plague is contagious or infectious?—I have; *first*, the authority of those who have written without bias on the subject; for instance Russel, and most of those who have seen it. *Secondly*, its being an *eruptive* disease is in favour of its being contagious; because we know that all eruptive diseases arise from specific contagions, or poisons as they are called; buboes and carbuncles are as commonly seen in the plague, as pustules in the small-pox.

Do buboes and carbuncles come under the description of eruptions?—Yes; the same as that of scarletina, or pustules in the small-pox.

Is typhus?—Typhus is not an eruptive disease.

Then you mean those disorders that medical men call Exanthemata?—Yes.

You have been a considerable time in various parts of India?—Yes.

Do you consider the malignant fevers, incident to Trincomalee, Batavia, and Diamond Harbour, to be a class analogous to the plague, as it exists in Turkey, Egypt,



Egypt, and in the African states?—No; I consider them to be totally different in their nature and causes.

Do you believe that these violent epidemics in India, depend for their origin upon the miasmata exhaling from the marshy soils of these regions; or are they communicated by *contagion* from the morbid to the sound bodies of men?—They are dependent principally upon the miasmata, which miasmata are influenced by the state of the atmosphere, and the diseases are not in their own nature contagious; but, under particular states, as from accumulation of filth and want of ventilation, they do occasionally assume a contagious character.

Do you believe the epidemic distempers and dysenteries of particular climates are contagious, under any circumstances?—I never knew an instance of simple dysentery being contagious; but epidemic fevers may sometimes become so. I consider that *all fevers*, whether originally contagious or not, may become so by the patients being too much crowded, by want of cleanliness or want of ventilation.

Have you experience of West India epidemics?—Yes.

Do you believe them to be contagious?—I believe the remittent and what are called Yellow fevers, more properly called Endemic fevers, are not contagious.

Have you had experience of the fevers that prevailed at Malta and Gibraltar?—I was at Gibraltar in 1800, but the fever was not epidemic then; there were sporadic cases, which I considered as of local origin; they were produced by causes generated in the surface of the rock, and atmospheric causes, not imported.

Define what is meant by the term sporadic?—Wandering cases, not generally epidemic; a case happening here and there in a family.

Do you believe the plague to be a contagious disease communicable by the effluvia of diseased bodies being applied to sound persons, independent of local circumstances?—Yes, I do, even under those circumstances, independent of any atmospherical or adventitious causes.

What are the means and circumstances most favourable to the diffusion of miasmata?—Heat and moisture.

May not epidemic diseases, under certain circumstances, become contagious?—They may; that is proved by the epidemic fevers of this country at this moment, which are produced in many instances by atmospheric and terrestrial influence at first, but propagated afterwards by contagion. I consider the exhalations of the earth as often combining with certain states of the air to produce epidemic fevers.

Take the converse; do you suppose that any contagious disorder could arise spontaneously?—No; I believe that what may be called the eruptive contagions, as small-pox, measles or plague, cannot arise spontaneously; they must spring from their own specific poisons diffused in the air, or directly applied to the body in some shape or other.

Do you admit the benefit or necessity of quarantine?—I should think it was necessary.

Do you not think the present laws of quarantine might be safely modified with regard to persons, without reference to cargo or goods?—I think that people arriving in health from suspected countries, might be admitted after a few days (say eight or ten days) to communicate with England, with the community at large; the length of the voyage materially bears on the question.

I ask you, whether you have had any personal experience of the plague?—No.

Do you know what the rules of quarantine are in this country?—I am not minutely acquainted with them; I understand that the time is sometimes 40 days in duration, and that the goods and clothes are ventilated or washed. I do not know minutely the laws of quarantine.

You do not know, then, that different periods of quarantine are assigned to vessels coming from different parts with different bills of health?—Yes, I always understood that there was a modification, but that few were below 40 days.

Are you aware that goods are classed according to the supposed power they have of conveying infection?—No.

In short, you are not acquainted with the regulations at all?—I am not.

So that you cannot say whether they are more rigid than necessary, or not?—I only state what I think would be quite long enough time for exposure to the air on the coast of England, before there was a communication with the people at large.

You have stated, that you have had no acquaintance in your own practice with the plague; therefore, the opinion you have delivered, with respect to its being infectious in the manner you have described it, is entirely derived from the knowledge



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of others?—Entirely from the knowledge of others, and reflection on their testimonies.

You have never, in the course of your experience, met with any case which impressed you with a belief that infection had been so communicated?—I never met with a case of the plague. I never met with a case where the peculiar symptoms of the plague were present.

When was you in the Mediterranean?—In 1800; I resided at Gibraltar hospital five months in the year 1800.

That was previous to the plague at Malta?—Previous to the plague at Malta.

I would ask you to explain what you mean by spontaneous production?—A fever, for instance, may arise without any visible cause.

As you consider the plague cannot be produced by spontaneous production, what is your opinion as to the case of the first person who takes the plague?—From latent contagious matter, dormant during a certain period of the year, and till a certain temperature or constitution of the air, or other adventitious circumstance in the person, gives it activity.

Then you suppose that the annual revival of plague is caused by latent or dormant infection?—Yes, called into activity chiefly by atmospheric influence.

Do you conceive that a certain quality in the air is necessary to bring forth the latent contagion; do you consider that, in the great plague in the reign of Edw. 3d, which spread over country after country, and carried off three-fourths of the inhabitants of Europe, the climates shifted; if from the year 1570 to 1665, there was a perpetual recurrence of plague in England, do you consider it probable that the same quality of the air could have been over England during a century?—With respect to the first question, the disease was probably produced by an epidemic influence, which will occasionally travel round the whole globe; for instance, in 1802, there was an influenza over most of the world. There was a fever in India a few years ago, which travelled nearly 1,000 miles, gradually extending itself in the direction of the monsoon, from near Cape Cormorin to the banks of the Carvery, and sweeping off 106,000 people. This took a considerable time to travel from one part to another; but went in the direction of the monsoon, affecting one district after another. That I consider as an epidemic influence which I cannot account for, excepting by peculiar states of earth and air; it was not contagious from individual to individual, but something in the air, which produced a general epidemic fever from south to north. I think it was some epidemic influence of this kind that spread over Europe; but from the time it happened, the descriptions are not minute; I hardly consider it the plague of the present day.

Do you consider that climates change?—I do; I think there are periodical changes, irregular in their returns, but bringing a constitution somewhat similar to former periods. This was the opinion of Sydenham, and is entertained by many at this moment.

Do you consider these changes as productive of disorders?—Certainly; and I think there are scarcely two epidemics precisely alike in their nature.

Do you consider the plague of 1665 to have been the regular true Levant plague?—I should think it was, and particularly from the eruption of buboes, which is the only criterion; the febrile phenomena in plague and other fevers, may be similar; the eruptions are the only sure distinctions.

Did you ever know buboes and carbuncles to appear in cases of typhus fever?—Glands suppurate sometimes, but very rarely; they are only exceptions to general rules; whereas, in true plague, the eruption of buboes or carbuncles is nearly as common as pustules in the small-pox.

Does every body who has the plague, also have it attended with carbuncles or buboes?—Not invariably; but perhaps 95 out of 100 have eruptions of one kind or other, unless the patients die in the first stage of the disease, previously to the eruption, (which is I think a sanative effort of nature,) or where nature is not ultimately able to bring out the eruption, even in protracted cases.

It appears that the plague was, at least, frequently recurrent in England for the greater part of a century, previous to 1665; in the year 1608 it is mentioned by a familiar writer, to be so prevalent, that houses were marked with a cross, and the words *miserere mihi* written on them to prevent persons from entering them; he particularly mentions the plague *spots*; would not that be a proof of the similarity of the plague



plague to the Levant plague?—It is a difficult thing to give a decided answer; where it is mentioned that they had the *tokens*, these were probably buboes or carbuncles; with respect to the *spots*, there is some difficulty in making up one's mind as to what they meant, they might mean petechi.

Dr.  
James Johnson.  
(17 March.)

*Veneris, 19<sup>o</sup> die Martij, 1819*

SIR JOHN JACKSON, BARONET,

In the Chair.

Dr. William Gladstone called in; and Examined.

YOU are a practitioner in medicine?—Surgeon to the Naval Asylum at Greenwich. Are you acquainted with the disease termed Plague in the Levant, and the contagion ascribed to it; and what is your opinion thereof?—I was at Constantinople in 1806 and 1807; and from having been then surgeon of His Majesty's ship the *Endymion* I there saw some diseases of the plague, and a great variety of Asiatic fevers, highly infectious.

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Was the plague at the time raging?—No; there is at all times more or less plague there.

At what time of the year?—It was in December, January, February and March, prior to the forcing of the Dardanelles.

Will you describe to the Committee the characteristics of the plague?—It is a disease attended by sudden prostration of strength and spirits, great apprehension, and many symptoms of a malignant type. From the little apprehension the Greek physicians I saw have to come in contact with the plague, I was led to feel the pulse of their patients, which I did with considerable apprehension. I do not consider the plague more contagious from contact than through the medium of the atmosphere.

What was the consequence?—I felt no bad consequences.

How many plague patients do you suppose you felt the pulses of?—I saw three, and took opportunities of visiting them several times.

How was their pulse?—Very quick and full, frequently alternating, indicating great arterial disturbance: they were stout men, slaves belonging to the arsenal.

Had they buboes or carbuncles on their bodies?—One had an enlargement in the *axilla*.

A bubo?—Yes; and two of them died of the plague I was afterwards informed.

From what you have seen of the plague with your own eyes, do you consider it as contagious?—I consider it as highly infectious. My opinion is that it is equally so through the medium of the diseased atmosphere of a sick chamber, as by simple contact, by feeling the pulse.

What do you suppose is the cause of the plague at Constantinople?—Diseased constitution of the atmosphere and other peculiar causes, such as effluvia and soil, which produce endemic diseases all over the globe; from the same causes as we have epidemic diseases in England, and from the circumstance of that city standing upon hills. Many of the houses are built on ground sloping to the south-west, consequently liable to the whole action of the south-west sun; all are badly ventilated. The streets are very narrow, and they do not I believe possess that grand source of health, common sewers.

Are you acquainted with the suburb of Pera?—Yes.

That suburb is chiefly inhabited by Europeans?—Chiefly by Europeans.

Is it true that there is generally less plague in that district than in any other?—Perfectly true.

To what do you ascribe that?—To the houses not being so close, or the streets so narrow.

Is there increased cleanliness in that district?—More I think in Pera than Constantinople.

What do you mean by infection?—Disease produced by a contagious state of the atmosphere. An epidemic state of the atmosphere produced by various causes; effluvia, virous effluvia, or by contact with a particular virus.



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Have you ever heard of the plague being in Great Britain or Ireland?—Yes; both, during the disease of 1665, in Charles 2d's time. There is an order in council by the honorable Privy Council, present the Lord Chamberlain, the Earl of Bath, Mr. Treasurer, Mr. Vice Chamberlain and Mr. Secretary Morris, ordering the College of Physicians to suggest measures, and give directions to prevent the spreading the infection of the plague.

Do you consider that was the real Levant plague?—No.

Why?—At that period, as far as I have been able to trace from a variety of old authors, there was scarcely such a thing as a common sewer. The privies were accumulated under every house, probably not emptied for years; and an order was given to empty them once a month. That order originated, I believe, in the college of physicians after the spreading of the plague.

As you do not consider that to have been what is properly termed the Levant plague, to what do you ascribe the sickness in 1665?—To the narrowness of the streets, accumulation of filth, and want of ventilation; and probably a diseased constitution of the atmosphere at that period.

Then you consider it was not the Levant plague; that it was not imported, but that it originated in England?—Yes; I believe that it originated in England.

Do you found your idea of its not being the Levant plague, from any historical description, or nosological character of the disease?—I have not been able to trace any decided fact of its importation; a circumstance of so much importance and general interest, if true, would I think have been marked by every medical writer and historian of the time. I look upon the narrowness of the streets, the filth of the city, the want of common sewers, and the state of the atmosphere at that period, to have been the causes, but particularly the want of common sewers.

Was it attended with buboes and carbuncles?—Yes, as far as I am able to learn; in some cases, not generally.

Did you ever see cases of typhus attended with buboes?—Yes, in the first instance, in some inflammatory constitutions.

Frequently?—Not frequently.

Have you seen the carbuncles in typhus?—I have seen an enlargement in the groin; the carbuncle in general comes on the back between the shoulders.

Have you ever heard of the plague in Great Britain and Ireland since 1665?—There was a disease in Dublin something similar, but I have not any correct information as to it.

In what year?—I do not know exactly; I believe soon after the plague in London, but I am not sure.

Do you consider that our quarantine establishments, have kept the plague from being introduced into Great Britain or Ireland?—No, I do not; I cannot say they have. From having been frequently under quarantine restraint myself, I have made it my business to visit most of the lazarettos between Gibraltar and Constantinople; but the source of disease is more frequently seen among the Greek vessels that carry cargoes to Marseilles, of which there was a great many sailed soon after the blockade by the British squadron under Sir John Duckworth.

If plague infection was introduced into bales of goods in the Mediterranean, do you suppose that the present conveniences and opportunities at quarantine establishments in Great Britain, sufficient to purify them from the infection?—I consider the lazarettos, as far as I am able to learn, particularly inefficient in fitment for that purpose; I mean with respect to ventilation and ballast.

Do you consider that the Levant plague can exist in a British atmosphere?—I think that is very doubtful; but I think there is great encouragement to nurse disease, if any is imported into the lazarettos. There are some of the lazaretto ships, as I am given to understand, where the shingle ballast has not been shifted for many years; and in many instances fevers have been produced, and nursed from this case, even in our men of war; the men of war formerly used to be ballasted with shingles; on turning this ballast, it has produced fever in several of the ships; that I have seen myself, but it is well recorded.

What kind of fever?—The usual fever of the station they happened to be on, or the place they were at; not the plague. It is a well-known fact, established among maritime people, that the health of our fleets, our troops in transports, and seamen in merchant vessels, have all risen in proportion to the degree of perfection at which we have arrived in cleanliness and ventilation.

Have you in your inquiries, ever heard of a plague case having arrived at or been seen in any lazaretto in Great Britain?—Never.

Do



Do you not suppose, that if the infection of plague had been imported in any bales of goods from the Mediterranean, which were opened for the purpose of being ventilated at lazarettos, that if the plague had existed therein, and was contagious, those expurgators would become themselves infected with the plague?—Certainly.

Would the circumstance of plague not having been seen for so many years in Great Britain, or in lazarettos, give sufficient confidence for concluding that the plague cannot exist in a British atmosphere?—I should think it would not give sufficient confidence; it would create great alarm if known to exist.

You still suppose it might exist?—I think that is a doubtful point.

Is not plague in plague countries periodical in its beginning and end?—Yes.

What is the state of atmosphere that you conceive compatible and not compatible with the existence of plague?—I look upon it that in cold dry weather, the plague does not so frequently exist. In hot weather, after floods, when the rivers, such as the Nile, have overflowed, and left marshes and ponds, the action of the sun in summer on such marshes and moist ground always produces disease, and frequently in the Levant plague.

What sort of temperature do you consider necessary to the existence of plague?—In the cases of plague I saw at Constantinople, the thermometer stood about the freezing point, from 26 to 30; it was in the winter.

Was the plague prevalent at that state of temperature?—No it was not, but there were always some cases there.

There were cases even during that state of the year?—There are always some cases at Constantinople.

Was you at Constantinople, or any other part of the Levant, at any period of the year when the plague was raging violently?—No.

Do you happen to know what the state of the atmosphere is, in which it is proposed to act most violently?—I believe a high temperature, from 66 to 76, and upwards.

Is there any reason, when there is a hot moist air in this country, and the temperature rises to that point, that the plague should not exist in this country as well as any other?—I do not think the summer heat ever rises so high in England, as in those latitudes.

As it appears that it existed at Constantinople when the temperature was nearly at the freezing point, is there any reason why it should not exist in the same temperature in any other country?—In most other countries, and particularly in England, the houses are better ventilated, more cleanly and well drained.

Then do you mean to state, that the probability of its existing in England, depends on ventilation, and the cleanliness of the people of the country?—Not entirely, but in a great measure.

Do you consider the plague in its character, as infectious or contagious?—I consider it equally infectious through the medium of the atmosphere of a sick chamber, as from simple contact, having experienced it so far as having felt the arm of a patient under plague.

As you appear to consider the plague as connected with the state of the atmosphere, when the atmosphere is in that state that it admits of the existence of plague, do you then consider it an infectious disorder; I mean when the air is in that state as to produce a liability to infection by the touch?—I think it is impossible to come in contact with a plague patient, without inhaling the atmosphere of his chamber; and that we are more susceptible of infection by the membranes of respiration, than those of the fingers.

Do you confine it to the sick chamber, or to the general atmosphere?—The surrounding atmosphere of the chamber; the atmosphere of a sick chamber is more infectious than any other.

From any experience that you have had of the plague, have you seen instances of its being communicated any other way than by the touch?—Not in any way; I have never seen an instance of its being communicated.

You have stated, that you were present when there were cases of plague?—When there were plague patients at Constantinople, I made interest to view them, with the Arabian physicians.

State the circumstances of your visit?—I saw him approach the patient, and feel the pulse, without the least fear; and upon the second view, but with some apprehension of contagion, I was induced to do the same.

In what stage of the disease?—One patient had been ill a week, and was recovering;



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the others had been ill two or three days; I understood they died: the one of the week's illness, I understood to have recovered.

Were buboes and carbuncles on these?—One in the *axilla*.

Were these all the cases that came under your observation?—These were all the cases that came under my eye, that were decidedly plague; I saw a great variety of Asiatic fevers.

Do you attribute its not being communicable by contact, to the state of the air?—I consider that the plague is not more liable to be communicated by contact, than by inhaling the atmosphere in a sick room.

Then you believe it is equally communicable by both, either by contact or inhaling?—It is impossible to approach to contact without inhaling the atmosphere of a sick chamber.

What length of time was you at Constantinople?—I was there three or four months.

Do you consider these points of metaphysical temperature of air so useful and decisive in the investigation of disease, as the plain fact, whether the disease has ever existed or not for many years?—No, I do not.

Then you consider the plain fact, where it has not existed, the best criterion?—The best criterion; but I do not consider we have arrived at sufficient knowledge with respect to air, so as to ascertain these facts perfectly.

As you touched the plague patients and felt their pulses, and did not receive the disorder, would not that rather convey the idea that the plague was not contagious?—That would depend upon the state of the atmosphere, and on the state and constitution of the individual who had touched the patient; and whether there was a predisposition to receive the disease or resist it.

Did you make the subject of the plague your study, while you was in these places?—From being frequently under the restraint of quarantine, I thought a good deal upon the subject, and read a good deal.

Did you pursue that by inquiries in the country?—By inquiries at the places we touched at; I made a point of visiting the lazarettos when I was on quarantine, and permitted to do so; where there was no lazarettos, I made a point of getting information from medical practitioners.

Were these practitioners Greeks or Turks?—In Constantinople there were Greeks, Armenians and Arabians; some few Italians at Pera.

Were they people who entertained the same opinion on the subject of Predestination as the Turks?—Most had not; some had; that is an opinion they do not avow.

I would ask, whether they stated to you that they considered there was any danger in the use of the clothes of the persons who had died of the plague?—Yes; certainly.

Then you infer, that the plague may be conveyed by clothes or other things, than the touch?—Certainly.

Have you any means of knowing what length of time packages may be conveyed, supposing the air not to operate upon them, or any clothes or materials used by persons having the plague, before they lose the power of communicating the infection; state, either from your own experience or information?—That entirely depends on the ventilation of the packages.

If the packages are not subject to ventilation, you are of opinion that the plague may be conveyed?—It depends on the state of the atmosphere. What I conceive as to cotton is, that it depends on the state of the cotton when it is brought on board. The Turks are a people very superstitious; when a person dies of the plague, they put the corpse into a shell, and sometimes the buboes discharge matter on carrying a corpse to the grave; this matter comes in contact with the dust, or if that dust should afterwards be mixed with cotton, and that cotton comes to England and meets with a diseased atmosphere, I cannot answer for the long conveyance, without ventilation, destroying the infection.

You have no reason to conclude it could not?—I have no reason to conclude it could not. I think a lazaretto properly fitted up with ventilating apparatus, so as to cause a current of air to be constantly percolating through the cargoes, the vitality of any contagion that might be conveyed to England, must be soon destroyed by that means.

Are not animal substances, such as goats' skins, particularly susceptible of infection?—They are; goat skins and hair skins, and Turkey carpets.

Do you think that the bales of goods which are closely packed, and come from Constantinople, admit of such a ventilation without being completely opened, as to give security?—No; it depends much on the state of ventilation at the lazarettos.

I am



I am of opinion, that the airing process might be as efficiently performed, as it now is, in a much shorter period, by a different fitment, attending to the state of the ballast and hold, which in every ship is important, but in lazarettos most particularly so.

You stated, that you thought that one of the things that contributed to the plague, was the stagnant water?—It always contributes to disease.

Do you know that the plague is frequently prevalent in Egypt?—Very well.

Do you happen to know at what period the Nile rises and falls?—I believe it begins to fall about August. I have not a perfect recollection of the history of the Nile.

Do you not know, that the Nile rises during the summer in hot weather, and subsides during the winter?—It subsides during the autumn, I think.

Is plague prevalent in Egypt, during the winter and autumn?—It is more prevalent in summer than in winter.

That is, it is prevalent in Egypt at a time when stagnant water is not found?—Yes, at all times.

After what you have stated, I should like to have your opinion as a physician, whether you would take on yourself to advise, on your own responsibility, the relaxation or the material relaxation of any of the precautions in this country, to prevent the communication of the plague?—That is a serious question; though I have not a doubt but what the quarantine might be with safety considerably diminished, under certain regulations of ventilation and fitment, in lazarettos; yet it is a thing of so much importance that it ought to be proceeded in with the greatest caution.

Do you think any distinction might be taken between persons and goods in quarantine?—Yes, I do.

In what period do you think persons would be safe from Smyrna?—As much quarantine in general as the men of war perform, three days. At Malta, coming from the Morea, I remember bringing a passenger, who was very anxious to go on shore, and they let him out in three days.

Did you ever hear of inoculation for the plague?—Yes, I have, by Dr. White, whom I knew well; the patient died under the disease. I am not sure it was the plague, or whether the disease he died of was from inoculation.

Do you make a distinction between ships of war and merchant ships?—Certainly.

Do you consider it more likely that the infection should be received in the internal part of a bale, or the outside?—That depends on the state of the bale of cotton; the state it was embarked in, whether moist, or perfectly dry.

Is it not likely to exist in the internal part of a bale?—Certainly infection is.

And therefore if it does so exist, according to your doctrine, would it not communicate plague, unless properly purified and ventilated?—That I consider very doubtful; but I should be very desirous to avoid the risk, by having it ventilated.

Do you believe, that the plague can be imported into Great Britain?—I should think it possible, certainly.

Do you think it likely?—No; and I think the vitality of the disease might be soon destroyed if it was.

And therefore you consider it could not long exist in England?—I think it could not long exist in England.

If the air was in a state which admitted of its existing at all, and it was once communicated, what reason is there to believe it would not be generally communicated; why would it not spread?—The disease would be weakened, in the first instance, in the lazarettos, by ventilation and fumigation.

I am assuming a case where there is no lazaretto?—I see no reason why it should not spread, except that the English people are more cleanly, better ventilated in their apartments; and the common shores and drains carry off all filth, which is a great cause of the spreading of the plague in other countries.

If it got among the lower orders of people, who are extremely crowded together in large towns, might it not then?—Certainly, but they would be immediately separated.

Do you think the plague more infectious than the small-pox, or measles, or typhus?—Yes, perhaps more infectious than any other disease; I have never seen any infection from it; I have from all the other diseases named. In the hospital I have now charge of, I had four years ago, about 82 cases of measles of a mild character; I was desirous of two girls being infected, I placed them in the wards, neither of them took it. I changed their linen; they both took it, and passed the disease mildly.

Did you ever know cases of typhus in which there were buboes as in the plague?—



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In high inflammatory constitutions, I have seen an enlargement of the groin, probably a sympathetic enlargement, in the first stage of the disease.

Do you consider the buboes a distinctive character of the fever called The Plague?—I should think so.

Is the typhus fever, such as we have it in England, a common disorder in those regions where plague prevails?—It is not so prevalent, but it is more fatal; the bilious remittent fever is more common.

The typhus exists distinctly from the plague, though not so common?—Distinctly, though not common.

Do you think that different regions, according to their different circumstances of climate, soil, and construction of cities, produce among the people at certain seasons of the year, fevers of a particular character?—Yes, certainly.

Do you think that one case of such fever being contagious, and the contagion transported to another country, where the circumstances are different, they would establish themselves in the other country?—No, only partially, if at all.

Is that your general opinion as to the probability of the plague being transported from the Levant, and communicated to other countries?—Yes; although if it was imported into England during a diseased constitution of the atmosphere, it might do great mischief before the vitality of the disease was overcome.

But you think it could not long survive its importation?—Not long.

And so you think of all other fevers?—All others that are not endemic of the country.

All other fevers characterized by particular circumstances?—Yes.

Do you suppose the atmosphere of England has been applicable to the receiving or generation of plague, for the last one hundred years?—No; this country and every part of the world inhabited, has been more cultivated, underwood near cities has been cleared away, and swamps drained, which has contributed much to rendering the disease milder.

Does not plague occur near the Mediterranean, where quarantine laws are rigid?—Yes.

Do you suppose the plague to be introduced into these places, or generated in the places themselves?—I have never been able to ascertain as a fact the introduction of plague into any place; I have heard it attributed to men and to goods, but never of my own knowledge.

Have you ever heard that the plague which prevails so generally upon the coast of the Levant, has been spread eastward over the continent of Asia?—I believe it has made some progress, but not always eastward.

I should be glad to know your opinion, founded on your general knowledge, why the plague should not proceed eastward through the continent of Asia, by land, as probably it is communicated westward, by persons and goods transported on board a ship?—I consider that as entirely depending upon the diseased state of the atmosphere in these places; and as to its being communicated westward, by persons and goods, I never knew it so communicated.

You must have heard that the plague is frequent in Aleppo, and that the caravans proceed regularly with goods in bales from Aleppo eastward through the continent of Asia; have you ever heard of the plague being communicated by these caravans, to the eastern country?—Never.

Why should not the plague be carried in bales of goods transported to Asia eastward, as well as brought by goods or persons on board ship westward?—I see no reason why it should not.

Does your knowledge of the practice of countries eastward enable you to say, whether the transportation of goods by caravans is calculated in any way to prevent the communication of the plague?—No; but I have seen the unloading of a caravan; the goods are not so closely packed in caravans as in Levant ships. You are aware of the mode they adopt in ships; the cargoes are screwed down; they often raise the beams of a ship in forcing the goods down; and consequently they are more liable, from their close stowage, to retain infection, if infection is embarked.

But the plague might as well be acquired by a caravan, as brought by a ship?—Certainly.

You say you was present at the unpacking of the caravans?—Yes.

Where?—At Constantinople.

From whence did they come?—I have seen one, I believe from Aleppo, I was only present at the unpacking of one, and I am not aware where it came from; they pick up goods the same as our waggons, every where on the road, I was told.

Do



Do you know that they come through infected countries?—I am not aware of that.

Are you not surprised that the expurgators of goods in lazarettos in Great Britain have never received the plague?—I should conclude from its not having been imported.

Then you suppose it has not been imported since the establishment of lazarettos?—Yes, I suppose so.

Do you think the epidemic disease under certain circumstances, may become contagious?—Yes, it certainly may become infectious.

Do you suppose that the plague has been imported prior to the establishment of lazarettos in Great Britain?—I never heard that it has been ascertained as a fact.

If it had been imported, would it naturally have occasioned the plague in the community?—Not naturally; it might have been destroyed by the climate, or by management.

How long do you consider the infection of the plague may be latent in bale goods?—I cannot exactly state what length of time it may remain latent in bale goods.

Do you know that there is no ascertained account of the introduction of the plague by importation, previous to the quarantine laws?—Not any that I am acquainted with.

Do you think that the concurrent testimony of all the old historians was merely vague report?—I am not competent to decide; I cannot speak as to that question.

Would you not rather be governed by modern facts, than historical reports?—Certainly, I would.

Do you consider the typhus fever a species of the plague?—Not exactly, but partaking of a highly malignant fever.

Does not Cullen call the plague a high state of typhus fever?—Yes, a high state of contagious typhus, but he never saw it.

*Dr. Augustus Bozzi Granville, called in; and Examined.*

ARE you acquainted with the Plague, and have you formed any opinion as to its being contagious; favour the Committee with your opinion respecting it?—I have seen the plague, and I have no doubt that it can be conveyed by an individual infected by it, to another in perfect health.

Where have you seen the plague?—In various parts of Turkey, Greece, Asia, Syria, Egypt, &c., and in Constantinople, where I resided two years.

What are the symptoms and characteristics of plague?—The symptoms are permanent; and during the time the plague raged in Turkey in 1812, they were permanent throughout the country. It is a sudden dizziness, great pain in the head, great prostration of strength, affections of the nervous system particularly; (there are no symptoms of inflammation whatever, not such as attend inflammatory diseases during their first attack;) sickness of the stomach occasionally, and the invariable appearance of glandular swellings, if it goes beyond sixty hours.

Is it not also attended with carbuncles?—With carbuncles and other pestilential eruptions, particularly livid spots on the body, partial mortification of the body.

What do you consider the cause of the plague in Turkey?—It is a question no practical man can answer; it is entirely unveiling the mystery in which all diseases are enveloped; I can only answer that it does exist, and is conveyed in the way I have stated.

To what do you ascribe our not having it in Great Britain?—To the regulations of the quarantine laws. It appears to me, as far as I can judge of the nature of a disease without knowing its origin, that being endemical at certain particular parts of the globe, it might explain why it is not peculiar to this country unless imported.

Does it not often appear in places in the Mediterranean, where the quarantine laws are severely rigid?—Never, except in lazarettos, or where a violation of those laws has taken place.

Then you conceive it must be imported, and that it cannot originate in those places?—It does not originate; certainly not.

What precautions are taken to prevent infection, by the Frank inhabitants of Smyrna and Constantinople, and other places visited by the plague?—If they can afford it, shutting themselves up in the houses before communication with persons infected; if they are obliged to go abroad, as some are, such as physicians who have their livelihood to get, some wear oilskin dresses, oilskin gloves and other medical

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precautions to prevent breathing the infected air; others anoint themselves with oil, and avoid contact as much as possible, under a strong persuasion that contact produces disease. In Egypt and Syria they shut themselves up as soon as there is a rumour of the plague, and never quit till the dews fall, that is, till St. John's day; then they come out, and proceed to church in order to sing *Te Deum*.

During the prevalence of great disease in any of these towns, did you ever know the plague destructive in the families of the Franks, who avoid contact with diseased persons?—No one instance, where contact or some other conveyance, by goods or other articles, could not be ascertained. If the Committee will allow, I will state a circumstance as to the house in which I lived myself. The house was one of the chief houses of the Hospadar of Wallachia, Prince Suzzo; that was the house where I lived for eleven months, during which time, at one period, in 1803, the plague prevailed; the precaution of shutting up the family immediately on the appearance of the plague, was never omitted; and no one case was on record in the family, of any plague having occurred within the walls of it.

Could such a circumstance possibly have occurred, provided the plague had been an epidemic disorder; could the shutting up of one house in an infected city save the family?—Certainly not. But the plague is not epidemic. I can bring cases in support of the assertion with regard to the plague not being an epidemic distemper, and that it does not depend on atmosphere or ventilation.

Do you not conceive, that in the case of contagion, the state of the air may have the strongest effect in stopping or promoting the effects of the disorder, as you have instanced in the case of the procession on St. John's day?—It may render the person exposed to the contact, more or less liable to feel its effect, but will not operate in checking the disease.

To what do you attribute the periodical appearance of the plague in the spring and autumn?—Because the seasons have an influence on the character of the disorder, the same as in this country; in winter you are more likely to catch a cold or catarrh.

Can you guess how plague was originally produced?—I should premise by stating that the impossibility of ascertaining the origin of a disease does not do away with its existence. Every medical man has attempted to form an opinion; and, I should state in answer, it is most probably an endemic disease, at some particular parts of Egypt. The first mention of it is as coming from that country.

What authors do you refer to?—First to Thucydides; though I am myself of opinion, that the plague of Athens, mentioned by him, was not the plague of the present day. The other authors are Muratori, Guastaldi, Foderé, Nacquart, and very recently Jourdan and Valli.

Are cases of plague pretty frequent in the division of Constantinople called Pera?—Not so frequent, of course, as in Constantinople, because every Frank takes precaution against the disease.

Is the suburb of Pera differently built from Constantinople?—It is a little more elevated, and is a long narrow street; as to the houses many of them are of stone, whereas in Constantinople they are chiefly wood; and the streets are wider at Pera than they are at Constantinople, generally speaking.

Is Pera upon the whole, from its situation, a more airy place than Constantinople?—More than some parts.

Do you think Pera is a less likely situation for the production of any disorder peculiar to the climate, than Constantinople?—I should say that there is no difference, except with regard to the crowded state of the houses, the topographical difference would not make much. The street leading from Constantinople to Pera is one of the dirtiest streets in Constantinople.

Have you been at Aleppo?—I have been at Aleppo.

Do you know that caravans proceed very frequently for the conveyance of goods from Aleppo eastward, through the continent of Asia?—Certainly.

Have you ever heard that the plague was conveyed by those caravans, eastward, so as to establish itself?—Not except among some of the few thinking Christians; the mass of the people never think of the disease at all; I have heard it among a few persons I have conversed with, and who thought the plague could be carried.

Has it actually been carried eastward?—I have no knowledge myself.

Do you believe it?—I do believe it.

Have you heard so?—I have heard so, but I do not know it.

In cloth carried eastward?—In the caravans leaving Aleppo; I have no knowledge myself of the fact.

Have you ever heard of any city, to which the caravans proceeded, becoming the seat



seat of the plague?—Damascus, in 1804; it was carried by the army of some Pashwa, who had been on the coast to assist in the reduction of Jean d'Acre. Bagdad is often, and has been lately infected with the plague.

Have you heard of any other instance?—None from Aleppo.

And none of the plague carried eastward?—Not to my own knowledge.

You have not heard of the plague establishing itself, and destroying the inhabitants, in any of the interior cities of Syria, except in Damascus in 1804?—I have had no means of investigating that.

Have you ever been in Smyrna?—I have been in Smyrna.

At the time of the plague?—Not when it was very prevalent; but when a few cases were reported to the different consuls, so as to induce them to give to the vessels a bill of health, which is called A Suspicious Bill, *touched*; that is, infected.

Have you ever heard of the plague being communicated from Smyrna to the interior cities of Asia Minor?—I have not heard any particulars.

Have you ever heard of the plague being at Brusa in Bythia, eastward of Constantinople?—I will not take on myself to say.

Have you heard of the plague being communicated westward of Constantinople, over land to Adrianople and other cities?—I have.

To Adrianople?—Yes.

Do you know instances of the plague being destructive at Adrianople?—I believe the plague raging in 1812, was nearly as fatal as it proved at Constantinople.

Have you heard of the plague being communicated from vessels from Smyrna, to many parts of the Levant?—Continually.

What is your opinion as to the infectious nature of the plague to be carried in bales of merchandize?—If the word infectious is to stand in my examination, I beg leave to qualify it. The plague is not infectious, as the yellow fever is; but it is contagious, which explains the way in which it is carried; for infection cannot be carried.

Explain the difference between infection and contagion?—Contagion is a mere mode of action resulting from the habit of certain diseases, to affect individuals; it is not a principle, such as the electric fluid and such kind, as many persons give an idea of in their writings, flying about the air. Contagion expresses this: during such a disease as the plague, there are certain animal emanations which partake of the morbid state of the body from which they issue; when these are applied by direct contact, or by any mediate contact, namely, objects on which these emanations rested, to an healthy body, it will contract the disease. Infection is this: infection is a peculiar state of the atmosphere, which has been rendered unfit for the healthy exercise of life, by the crowding together of a number of persons ill of the same fever, in a given place, and during a given time; thus an epidemic may become infectious.

You mean epidemic influence; what is your opinion of the contagious nature of the plague to be carried in merchandize from one country to another?—The answer is included in the one precedently given; I stated that the plague, and two or three other contagious diseases, seem to give out, as the body does, certain emanations, which must partake of the same disease as the body; if these are applied to goods liable to receive and nurse it, even then the principle of the disease (if you call it the principle, but I am averse to such a name) may be conveyed, by such articles containing the emanations being carried about.

Do you think that articles so contaminated by the matter of the plague, would retain the matter for a long time, so as to communicate the disorder upon being touched?—There are examples, and those very authentic, proving that this matter of the plague can, if applied to an healthy body, cause the disease to break out even at a very long period after; and I should mention several months. There is one instance in point, among the most recent, and it rests on the highest authority. During the plague at Corfu in 1815, one of the villages which had been infected several months, had for sometime, I believe for 43 days, exhibited no sign of the plague, owing to the measures of segregation adopted by Sir Thomas Maitland; the village was reported to be released, and fumigation, preparatory to its receiving *Pratique*, ordered; the officer who had the *surveillance* of the village during the three or four months had resided in the church, from there being no house that was not thought infected, in which church the people and the priest had been crowded just before the laws of segregation were ordered by Sir Thomas Maitland; some of these died subsequently, for the church was ordered to be shut the instant the plague begun. It was therefore necessary to purify the church before the people could go in again, as well as the village altogether. Leave being granted, the priest went in, and touched the cloth of the great altar, so



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as to shake it to purify it, when he was seized with the plague, beginning with the head-ache, so as to cause him to fall on the steps of the altar almost immediately; and in three hours before, he could be carried to the lazaretto, he expired, with buboes under the arm and livid spots over the body.

I thought you said in a former part of your evidence, that the buboes only appeared when the disorder continued certain hours?—When it continues sixty hours they are sure of coming, but they may be earlier. I merely said, that the glandular swellings must appear if the disorder goes beyond sixty hours.

Do you think, from your general knowledge of physiology, that the priest then took for the first time the infection of the plague, and sickened on the spot, so as to die of the plague in three hours from the time of touching the cloth of the altar?—From analogy to the rapid action of other poisonous substances with which I am acquainted, I should think there was not the least doubt as to the priest having been infected for the first time.

And do you think he took the disorder by contact through the skin of his hand with which he touched the cloth, or by any effluvia from the cloth which he might have inhaled at the time, when he went so near as to touch it with his hand?—Certainly through the skin; because, if the effluvia had arisen from the cloth there is no reason why the officers who had resided there two months shut up in the church, should not have felt the effect.

Did he fall down upon the steps of the altar, immediately after touching the cloth?—He was seized with a dizziness of the head; touched with the plague: there came on dizziness, and he fell in a fainting fit; he was seized with the plague. It is the usual expression; the case is stated thus: he was seized with the plague, and died in three hours afterwards.

Do you believe the case to be exactly as you have reported it?—From my knowledge of several facts, such as I can have no hesitation in believing.

Have you seen such instances yourself?—I have not seen them myself; but I have had them from such good authorities, where I met with them, that I cannot doubt their truth.

And such an event is agreeable to your general knowledge of physiology?—Certainly; I do not see any law in physiology that can prevent the belief that virulent poisons can be carried into circulation, and go through the lymphatic system in less time.

Then, according to your opinion, the plague must be brought; the contagious matter of the plague must be brought either by persons or in bales of goods on board ship from the Levant to England, and persons touching the infected portion of merchandize packed in these bales, must exhibit such phenomena in the lazarettos in England, as you have described to have been reported to you to have happened in the village in Corfu?—Without the smallest doubt, that is my firm belief; cases in point have happened at the lazaretto at Leghorn since 1814; at Marseilles within fifteen years, twice; and recently, according to the dispatches of Mr. Hoppner, the British consul at Venice, in October 1818.

But you have not heard of such instances in the lazaretto in England?—No.

Have you ever heard of the plague being caught by any of those persons appointed to see the quarantine laws put in execution in the lazarettos in England, and who in discharge of their duty must be liable to such communication with goods and persons, as would expose them, one would think, to the contagion?—I have not heard of any cases of the kind happening in England to my personal knowledge, but I have never made inquiry in England.

Do you think it extraordinary, that in the lazarettos in England, none of the officers appointed to carry the quarantine laws into execution, should not have caught the plague?—In order to answer whether it is extraordinary or not, I ought to know whether a vessel arriving at a lazaretto has performed any quarantine or made any stay in the Mediterranean ports; whether they have come direct; whether before the bales have been touched, there has been purification and other means of precaution observed.

You have stated, that the contagious matter of the plague being entangled in goods fit to preserve it, may remain in a state to communicate the disorder for many months?—I do think so.

Do you not think it likely, that by some accident in a long course of years, from the contagious matter of the plague, and from the nature you think it to be, it might have been introduced into England from the ports of the Levant?—I should humbly conceive, that its non-appearance in England does not do away with the contagious nature



nature of the disease; it must be supposed that the goods had the plague; I should say then, that the expurgators could not avoid having the plague.

Then, as they never had the plague in our lazarettos, you naturally conclude that those goods which arrived, were not on their arrival infected with the plague?—Certainly not, if they had been touched by several individuals on their arrival before purification, and they had not excited symptoms.

Are you aware, that during the prevalence of the plague in the Levant, goods are in general not allowed to be shipped for England under the quarantine laws, till after the disease has ceased?—I am perfectly aware of it.

Would not the length of time after such goods were shipped, and the length of the road to England being so great, be sufficient to account for the contagion being considerably weakened?—If the length of time is very great between the time of shipping and unloading, and if certain circumstances have taken place, either on the removal of the cargo during the voyage, or in altering it, or the vessels meeting with bad weather and being washed over and over again, it is not improbable to suppose that part of the plague-matter, if any existed in the cargo or attached to any part of the vessel, may have been weakened in its virulence; but I beg to give that as a supposition, and not as my belief, because we know that all poisons may be qualified by many circumstances, so that the strongest may not have effect. A barrel of gun-powder may not take fire with a red-hot poker, under certain circumstances; that is, if by moisture you render it incapable of combustion.

Are not different persons, in different climates, more or less susceptible in various degrees of contagion?—No doubt: the prevalence of certain circumstances, both with respect to individuals and climates or seasons, would very much forward or diminish the chance of the person receiving the effect of contact.

Would not those circumstances, and the length of time which elapses in a voyage between the Levant and England, account for the very rare degree of contagion which has taken place in England, without supposing the impossibility of it?—I should think it scarcely probable, that if what I have called a contagious matter is in the bales of goods, unless the period of time is very great, that it would fail to excite the disease.

Would that account for its not having taken place during the last 154 years?—The only way I can account for its not having taken place is, that it was never shipped from the Levant; for though I admit there is a probability that circumstances will diminish the virulence; I do not admit, that if the disease is shipped on board, any circumstances will prevent its spreading.

Is not the fact of its never having occurred for 154 years, sufficient to inspire the confidence that it cannot exist in a British atmosphere?—Neither 154 years, nor six or seven centuries can give such hope, when we know that such a disease existed before.

Was the plague of 1665 the plague of the Levant?—No doubt, according to Dr. Mead.

Dr.  
A. B. Granville.  
(19 March.)

*Lunæ, 22<sup>e</sup> die Martij, 1819.*

SIR JOHN JACKSON, BARONET,  
In the Chair.

*John Green, Esquire, called in; and Examined.*

YOU have been many years treasurer to the Levant Company?—Yes.

Have you ever been in Constantinople?—Yes.

During what time?—I was there from the year 1774, to the end of 1780; six years.

During that period have you seen the plague?—Yes; a very bad one.

A raging violent plague?—Yes, in May, June and July, upwards of 200,000 people died.

In what year?—I think in 1778, speaking at this distance of time.

It was considered a furious raging plague?—The greatest that was ever known till about five or six years ago, when there was one rather more violent.

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Were you exposed to it yourself?—I was in the city the whole summer.

Did you walk about?—At first; till it began to be violent.

Did you take the plague?—Not that I am aware of; I was ill, and I had a fever about a week. I had a gathering in the throat, which broke out.

What month was this?—About July.

Some time after it began?—During the heat of it. They sent a doctor to see me, a Greek or Italian, who was physician to the Grand Signior's sword-bearer. He opened the door of the room, and desired me to put my tongue out. He asked me a few questions. He said, "I cannot come in, because (mentioning a person) I was called in to see a few days ago, and he was in the same situation you are, and as I was passing his house just now, I saw them carrying him out to be buried." I said I am not under any uneasiness, except with respect to the complaint in my throat.

How long might you remain ill?—About a week in extreme pain. With extreme pain in my throat so that I could not sleep; when I attempted to swallow, the saliva would make me start.

Did it break?—It broke internally. I had not slept for some days in consequence of the pain. I fell asleep, and I had slept for about 15 or 16 hours; when I awoke, I felt myself quite at ease and comfortable, with my head inclined on a chair at the side of the bed, and there was a deal of matter that had issued from my throat.

Was it white matter?—Rather yellowish: pus, I should call it.

During the other part of the time you remained in Constantinople, was the plague there then?—It did not cease afterwards.

What is your opinion as to the cause of the plague?—I think it is an epidemic, occasioned by a particular state of the atmosphere.

Do you consider it contagious?—I think it is contagious so far, that if you come in contact with the person actually ill, I should have apprehension in that case, just as I should of any fever.

Have you any decided reason why you consider it contagious?—No other than that, I do not think it of the nature of the small-pox. I do not think it can be communicated by the clothes or goods; by goods, certainly not.

What do they do with the clothes belonging to persons who die of the plague?—Sell them; they never destroy them.

Have you ever known the clothes to be the cause of the plague in other persons?—No; I have strong reason to think they are not the cause.

Why?—Because the people who deal in them are not infected.

Have you ever known any specific person who dealt with them, not infected?—No; but it is a general remark, that the dealers in clothes do not take the plague.

Do they do any thing with the clothes?—No, not the natives; the Europeans generally wash them, but there are so few cases of plague among Europeans that I do not allude to them. I will state the reason why I think they are not infectious. It is, that the plague frequently ceases suddenly; it ceases and does not recur for two, three, four, or five years; and the clothes not being destroyed, but generally distributed and worn as well as the bedding, I conceive that if they were contagious it would be impossible that we could be without the plague during that period.

Even the bedding is sold, you say?—Even the bedding is sold. There is a custom in Turkey, that if a stranger dies in the plague, the Governor or Pasha takes possession of his property, and the clothes are part of the property; and of course he orders them to be sold for his own benefit, and they dare not destroy them.

Then the governor is interested in the sale of the clothes?—Certainly; that is his perquisite.

Do you consider that the same person can have the plague more than once?—Yes.

Have you known instances?—Yes.

Decided instances?—Only from common report.

Is that the general belief of the Turks?—Yes; the general belief of most people; but there is a particular symptom, I have heard, that if a person has the plague with a particular species of buboe, I forget the modern Greek word for it; they call it the Blessed; when they have had that they are not liable to take it again so much, if they do, it is only slightly.

That is the prevailing opinion?—The prevailing opinion of the natives. The people of the country.

Have you seen persons who have had the plague more than once?—I have seen the Abbé, who had the care of the Frank hospital at Constantinople. I heard that he had had it 10 or 12 times.

Did



Did he acknowledge so himself?—Yes.

Had he been very ill?—I rather suspect he had not.

What was he?—He had the care of the Frank hospital.

He used to have it several times?—Several times, but he was not afraid of it.

Have you known particular shops where they sold the clothes?—They sell them mostly in the street, like Rag-fair, or Monmouth-street, opposite our own warehouses.

How near your warehouses?—The streets are very narrow; I do not think they are above twenty feet wide, so that you are obliged to pass very close to them in going to your warehouse. I cannot say that all the clothes exhibited for sale are the clothes of people who died of the plague.

But they make no distinction whether they belong to plague patients, or not?—Never.

State any facts that occur to you?—It had been generally conceived that the plague was put a stop to by extreme hot weather, or extreme cold weather, and I thought so too till lately. I am of opinion it is not the heat, but the effect of the heat. It is the fall of the dew that stops it, because the plague prevails at Alexandria, in Egypt, occasionally, till the 24th of June, at that time the sun has such power, that it occasions strong exhalations; a strong fall of dew, almost like rain; and it is so much a matter in course, that the people, on the 24th of June, who had shut themselves up, came out without any apprehensions at that time. And about five years since we had very strong fogs here in London for about 14 days, so that we could not see across the street. At that time I had a letter from Mr. Morier, consul general, dated, I think in February; in which he stated, that the plague that had begun to be very prevalent had all on a sudden entirely ceased; and that he could not account for it, unless it had been occasioned by the extraordinary continuance of dense heavy fogs; but that it ceased. When I received the letter, it occurred to me to inquire as to the state of Smyrna. At Smyrna it is expected to cease about the month of July, and generally does cease during the great heat. I inquired of a captain of a ship that had been many years in the trade, whether during the great heat at Smyrna, in the month of July, there was any appearance of dew. He stated, certainly; and upon asking his reason for giving me so direct and immediate an answer; he said he was certain of the fact, because during the hot weather the crew slept on the deck; but that in the month of July, when the sun became powerful, it occasioned such a heavy fall of dew, they were obliged to go below to sleep; it would have wet them through. This is what he stated to me; and I was very particular in asking the reason, because he answered so immediately. I wanted to know his reasons. I do not feel myself competent to decide why the dew has that effect. I always understood from the Armenians and other natives of Constantinople, that exposing clothes of infected persons in the night to the dew, would more effectually render them innocuous than putting them a week in the sun.

During the six years you was at Constantinople did the plague cease, and for what time?—Some months at a time.

Did it cease for two years?—It had not prevailed for two or three years when I first got there. I arrived in 1774, and to the best of my recollection the first instance of plague was the beginning of 1778.

From 1774 to 1778, you believe there was no plague in Constantinople?—None at all; at Smyrna they have been without the plague for three or four years. After the Quarantine Act was passed in 1800, I mean the first Quarantine Act, for the first Report we made was in 1800, (the quarantine permitting ships to come from Turkey with clean bills of health was in 1800) I predicted that we should not have any further foul bills of health, and I will state the reason. The bills of health are determined by the foreign consuls at Smyrna, upon the report of a number of Greek merchants who form a committee for the purpose. These merchants carried on principally the trade between Smyrna and Holland, that is, several were concerned; it was their interest to establish foul bills of health in order to keep the trade to themselves; because English ships could not come to England without going first to Malta or Leghorn, or some other lazaretto in the Mediterranean, to perform quarantine of ninety days. In the mean time the Greeks loaded cotton wool and other goods, and all the articles which constituted the chief object of the trade, in ships, which they sent to Holland: there they have no quarantine establishment. The practice in Holland is, to take a few of the goods out on the arrival of the ship, which they put into a lighter alongside the ship and cover up the hatchways; at the end of twenty-one days, the ship and lighter go up to the quays and discharge their cargoes; sometimes the cotton is transhipped in vessels bound to London without being landed. On their arrival in England they

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they were liable to fourteen days quarantine in Standgate Creek, where they merely cut a little slit in one side of the bales of cotton; after the end of fourteen days, the cotton was sent to London in the same vessel or in lighters, and of course immediately sold and distributed among the manufacturers, without any other precautions than I have stated. By these means the Greeks anticipated us, and we could not carry on the trade; but there is another reason even now, to influence the bills of health. The committee who decided on the plague or no plague at Smyrna, during the time of the plague when it was known to prevail, collected from the Greek community a certain sum weekly (I am not aware that they collected from other people.) That is for the avowed purpose of rendering assistance to persons afflicted with the plague, but there is no account rendered of the distribution; consequently, so long as they can establish the plague to exist, they collect these contributions. On the other hand, when there has been no accident from the plague, and clean bills of health are issued, then the community resist as much as they can the first allegation of an accident from the plague, in order to save their contributions. The plague is said to originate sometimes in Smyrna. It prevails most in particular low narrow streets, where the houses are so close that you can shake hands across the way, and which are inhabited by the very lowest classes of people; a place into which no European would chuse to go, therefore we do not go to investigate it: it is a situation where fevers must necessarily be expected, from the confined air and want of ventilation, and the concourse of persons existing in such numbers there. I also think the plague is not necessarily taken by contact; because during the plague in 1778, I have seen the man who brought provisions to me to my house where I lived, and who went errands for me, I have seen him a dozen times every day take off the bundle of clothes belonging to people who had died of the plague, Armenians. They are buried without coffins, but carried on biers; and when they are put into the grave, they bundle the bed and clothes into a sheet and bring them back again, bring them home. There was a winehouse opposite our house; I have seen our man who attended me, I have seen him take the bundles from the men's backs as they were returning from the funerals a dozen times a day, to go into the winehouse to get a glass of wine. I have also seen him very frequently assist people staggering in the street from debility, from illness to walk home to their houses, during the height of the plague; and I remonstrated with him on the subject, and he told me he did not trouble himself about the plague: he was very much in the habit of getting drunk, half drunk all day. I have seen him lie in the street, and persons passing the dead over him, kicking him out of the way like a beast or a log. When the plague first broke out, in 1778, the son of an Armenian merchant, opposite our house, was taken ill; and an intimate friend, a companion of mine, who was clerk in the counting-house of the Armenian, was sent with this young man that was ill, to a place called Ortaquey, a village about four miles from Constantinople, on the borders of the Bosphorus, and there he remained for nine days. At the end of that time the young man died, and it proved to have been the plague; my friend had attended him day and night, during the whole of his illness, and slept in the same room, on the same sofa probably, (for the sofas go all round the room,) and he was not at all affected by it, and did not take the plague. The family afterwards went to another village, where the English gentlemen are; it is called Buyakderé. About a month afterwards I was sent for by Mr. Abbott, to assist him for the post which goes once a fortnight, with whom I was. There I took the boat and rowed down to the other end of the village, where my friend was, to inquire for him. I saw him, and agreed to go fishing with him the next morning at four o'clock; and I went, but he did not come. I waited till five, and got a person to knock at the door; when he came, he told me he had had an unpleasant affair that morning. The servant had not got up as he had ordered him; he went to his room to inquire the reason, or to call him. The man said, "For God's sake do not come near me, I am very ill, and I have got the plague." He had been down to Constantinople two or three days before; this was at the very height of the plague, in July, I think. He said he would not allow the man to lie in bed; made him get up, and assisted him out of bed. He told him to have courage, that it was no such thing; he made him brush his coat and get his coffee ready, and then told him to go and get the boat ready. Not finding that he had done it, he returned to his room again, and found that the man had laid down on his bed; and he said it was impossible he could go, for he could not stand upon his legs, he was so ill; his head was fit to split; and he repeated, that he was certain it was the plague he had got. Upon this my friend immediately called up the master and mistress of the house, and they sent an old woman in the house, who had been a nurse to people in the plague, and who understood



understood the disease, to examine him; and she declared it was the plague the man had got. In consequence of that they sent him out of the house, down to their own country house, where the son had died; and this man died in about a day or two afterwards. About a fortnight after that I returned again to Buyakderé, and went to see my friend. He told me that he had had another unpleasant case, two or three days before. One of the maid servants had been unwell for some days, but she went about the house, with her head muffled up, affected. She said she had got the tooth-ache or a swelled face. He said he met her in the passage, and got hold of her and gave her a shake, and told her to hold her head up and not be moping about; that it was nothing at all. He spun her round by the elbow, and she immediately called out, and clapped her hand to her groin, and said that he had hurt her very much. He said he immediately suspected that it was something more than a mere cold she had got.

Did it prove to be the plague?—He sent the old woman to examine her, and they found it was the plague she had got, with a buboe; the impression on my mind is, that he said the buboe had been broken; it was in a state of suppuration; she was sent down to their own house, where the man was sent; but she recovered, she got well. During the whole of this time, neither my friend nor the master or mistress of the house, were at all affected by the plague; nor did I hear of any other person amongst them who was.

Then, you consider there are often instances of the plague, without its spreading in the community?—Yes; it has been a common observation, that if the plague exists at Constantinople and not at Smyrna, if persons infected with the plague go down from Constantinople to Smyrna, although they die there, the plague does not spread at Smyrna, and *vice versa*. It is generally considered, that if it is carried from one place to another where there has not been the plague, it does not spread. There was an English ship, last year, I think, or the year before, the *Smyrna*, captain Farmer, carried down two Turkish passengers from Constantinople to Smyrna; one died of the plague and the other was landed at the fort, about seven or eight miles off Smyrna. The ship was, on her arrival at Smyrna, ordered by the consul to perform 40 days quarantine, to be fumigated before they would permit her to take in any goods; but neither the captain nor any of the crew were affected by the disease; they did not take it. I believe there is no instance on record, of any English sailor dying of the plague on board the merchantmen in Turkey.

Do you mean British merchant ships?—British merchant ships.

Have you sought for information of such accidents?—Of course, it has been a subject of great interest to me, and I wished to investigate it; and I have thought their escape from it may probably arise, not only from the different habits, living freely and drinking wine; but also from the English sailors in general sleeping on board their ships, where there is a great difference in the atmosphere, from what it is on shore, perhaps eight or ten degrees.

Have you ever known fever arise from the moving of any quantity of earth near dwelling-houses?—No. Another circumstance is, all the European merchants in Turkey employ brokers, who do all their business, buying and selling for them; these persons go about freely during the plague, buying and selling goods, and collecting monies. I do not recollect any instance of any of these people taking the plague; I have only heard of two instances.

You never knew a plague case on board a British ship?—I have paid most attention to Smyrna. I have heard of instances, where the Greeks who are employed to stow the cargoes, but although they have been sent ashore ill, and supposed to have the plague, it has never infected the English sailors.

How does it happen, do you think, that the brokers never take the plague?—I cannot account for it.

Do they dwell in a different part of the town?—They do not live with the merchants; they live in different parts of the town.

What countrymen are they?—Jews and Armenians.

Do they abstain from wine?—No, they drink it freely.

Do they not use precautions?—I rather think not; there used to be a custom as to the mode of receiving money, rather different from what it is now; there was a small half tub with water inside the railing in the court yard, into which the money was thrown, and I used to take it out of the water immediately. It was supposed any thing immersed in water would be purified; they used to throw in the meat, and every thing brought in the house, except the bread and flour; the bread is considered not to be capable of infection.

Does the plague in Turkey generally decline suddenly?—Almost always.

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When any numbers are infected?—Yes.

Does it observe regular periods of commencing and ceasing?—Generally it prevails most towards the winter at Smyrna, and Constantinople in summer.

Then there is no apprehension in Egypt, Asia Minor or Syria, of receiving the plague from Constantinople?—A notion prevailed originally that the plague of Egypt was more dangerous than that which arises at Smyrna or Constantinople; and if a case happens, of a person infected coming from Egypt to Smyrna, and occasioning a foul bill of health, it has been generally believed that the plague would spread; but there is an instance, just occurred, which is directly in contradiction to that. I think about the month of November last, or December, a foul bill of health was issued at Smyrna, in consequence of some persons arriving from Egypt infected with the plague; but instead of the plague spreading at Smyrna, the letters received to the 11th February state, that the vessels which had sailed a few days before had sailed with clean bills of health, and that the plague had not spread.

You consider then, that the plague cannot be produced from goods nor from clothes?—I had always been of opinion that there had been danger in clothes, until I reflected on the facts which I have stated to the Committee this day.

What is your present opinion?—My present opinion is, that it is doubtful whether the clothes which are at all exposed to the air will be dangerous; I am convinced that the plague never has been brought from Turkey to this country, or to Holland, nor ever will be, by mere merchandize. I do not think that the plague was carried to Messina nor Marseilles by merchandize; because in both instances I had occasion to remark to the Quarantine Committee in 1800, that Dr. Russel, in his publication on the Plague, expressly stated, that the plague existed on board the ships at the time of their arrival in these places. The ship that was supposed to carry the plague to Messina came from the Morea, from a place where the plague had been very prevalent; some of the crew had died; she was only 36 hours coming from the Morea to Messina, and the captain himself was ill at the time, and he died within a day or two after he had communication with a person who smuggled on shore a box of jewellery. The ship that took the plague to Marseilles had loaded at a port on the coast of Syria, where the plague had not prevailed for two years. After she sailed from Syria a contrary wind forced her into another port on the coast of Syria where the plague had prevailed; and she took on board several Arabs, passengers, merchants, to take them to the island of Cyprus. Some of these persons were ill of the plague at the time, and died; after that the crew, some of them took the plague, and they had put into more than one port, and had been driven from other places, and had the plague on board actually at the time of her arrival at Marseilles. A passenger went on shore (for there was no quarantine establishment, at least it was not rigid;) the passenger went on shore, and shortly after the plague appeared at Marseilles. Dr. Russel states in his publication, that when he was at Aleppo, he heard that the plague had appeared at a particular quarter of the town, and, out of curiosity, he went to ascertain the fact. That he found a person who was ill, said to be of the plague; that he made him get up in his bed, and pulled of his shirt; he examined him, and found either a buboe or other symptom that satisfied him it was the plague he had. But, on going home, he recollected there were two English ships loading at Scanderoon, (which is the port of Aleppo) that were nearly loaded, and if he had mentioned that he had discovered the plague to exist, they must have had foul bills of health, and could not have come to England; therefore he said nothing about it, but went and mixed with his friends as usual. A few days afterwards he heard of other accidents, and did the like. I stated this to Dr. Russel as very extraordinary; I asked him what precautions he had taken. He said, he had fumigated his clothes and washed his hands with vinegar. But I observed that he could not at the time have entertained the same opinion as to the danger of the plague as a contagious disorder, or he would not have run the risk voluntarily of such an examination; and that if he knew of any specific, any thing that would prevent persons from taking the infection, I conceived he ought to publish it.

Was you ever at Aleppo?—No.

Do you know of caravans going from Smyrna inland?—Constantly.

Have you ever heard the plague was carried eastward by these caravans?—No; I have heard it remarked that the plague did not extend beyond Turkey.

What are the principal great cities?—Bagdad and Bussorah; they also go through Armenia to Persia.

Have you ever heard of the plague being carried to Bagdad or Bussorah?—No.

To Moscow?—No.

When you was at Constantinople, at the time of the plague, did you hear of caravans



caravans going to Brusa?—No; the goods are crossed by the Sea of Marmora; there is very little communication between Brusa and Constantinople. The vessels that take the silk from Brusa load at a port on the opposite side of the Sea of Marmora, opposite Constantinople; but it is in general carried by caravans to Smyrna.

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Did you ever hear of a trade by caravans to Angora?—No; I had so little communication with that place, that it is not possible I should.

Where do the caravans from Constantinople eastward go to?—They go from Scutari to Angora and Trebisonde; but we had so little to do with them that I had no occasion to inquire.

You never heard of the plague being taken?—I do not believe there is a Frank house established at Trebisonde; it is a wild country, and the inhabitants are savage.

Is the plague often carried westward of Constantinople to Adrianople?—I do not know whether it was conveyed; it prevailed there.

How far is the distance?—Three days journey.

About 100 miles?—Yes, I believe it is but three days journey.

Are there any regular caravans from Constantinople through Romillia southwest?—I should rather think so, but almost every thing goes by sea; they go as far as Salonica; very likely the expense would be too great.

What is the distance from Constantinople to Salonica?—It is eight or ten days for a messenger. I do not think it is above three days sail; much about the same distance as Smyrna.

You have stated, that you have often known and heard of the plague on board British ships, where the persons were not British subjects?—I have heard of accidents, rather suspicions of plague, which did not communicate to the British crew; only to the Greeks employed to stow the cargo.

Have you ever known a plague case in Great Britain?—I think the typhus fever is the plague in a milder degree.

Have you ever known any person who handled the goods in quarantine, infected?—Not in England.

To what do you attribute our never having seen the plague in England, for a great number of years?—I think it is owing to the state of atmosphere.

And you do not think the goods which arrive in the quarantine establishment, could produce plague?—No.

Do you mean to say only persons?—I should not apprehend the danger of the plague being brought by any way but by persons actually infected with it.

As you have never heard of persons infected, to what do you attribute it?—To the climate.

Do you conceive the climate materially altered since the plague in London?—Certainly; not only the climate, but the circumstances of the country generally, and especially London itself; the improvements in London render it generally less liable to epidemic disease.

Do you conceive the plague could exist in a city of the latitude of Edinburgh?—I should think not; I have many doubts as to the identity of the plague in London with the plague in Turkey.

Do you mean in 1665?—Yes; the symptoms do not appear to me to be the same.

Are you aware, that a great and extensive plague prevailed at Moscow, which is in the latitude of Edinburgh?—I have read of a plague in Moscow. I beg to state it is by no means my opinion, that the performance of quarantine should be abolished. I think that many modifications may be established without any risk, but I am by no means of opinion, that it would be proper to abolish the regulations altogether; not only because I conceive it necessary to have a proper examination of all vessels arriving, to see the state of health of the crew and passengers when they arrive; but I conceive it also absolutely necessary, that we should observe certain formalities of quarantine, on account of our connection with other countries where a more rigid quarantine is conceived necessary. If the quarantine establishments of this country were abolished, no matter why, it might occasion a prohibition of our vessels in other ports.

Have you had occasion often to go on board the lazarettos in England?—Yes; I performed quarantine in Standgate Creek, and have been on board the lazarettos.

Frequently?—Not frequently.

Do you know the process of ventilating goods?—Yes.

State it?—The English lazarettos are old men of war, with houses built upon them like an ark; the sides of these house are open like a brewhouse, with shutters, and the

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floors are all open gratings in fact, so that the ventilation is excessive on board these vessels in Standgate Creek, greater than it is possible to give on any building on shore. The ships also swing with the tide; that is, when the tide turns they change their sides to windward every six hours. I remember Sir Gilbert Blaine and Dr. Johnson went down to Standgate Creek to examine the floating lazarettos, and they stated the ventilation was the greatest they had ever met with. Dr. Johnson told Sir Lucas Pepys, that the ventilation was greater than the north-west winds on the coast of America.

What is done with the bales?—A different process is directed for different species of goods.

What is the practice?—In some of them, the bales are to be ripped open on one side, sufficiently to let in the air, and for different periods of time, for common bills of health and foul bills; in one instance they undergo 15 days quarantine, in the other 40.

Is the internal part of every bale exposed?—It is impossible; but certain articles are ordered to be emptied out of the packages; supposing a ship comes with a foul bill of health; supposing goats wool, the order is to empty it entirely, so that they ventilate the articles in bulk; but the bales that have been ripped open on one side, continue so for a certain number of days, when the side is sewed up again; and the other side of the bale is ripped open and exposed for a certain number of days, in like manner.

Do you mean the internal part of the bale?—They are ordered to introduce their arms as far as they can; the people who manage the expurgation of goods there, are ordered to push their arms in as far as they can; it is done for the express purpose of ascertaining whether there is infection.

If there was, is it not likely to be the mode of catching it?—I should suppose it was.

How many are ordered to be opened?—The whole in general.

Does that include silk?—Yes.

Cotton?—Yes.

What is done in respect of corn?—Corn is under a different direction.

Is it subject to quarantine?—Yes.

In the Mediterranean?—Only a nominal quarantine; they let it be taken out of the ships directly; they order a grating for the corn to pass through, in order that if there is any loose rag, it should be stopped. The practice is this; the ship remains a certain number of days, and if all is well, they discharge the goods; and if there are bags or mats, they are taken out.

If goods which arrive are capable of communicating infection, do you think it possible the expurgators could escape it?—Certainly not.

How many persons are employed on board lazarettos, on an average?—I do not think there are more than half a dozen, besides the master; I cannot say, Government go economically to work.

Would not that number be inadequate to ventilate cargoes from the Mediterranean?—If the cargoes were susceptible of plague, they ought to endure a process that would require more labour.

Do you think quarantine establishments prevent the introduction of the plague?—I have stated that I have no recollection of persons arriving who were infected, and that I conceive it is the only way the plague could be introduced; therefore, inferring from what I have said, I should think no infection could have existed for the last 200 years.

Do you think the plague can exist in this country?—I have stated, that I think typhus fever is the plague in a less degree; I look upon it it is the same disease, only that in Turkey, from the different habits of the people, there it acquires more violence: they live upon fruits, cucumbers, melons; eat very little animal food, and drink chiefly water, which in summer time is stagnant. Constantinople is supplied by water from a lake at a village called Belgrade, about 16 miles from Constantinople, by means of aqueducts, tubes or pipes underground, that were constructed by the Greeks and Romans. In the summer time that lake is very much dried up and exhausted; and the water becomes so bad in the public fountains, that I remember very often the Turks our neighbours coming to beg rain water from our tank; rain water that we had saved.

By typhus fever you mean the typhus that exists in Great Britain?—Yes.

Is that communicable by contact?—If you go into the same atmosphere; but it is not dangerous if the person is removed, and conveyed to where there is a pure air; I have the authority of Dr. Pym, who attends the board of trade.

Where



Where a contagious disorder is communicated by contagion to a person in a different climate, are you not aware that such contagion usually assumes a more malignant character than in the place where it generated?—I can only answer that as to the observation I have made of the plague in Turkey. I have before stated, that the plague carried from Constantinople to Smyrna very seldom spreads there; consequently I should rather imagine the contrary, that it would not; I beg to be understood as I have stated already.

You are not at all acquainted with the circumstances of the plague at Noya, in Italy, last year?—No.

Do you recollect about 1800 or 1801, there were two or three ships cargoes sunk at the Nore?—I have heard so.

What was the value of the goods so destroyed?—I do not know the value, because that was settled by the Treasury; 10,000 *l.* or 20,000 *l.*; they were under peculiar circumstances.

Were the ships destroyed as well as the goods?—I think they were.

What was the cause of their being so sunk?—I was examined by Mr. Pitt on the subject in general with the Quarantine Committee that were then sitting at the time. The circumstances were these: the ships had loaded at Mogadore, where the plague prevailed to a violent degree, so much as almost to have depopulated the place; and the cargoes consisted chiefly of goat skins, which had been collected during the time of the plague; they were turned with the hair inside, and they were packed in bales. I remember stating, that I conceived if danger of the plague could exist at all in merchandize, it would certainly be in these goat skins, and they were incapable of being opened and aired unless every skin was turned out again, which would have been a very dangerous operation; and therefore as they could not be expurgated by the existing regulations of quarantine, I submitted, that if danger of infection could exist at all, it might not be correct to subject any individual to the process of turning those skins. That was my opinion at the time; and after having discussed the subject, and taken the opinion of the persons supposed to be most competent to judge, the ships and cargoes were ordered to be sent down to the Nore, and sunk in deep water.

What did the cargoes consist of besides?—Gums are what are generally brought from Mogadore; but the principal part of the cargoes were goat skins turned inside out and packed in bales, so that it was impossible to air them. I stated to Mr. Pitt these circumstances, who seemed to be very reluctant to have these ships destroyed.

How many, and what size were the ships?—From 120 to 150 tons.

Three of them?—Three of them; I stated these circumstances to Mr. Pitt, but they were destroyed.

Did Government pay the value?—Government paid the value; I had nothing to do with it, but was sitting with the Quarantine Committee when I was sent for.

Did the value amount to more than 20,000 *l.*?—I should think it would, but I can only speak from conjecture.

*Dr. John McLeod*, called in; and Examined.

YOU have been brought up to the medical profession?—I have.

In what service?—The navy.

Was you the surgeon of Lord Keith's flag ship?—I was.

What ship?—The *Ville de Paris*. I also went to China with Lord Amherst; and I have served much in tropical climates, and in the Mediterranean.

How many years in the Mediterranean?—I think, altogether five years, from 1808 to 1812, and in 1802 a short time.

Have you seen any case of the plague?—I doubt very much whether I have.

Have you formed any opinion of the plague?—Only from hearsay, and therefore I feel a diffidence in giving an opinion. On the coast of Barbary we had some suspicious cases, on board the *Volontaire* frigate. They were of a very malignant nature, but we soon got rid of them.

Was the fever contagious?—It appeared to be so, for the men attacked were of the same mess.

Was it attended with buboes?—No. I am not sure whether one man had not a swelling in the parotid gland. It was the only fever I have seen, which I suspected of being the plague.

And you consider the disease to have been contagious?—I had no doubt about it; it looked more like contagion than I recollect to have seen before or since. I have not seen contagion existing in the yellow fever, although I believe it may exist.

*John Green,  
Esq.  
(22 March.)*

*Dr.  
John McLeod,*



Dr.  
John M'Leod,  
(22 March.)

Do you consider the Gibraltar fever as contagious?—I was not at Gibraltar at the time of that fever; but I conceive that any fever may become contagious when people are crowded up together; under bad management, without ventilation and cleanliness, a fever will become highly contagious. At the same time, I believe, we have much less to apprehend from contagion than is generally believed. I had lately an opportunity of witnessing a very bad fever at Batavia, where we were under circumstances extremely favourable for the operation of contagion; and yet, although we were very crowded, having been lately wrecked, and at the time huddled together in a transport, yet, by using proper means, such as free ventilation, and doing our best to prevent the accumulation of morbid affluvia, no case appeared to arise from infection: those men who were ill, having evidently become so by sleeping in Batavia, and getting drunk there.

Then, do you think the plague should be considered under the general description of fever?—Certainly. People are said sometimes to die before the usual febrile action takes place, but that does not take away the character of fever which it possesses generally.

Have you ever seen or heard of any thing like the plague in Great Britain?—Never.

To what do you attribute that circumstance?—To the improved state of society. We have had a fever in England resembling the plague, with buboes and carbuncles, as appears in history.

In 1565?—Yes; but the means resorted to on that occasion, like the measures among the barbarians in Turkey and Africa, were calculated to propagate rather than prevent the disease.

If goods were infected with the plague, is it not most probable that they would affect the persons called Expurgators at the different quarantine establishments?—Were the disease capable of being brought to this country by means of goods, many circumstances of that sort must have occurred. This I give as a matter of opinion.

Do you consider the goods can retain the infection and communicate it to other persons?—I can only say as a mere matter of opinion on this subject, that in the place where the plague exists, a man sleeping in the same blanket previously used by a diseased subject, would be very liable to be seized with the complaint; but I believe the blanket might be sent from Smyrna to London, and it would not there be infectious. It appears to me that a sea voyage does not agree with the plague; for the Americans never carry it across the Atlantic; and I believe it would die a natural death or become extinct before it got round Cape Finisterre.

Must not that depend much on the length of the time of the voyage?—No doubt that would have an influence. I can easily imagine that the plague may creep from town to town, by daily importations of infected people coming directly from the sphere of contagion; and in this way it may extend itself to a great distance along a continent, the season and other circumstances being favourable to it; but in 200 years not one instance has occurred of its having lived across the Atlantic, or of its appearing on the coast of England in any ship.

Do you make any distinction between infectious and contagious?—The word infection I conceive to mean the act of transferring disease from one body to another in whatever way it can be done; contagion is receiving disease by the touch alone.

You consider cleanliness and attention to the lazarettos very important, particularly as to the shingle ballast?—Certainly; the shingle ballast I consider a very improper thing.

Do you consider that the quarantine establishments in this country have prevented the infection of the plague?—Surely not; because the plague has never made its appearance through shipping. Quarantine could not certainly have prevented men arriving with the plague on our coasts; and the expurgators, or men employed in opening the goods, must have been attacked by the disease at one period or other, had it been possible to import it in this way.

Do you know of any better mode of treating the probability of the arrival of the plague, than the present quarantine establishments?—I do not know that any thing more is necessary than to inquire of every ship that arrives, whether they are all well on board; and if any men are ill of fever, to treat them as you would other people.

Would you prefer sending them ashore?—I would put them in an hospital, tent or barn, and treat them as rational beings, and not like mad dogs, by cutting them off from society and assistance, and exciting fear and alarm. The depressing passions are much to be avoided. I can see no reason why seamen should be used in the  
common



common rigorous way, when they happen to arrive with fever, more than persons in Birmingham and Manchester, where there are typhus fevers prevailing every year. In my own mind it is fully established, that we have nothing to fear from the importation of the plague from the Levant to London; and I ground this opinion upon the simple fact of long and great intercourse, without the disease having once made its appearance by a ship. We have tried the experiment sufficiently long to be satisfied that we have nothing to fear from the importation of goods.

Do you consider the typhus fever a species of plague?—I conceive that almost all fevers have a certain connection; but typhus cannot be considered to have a close resemblance to the plague, for it wants its distinguishing marks, the buboes and carbuncles.

Do you consider it contagious?—I think it is.

Is the yellow fever?—Any continued fever is contagious, where you cram people together; but neither typhus or yellow fever is likely to be so, under good discipline and management.

Have you seen the quarantine establishments in any part of the Mediterranean, or obtained any information respecting them?—At Port Mahon I have seen the quarantine establishment.

Is it very rigid?—Very much so.

Any other place, Malaga?—No quarantine was in force at the time I was in Malaga.

Have you seen the quarantine establishment at any other place besides Port Mahon?—No.

Do you suppose they are in general very good?—From what I saw at port Mahon, and from every thing I could learn, they were very good.

Does the plague, from your information, occur at those places where the quarantine is rigorous?—At Marseilles and other parts, it has occurred, and more than once.

Have you ever heard of the plague in China, or any other malignant fever raging there?—Yes, very malignant fevers, which have cut off great numbers.

You have seen a great variety of fevers in tropical climates?—Not much variety of fever, but I have seen all the varieties of the same fever that could exist. I have seen it at Carthage, off Vera Cruz, the Havannah, and every part of the West Indies; also on the coast of Africa, and at Batavia. The only difference in this fever, seems to consist in shades of violence proceeding from the constitution of the patient, or local circumstances. It was more inveterate at Batavia, but it was the same fever, and originating from the same causes.

And are you inclined to think the plague may include in the same list of fevers, and originate in the same cause?—It appears to be a fever that generally exists on the borders of the Mediterranean; other fevers do not assume the buboes and carbuncles.

What do you consider to be the cause of the plague?—The cause appears to be the same as that of any other malignant fever, foul effluvia, dirtiness, want of ventilation, and poor living; you may generate in this way, a fever like our gaol fever.

Dr.  
John M'Leod,  
(22 March.)

*Jovis, 25<sup>o</sup> die Martij, 1819.*

SIR JOHN JACKSON, BARONET,

In the Chair.

*John Green, Esquire, again called in; and Examined.*

HAVE you known of instances of persons having slept with others, and not having taken the plague?—Yes, Mr. Slaars, a Dutch merchant at Smyrna, had two daughters who slept together; the one was taken ill, and the sister continued to sleep with her; at last she died, and upon examination it appeared that she had had the plague; they found the buboes on her; the sister did not take it, nor did any of the family.

Do you know of any other instance?—Yes; Mr. Perkins, an English merchant at Smyrna, had two daughters who also slept together; one of them was taken ill; it appeared that it was with the plague; she got well of it, and the sister did not take it, nor did any of the family.

John Green,  
Esq.  
(25 March.)



*John Green,  
Esq.  
(25 March.)*

What is the mode of shipping goods at Smyrna; is there any difference made whether or not there is plague there?—None at all.

Prior to 1800?—The mode of shipping them was always the same.

Prior to 1800, what was the practice and precautions to prevent the plague being shipped in vessels for England?—Previous to 1800 English ships were not permitted to come direct to England, without a clean bill of health.

What was the practice that prevailed when they had not a clean bill of health, where did they quarantine; did English ships that sailed for England with a foul bill of health quarantine?—In some instances; not very frequently. English ships loaded at Smyrna during the plague, and went to Malta or Leghorn to perform quarantine, and afterwards shipped the same cargoes on board them to England.

Since 1800 there has been no distinction, whether plague or not?—In the year 1800 an Act was passed, permitting English ships to come directly to this country without a clean bill of health.

Were not the quarantine laws in this country, in consequence of that alteration, more rigidly enforced?—There was a general revision of the quarantine laws in 1800; a committee was appointed for the purpose of making a report upon certain questions specifically put to them by the Privy Council; the Privy Council afterwards formed regulations respecting quarantine generally, including ships coming without clean bills of health.

Under the form of regulations which prevailed before 1800, is it not probable that the plague was seldom if ever shipped for England from the Levant?—I cannot speak as to the shipment of the plague; I can speak specifically, that the same species of goods had been for a century brought to this country from Smyrna, during the plague, by ships bound to Holland, and from thence the goods were brought here; they have no quarantine establishments in Holland, consequently it was tantamount to their having come direct.

Did the same regulations you state to have prevailed prior to 1800, prevail in other parts of the Mediterranean, and in Turkey generally?—When I speak of Smyrna I mean Turkey generally.

I think you stated, there were very few of the bales that arrived in England, opened?—The bales were opened after they came here, not in my opinion as they ought to be; since 1800 they were ordered to be opened from one end to the other, and exposed for fourteen or fifteen days.

Are all opened?—They ought to be.

I understood that very few were?—That was previous to 1800.

Do you consider that all are opened now?—I conceive they are, for the order in council is to that effect.

Are there men enough to open them?—Yes, a knife will do it.

But then they have to sew them up again?—They have to sew them up again; they are cut from top to bottom. The external part can be exposed to the air, but the inside cannot; they are ordered to put their arm in and to rummage the bale to find the plague; I have not discovered that they have found it yet; I believe it must be generally admitted that it has not been found.

Do you consider that they have generally opened all the bales?—I have no reason to suspect that they have not done their duty.

And it is quite practicable for them to do it?—Certainly.

Though there are so few hands, only six?—I am not prepared to state the number under the direction of Government. It is customary at Smyrna for the crews of the English ships to fetch all the goods from the shore on board their own ships; they stow them in the hold, and they unstow them afterwards when they come here; but I never heard of any instance of any of them taking the plague.

*Sir Arthur Brooke Faulkner, called in; and Examined.*

*Sir  
A. B. Faulkner.*

STATE the opportunities you have had of considering the plague, and the nature of contagious distempers in general, in the course of your practice?—The only opportunity I have had of seeing the plague, was in the Island of Malta.

On what occasion?—In the year 1813.

When the plague prevailed?—When the plague prevailed in the island.

What situation at the time did you hold?—I was physician to the forces. I was the only staff physician employed during the greater part of that service.

Was you there at the time it broke out first?—I was.

And attended as a medical man during the whole course of it?—Not during the whole



whole course. I did not attend officially until the army became infected. I was not permitted when the natives only were infected.

But you was present?—I was present during the whole period of the plague.

And practised as one of the principal men of the army?—After the army became infected, I practised as physician to the forces.

What is your opinion respecting the mode in which the plague in general, is generated and communicated?—I believe it is generated or produced by a contagion, *sui generis* quite peculiar and specific, and that it is communicated only by contact or close association with the person or thing infected.

What are your reasons for believing that it is communicated only by contact or association, and not by a certain state of the air?—My reasons are drawn from the course the plague took from its first entrance into the Island of Malta, until its cessation. It was communicated in the first instance in the direct line of contact. It could be traced to have been propagated in the direct line of contact, in the city of Valetta, and from the city into most of the cassals or villages, where any history could be obtained of its introduction.

Will you have the goodness to state the instances of its communication by contact, during your own experience at Malta, from your own knowledge?—The first case of the communication of the plague, was, in my opinion, from a vessel the San Nicola, in the harbour, to the family of a person of the name of Salvator Borg.

The vessel lay in what harbour?—It was lying in the harbour contiguous to the city of Valetta; the harbour is called Marsamuchetts.

State the circumstances?—To prove that it was from this vessel the infection was received, I shall crave permission to read a letter addressed by myself to the governor. I am not quite sure of the verbal accuracy of the letter. After the vessel arrived in the harbour in March, the whole town became extremely alarmed, and among the rest myself. I understood, but this I cannot pretend to vouch for, that several merchants had remonstrated against the vessel remaining in the harbour. Participating in the common alarm, I thought it my duty, though not called upon in my official situation, to represent the consequences that appeared inevitable in permitting the ship to lie there; and therefore, though not solicited, I communicated the following letter to the governor:

“ Sir,

10th April 1813.

“ ALTHOUGH in offering the following observations relative to the means of preserving this garrison from the calamitous distemper with which it is threatened, I should not be altogether able to elude a charge of intrusion upon the province of the health officer, yet being the only physician to His Majesty's forces on this station, I trust your Excellency may be pleased to see, that the contribution of my opinion at such a juncture (though it has not been called for) is not unjustifiably at variance with my duty. It was my intention to have had the honour of addressing your Excellency on this subject some time ago, and previous to the malady being reported to be so close in our vicinity. The melancholy fate of the surrounding countries which have lately fallen a prey to its ravages, left in my mind no doubt as to the expediency of such a proceeding. My purpose was, however, for the present over-ruled by certain of my friends, who could not be brought to believe, that the evil was in the least likely to approach so near to ourselves. If credit can be placed in the report of the day, these expectations have proved illusory, and therefore I can no longer apprehend that my addressing your Excellency on this subject should be deemed improper. I shall consequently hasten to submit for your consideration a proposal, from which, obvious as it certainly is, I am led to think considerable advantage might still be derived for the protection of Malta against the introduction of plague. With this view I would suggest, that neither the harbour of Marsamuchetts, nor the island there usually allotted to quarantine, should, upon the present emergency, be accessible to any arrivals from suspected ports; and therefore that some more distant, yet commodious place be sought out, which, after being insulated from all intercourse with the population, should, exclusively be destined for the reception of all persons with any suspicion of the disease. Some information which I have lately received, will not allow me to doubt, Sir, that such a place may be found; and that the vessels, cargoes and crews of infected ships, could be disposed of in such a secure manner, as to allow of the least possible risk. Unless called upon, I will not trouble your Excellency with any detail of particulars, by which my proposal might be carried

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into effect. Whether the apprehensions about the existence of plague in our vicinity, be sufficiently founded or otherwise, I cannot resist conviction that the measure I have been proposing, would in time of such peril, have been at the first of much importance. Assuming as a fact, that there exists no longer any reason to doubt that the disease has made its appearance in the neighbouring quarantine ground, the dangers arising from the extreme proximity of that situation to so many adjacent shores, and to so very populous a neighbourhood as this, are, in my humble judgment, too obvious to require comment; since the points of invasion by so formidable an enemy, are thereby so much more multiplied. How awfully has the experience of other times informed us, that in this and in similar situations of exposure, the plague has found its way, in defiance of the most vigilant regulations. It is this reflection which has chiefly prevailed with me, to submit the above proposition to your Excellency; by the prompt adoption of which it appears to me, the best chance would be afforded of checking the approaches of a calamity, which even a little delay might baffle the best efforts to oppose. I hope, Sir, the urgency of the occasion will atone for any imperfections in this letter attendant upon haste and anxiety; and that you will believe me, with the most zealous concern for the interests of His Majesty's army, and the people here committed to your governance,

"Your Excellency's most obedient, &c. &c.

"A. Brooke Faulkner,

"Physician to the Forces."

Such was the letter I had the honour of addressing to the Commander in Chief.

Go on with your detail?—My apprehension of the disease finding its way into Valetta, from the lazaretto and plague ship, arose from my knowledge that the persons appointed as guardianas, were taken from the lowest part of the community, and paid, as it appeared to me, very inadequately, somewhere from 1*s.* 6*d.* to 2*s.* a day; and having recollected from reading the history of a plague that visited the same island in 1675, that it crept on shore from an infected vessel unobserved, I thought I was justified in entertaining the same fears on the present occasion. Accordingly on the 16th of this month, six days after this letter was presented to his Excellency Lieut.-Gen. Oaks, the first infected case occurred in the town of Valetta; it was the case of the daughter of Salvator Borg. She died with well marked symptoms of the disease, I think on the 19th April. Two other persons of the same family died on the 2d May, all with well marked symptoms of the disease.

Will you trace the communication between them and the vessel?—From the family of Borg it made its way in a direct line into the family of one Maria Agius, a school-mistress, who, together with others she immediately communicated with, were attacked by the plague, and all of whom (with some of her scholars, I heard) were seized or perished with well-marked symptoms of the disease. I ought to revert to that part of your inquiry, which is of most consequence, namely, the communication between the vessel and the town of Valetta. I hold it as hardly requiring proof, that the disease should have found its way from an infected ship in the harbour, when I consider the apparent connection between the cause and effect, arising out of the arrival of the vessel, and the almost immediate verification of my prediction to the governor; and recollect besides, that the island had not been infected for 130 years before. I consider these circumstances as conclusive. But, in the next place, some new linen was discovered in the house of Salvator Borg, which was confidently rumoured to have been brought from the infected vessel; and it was further stated, but of this I have no certain authority, that when the vessel returned to Alexandria, the infected place from whence it came, there were some bales missing.

Have you any reason to believe that the family infected, among whom the disease broke out, had direct communication with the ship; and what means have you of knowing it?—When I consider what appeared to me the imperfect state of the quarantine system at Malta, I can only say, I think it an event not improbable that some of the family might have got goods from this vessel.

Can you state that any communication took place, and what, between the family of Borg and the family of Maria Agius, where the disorder next appeared?—The families of Maria Agius and Borg were intimately acquainted with each other, and she was constantly employed in relieving the afflictions of the latter when taken ill of the plague.

From the family of Agius could you trace the progress of contagion to any other family?—For my own part I dropped the inquiry there; the *foci* of contagion became



so rapidly multiplied, that it appeared to me impossible to carry the investigation in a direct line further in that populous city; but I am in possession of documents furnished to me by one of the captains of the lazaretto himself, a man of strict integrity, and many years employed in that official situation, showing, that the contagion made its way in a direct line from Valetta into most of the infected cassals or villages: these documents I can produce if required. In the next place, in pursuing the course of the disease by contagion, I should beg leave to remark as a very important circumstance, that the means of its communication to the small contiguous island of Gozo, at a late period of the calamity, can be distinctly made out. A man belonging to an infected family in one of the cassals, made his escape with a box of clothes into a neighbouring cottage; it was speedily found out that he had escaped, and he was accordingly apprehended and sent to the lazaretto. On his enlargement from the lazaretto, he returned to his cottage where he took this box of clothes that had never been suspected to be there, but had been concealed; and he hired a boat and carried this box of clothes to the island of Gozo. The first family infected on the island was the family at whose house he arrived, and to which place he carried the box of clothes. It was a marriage present, I understood; and a priest acquainted in the family, was one of the first victims; he died with well-marked symptoms of the plague. I have not had it in my power to trace the direct communication further.

Did the individual who conveyed the clothes take the plague; was he himself infected?—I am not prepared to answer that question, but I rather think he was; many persons were not infected by the disease, that were taken from the very bosom of those families, who all died of it.

Do you happen to know whether this person had communication personally with the individual who took the complaint, as well as by giving the goods?—He lived in the family; there was a marriage about to take place, or had taken place, in it.

How long after he got this box of clothes was it before the disease broke out?—Within a short time.

What length of time were the clothes locked up in the box, between the time of their being infected, and the box being opened, and the clothes given to the people in Gozo?—During the term of his quarantine, I believe somewhere about 20 days; I am not quite prepared to answer when it was opened. All I can say is, that the box was carried by this man to a cottage, and was concealed from those who went to take him to the lazaretto.

Do you know whether any person in the cottage, where the box was deposited, took the plague?—I cannot answer that question.

Do you know whether there was any communication, any thing that could have conveyed the disorder from the ship *San Nicola* to the family, except the linen?—I am not aware of any thing; I rest my whole evidence on what I before specifically stated, namely, the tendency of the disease to propagate in a direct line, and the circumstance of my prediction being followed in four or five days by its consummation, and the collateral consideration of the island not having been infected with the plague for 130 years.

And you conceive that to have been a sufficient cause to account for the propagation of the plague?—I should think so. I beg to be understood in giving this evidence, that I was not present myself, and therefore I cannot speak with confidence as to the linen being found in Borg's house; I did not see the linen myself. As to the other circumstance of the disease propagating in a direct line to the cassals, I had the documents from one of the captains of the lazaretto.

You have stated, that in the family of Borg, and in that of Maria Agius the schoolmistress, and also in the family in the island of Gozo, the different individuals died with well-marked symptoms of the plague; do you state the well-marked symptoms of the plague to have appeared, from your own individual knowledge, or from information derived from others?—From information derived from others. With respect to the first case, I had official information communicated by the head of my department, I received an official letter from him on the subject. With respect to Maria Agius, it was a fact so notoriously known, that I apprehend any evidence on this point would be unnecessary. With respect to the infection of the cassals in a direct line, my evidence, as I have stated above, rests on the written statement of one of the captains of the lazaretto, employed in the service during the plague of Malta.

Is he a medical man?—No; it is not necessary he should be so to fill that office.

With respect to Gozo?—With respect to Gozo, I have the information of some respectable authority, but I do not recollect his name; it is, however, a well-known fact.

Sir  
A. B. Faulkner.  
(25 March.)



Sir  
A. B. Faulkner  
(25 March.)

Then, in point of fact, not one of these cases, in which you state the symptoms to have existed, was from your own personal observation?—Not one. I was not officially employed; I offered my services in the native hospitals; but they were not received, on this ground, that they might be wanted for the army.

Had you any intermittent or other fever at Malta, during the plague?—I had none under my own immediate eye or care; but I understood there were a few, and those very mild, principally occurring, or indeed altogether occurring, towards the autumn or the latter end of the year 1813; but as I have not seen any of the cases, I can only speak from hearsay.

Did those instances occur before the plague broke out?—They had, I understood, been occasionally numerous in preceding years.

The instances you state to have prevailed before the plague broke out, were they the marsh fevers?—I am not aware that any had occurred the year before; *i. e.* I cannot specify, myself, on my own authority that any occurred the year before; but I understood that they were of frequent occurrence in every year.

Was the plague particularly prevalent in the places where the marsh fevers prevailed?—Not at all particularly prevalent where the marsh fevers were most generally produced.

Is there any similarity between the marsh fever in Malta and the plague?—I never could trace any series of symptoms that could lead me, in the slightest degree, to suspect any identity between them; but I have known the plague to personate in certain symptoms almost every possible form of fever, and I have known it to be entirely free from every kind of fever; there is no certain type to which it can be affixed.

Do you mean to say, that there is no distinct symptom that marks the plague as distinct from every other fever?—I do mean to say, that fever is not an essential attribute of the plague; it is frequently mortal where there is no fever. It is an extraordinarily anomalous disease, which defies (I should rather say, has almost defied) definition. Dr. Cullen, I conceive has defined it best; but even his definition is not a correct one. In fact, I may say, it has hitherto baffled nosologists scientifically to define it.

Are there not symptoms that distinguish the plague, in a manner which cannot be mistaken?—There are symptoms which are sometimes called characteristic symptoms, but they are not constantly present. The most frequent and constant symptom was a peculiar cast of the eye, and a certain appearance of the tongue; the eye had the appearance described by Russel, of a muddy dull colour; I believe that to be the most frequent and most characteristic symptom of the plague. As to buboes, carbuncles, and appearances on the skin, they are not constant. In many of the most fatal cases, the patient perished before the buboes or any other eruption made their appearance; many without any other appearance than that of the eye.

What was the state of the pulse?—The pulse had been felt occasionally, through a tobacco-leaf, and was in many instances extremely rapid. The fine for feeling a pulse was several days quarantine; if any medical man had felt a pulse he was subject to this quarantine.

Can you show that prompt separation has been effectual in securing persons from contagion?—I can, in many instances; the instances would be difficult to detail, they are so numerous.

Did the disease extend to Sicily, or the neighbouring islands?—It did not extend to Sicily, in consequence of the prompt precautions that were adopted: and had there been the same at Malta, my persuasion is, that the disease would have been resisted *in limine*.

Were quarantine restrictions found effectual in resisting the plague at Malta?—Wherever proper quarantine restrictions were imposed with firmness, steadiness and promptness, they seemed to be altogether effectual in preventing the extension of contagion; but the quarantine system seemed to me so extremely lax from the beginning, for several months, that it would have been next to impossible the disease should not have been widely disseminated through the island. I may enumerate as instances of this laxity in our quarantine system at Malta, that there was no complete *census* taken of the population, with a view of detecting cases of infection, until, I think, the 19th May 1813. There was not a complete and sufficient corps of trusty guards until the month of August; the people were not shut up in their houses until, I think, the month of August; that is, not universally shut up, probably partially. It is notorious, that contact constantly took place in the street, previous to the organization of this corps of guards, and the shutting up of the inhabitants



inhabitants in their houses; I have official documents to prove all these points I have been just stating.

Was the plague ever known to be received in the lazarettos?—It has been known; I have heard many instances related to me by the Maltese, and here is evidence of one; I have brought the title page of a book, which represents a monument raised to the memory of a grand master, for having arrested the disease.

In what year?—1743.

Do you know any thing of the introduction of the former plague, that ravaged Malta, and when did it occur?—I beg to refer to a paper I published on the disease, during my engagement, on the plague at Malta, which was communicated to the Edinburgh Medical and Surgical Journal, and published 1st April 1814. The passage I wish to read to the Committee, is this: "It is somewhat remarkable, that the history of the introduction of the plague, when it made such great ravages on the last occasion on the island, about a century ago, was nearly similar to what is circulated of the present; being attributed to some linen brought from a Levant vessel, by a Maltese shopkeeper; which, after producing the disease in all those who first came in contact with it, ultimately disseminated the malady throughout the whole population."

During the late plague at Malta in 1813, was the disease arrested when the quarantine system was rigidly acted upon?—It was: from the moment that an adequate and a regularly organized police was established, and the inhabitants shut up in their houses, and other strict measures of quarantine enforced, (which was the case at a very late period) in the month of August, the plague did rapidly decline.

How was the disease stopped at last?—By what I have just stated; by the organization of a sufficient corps of trusty guards and police restrictions, and by shutting the inhabitants up in their houses. I could name a number of other circumstances connected with the means of preventing it.

How were the medical attendants preserved?—With respect to the military hospital, of which I can speak from experience, the hospital in which I attended, (the pest hospital,) they were, in my opinion, preserved by wearing a dress of oiled silk, which prevented the possibility of any contact of infected matter with the skin, and probably also by its promoting free and copious perspiration, and in consequence preventing absorption.

When was the plague stopped; at what time?—I am not quite sure whether it was in December.

Can you state when it began to decline?—It began before the month of August.

What do you conceive the hottest period of the year at Malta?—I am not prepared to answer that question; I believe the month of August. I have kept a thermometrical table; but having it only for one year, the results of my observations are probably insufficient.

What was the temperature of the atmosphere at the period when you conceive the decline to have been apparent?—The 16th July appears to be the day when the plague was at its height; 67 died that day; the thermometer was at 81, at four o'clock in the afternoon. In the morning at six o'clock at 77, and at 10 at 81½. The next day, 36 died; the thermometer was at 82, and in one part of the day at 83. On the 18th of the month, 50 died; the thermometer was in the course of the day at 81. On the 29th 41 died; the thermometer was at 79. On the 20th of the month 43 died.

State the period at which there was a sensible decrease?—I think from the 16th of July there was an average decrease, though a very irregular kind of decrease; but the thermometer was rather higher than lower.

How far was the establishment of the police precautions to which you have alluded, coincident with the decrease of the plague, with the visible decrease of the plague?—This question requires a cautious answer. The gentleman appointed at the head of the police, began to organize his system on the 3d July; the disease extended its ravages after he had organized his system in some degree; but it was not perfectly organized till the 2d August, *i. e.* it did not shut the people up in their houses, nor was there an absolute prohibition of contact; but as soon as it did enjoin absolute prohibition of contact, and shutting the people up in their houses, the disease declined.

Then it appears the decrease was not very visible till these precautions were put strictly in force?—Not so visible.

State from the period at which they were strictly enforced, namely, the 2d August, what was the average decrease from that time?—On the 2d August 50 persons died, on the 3d August 48, on the 4th 27, on the 5th 47, on the 6th 43, on the 7th 35, on

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the 8th 37, on the 9th 24, on the 10th 26, on the 11th 28, on the 12th 26, on the 13th 31, on the 14th —

Instead of putting the result of every day, look at your table and see when the decrease became considerable?—I have brought it down since the 16th July until 14th August, to less than one half; I have brought it down to 31 instead of 67, in less than a month.

From the 16th August did it go on gradually decreasing, till it disappeared?—It went on decreasing on the average, but not regularly.

At what period did it finally disappear?—On the 19th October; in my note of this day is stated the last occurrence of a case of plague in Valetta.

Did it continue in other parts?—In some of the cassals for a considerable time.

Have you any doubt whatever, that the decline of the complaint was produced by the prohibition of intercourse among the inhabitants?—I feel satisfied that it was very much owing to the prompt measures of police; and my reason is, that the thermometer rose inconsiderably in point of fact, while the disease was decreasing fast.

Is there any other cause to which you can attribute the decrease and cessation of the plague?—I really do not see any other cause.

In your observation of the plague, has it appeared to you that it subsists only in a given temperature, neither in very great heat or very great cold?—During my residence at Malta it did not appear to me that the temperature of the air had any thing to do with it. In my own opinion, I do believe that a very high or a very low temperature would check it.

Will you state the opinion you entertain, from the best sources derived, what degree of heat is not consistent with the plague?—I can only speak from my reading, on that point. I believe that materially below 60 or probably at 60 degrees of heat it cannot subsist; but it is bare conjecture.

You had never any opportunity of observing the plague except at Malta?—No.

Was there any thing remarkable in the state of the thermometer at the time the plague broke out at Malta?—Nothing, I believe.

What was the temperature at that time?—The thermometer, on the day the first case was reported to have taken place, was at 64; that was on the 16th April.

What was the state of health on the island, before the plague broke out?—To the best of my knowledge nothing remarkable. If there was any thing remarkable with regard to its climate, it was that there was nothing very remarkable, for the people were wondering that there was nothing remarkable in the state of the air to produce plague; there was nothing anterior to the breaking out of the plague, at all leading to any reason why it should exist unless by contagion.

At what time did the first case of plague appear among the soldiers?—Without referring to my official letter I cannot exactly state.

What month was it?—In June.

Was the soldier who was first attacked with plague, in barracks or quartered in the town?—I shall be under the necessity of consulting my medical register; but I have no doubt he was in barracks.

Could any communication, personal communication, be traced between the soldier first infected and any other soldiers who were afterwards infected?—I do not know that any had been attempted to be traced; for when soldiers live in the gregarious manner they do, it would be in vain to make the inquiry.

Were the soldiers kept within their barracks, previous to the appearance of the plague among them, and their communication with the inhabitants prevented?—In some of the barracks it was prevented, in some not; and it is material in order to prove the contagious property of the disease, that in those barracks where a strict quarantine system appeared to be kept up, the plague was excluded, though they were in an unhealthy part of the town; whereas in other places that were more elevated and airy, but where there seemed not to be the same precautions observed, the disease was brought in.

Then the soldier first infected was in one of those barracks that had a more free communication with the town; had you the charge of the sick in the barrack in which the first case occurred?—I had partly the charge of them in this barrack, but not in the first case.

When did your charge of the plague patients commence?—It was relative to that point I wished to consult my register; but as far as I can state with confidence, I was not employed officially to prescribe till De Rolle's regiment was infected. I think I was called in to see some other cases, but I had them not under my charge.

Were you yourself, in attending the sick, those who were ill of the plague, in contact with



with them?—Personally close to them, as nearly as it was necessary for me to approach them.

Had you the plague?—I believe not; though I have some doubt respecting that.

Who were the persons employed under you in the care of the sick?—Orderlies and such like.

Did any of them catch the plague?—Not one.

Were they necessarily in contact with the individuals who had the plague, and with their clothes and bedding?—Necessarily.

Were any precautions taken with the view of preventing them from catching the plague, in the discharge of their duties?—Oiled silk dresses were enjoined by command to be worn by every person in attendance about the sick.

Was it complied with?—It was I believe, in point of fact; they were also enjoined a prompt ablution after touching the infected, they were obliged to wash their hands; in short every means were adopted to prevent their catching the infection, with the addition of ablutions.

Was one of the precautions rubbing the body with oil?—It was; but there are the best reasons for supposing that it had no share in preventing the infection.

What reason?—It had been employed with all the attention possible in the garrison; but yet the disease made its way. It had been employed by those who attended in carrying out the dead, and who I believe almost all perished; there were very few instances of such persons who did not perish.

When you describe the plague as contagious, do you mean that it is communicated by the breath?—I am not prepared to say whether it may not, by closely inspiring the breath of an infected person; but this in my judgment is a kind of contact. My opinion is, that it is principally communicable by the touch, but I think it can be communicated in the former way also; few would be hardy enough to try the experiment.

If it can be communicated by the breath, how can wearing oil-skin dresses or ablution prevent the breath of the infected persons getting into the mouth or nostrils from the infected?—We know, that at a certain distance in other diseases, the contagion from fomites may be so diluted by the atmosphere as to become innoxious.

Was the progress of the plague among the troops rapid?—It was not rapid.

Not so rapid as among the inhabitants?—Not at all; in all not above 20 I believe died up to the middle of October.

The progress of the disease I mean?—In some it was rapid, and in some it was not: there was every variety.

What was the per centage of those in garrison attacked?—I am not prepared to say.

Was it a greater or less proportion than the inhabitants?—A less proportion.

The precautions applied to the troops were more rigid than those that could be applied to the population?—Certainly. I was going on to state some circumstances as to the degrees of precaution used in each of the military barracks. The Sicilian regiment, though situated in a very infected part of the island, a place called Florian, escaped by the promptness and vigilance of Col. Rivarolla. De Rolle's regiment, which was in the healthiest spot, was invaded by the disease, and evidently in my opinion in consequence of their barrier admitting a contact with persons on the outside. It was a barrier at which you could shake hands with any body on the outside. In the 14th regiment, which was near the most unhealthy part of the town, there was but one person suspected, and his disease was immediately arrested; the public prison and public general hospital escaped. The convents in Valetta escaped, with the exception, I believe, of one; and the introduction of the disease to that one was accounted for. The prison and these public institutions escaped, I conceive, very much by the voluntary attention paid by their inhabitants to a strict system of quarantine.

Did the plague cease in the military hospitals before it ceased in the town?—I am not prepared to answer that question.

Were the soldiers in barracks prevented from holding communication with the town, after the plague had ceased in the barracks?—I believe so; that would greatly depend upon the commanding officer.

I ask you, whether in point of fact, they were?—Throughout the whole they were interdicted as far as possible; the commanders of regiments issued orders to prohibit intercourse, but they were not strictly obeyed.

Did the plague find its way into any of the barracks or regiments, where these orders were not strictly observed?—It got into De Rolle's regiment particularly.

You have stated, that these three cases of Salvator Borg, Agius and Gozo, were

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cases you received from information; now I observe in many cases that came under your own knowledge, it did not communicate to persons; do you not consider that the natural time of the decrease of the plague is the fall of the year?—It is my own opinion, that it would cease if the temperature was low; I think that the plague is incompatible with a certain temperature, high or low.

Then it is not the particular period of the year?—No.

You stated it to appear prior to August, but the restriction was not till the 2d of August?—Not in its full rigour, but an improved system was acted upon in July.

The ship Nicola returned to Alexandria with her whole cargo, did she not?—If I may except those bales which were rumoured to be missing.

She was not allowed to land her cargo?—No.

Who navigated her back?—Probably the remaining part of the crew.

Was she not navigated back by Maltese?—She might.

Do you know whether they took the plague?—They arrived in safety.

Did they who assisted in landing the cargo?—I believe so.

Are there any eruptions in the skin, in the plague?—If we can call eruptions, what are termed blains and carbuncles.

Do you consider a buboe or carbuncle to be an eruption?—I should think so; it is freely applicable to the term; its etymology is from *erumpo*, which is to break forth.

Does not eruption mean a cluster of pimples?—In common acceptance it may.

Do you think the plague comes under the description of Exanthemata?—I think it does; I believe that Dr. Cullen has given the best account of the disease.

You have stated, that the contagion in plague is what is called *sui generis*, do you consider it different from contagion in the small-pox?—Different from every other known contagion.

Have you ever heard of the plague in England?—I have read of it.

In what year?—The last was in 1665.

Have you ever heard of plague since?—Never, as imported into England.

Do you consider the plague can be propagated from goods as well as persons?—I think so.

Have you any reason for thinking why the plague has not been introduced from goods in the quarantine establishments?—In the first place, quarantine restrictions since 1709 have been a great deal more rigid; indeed they did not exist in England at all, previous to that period. I conceive that the intensity of the contagion may have been greatly blunted by the length of the voyage, and the length of time that passes after the shipment of goods. Besides we know, that other countries have a good system of quarantine, which is in favour of the plague not being imported here.

Do you consider the plague of 1665 to be the true Levant plague?—From the description I have read of it I am inclined to think so.

Do you consider the reason why the plague has not been introduced in England, has been more from the length of time in the voyage, than the quarantine establishment?—I mean both conjunctively, viz. the time and the means used to free goods from contagion, and to expurgate infection.

How do you account for the expurgators never having taken the plague?—I cannot account for that, but by collateral considerations.

What are those?—1st. That we have observed, in other countries the disease has not taken place for a long series of years, not for 130 years in Malta. 2dly. We do not know what the circumstances are that constitute aptitude in the receiver, sufficiently, to know why the plague has not been received into the lazarettos since 1665. But 3dly, it does not follow because it has not been received into the lazarettos since 1665, that it may not by some fortuitous concurrence of circumstances occur again here.

Are you acquainted with the opinion of the ancients, respecting the plague?—I am. It has been stated, that the ancients were not acquainted with contagion, but I can adduce instances from the medical writers and the poets, to the contrary; I can produce instances from both the Greek and Roman writers and poets.

Does Hippocrates mention it?—He does not. He had not the experience to determine the point; but with respect to the authorities that do speak of contagion, I shall beg to refer to the following, viz.

Συνδιατρέχειν τοῖς λοιμώτεσιν ἐπισφαλὲς ἀπολαῦσαι γὰρ κίνδυνος, ὥσπερ ψάρας τινος ἢ ὁ φθαλμίας.—Galen, lib. 1, ch. 2. de different. Februm.

Διὰ τί ἀπὸ μὲν νόσων ἰνὴν νοσοῦσιν οἱ πλησιάζοντες, ἀπὸ δὲ ὑγίαιας κείνης ὑγιαίνει;

Aristotle, Probl. lect. vii. 1.

Δίος



Δίος δὲ ἐμυβίαν τε, καὶ ἐνδιδαιτῆσαι, ἢ μίον ἢ λοιμῶν ἀναπνοῆς γὰρ ἐς μίανθῶσιν, ῥηϊδίῳ βαρῇ.

Aretæus de Elephantiasæ.

Infecti quasi valitudine et contactu.—Annal. Tacit. b. 6 & 7.

Postea curatio ipsa et contactus ægrorum, vulgabat morbos.—Liv. 25 & 26.

Contagion is clearly expressed in the last eight lines of the third Georgic of Virgil; likewise in the first Bucolic, verse 52; where these words occur:

Nec mala vicini pecoris contagia lædent.

There are numerous other authorities.

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Veneris, 26<sup>o</sup> die Martij, 1819.

SIR JOHN JACKSON, BARONET,  
In the Chair.

Sir Arthur Brooke Faulkner, again called in; and Examined.

I THINK you wish to add to your answer respecting the air of Malta?—I was observing, that a high wind, from whatever quarter it blew, was always accompanied with some increase of the number of infected.

Can you give an undoubted proof of the contagion of plague, from any fact that came under your own eye or personal knowledge?—At the military barracks I think, certainly.

What was it?—The attacks being *consecutive*, as from contact, instead of being *simultaneous*; it was impossible to trace immediate contact with an infected person in barracks, where soldiers were so much together, and lived so gregariously.

If the air was the general cause of plague, must not that have operated as the cause, in the instance to which you have alluded:—Certainly not; if the air had operated as the cause, the disease would not have extended consecutively, as I have shown to be the case, but would have been produced through the corps simultaneously; the same would have happened through the population of the island, especially as there were several parts of the island, from local circumstances affecting the air, more exposed to contamination than Valetta.

Is Valetta a lower part of the island than the other parts?—I am not quite sure respecting that; but it is universally allowed to be one of the most healthy parts of the island, the most free from marsh fevers; and as an instance, I may mention, that in 1801, when marsh fevers were very fatal and numerous, Valetta entirely escaped.

Was there any fever except on board the San Nicola, at the time?—I cannot speak with positive certainty, but I think it not unlikely, as vessels from Alexandria, an infected port at that time, were not excluded from entering the harbour contiguous to Valetta.

Whereabouts was Salvator Borg's house?—In Strada St. Paulo.

Is that far from Valetta?—It is in Valetta.

Is Valetta the fort?—It is a considerable and well fortified city, the largest in the island; it is the last spot where one would look for marsh fevers or diseases of any kind, being perfused with pure sea air in every direction, and the soil being perfectly dry.

Would not the numerous instances you have alluded to, of persons having escaped the plague who had come from the bosom of families afflicted with it, be an inducement, if not a proof for deeming plague not contagious?—Neither an inducement nor a proof; for we see in other diseases allowed to be contagious, the small-pox for example, that many such escapes have taken place.

Have you any better proof for deeming plague contagious, than the preceding observations on my question for deeming it not contagious?—I think that when the whole evidence I have given, respecting the propagation of the plague in a direct line, be well weighed and considered, and when we see that any other supposable cause than contagion is inadequate to account for such extension of the disease in a direct line, the proof is made out as far as presumptive evidence can well render it.

Do you know how many died of the plague in the harbour?—None in the harbour;

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two I believe died on their passage to Malta from Alexandria, and two died in the lazaretto after the infected crew were sent on shore.

You know the ship *San Nichola* was sent back to Alexandria, without unloading, from Malta?—It was notoriously stated.

And do you know that the goods were landed at Alexandria, and none of the persons took the plague who went with her?—I believe none of the persons who navigated her back took the plague, but arrived in perfect health; farther I know not; I know nothing of her unloading; I have said, there was a report that some bales of goods were missed, but I only speak from public conversation.

Is it not more likely that the persons who went with her to Alexandria should have received the plague, than that a bale of linen carried into Malta from her should have produced the plague?—The ship had undergone a very considerable quarantine; and I heard that means were taken to prevent her from infecting those engaged in her navigation.

Do you suppose her goods were unladen?—I believe not; in every other respect as far as circumstances would admit, without unloading, I have heard she was expurgated from infection above decks, but I am not certain of this.

Do you believe it would be possible to ventilate the goods, without unloading them?—I think it would be impossible.

What number of military were at Malta in 1813?—To the best of my recollection, about 4,000.

What was the greatest number of military afflicted with the plague, at the same time?—I am not prepared to answer, as the returns of the whole army were never in my possession; but I can speak as to those under my own care; I have the return of them in my pocket: 4th July, the first case was placed officially under my care; the second was the 8th July.

What is the greatest number at any one time?—I beg to read the return; the third case was the 20th July, the 4th case the 21st July, the fifth case the 21st July, the sixth case the 23d July, seventh 25th July, the 8th case is the 28th July, the 9th case is the 2d August; I believe that is the last officially under my care.

The sick of all the persons were under your care?—Not of all the forces; some of them were attended by their own regimental surgeons within their own barracks; those sick only properly belonged to me officially, that were sent into a general hospital, although I did attend also in the regimental hospitals; we were at one time so ill off for a general pest hospital, that medical staff officers were under the necessity of attending plague cases at the barracks under canvass.

Have you any recollection of the number of soldiers altogether taken ill of the plague?—In all, our army had not hitherto lost above 20, up to the date before mentioned.

What date?—Up to October,

Were any taken ill after that?—I believe some solitary instances occurred after that. We lost very few in all.

Was any medicine administered which was successful in these cases?—Some articles seemed to be very successful, but there could be no dependence placed upon any.

Would you like to mention any?—Those which I found most beneficial were the cold affusion and turpentine; to which of the two it is difficult to ascribe the good effects.

Did you use mercury?—I did.

Blood letting?—Yes, by leaches, topical blood letting. Camphor I also used, and several other medicines. Calomel was reported to me as having done some good under the care of the garrison battalion surgeon, but I never found it myself of any use.

Of those infected with the plague, how many do you suppose recovered among the soldiers?—I can only speak as to De Rolle's regiment; I think nearly one half.

Was there any plague at Sasi?—None, nor at some other cassals in the island.

To what do you attribute that?—To infected persons not having made their escape to those cassals.

Was there an order from the commander in chief not to feel the pulses of the plague patients, under a fine of 80 days quarantine?—There was. I find now on referring to my notes, that I have made a mistake; the medical men were interdicted from feeling pulses, only under a penalty of quarantine for a considerable number of days; the mulct for feeling pulses (even through a tobacco leaf) being not less than 15 or 20 days.

Did you go among or near many persons afflicted with the plague, or did you keep personally



personally from them, except among your own soldiers?—I volunteered my services to examine the patients in the lazaretto, some of whom I saw and examined

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Do you recollect any who were ill in the lazarettos?—I rather think I was prevented from seeing the living cases of plague within their wards, and that I examined more particularly the dead.

Do you consider dead cases capable of producing plague?—From the general opinion which is abroad on this point, I should conceive they are not so liable, if liable at all.

Has the quarantine in Malta been regularly attended to, prior to the breaking out of the plague?—I have had no opportunities of judging of that; my attention to quarantine laws was not particularly arrested, till I saw danger in our neighbourhood.

Is it not likely to suppose that cases of plague have frequently arrived in Malta, prior to the breaking out of the plague?—I understood that it had repeatedly been known in the lazaretto, but was stopped by prompt precaution. I yesterday produced the title-page of a book, in which there was an engraving of a monument to the memory of a grand master in 1743, who had arrested the plague.

Did you remain at Malta after 1813?—I think I left Malta in April or May 1814.

Was there a plague in May 1814, at Malta?—I never heard it recurred in that year.

What was done with the clothes and bedding of the persons who died of the plague?—I understood, generally destroyed; though in some instances not until long, after their being infected.

Upon the whole, do you consider the plague to be a disease propagated by contagion, like the small-pox and other eruptive diseases?—I do.

Do you believe it may be so propagated, independent of any influence of the atmosphere?—I believe it may.

Do you consider insulation by the means of quarantine, the most effectual method of preserving against the plague?—By far the most effectual.

Do you know of any cause of communication of plague, besides contagion?—None that will explain its production and dissemination, except a contagion *sui generis*.

Explain your meaning of *sui generis*?—I believe it signifies whatever is quite peculiar to the thing spoken of, consequently the contagion of plague is quite peculiar in producing the plague. Take other examples; the contagion of the small-pox is peculiar in producing small-pox only; the contagion of the measles is peculiar in producing measles only; and so in like manner the contagion of the plague is peculiar to itself, or what is termed specific.

By peculiar, do you only mean that the contagion of the plague will produce plague, and the contagion of the small-pox, small-pox?—I mean that only.

Then you do not allude to the mode of producing the effect?—We know nothing of the *modus operandi* of the contagion, it is quite inscrutable.

Do you wish to state something as to the arrangement for the guards?—I should have mentioned in my examination on this head, that some part of the police guards were enrolled in the month of July, by the gentlemen placed at the head of the police.

Have you ever heard of the plague in England?—I have.

Mention the year?—I have read of several having visited England, but my recollection respecting them is not distinct; I recollect most of that plague which occurred in the year 1665.

Do you consider Dr. Sydenham's account of the plague, as the best?—I think Dr. Sydenham's account did not result from any very patient or philosophical investigation of the disease.

Does Dr. Sydenham consider it the real Levant plague?—I think not; but it is so long since I read the work, that I cannot charge my memory with any of his observations.

Do you consider it yourself, as the real plague of the Levant?—I do, decidedly.

Have you ever heard of plague since that period?—I am not prepared to answer that question; whether it has visited England since or not, I should apprehend, could only be answered by those engaged about the health office.

If the expurgators of goods at the quarantine establishment have never received plague from opening the bales from the Levant, even those which come with foul bills of health, should you not from thence conclude, that there was no matter of infection contained in the bales?—No; the caution enjoined in the operation of expurgation, may be sufficiently great to prevent the reception of contagion of plague, even though it existed; the intensity of the contagion may be so blunted by length of time, and by care, as not to be calculated to excite the disease readily.



Sir  
A. B. Faulkner.  
(26 March.)

Has it not astonished you, that for a period of 154 years, there should have been no occurrence of plague in England?—I cannot say it astonishes me more with respect to England, than other places. I find it has paid visits at the distance of long intervals of time to other countries as well as England; and we do not know enough of what constitutes aptitude in persons to receive the contagion, in order to know under what circumstances the disease must necessarily be produced.

Do you consider the quarantine establishments in England to have been one of the causes of preventing plague from being introduced?—I should think the quarantine establishment taken in all its bearings, abroad and at home, has had a great share in preventing the introduction of the disease.

Do you suppose the corn is capable of producing infection, and therefore ought to be the subject of the quarantine laws?—On that point I am not able to speak; I do not believe it is considered an article of high susceptibility.

To what articles should you attribute the greatest probability of plague infection?—I cannot be certain, but I should rather think woollen clothes and cotton; upon this part of the subject I would rather not answer; I am very doubtful with respect to the degrees of susceptibility of different articles.

Were the arrangements made at Malta, respecting the plague in 1813, very expensive to Government, during the plague?—I should think they must have been a very great expense; but I only speak from surmise, concluding from what I saw.

Dr. William Pym, called in; and Examined.

Dr.  
William Pym.

ARE you acquainted with the plague in the Mediterranean?—No, I never saw it.

You was an officer at the quarantine establishment at Malta?—Formerly I was; I am not now.

Do you consider the plague to be propagated by contagion, in the same manner as the small-pox and other eruptive diseases?—Not exactly in the same way; the small-pox may be communicated by being in the same room, or at a considerable distance from a person labouring under the disease, without contact; to be infected by the plague, contact or very near approach to the person under the disease is supposed to be necessary.

Do you believe that it is independent of any disease of the atmosphere?—I do.

Do you consider that insulation by the means of quarantine, the most effectual for preventing it?—I do.

Do you give your opinion on the contagious nature of the plague, from your own knowledge, drawn from your own observations?—No, not from my own observations; I never saw it.

From whence?—From general information; from reading, and from facts communicated to me by individuals who had seen the disease in Egypt, at Malta, and other places. I know one instance of the plague having been communicated at sea; some French gun boats were taken by a man of war, they were ordered alongside, and while lying there, the person ordered on board to issue provisions, &c. received the infection of the plague.

Name the ship?—The Theseus.

What year was it?—In the year 1800.

In what part of the world?—Off the coast of Egypt.

Have you ever heard of the plague in England?—Not since the last plague in London.

Was that the real plague?—From the history of it, I consider it to have been the real plague.

You have said, that the insulation of goods, which it is the object of quarantine regulations to secure, is likely to prevent the dispersion of the contagion of the plague?—I think so, more particularly in places near the focus of contagion.

Suppose, as is the case in England, the quarantine regulations should have been established, and in force for 12 or 14 years, with care, would not the contagion of the plague, if brought by persons or goods on board ships from foreign countries, show itself, if at all, in these quarantine establishments?—I consider the length of the voyage, and the care in opening the bales of goods, particularly their being opened in the open air, as one means of preventing the appearance of plague in this country. The lazarettos are certainly the most likely places for the plague to show itself.

What is the cause that no instance of the infection of the plague being brought to this country, is known to have appeared in the quarantine establishment?—I consider the length of the voyage gives some security; and the goods being opened in the



the open air adds much to that security. The plague now is in Barbary, at Tangiers; I conceive that if goods were packed up there and sent to England, there would be great risk unless they were opened in the open air.

Then according to your opinion, if the same care was observed in the case of landing goods, and purifying them by exposure to the air; if ships were admitted to immediate pratique, as is observed in landing persons and goods, and purifying them at quarantine establishments, ships conveying persons and goods to England might be with safety admitted, with the same bills of health as those with which they are at present admitted at our quarantine establishments?—I should consider that to be actually quarantine.

Then how do you account for this, that those whose duty it is to perform these expurgations of goods imported, should not ever, if the contagious matter of the plague has been about these goods, have caught it in the quarantine establishment?—It is difficult to answer that; but I think the danger might be increased if the goods, cotton for instance, were distributed among weavers in their small and ill-ventilated apartments, without having undergone the purification which they do in the open air in the lazaretto.

Do you know what the course of practice, with a view to the expurgation of goods from infection or plague, is in our quarantine establishments?—Yes, I do.

Then you can inform the Committee, on your own knowledge, what the usual practice of the expurgators is, in the personal performance of their duty, with respect to ships coming with foul bills of health?—The first step is, with respect to bales of cotton, to get a certain number of bales on deck in the importing ship; the bales are opened at one end, and a certain quantity of cotton drawn out, by the person employed pushing his hand and arm in as deep as he can (in this country they do it with their hands; at Venice and Marseilles, when cargoes are infected, they do it with iron hooks.) The bale remains in this state for three days, as well as I can recollect, when the other end is opened and undergoes the same operation for three days longer; the bales are then removed into the lazaretto, where they are again opened at both ends, the cotton pulled out, and exposed to the air as much as possible for forty days.

In performing their duty so, do you not think the expurgators expose themselves to every possible risk of taking the plague, by contact with the cotton, if the plague was attached to it?—They expose themselves certainly, but not so much as if the cotton had been admitted into small apartments, such as weavers occupy, where they are liable to come in contact with it without its having been purified by exposure to a circulation of air.

Is your opinion, such as you have drawn from the knowledge of others, of the contagious nature of the plague, that it is more easily communicated by actual contact than by inspiration or vapour from an infected person?—It is from the experience of others, particularly that of our medical officers of our army in Egypt and at Malta; on this subject Sir James Macgregor has written very fully.

Then, is it more communicable by contact?—In very many instances it has been proved to have been communicated by contact.

Is it not matter of wonder to you, that in an establishment of fourteen years duration and full practice, and with the great care the expurgators take in performing their duty in the manner you have described, the expurgators should never any one of them have taken the plague from goods which came in ships having foul bills of health?—It must appear extraordinary, if the goods really were infected.

Then you must either wonder, that the plague has never been taken by these expurgators, or suppose that the bales of cotton in which they thrust their hands, had not matter of the plague in them?—Malta, before 1813, had been nearly as long free from the plague as England has. The plague, in my opinion, was introduced into Malta by goods infected with the plague, and which had not been expurgated.

You have said, that at Venice and Marseilles the practice is to draw out the cotton with iron hooks; do you know that it is different at Malta?—I have seen them doing it with their hands at Malta; at Venice and Marseilles, I believe it is only infected cargoes that are treated with hooks.

But you do not know, that during the whole of the time that Malta was exempt from the plague as in England, it had been the practice to do it with iron hooks?—I never heard that it was the custom to use iron hooks; previously to my superintending the quarantine department in that island, it was customary completely to unpack every bale of cotton, that it might be the more exposed to the air; this occa-

Dr.  
William Pym.  
(26 March.)



Dr.  
William Pym.  
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sioned great inconvenience and considerable loss to the merchants; and in consequence of a representation from them, I directed cotton to be purified there the same way as in England.

When you say, that you have seen the expurgation performed at Malta, with the hands and arms as in England, you speak of a time since Malta fell into the occupation of His Majesty?—I do.

You have no knowledge of the manner of expurgating goods before Malta became a British possession?—No knowledge of my own.

Have you heard that it was done differently at Malta, before it fell into the possession of His Majesty, from the manner in which it is done at Venice and Marseilles?—No; I rather think it was carried on in the same way, for the same persons remained in their official situation.

You was an officer in the quarantine establishment at Malta?—I was formerly; I am at present confidential adviser to the Privy Council, in matters relating to quarantine.

But you have no official situation?—I have not had any since the year 1813.

What was you in the quarantine establishment at Malta, in the year to which you allude?—I was superintendant of the quarantine department there.

How many persons were employed under you?—I do not know that I can answer that question positively; I think there were two commissaries, two captains of the port, one captain of the lazaretto, a secretary and vice-secretary, a proto-medico or physician, and a great many persons under the description of guardians and expurgators.

How many expurgators were employed?—That depended entirely on the quantity of goods landed.

Then you used to increase or diminish the expurgators, according to the quantity of goods landed?—Yes.

Were the quarantine laws there rigidly observed?—During my time very rigidly observed; and before that, since 1800, since the army came from Egypt.

Do you think goods may be infected with the plague, and communicate it to persons?—I do.

You have stated just now, that contact with persons has been proved to have produced the plague?—It has.

Has it not been also proved, that contact with plague patients has not produced the plague?—Many instances, I believe, can be produced; and the same may be said of small-pox, typhus fever, yellow fever, and other contagious diseases.

Do you think there are more numerous instances to prove that plague is produced by contact, or to prove that contact does not produce the plague?—From our experience in Egypt, it appeared that there were very few in the way of having it, that is, who communicated with the infected, who escaped it, unless they took precautions, such as washing hands.

Was you in the army?—I was not; I obtained my information from others.

To what do you attribute the expurgators in England not taking the plague for so many years?—There is a probability that the goods which arrived might not have been infected. I consider the length of time they are shut up during the voyage, and the exposure to the open air, during the period of quarantine, as the principal causes of their escape.

Do you suppose that all the goods, or a greater part, landed in England, are exposed to ventilation before they are landed?—They ought to be, according to the instructions given to the people, who are sworn to do their duty.

You have no personal knowledge as to the practice in England?—I rather suspect it had been done very negligently in former times.

Have you any reason for knowing it?—Yes; I know instances of it.

For many years?—I have not been consulted many years; I was sent to Standgate Creek in 1813, and then I thought it was done negligently.

Is it now?—I suppose it is better done now; the officers have had their line of duty pointed out to them, and I believe understand it better than they did formerly.

Do you conclude then, that all the goods brought from the Levant now, where we understand there are foul bills of health, are exposed to ventilation before they are landed?—I should suppose now that all goods, coming with foul bills of health, are exposed to ventilation; and I consider also, that many of the cargoes have been embarked when no plague prevailed; but one accident of plague occurring before the sailing of the vessel, makes it necessary to have a foul bill of health. The Lords of

His



His Majesty's council have full power to diminish the term of quarantine, and I believe very generally take those circumstances into their consideration.

Do you conceive, that during the issuing foul bills of health, the bales which are imported contain at the time infectious matter of plague?—I should suppose they seldom do; but it is very possible that they might, for persons are liable to have the plague in their constitution, without their being sensible of it, and without complaining; in which case, if they should pack goods, particularly cotton, I should conceive them liable to make those goods what may be termed contagious.

Then you conclude that goods even might have arrived, infected with plague matter, in England, during the last few years?—I cannot say positively; it is very possible.

Which is the most likely, that they have been so infected, or not?—It is more likely that men in health will pack and load a ship, than men with the plague in their constitutions; and, therefore, it is less likely that they are infected.

Do not these goods, on their being packed and shipped, go through a vast variety of hands at Smyrna or Constantinople?—I never was at Smyrna or Constantinople myself, therefore I cannot reply to that question.

Do you consider the fever at Gibraltar to have been the plague?—No; I consider it a much more serious disease than the plague; during the fever of 1804, when the population of Gibraltar was not 20,000, 6,000 persons died.

What is the distinguishing mark between that and the plague?—The plague is distinguishable particularly by buboes and carbuncles; the yellow fever is distinguished more particularly by vomiting of a black matter, resembling coffee-grounds in the last stage of the disease, with suppression or rather non-secretion of urine, and an appearance of the stomach upon dissection resembling mortification. Persons are considered liable to repeated attacks of the plague; but from my own experience I can assert, that persons after one attack of yellow fever are as little liable to a second attack, as they are to a second attack of small-pox or measles. By yellow fever, I mean the disease which is now called *Bulam fever*; and not the bilious remittent or marsh fever, mistaken by many medical men for the genuine yellow fever, which are two distinct diseases, the one contagious and the other not.

Sir James M'Gregor, called in; and Examined.

YOU have been long in the medical profession?—I have been on the medical staff of the army twenty-six years.

Are you acquainted with the plague?—I have seen the plague in Egypt, and am (as director general of the army medical department) in possession of the details of the plague in Malta and the Ionian Isles.

In what year was you in Egypt?—I went there in 1801.

Were there a great many cases of plague that came under your own inspection?—Few under my own inspection. I was at the head of the medical department of the army which came from India to Egypt; it was my duty to apportion the attendance, and frame general arrangements.

Had you many cases of plague that came under your inspection?—Under my own immediate inspection; they were the first cases that appeared in the Indian army; there were 165 in that army.

Did the whole 165 come under your own personal inspection?—They did not.

But several of the cases came under your personal inspection; state to the Committee the circumstances attending them; the first case that came under your observation, was it attended with buboes?—With buboes.

With fever?—Fever and buboes.

You then considered it to be true plague?—Most undoubtedly; the two first cases that appeared were hospital servants.

Did the cases prove fatal?—These two, and four other men that slept in the room, all proved fatal.

How do you suppose the first patient caught it?—It never could be traced; but we discovered that the plague existed then in Rosetta where hospitals were situate.

Do you suppose the others who were afterwards infected, caught it of them?—It was distinctly traced to those men; perhaps I could make this matter clearer by referring to a statement which I published at the time.

Was the plague in the country at the time the two Indian servants caught it?—Yes; the hospital in which the first cases of plague appeared, viz. that of the 88th regiment, was situate in Rosetta, and the plague was there at the time.

Dr.  
William Pym.  
(26 March.)

Sir  
James M'Gregor.



Sir  
James M'Gregor.  
(26 March.)

Give your own account?—These cases and the subsequent ones had fever, followed by buboes; but towards the end of the season, in April, May and June, bubo was seen as the first, and in some cases as the only symptom; the seasons from September till June, the first case appeared on 14th September, and the last in June.

Do you believe the plague to be contagious?—Certainly, by contact; I should have some doubts of a very close atmosphere, but I have no direct evidence of that; I could often trace it to contact.

Can it be taken by any other means or cause?—I should think most cases are by actual contact.

Not infection?—No, contact.

Do you mean actual contact with the body, or clothes infected with miasmata?—Both.

Do you think that the air has no operation in the production of disease?—There is a variety of opinion as to that point; a very general opinion is, that a particular constitution of the air is favourable to its spreading.

Then you consider the air as assisting?—Perhaps it may; but I am in possession of no facts to enable me to give a decided opinion on this part of the subject.

What is your reason for considering it contagious?—From having traced it clearly from one subject to another, on the first appearance of the disease in Egypt in 1801. In an hospital where there were 165 men, the disease appeared first in two native Indian servants; they were separated on the following day; but other four servants who slept in the same room, and who, I believe, slept in the same blankets, caught the disease, and the whole six died.

What reason have you to suppose the two first took it by contagion?—I could not immediately trace its origin, in the two first cases; but subsequently it was traced from the two servants to all who were afterwards attacked.

Might it not have been produced by the original agency of the air?—There was nothing particular in the air of the hospital where the plague appeared, nor any thing that could be discovered, different from all the other hospitals, or from the hospital to which the whole 150 men were removed afterwards; perhaps it might be satisfactory to know, that in the regimental hospital in which it first appeared, it was got rid of by separation.

Separation from what?—After these six men were removed, others with symptoms of fever were immediately separated, and placed in distinct rooms under observation. As I have stated, there were about 165 men in that hospital; immediately after the discovery of the plague, all the cases of it were sent to a pest house; the suspicious cases, those with symptoms of fever, were placed in observation rooms; and then the whole of the remainder of the 165 men were, without loss of time, removed to another hospital prepared for them. Before any man was removed to the new hospital, the strictest precautions were used; his hair being cut off, he was put into a bath, and the whole of his clothing left outside the hospital and destroyed; each man was then provided with new and fresh clothing. The consequence of these precautions having been rigidly enforced was, that after entering the new hospital, no new case of the disease appeared.

Were they infected with the plague before they went into the hospital?—No.

Do you mean, that all those who went into the hospital were persons not infected?—Not infected; care was taken to prevent any person with the slightest appearance of the disease from going there.

Do you think the plague can be produced from goods and things, as well as persons?—I should think from goods; I can speak with certainty of the clothing of men; and I can also speak with certainty, that blankets have conveyed it.

Have you had instances where contact with plague patients has taken place, but no disorder has occurred?—Yes, I have known some such instances; on the first appearance of the disease in the months of September, October, November and December, when the disease was virulent, I knew of very few cases where the disease did not follow contact; but afterwards, when the most rigid precautions were taken, and towards what I have denominated the end of the season, and when the disease was in a mild form, people went sometimes together with impunity, a case of plague has been detected, and people in the same tent have not had it.

Were many taken with the plague together at the same time, simultaneously, as they call it?—I think not; the 160 fatal cases of plague in the Indian army were pretty equally divided among them, the first four or five months after its appearance.

Of those afflicted with the plague, what proportion died?—I am sorry to say, that soon



soon after the first part of the season none recovered; indeed the subjects of the first part of the season were mostly native troops, the Sepoys; and many unfavourable circumstances along with the virulence of the disease attended.

From what number of soldiers were those 165 taken?—The Indian army consisted of 7,886; of those 3,759 were Europeans, and 4,127 natives of India.

How many of the 165 were Europeans, and how many natives?—There died of the plague, of Europeans 38, and of natives of India 127.

When does the plague generally cease?—The inhabitants of Egypt have an idea that it ceases on St. John's day, the summer solstice.

To what do they attribute it?—The general belief is, that the extremes of heat and cold arrest the plague.

Do not the waters of the Nile overflow the Delta, about June almost invariably?—The increase continues to that time, and there is a great deal of slime and mud thrown up on the banks of the river, from the low situation of the country; the Delta is a marshy low country; but the plague always commits as much devastation in Upper Egypt, where there is no marsh.

Does the plague subside suddenly?—No, it subsides gradually; from perhaps February or March till June.

Does the plague occur in Upper Egypt, prior to Lower Egypt?—In descending from Upper Egypt, we understood, in its capital that they had had what they termed *accidents*, before we came down; and that in fact the disease was never out of the country.

What time did you come down?—In June.

Where did you land?—At Kossier in the Arabian Gulph.

Do you recollect the month you landed there?—On the 16th May.

And from June to September was there no plague?—No plague in the British or Indian army; and it was confined there that year mostly to Rosetta.

To what cause do you attribute the suspension of the plague?—The natives of the country have an idea that extreme heat extinguishes the disease. It is a pretty general opinion too, that the disease is never entirely extinct in the country, but that it is called into action by causes which we are perhaps not very well acquainted with.

Do you not consider that the exhalations of the slimy mud of the Delta, may be the chief cause of the plague?—We know a specific disease, caused by these exhalations, but very different from the plague.

Have you ever heard of plague in England?—I have heard of it in the history of the country.

What year?—The last appearance of plague was in 1665.

There has been no appearance of plague since?—I never understood there was.

Do you consider the disorder then to be the real plague of Egypt?—I have not read a description of it lately. I had no doubt, at the time I read of it, that it was the same.

Whose account are you speaking of?—Dr. Mead's.

Do you recollect that Dr. Sydenham was of opinion it was the plague?—I have not read of or attended to the subject of late years.

Have you known of any of the expurgators of goods in this country, afflicted with the plague?—I never heard.

Do you not suppose, that if the plague had been brought in bales of goods to our quarantine establishments, some of the expurgators of goods must have been infected?—They must have run a great risque; the risque would be much diminished from the distance of time the things were packed or opened.

From their not having been infected, would it not be more likely to infer that no infection was brought in the bales?—I think it probably might; but there are many circumstances to be weighed, between the present and the time the plague prevailed in England; improvements in the structures of the houses and towns; cleanliness, ventilation and police regulations, are enforced in a degree unknown in the 17th century. Medical science stands now on different grounds; and we have acquired a knowledge of the disease, its treatment and prevention. In Egypt, as well as in Turkey, many existing circumstances tend to the propagation of contagion, and rendering it more virulent. Were typhus fever to appear in those countries, it is difficult to conceive how it ever could be eradicated.

Do you consider the quarantine establishments of any use in this country, from the circumstance of the plague not having been in the country for so many years?—From the nature of fomites, I should consider the risque would be increased from having no quarantine. The risque in this country would be less, compared with a



Sir  
James McGregor.  
(26 March.)

country where the intercourse was short and by land, from the country where the plague raged.

From what undoubted truth of the contagion of the plague, that has come under your knowledge, do you found your idea that it is dangerous?—I should refer to my answers to former questions, and I could adduce many other instances that came under my knowledge in Egypt. A man was taken up in Alexandria, and put in the main guard-house; the man the day after showed symptoms of plague, and was sent to the pesthouse, and died of it; several of the guard immediately after this, and prisoners, had the disease. Another instance I should like to mention; a Sepoy had the plague, and was sent to the pesthouse at Aboukir; his wife insisted on accompanying him; the man died in a few days after he went there. The woman, who intreated not to be kept in any part of the pest establishment, was sent to a hut at a distance, and a sentry placed over, and on the 10th day after her removal, she showed symptoms of the plague, and likewise died of it. I could adduce many similar instances.

*Martis, 29<sup>o</sup> die Aprilis, 1819.*

SIR JOHN JACKSON, BARONET,

In the Chair.

Dr. James Curry, Senior Physician to Guy's Hospital, called in;  
and Examined.

Dr.  
James Curry.  
(29 April.)

HAVE you considered the subject of contagious fever and plague?—Generally, but not more particularly as to plague.

Do you consider plague as contagious?—To a certainty; and for this reason, that all persons who are apprised of its contagious nature, may, by keeping apart from those persons who labour under the disease, or are suspected of labouring under the disease, be perfectly free from it, even at a very short distance from them; and probably if they were to keep to the windward of them, they might even almost touch them with impunity.

You speak now to the places where the plague most prevails?—Yes; and that is the general impression made on my mind by all those whose writings I have read upon the subject, as well as by conversation with several who have seen the disease in Egypt, &c.

How do you account for the plague not being in England?—Certain countries are less liable to particular species of diseases than others, without our knowing why; it appears to me, that the plague attends and is usually incidental to a particular state of what is called by Sydenham and others, *constitution of atmosphere*; and the various changes which take place in the air at different times appear to be produced by an interchange of electricity between the earth and atmosphere, which occasions that particular state of the human constitution which renders it liable to some one certain species of disorder, for the time it exerts its influence, and not to others. For instance, the small pox will prevail under one state of atmosphere; the measles under another, and scarlatina under a third; and we scarcely ever find that two of those disorders prevail at the same time: each has a particular or appropriate state of atmosphere which especially favours it.

What do you consider as the cause of plague?—I consider the cause as two-fold; the plague is in itself a highly malignant fever, arising from a peculiar and very virulent morbid poison, generated by the bodies of the sick whilst labouring under the disease, and capable, when applied to the bodies of those who are in health, in sufficient dose or intensity, of exciting the same kind of fever in them; the spread and diffusion of the plague, however, seems to require the co-operation of a *malaria*—*malaria* produced by the state of the soil and the atmosphere operating upon each other; hence, at one time it may be particularly rife and violent, and at another time it may not appear at all.

What do you mean by *malaria*?—It is the Italian word for a morbid vapour arising from the earth, under the influence of the sun's heat, and of the electric interchange already alluded to; it is found every season all along the coasts of the Mediterranean, but in a much greater degree in some places than in others; the essential cause



cause of the plague is double; first, the specific poison, which is generated or multiplied in the bodies of those who labour under the disease, without which it cannot exist; and secondly, a state or condition of the atmosphere, which gives a strong tendency to support the disease among the people at large; it is virtually occasioned by a state of the atmosphere, and it is communicated by the infection, either in clothes, wearing apparel or bed linen; animal matter, such as feathers, silk or wool, will preserve it much more readily than any thing else.

Do you consider the contagious principle as certain and as settled as that of small-pox?—It cannot be communicated the same way, as far as we know, I mean by inoculation; if the matter be introduced into the system, it does not entirely introduce the plague, but it will introduce a disease which is nearly similar. I have never understood that there is any difference between that form of the plague which affects a person who has touched another afflicted by it, and that which afflicts those who receive it from the odour or vapour arising from a person who is so diseased. The same remark may be made with regard to the small-pox; the contagion of the small-pox is communicated in two ways; one is by the palpable mode of inoculation, or contact; and the other is from the gas or vapour arising from the infected person.

Then you think that actual contact is not absolutely necessary to produce infection?—No, it may arise from vapour, and the contagious matter contained in the atmosphere.

Do you state, that the contagion is not always propagated by contact?—No; and it is so with some diseases, that they cannot be propagated in that way. I do not say it is always so with respect to plague; but, for instance, measles, with all the experiments that have been made on the subject, never have been palpably communicated by inoculation. Each poison may be supposed to have a peculiar mode of existence, and a peculiar mode of propagation. The same case occurs with regard to the whooping-cough. The whooping-cough has never yet been communicated, except by the breath, or by coming near the person infected with it.

Do you consider the fevers which are prevailing in Ireland, and in this country, to be both, or either of them, contagious or infectious?—I doubt whether a person removed from the place where he was taken ill of that fever, and carried even to a short distance, would communicate it to anybody, even under the very worst state that he could have that fever.

Either in England or Ireland?—Yes; and I will give you my reason for thinking so. At one time it was a great question, whether the yellow fever at Philadelphia was of domestic origin, or originated from importation; and after we began to take patients from Philadelphia to a place called Bush Hill, not a single example took place of their communicating the disease to other persons.

Have you ever heard of the plague being in London?—Not since 1665.

Not even in the quarantine establishments?—No.

To what reason do you attribute that circumstance?—I believe the propagation of the disease, or the existence of it, must chiefly arise from a certain state of the atmosphere having a peculiar disposition to receive the disorder.

Do you consider the plague contagious from goods, as well as from persons?—Much less so; because the clothes of a person affected with the plague, become saturated with the poison in the person, and are much more liable to communicate the disorder than goods. Besides, it is scarcely to be supposed, that bales of goods, coming from a country affected with the plague, would have been handled by persons who had the plague, because persons so affected would be incapacitated from labour.

Do you suppose, that goods which have been imported from a country that is infected with the plague, would not communicate that disease?—I believe, that if they communicated it at all, (which I doubt,) it would be from those goods having been extremely confined. It does not meet with a suitable soil or sun here.

Is it your opinion, that if a bale of goods be placed in a room where there is an infected person, they would be likely to imbibe so much of the infecting vapour as to convey the infection to a distance when removed?—It is scarcely possible to answer that question, for this reason; that the size of the room, and the circumstance whether the person is lying on the bale of goods or not, must be taken into consideration; but a mere bale of goods placed in the corner of a room where there is an infected person, and not touched by that person so labouring under the plague, I should think would be very little subject to carry infection.

Then you consider that the effect of the vapour can only be understood to be  
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infectious when any body or goods are placed near to an infected person?—Either the body of the patient, or his wearing apparel or bed-clothes, by touching or handling which the infection may be communicated, they having strongly imbibed it.

What do you conceive is the cause of the annual revival of the plague in Egypt and those regions?—The peculiar operation of the sun and the change of the Nile. It is said to cease always on the 24th of June in Egypt; that is the time the sun crosses the equator.

Do you not suppose that the cause of its imagined stopping always on the 24th of June, is not generally to be attributed to the overflowing of the Delta by the Nile; because when the Delta is overflowed the plague instantly subsides, I understand?—It does not appear to me to depend upon that; because the run, or rather the spread of water on dry land, does not produce any sickness. It is the fall of the water, and leaving the mud exposed to the sun and air, together with the state of the atmosphere, that produce it.

Do not you consider that the reason why we have not the plague in this country from goods brought from places infected, is, because there is no infection contained in those goods so imported?—Why I suspect there is very little infection in such goods; but I cannot say any thing about that practically.

Then you think that the state of the atmosphere is one of the first causes?—Yes.

Is it your opinion that in the year 1665, the prevalence of the plague in this country was in consequence of the atmosphere being in such a state as to favour the operation of the contagion?—Why, contagions divide themselves into two great classes. One class consists of those diseases that scarcely ever, if at all, occur more than once during the life of an individual. Such is the small-pox, the measles, the hooping-cough, and scarlatina. There is another class of fever which are also communicated by contagion, and that capable of occurring more than once in the life of an individual, as for example, typhus and the plague. The first class depend upon a contagion which is only multiplied through the bodies of persons labouring under the same disease; like seed sown in the earth, which produce the same plant, and so on *ad infinitum*. The other class is capable of being generated *de novo*, as the contagion of typhus fever, and in plague countries the contagion of plague. In one case the poison is always in existence, either in an active or dormant state; and in the other it may be so, for any thing that we can say to the contrary, but it is much more probable that it is created afresh. The question appears to correspond with that respecting the small-pox being epidemic. The greater probability is, that under certain circumstances of the sun, the climate, and the particular state of individual constitutions concurring together, the plague and typhus fever are capable of being generated *de novo*. I am therefore of opinion that the plague which prevailed in London, in the year 1665, was more probably generated here, than imported.

Do you consider that the circumstance of the plague not having occurred in any of our quarantine establishments for these last 100 years, a good reason for inferring that the disease was generated here in the year 1665, and not imported?—I am rather disposed to believe that every plague, even in the Levant, is oftener generated than propagated by the contagion.

Then you are inclined to believe that the plague in this country, of 1665, originated in England, and was not imported?—Yes, under a state of circumstances which may by possibility occur again, but which as yet, has not occurred a second time.

Do you think it impossible to import plague into England?—I think if it were imported it would affect but few; and the cases would be so insulated, that it would be very soon cut off.

But if there should be again a state of the atmosphere in England, in any degree resembling the state of the atmosphere in 1665, if the plague should happen to be imported at that time, would there not be a strong probability of the infection spreading?—Certainly.

Is it your opinion that such a state of atmosphere may again occur?—Whatever has happened in the world once, may happen again, except perhaps the deluge or such circumstances.

Do you consider the quarantine establishments of service?—From the circumstance of Holland never having been at all affected with the plague, although admitting goods from the Levant without difficulty, I should conclude it would be the same with regard to this country, and with an equal immunity.

Holland admits goods from the Levant, even without quarantine?—Yes.

If persons infected with the plague were to arrive on board our quarantine vessels, would it be best to suffer them to be landed, or to keep them on board?—I should conceive



conceive it would be more safe to keep them on board, and the same degree of ventilation can be supplied with a little pains so as to dissipate the vapour; and there is no poisonous vapour arising from the body of the sick person, which may not be so diluted with atmospheric air as to be rendered uninfectious.

Would not the improvement of health on landing, overcome the contagion?—I do not know of any improvement that would arise from landing, further than walking; and if a person is able to walk, he may as well walk the deck of a quarantine ship.

But is there not some beneficial consequence arising from touching *terra firma*; is there no electrical effect?—Nothing but that which would occur equally on board of ship. The question, taken in its general bearing, would make rather against the supposition inferred by your question. Several years ago, when I was lecturing on the subject of contagion and fever, and the influence of *malaria* arising from the land, the late Captain Pelly happened to be present at the lecture; and I was mentioning the fact, that in the West Indies, *ceteris paribus*, the inhabitants to the windward of the islands have not the fever so much as those persons who reside on the leeward side; because those persons who reside on the leeward side of the islands are necessarily exposed to the fever arising from the land which intervened between the windward side and the leeward side. In corroboration of that, he mentioned a very curious circumstance, which had been repeatedly observed by himself, and by many other officers who were in the Channel fleet, that as soon as they got out of sight of land, and had an entire sea breeze, the men and boys might go to sleep in the tops, and wake after an hour or two without any injury; but as soon as they came up the Channel, so as to receive the influence of a land wind from the English or French coast, they always wake with a cold upon them if they have been so to sleep, or have a cold a short time afterwards; so that it would appear, that all land wind has something contagious attached to it, in a greater or less degree.

Do you think, that the plague of 1665 in this country, was the same as the Levant plague?—We have no accurate description of it by which that can be ascertained; and it appears even with regard to the Levant plague, that there are five or six varieties. They are classed by Dr. Russel, as consisting of five or six sorts, and by other persons as being of seven descriptions.

Is the plague, as we now understand it, of very ancient date?—It was supposed to be introduced at the time of the Crusades, into western Europe.

Do you mean into the Mediterranean?—Yes.

From Jerusalem and Syria?—Yes; the small-pox and measles were also supposed to be introduced at the same time.

You have stated, that the plague was introduced into western Europe by the Crusaders. Then in that case it must have been carried there by *fomites*?—Most likely by *fomites*.

And therefore it was not generated in Europe, as you suppose the plague of 1665 to have been?—It is capable, as I have said, of existing in a dormant state, or of being created *de novo*. But the peculiar cause may attach to the part of the world where it exists, and it is in a great measure confined to those parts; for though there is a constant communication of it, through the medium of the Black Sea, to the Tartars and Persians, it seems very seldom to be communicated to Russia.

How do you account for the plague having been at Moscow in Russia?—It was said to have been introduced by some soldiers, who had been brought from the coast of the Black Sea.

Then you consider, that the combination of the causes of the plague, more specifically exist where the plague prevails?—Certainly.

And therefore not so likely to occur in other places?—I conceive it might be propagated here, or might be generated *de novo*, though not so likely.

Are you of opinion, that epidemic diseases, under any circumstances, may become contagious?—Yes, by a very near approach to the bodies of persons labouring under the disorder. The vapour arising from the bodies of persons infected, would produce the disorder readily and violently; but in all epidemics they arise in such a great many points at once, that it would be almost impossible to say, that they were produced by contact with infected individuals. In a conversation which I had about four years ago, with a very intelligent Spaniard, who was secretary to the embassy going from Spain to Sweden, he told me a very curious fact, with respect to the town of Medina Sidonia, which is about twelve miles from Cadiz. The first time it was affected with the contagion of the epidemic of Cadiz, only a few houses on one

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side of a street were affected; and the next season, when it occurred in Cadiz, it attacked the greater part of the town of Medina Sidonia; but it was insulated in the first instance.

Do you attribute that to a current of air?—There are many circumstances which escape common observation, and which cannot be accounted for by many, that have yet an influence upon human health. It may be illustrated by a fact, which is commonly observable in this country, by the excessively offensive smell arising from our sewers on particular occasions, which has usually been attributed to the wind setting in in a particular quarter, or blowing up a particular grating, and so up into our houses. But it appears to have no connexion with the *direction* of the wind, nor any *sensible* state of the atmosphere; but rather depends on some peculiar change that has taken place, apparently of an electric nature, between the earth and atmosphere.

Have you not remarked, that the bad smell from sewers, &c. generally precedes rain?—Yes, frequently; but then it must be remembered, that a change in the electric state of the atmosphere always precedes rain. The point may be further illustrated by a variety of phenomena, that are constantly occurring before our eyes, but which are little attended to, and still less inquired after, as to their causes. Frequently during the summer in this country, you may observe a puff of warm air come against your face as you are going along, without any circumstance that can explain it, except that owing to some local cause acting upon such portion of the general atmosphere, as to render it sensibly *hotter* than the general mass: it is what is commonly called a *hot gleam*. This appears to be only a lesser degree of the same phenomenon which produces sirocco of Sicily, the hot winds of India, the harmattan of the Coast of Guinea, the samiel winds of the Desert. You will also frequently observe, in a day when the air is perfectly still and calm, that in travelling along the road, or crossing a plain, like that of Salisbury for example, without a tree, a wall, or a hedge being near, which could account for it, a whirl of leaves and dust will rise in the air, and travel from a few yards perhaps to a quarter of a mile, and cease there; and then another perhaps will arise, and go on. These are only so many lesser degrees of what is known in other countries, especially North America, the West Indies, and still more the Eastern Archipelago, by the name of tornadoes and tiffoons; and they can only be explained satisfactorily by supposing, that a change has taken place in the relative electrical state of the earth and atmosphere, and occasions either a sudden and considerable condensation or expansion of the air over the particular spot, in consequence of which the circumambient air rushes in to fill up the void; and these whirls or tornadoes travel in various and even opposite directions at the same time, no doubt according to circumstances, which are dependent entirely upon some electric interchange which determines both the force and the extent of the motion.

You mean the electric principle travels?—Yes; for the air has no loco-motive power of itself. It must be either subjected to compression, or impulse, or the agency of something extrinsic, such as heat, cold, electricity, &c. to give it motion.

I would ask you, whether you ever had an opportunity of seeing the Levant plague yourself?—Never.

A gentleman has stated to this Committee, that it would be next to impossible to import the plague into this country, if even a high premium were offered for the purpose; what is your opinion upon that subject?—I can only say, I should be very sorry to make the trial.

Dr. Robert Tainsh, called in; and Examined.

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YOU were surgeon of the *Theseus*, I believe, in the Mediterranean, at the siege of Acre?—Yes, I was.

In what year was that?—It was in the years 1798 and 1799.

Did you see any cases of plague whilst there?—Yes.

How many cases of plague did you see?—I saw five cases of plague.

Were they on board the *Theseus*?—Yes.

What countrymen were the persons infected?—There were three Englishmen and two Frenchmen.

Did they belong to your ship?—The three Englishmen had belonged to the *Theseus* formerly, and they had been taken in one of our gun-boats. They all appeared infected with the disease.

In what state of the disease were they; had they buboes?—Only one of them had it of any great consequence. The other four were petichial slight cases. They were in a state of convalescence, and had rather the remains of the disease, than any



any thing else. One of the Frenchmen, however, had buboes, and in a state of suppuration.

Did that Frenchman recover?—Yes.

After what lapse of time?—In about three weeks or a month. Both the Frenchmen were sent on shore.

But was there any communication of the plague to any other persons on board the *Theseus*?—No.

Were there any means of separating these plague patients from the rest of the crew?—Certainly; all of them were removed into one birth on the starboard side of the ship, called *The sick bay*. Every part of their clothes that were on them on their coming on board, were immediately taken off and thrown overboard by my orders. Their bodies were shaved, and no hair left on them that could lodge moisture. They were then washed with soap and warm water, and new clothes were given to them: they had new bedding, new shirts, and every thing new within ten minutes after they came on board.

Who washed them?—One man whom I persuaded so to do, by handling the patient myself, and applying the poultices to the buboes.

Had you communication with the ship's crew at the same time?—Yes; I examined them every morning, to see whether they had caught any infection, but none of them had.

Did the man, who attended these patients, mix with the crew?—He communicated generally with the crew of the ship.

What was your object in destroying their clothing in which they came onboard?—It was a mere caution to prevent those clothes from being again used. It was on account of no particular theory, but merely for cleanliness.

It did not arise then from the belief that it was of itself contagious?—No; and my hands being so much engaged with the knife at that time, I had not much opportunity of studying the disorder.

Did you touch the man who was so badly affected?—Yes, I applied his poultices.

Did the same man attend upon him who had shaved him?—No, the barber of the ship shaved him; and the only precaution used was, when the attendants came out of the sick bay, I made them immerse their hands in a bucket of vinegar.

Do you suppose they always did that?—They were ordered to do so, and a sentry was placed there to oblige them so to do.

How near was the sentry to them?—He was on the opposite side of the ship, the sick bay generally taking in half the gally.

Mr. *Edward Hayes*, called in; and Examined.

HAVE you resided long in a plague country?—Yes, I was born at Smyrna, and resided there nearly all my life. I have resided there nearly 44 years, from the time I was born.

During that period have you seen frequent occurrences of the plague?—Very frequent occurrences of it.

Did you avoid it yourself?—We always do.

By what means?—We shut ourselves up from communication with the town, and only communicate through purveyors.

Do those purveyors have communication with persons who are infected?—Yes, but they are generally people who have had the plague themselves.

Had you the plague?—No; it was once in our family, and I thought I had symptoms of it but it was not the plague. It had got into our house, and several individuals died of it, and among others a relation.

Notwithstanding all was shut up in your house?—Yes; that sometimes happens; but we can almost always trace it to some imprudence of our domestics.

Will you explain what imprudence?—The receiving any articles without putting them through a purification of air, water, or a fumigation.

Have you known instances of persons having communication with persons who were afflicted with the plague, without catching the infection themselves?—Very often.

As often as on the contrary?—No, not by any means.

Do you consider the plague to be absolutely contagious?—Certainly; that is to say, the atmosphere must be in a state when it will spread a great deal more than at other times.

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What become of the clothes of a person who dies of the plague?—When an European dies of the plague, we generally destroy the clothes; I mean such as we cannot wash. But when the natives die of the plague, the clothes are sold again; that is, *until lately*. They now discover their folly, and begin to take the same precautions that they do with respect to Europeans clothes; at least with regard to the higher order of Turks, but it is by no means a general custom.

Then do the Turks make no hesitation in putting on the garments of a person who has died of the plague?—The greatest part of them do not.

Nor in sleeping in the same places?—No; but that arises, in a great degree, from their being Predestinarians.

When does the plague generally subside in your country?—When the great cold or the great heat destroys it. It is erroneously supposed, that it must cease about the 24th of June, because the 24th of June is St. John's day; but it is quite absurd to suppose that, because I have seen it cease sometimes before; and I have seen it continue sometimes as late as July or August, when the great heats destroy it.

And when do the great heats usually destroy it?—The virulence of the disorder is almost invariably over by August.

When does it begin?—In March or April.

Do you ship goods promiscuously, whether the plague rages or not?—Yes.

To all parts of Europe?—Yes.

Do you imagine that goods shipped during the time the plague is raging, convey the contagion?—Certainly; and that every country that receives those goods, receives in a degree the contagion of the plague.

To what do you suppose it may be attributed, that England has not the plague from that circumstance?—To the climate, to the length of the voyage, and the exposure of the goods to the air.

If your goods are imported into this country, how comes it that the expurgators of those goods do not catch the plague?—From the same circumstances, perhaps, as that I have seen persons not catch the plague, though attending upon plague people. It may arise from the state of the body; there has been plague in the lazarettos in other countries.

Do you consider the lazarettos of any use in this country?—They are very imperfect; and are by no means adequate to keeping the plague out of the country.

Do you think they are of some use?—Certainly they are of some use; the length of time that persons are obliged to stay there, must be of use.

Are there any quarantine establishments in Holland?—Yes; and vessels that have quitted the Levant at the time the plague prevails, will not be permitted to enter their ports.

You have stated, that the purveyors who carry on the communication between the natives and Europeans, during the existence of plague, are generally persons who have had the plague; are individuals who have had the plague once, less likely to have it again?—If they have had the plague in the severe stage once, and during a period of plague afterwards, if they take every precaution, and keep a proper regimen, they are much less liable to have it, though they are by no means certain of being exempted, because I have known people to have it ten times.

You have stated, that the plague frequently makes its way into European families, from the imprudence of domestics; do you speak from your own knowledge of any case in which the plague has been introduced, by the introduction of goods of any description, into an European family?—Certainly; repeatedly.

From your own knowledge?—Yes, dear-bought knowledge; for it was brought into our family in that way.

In what way?—By servants bringing stockings, or any thing of that kind, into the house, without their having undergone a proper purification.

Are you, however, satisfied that it was introduced by those goods alone, or might it not have been by contact with persons affected by plague?—I have known cases where it has been introduced by goods, and also by walking out, and having communication with individuals who had the plague, without our knowing it.

But I wish to put it to you, whether, within your own knowledge, any case has occurred from which you are satisfied in your own mind that it was introduced solely by goods, without contact?—Repeatedly; I have known many obvious cases of that sort.

Is it your opinion that goods that have been touched by infected persons, will retain that infection for any length of time?—If those goods were closely packed up, they would retain it for a long time; but if the air comes to them, it destroys



destroys it. I am, however, persuaded, that plague might be kept in goods or boxes closely shut up, for many years.

What species of goods are you of opinion are most liable to retain and convey the infection?—All wools, and any linen; any cotton goods. Goats wool is particularly adapted to retain the infection, on account of the way in which it is prepared.

Are goats themselves subject to the plague?—No.

Are animal substances more likely to retain and convey the infection, than vegetable substances?—Certainly.

But cotton goods are liable to carry the infection?—Yes.

Are there any substances which are not liable to retain the infection?—Yes, some substances will not retain it; a stone, for instance, does not; but I should be very sorry to put my hand upon a stone immediately after it had been touched by a person afflicted with the plague.

You say that the inhabitants of Smyrna are in the habit of using many precautions against the plague; have you ever heard of inoculation for the plague?—I have known one or two instances; but as the patients are liable to take it again, it is of very little use.

Have you ever known the plague communicated by inoculation?—In one or two instances.

Has that inoculation caused the plague?—Yes.

Is the cow-pock known at Smyrna?—Yes.

Has it ever been tried as a preventive against the plague?—Not that I know of. It is unfortunate that the consequences of the disease are so rapidly destructive that few medical men ever made it a point to study the nature of the disease; there have been several doctors attempted it, but all of them have fallen victims. One doctor, whose name I forget, was sent to Smyrna by Catherine of Russia, and he waited with great patience for a considerable time while no plague was there; he waited until there was a case of plague occurred; he went into the hospital, and he died in three days afterwards. His mode of attempting to cure the plague was by friction of snow; but I have good reason to believe that friction of oil is a very good application.

Have you ever known mercury used?—It has never been used that I know of.

Did you ever know of a person going into a plague hospital and coming out cured?—Yes, a great many.

What sort of hospitals are they?—There are Roman Catholic hospitals, Armenian hospitals, and hospitals for Jews; and what is a most extraordinary fact, that, even filthy as they are, they recover; but I believe that is in a great degree owing to the care that is taken of them: for there is very little care taken in the Greek hospitals.

*Sir Robert Wilson*, a Member of the House, called in; and Examined.

I BELIEVE you have been in Egypt?—Yes, with the army.

While in Egypt with the army, have you seen any cases of plague there?—Many; and if you will allow me, I will state the result of my observations. The army that invaded Egypt was divided into two corps. One was stationed at Alexandria, and the other moved on against Cairo; a part of the army which remained stationary at Alexandria had a detachment at Aboukir, where the preceding year many thousand Turks had been put to death in consequence of a defeat in an action with the French, (and where several hundred British and French had recently been interred;) every precaution was taken to prevent the introduction of plague into that part of the army which blockaded Alexandria and was stationed at Aboukir, and from particular local circumstances all communication with the country was successfully intercepted, except under authorized regulations; notwithstanding which precautions, plague broke out three distinct times, beginning amongst the troops occupying Aboukir, and extending to those stationed before Alexandria. That part of the army, Turkish and British, which moved against Cairo, passed through the country where numerous villages were infected with the plague; and during the march the soldiers had constant communication with the inhabitants of those infected villages. At Menoof, where the plague had raged with the greatest violence, a bakery was necessarily established for the use of the army; but none of the persons who attended that bakery were infected with the plague. At Rahmanich there was a lazarette or plague hospital; several men were lying infected with the plague, and many were brought out already dead; others were dying in the environs of the town of the same disorder. The Turks

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stript the bodies of all, indiscriminately, of their clothing, and there was no restraint whatsoever in the communication with the inhabitants, who had also free access to the camps, yet no plague was communicated to the troops. The city of Cairo had lost a great many inhabitants the same year, by the plague. When the army arrived at Cairo and united with the Grand Vizier's army, many of the graves in which the inhabitants had been buried who had died of the plague, were opened and the bodies stripped of their clothing, with which the Turks covered themselves, and yet no soldier of either the British or Turkish armies was infected with the plague. The disorder ceased between the 17th and 24th of June, at the precise time when its cessation had been anticipated and assured by the inhabitants, except at Aboukir, where it continued to exist some time longer. It was also affirmed to us by the French officers, that although the plague had raged in Cairo that year with very great violence, and carried off some of the French army, yet notwithstanding a constant communication was held between the garrison stationed in the citadel and the inhabitants of the town, the soldiers in the citadel were not affected, in any one instance, with the disorder. Many thousands of the inhabitants of Lower Egypt had died that year of the plague. The Indian army, passing through Upper Egypt, had traversed a country in which about sixty thousand inhabitants were said to have perished; whole villages having been destroyed; but yet the troops of that army brought no infection with them, nor were any precautions adopted to prevent contagion on their junction with the British European army. To these circumstances I was myself an eye-witness. I would wish also to state, that as we moved through the country, the inhabitants pointed out to us particular villages that were infected with plague, and which plague did not extend out of those particular villages to any of the contiguous villages, although there was no precaution whatever used as to the communication with the inhabitants of the infected villages. Conversing with Dr. Desegnettes, the chief physician of the French army, and M. Assilini, the head surgeon of the French army, they assured me, that whenever a battalion infected with the plague had been marched out of the infected place, that the soldiers recovered and never conveyed the infection to other garrisons; and that troops marching into that infected garrison which had been vacated, did not become themselves infected, unless they remained there longer than eight or ten days. And M. Assilini further assured me, that several French officers and soldiers, who had the plague, having removed themselves, or been removed when sick of the plague, into other places, they had almost always recovered. But he said, his great difficulty was in persuading people to make the exertion of movement; for they were generally so enervated that they preferred to remain where they were and meet their fate.

What is the inference you draw from these facts, generally?—I should be very unwilling to state any positive inference; but in my own opinion I think the plague is a fever originating in a particular state of the atmosphere, produced from local causes and confined to their influence.

Have you any idea of those causes?—I should suppose it must arise from a putrid state of the atmosphere; because those villages which were infected, were stated by the inhabitants to be generally those where the mud had been left longest, and the moisture only, after considerable stagnation, had been absorbed. The Nile annually overflows all the inhabited land with a body of water four or five feet in depth, and charged with a very rich mud, which it deposits. After several months, when the Nile falls, the water, in a comparative pure state, is carried off the land by canals, which at a prescribed season, are opened for that purpose. As the sun gains power, the moisture of the mud which has been left is absorbed, until the mud becomes quite dry and brittle; the absorption is so great that the ground is over all its surface broken by large fissures, sometimes three or four feet in depth, and which render the passage for horses extremely dangerous.

Is it a sandy mud?—No, it is a clayey mud; an extremely rich mud, quite fat and greasy.

Then it appears from your testimony, that where the greatest caution was exerted the plague occurred, and where it was left to its chance it did not occur.—Yes; the troops, however, being in constant movement, except at intervals of three or four days. And I should have no fear whatever of going into any place infected with the plague, provided I was not obliged to stay there altogether during the plague season.

Should you have any objection to touch a person infected with the plague?—No.

Did you ever touch a person infected with the plague?—No, not knowingly; but about five years ago I went to Constantinople, and the plague had broken out there



there at that time. I took no precaution against it, and went through those parts of the town which were affected by it. I never felt any apprehension; and I neither was infected myself, nor did I communicate the disease to other persons.

Did you lose any men by the plague, at Alexandria and Aboukir?—Yes.

Have you any idea of the number that were affected?—I should think, between the 12th April and 26th August 1801, about 400 were affected, out of which 173 died.

Were they natives of India?—No; Europeans.

All of them?—All of them; mercury was found on that occasion to be the best remedy. Oils were tried, but mercury was found to be most efficacious.

Were any of the natives of India afflicted?—I do not know what happened to the Indian army as they passed back through the country to India, but I know that none of them were afflicted in the advance.

You began by stating, that a very great destruction of Turks had taken place the year before; do you consider that the putrefaction of those 12,000 Turks conducted to infect the atmosphere?—It certainly made the state of the atmosphere much worse; but with regard to putrefaction I must inform the Committee, that bodies do not corrupt there as they do in Europe. The ground is so very salt, and the air so extremely rarified, that bodies become rather pulverized. When we came to the place where the remains of those Turks were, we found the scalps of many, with the hair on them, and parts of their clothes; and though we might look on it as a place of infection, I cannot say that there was any putrefaction there, in the general sense of that term, when applied to the decomposition of bodies. I have seen bodies lying on the surface for months, but from the heat of the sun they lie almost in a mummy state.

Moisture is requisite for putrefaction?—Certainly; and there is a very heavy dew at night; but the ground is so strongly impregnated with salt, that I presume the effect of that moisture is counteracted.

Was there no smell in this place?—Yes; the ground had an offensive smell; but the sand in that country, over which the Nile does not flow, had also generally a peculiar sickly smell; however, that place had, in our opinion, a remarkably offensive smell, in addition to the natural disagreeable smell of the sand. No one had any wish to have any communication with the spot; but there being a fort on that point, we were obliged to have communication with it, and all the boats were at first obliged to come there.

How far is Aboukir from Alexandria?—About eight or ten miles. Whether right or wrong, I do not know, but we always ascribed the plague at Aboukir to the state of the atmosphere, occasioned by the previous decomposition of dead bodies, because every possible precaution had been taken to prevent the infection by communication. The camp was in fact in a state of quarantine, in consequence of the precautions taken.

You have stated, that the French officers thought their garrison at Cairo, had never been infected that year in the citadel; are you aware that they took any precaution, to prevent it?—I know there were none taken; the citadel contained a very small portion of the garrison, perhaps only twelve hundred men. There was an army in the city (including followers,) of near thirty thousand; and the communication of the soldiers of the garrison with those in the town, was constant. Some of the French soldiers in the city died; but the French soldiers themselves, felt a perfect confidence, provided they did not remain stationary in any garrison in which the plague raged. What makes the phenomena of this disorder more remarkable, is, that the villages are insulated, and built on parallel lines, not more than 500 yards asunder; and though six or seven of those villages in one district may be affected with the plague; and though the inhabitants of those infected villages constantly pass through villages not infected, on their route to the Nile; yet, though there is such a daily traverse and communication, the infection will remain in the villages where it broke out, and not extend infection through the district.

Is M. Assalini a very clever man?—Yes, a very clever man.

Sir  
Robert Wilson.

(29 April.)



*Martis, 11<sup>e</sup> die Maij, 1819.*

SIR JOHN JACKSON, BARONET.

In the Chair.

*Charles Dalston Nevinon, M. D. called in; and Examined.*

*C. D. Nevinon,  
M. D.*

(11 May.)

HAVE you been abroad at all?—Never.

Then you have not of course seen any case of the Plague?—Not any.

Have you formed any opinion respecting its contagious quality, from reading or otherwise?—Yes I have.

Favour the Committee with it?—That it is a contagious disease.

Do you suppose a person arriving with the plague in England, would be likely to communicate it to others?—I do.

Do you suppose also, that goods infected with the plague are equally the cause of communicating the plague to persons?—They are a cause, but not equally.

How do you account for the circumstance, that none of the expurgators of goods at the quarantine establishments have ever been the least infected with plague?—I do not know that to be the fact, but if it were the fact I should suppose it might arise from the goods being opened in the open air, and the fomes of the disease not being sufficiently concentrated to produce the impregnation of others in the open air.

Then you consider that the plague may have arrived in bales, but still not be able to communicate the infection, from the ventilation?—Yes, in the open air; and with the precautions that are probably usually taken at quarantine stations.

Would it happen in a case of small-pox contagion?—I should think not in the same degree, because the plague is asserted by authors to be difficult of communication and almost by contact only; the small-pox we know to be propagated by the contagion being diffused in the atmosphere, in very diluted portions.

You have never heard of a plague case in England, I suppose, since 1665?—I have heard of such cases, but they turned out upon examination to be false; a few years ago there was such a suspicion in Westminster, in four cases.

But you do not consider there is any verified case of plague in England, since 1665?—Not to my knowledge.

Do you consider the plague of 1665 to have been the real Levant plague?—I do; observing always, that what I now state is an opinion only formed from the effect of reading.

Do you consider the plague as an eruptive disease, and coming under the order of Exanthemata?—No; but eruptions are concomitant with it, in the form of carbuncles petechiæ and buboes.

Do you suppose that persons can be re-infected with the plague?—I do.

And cases have often occurred in your reading?—Not many cases; but some certainly; and physicians who are now alive, have suffered the plague twice.

Is the plague supposed to be a species of typhus?—No; it has typhoid symptoms attending it; but it is not that disease which goes by the name of typhus in this country, there are some of the same symptoms, but not all.

Is typhus contagious?—It is.

In a greater or less degree than the plague, do you suppose?—In a less.

Is typhus fever ever attended with buboes, as in a case of the plague?—No.

Does the propagation of the plague depend materially upon the state of the air?—I should conceive it does, because it is known to commence and terminate under certain states of the atmosphere in countries where it is endemic.

You understand that the plague is said to terminate in Egypt, generally on or about the 24th of June, about the time the waters of the Nile overflow the Delta; does not that make it appear that the exhalation from the mud of the Delta is the cause of the plague in Egypt?—It does not to my mind convey any such impression, because the plague prevails in many parts where there is no mud and has been no mud; and because such a rising and falling of the Nile may induce other circumstances sufficient to account for the alteration in the extension of the contagion.

Is it not likely to have been produced by the narrowness of the streets, and the dirty dress of the inhabitants?—Whatever depresses the animal powers, which these circumstances



circumstances have a tendency to do, must render them more liable to contagion, and that contagion more destructive when it is effected.

Do you consider the alteration in cleanliness, in London, which has taken place since 1665, to be the reason why no plague has existed here?—A co-operating, but not the principal cause; believing that the plague originated by importation.

It is not your opinion, that the plague is likely to have originated in this country?—It is my opinion that it did not originate in this country, and that no degree of cleanliness would prevent its being extended to the individuals of the country, if they were sufficiently exposed to the contagion.

That is, if they were exposed to persons having the plague?—And came in contact with them a sufficient length of time.

Do you consider the lazarettos as useful, in preventing the introduction of plague?—I should consider all regulations which prevented the communication of persons infected with the plague with others, as useful, of whatever kind, whether performing quarantine on ship board; in floating lazarettos, or in lazarettos on shore. The plague not appearing in the lazarettos is no more a proof that it is not contagious, than that typhus is not contagious because it does not extend in the hospitals in this metropolis, where every precaution is used, by ventilation and cleanliness, to prevent its propagation.

Then typhus does not communicate in the hospitals?—Certainly not; in St. George's hospital, to which I belong, I never knew an instance of its communication for nearly twenty years, during which I have acted as physician to the charity, nor during nearly six years I was in attendance as a pupil there before; I have certainly seen some of the worst states of typhus in that hospital.

Do you suppose that a plague patient, coming into a hospital, would communicate the disorder?—Not if precautions were used to prevent contact, and they were always put to leeward of the attendants.

Similar precautions as are used in the case of typhus?—Similar precautions as are used in the case of typhus, and similar precautions as are used in pest-houses abroad.

Persons brought in with the small-pox, do they communicate the small-pox in the hospitals?—They do; I have known two or three instances of such extension; and the same with scarlet fever, in one or two cases.

Then the contagion of the small-pox is more diffusible in the atmosphere, than the contagion of the plague?—Much more diffusible in the atmosphere.

*Richard Powell, M. D. called in; and Examined.*

HAVE you ever been abroad?—Not so as to see the Plague.

Have you formed any opinion respecting the probable contagion of the plague?—Yes.

Will you state it to the Committee?—That it is contagious.

Will you give your reasons for that opinion?—I deduce it from the recorded facts upon the subject, which establish it to my mind as strongly as any fact with which we are acquainted.

Do you allude to a particular fact?—I allude to the general histories given by authors from the earliest periods; and I should lay a great deal of stress upon the more modern publications of Dr. Russell.

Do you conceive it is equally communicable from goods as persons?—I have no doubt it is communicable from goods; but I should suppose not equally so as from persons affected with it.

To what circumstance do you attribute the plague not having occurred at the quarantine establishments?—To the care which has been taken.

To the ventilation?—Chiefly to the ventilation, but not wholly.

You are of opinion, that the infection of the plague must in some instances have arrived at those establishments?—I do not know how that may be, but I believe it has actually occurred in some of the lazarettos on the Continent.

You suppose then, that the ventilation of the quarantine establishments is sufficient to dispel the cause of plague, if it should arise there?—Certainly it goes a great way towards it; and if no case has occurred I should say the means in the aggregate were sufficient.

Taking it for granted the plague has arrived there?—I only assume from what has occurred elsewhere, that it may have arrived; but as to the sort of goods which may communicate it, I should think it was more likely to be contained in woollen goods

*C. D. Nevins,*  
*M. D.*

(11 May.)

*Richard Powell,*  
*M. D.*

(11 May.)



*Richard Powell,*  
*M. D.*

(11 May).

used for clothing, and which have been in contact with the bodies of the sick; and that the kinds of manufactured goods in the mass, which are the common subjects of importation here, are not so likely to be impregnated with contagious matter.

Do you suppose woollen is more likely to communicate and contain the plague than linen?—I do; but we must not be guided by analogies, for we should bear in mind, that every kind of contagion has its own specific laws; that you cannot argue from one as to what takes place in the other; and I have never seen the plague.

Do you consider, that persons may be re-infected with the plague?—I do not know, but I think they may, as far as evidence goes.

Do you consider it a species of typhus fever?—No, it is a specific disease, and has nothing to do with typhus, except that the symptoms of all severe febrile diseases are similar in many of their points.

But the contagion of the plague is not so easily communicated as the contagion of the small-pox?—We have reason to believe, that the plague is a more fixed sort of contagion, that it is not so diffusible, that it does not act at so great a distance as some others.

Would it not be fair to infer from that, that it depends more upon local causes than any thing else?—Upon my word I do not know on what any contagion originally depends; but I think, where contagious disease exists, it is propagated from those who labour under it, or by some modification of matter produced by their bodies.

Do you suppose, that a person infected with the plague in England, could produce it as easily as one infected with the plague in Constantinople?—I cannot tell that, because I believe the temperature has a very considerable effect upon the spreading of the plague.

Do you consider the typhus fever is contagious?—Indeed I do; from my own experience I can have no doubt about it.

Do you consider the quarantine establishments useful?—I hardly know the laws by which those quarantine establishments are regulated; but I think, that every thing that is connected with care and attention to prevent the introduction of such a disease as the plague, is useful.

And you consider ventilation as likely to prevent the introduction of it?—I think ventilation a great point; in truth, I think it is ventilation chiefly that prevents the spreading of typhus in our hospitals.

The effect of ventilation is the diluting of the poison?—I think it is.

*Algernon Frampton, M. D.* called in; and Examined.

*A. Frampton,*  
*M. D.*

(11 May.)

HAVE you been abroad?—No.

Have you formed any opinion respecting the contagion of the Plague?—No, I cannot say that I have formed any opinion worth detailing to the Committee.

Have you ever known a case of the plague in England?—No, never.

The plague is supposed not to have been in England since the year 1665?—I have no knowledge of any subsequent disease under that denomination.

Do you consider the plague a species of typhus fever?—I can scarcely conceive I am qualified to decide that point, never having seen the plague; there can be no doubt they very much resemble each other, and are prevalent at the same time.

Is typhus fever supposed to be contagious?—Under certain circumstances of close and confined situations, but not in open air and well ventilated apartments.

You have not given your mind at all to the consideration of the plague?—Not particularly; I certainly have more doubts on the point than my learned brethren who have been examined here; but I do not think I am qualified to give an opinion at all.

Do you consider there is a diversity of opinion among medical men, as to its contagion?—I cannot speak to that point; I really have no knowledge that I can depend upon.

Have you an opinion upon it?—I have doubts upon it certainly.

Doubts upon what?—Whether it be more contagious than typhus; I can scarcely doubt that it is contagious, under certain circumstances.

Do you consider the quarantine establishments are likely to be useful in this country?—I should certainly think some kind of establishment of that kind proper, under more or less degrees of strictness.

Do you know that the Dutch have no quarantine establishments?—I am not acquainted with that fact.

You



You have stated, that the plague and typhus fever resemble each other; are there not very distinguishing symptoms in the plague, that do not occur in the typhus fever?—The eruption of buboes and carbuncles, or perhaps buboes only.

Which do not appear in the typhus fevers?—Which do not appear in typhus fevers of this country.

Do not other symptoms give the plague a very distinct character, from the typhus fever?—It is supposed so, but I am not satisfied that it is a very distinct disease.

*A. Frampton,  
M. D.  
(11 May).*

*Jovis, 13<sup>o</sup> die Maij, 1819.*

SIR JOHN JACKSON, BARONET,

In the Chair.

*Edward Ash, M.D. called in; and Examined.*

ARE you acquainted with the Plague?—I have no personal knowledge of the complaint.

Have you been in countries where it exists?—Never.

Have you heard any thing of it in your travels?—I have travelled a good deal, and have endeavoured to collect all the information I could upon the subject, in travelling on the Continent.

*E. Ash, M. D.  
(13 May).*

Have you formed any opinion upon it?—As far as I have had an opportunity of collecting sufficient facts I have, in regard to the contagious nature of it.

Favour the Committee with your opinion upon that point?—My opinion in regard to the plague, is, that it is decidedly contagious; that it is propagated from body to body; and from infected articles of merchandize, goods or clothes, to human bodies.

State the reasons for that opinion?—My reasons have been collected merely from general information, from reading books upon the subject; and the facts which have occurred to me in conversation with medical men on the Continent, and in this country. I think the general opinion of all nations where the plague prevails, is such as to make its contagious nature a matter of common observation and experience.

Did any thing peculiar occur at Moscow, to give rise to that conclusion?—My opinion that the plague could be propagated only by contagion, was formed upon several facts; but two in particular I will mention to the Committee. One was the immunity from plague which was preserved in the Foundling House at Moscow, which was free from the disease while the population of the town was perishing around, by drawing a cordon of troops around the building, which was completely insulated, and making the most strict quarantine regulations; by means of which none of the inmates of the hospital perished. Another principal fact to determine my opinion was, the effect of shutting up or wholly insulating the Frank quarter, during the prevalence of the plague in Constantinople, Aleppo, Smyrna, and all the other towns which are exposed to ravages of the disease; a measure the success of which in preventing the spread of plague, renders it impossible to suppose that the plague should be communicated by the air only, and renders it highly probable that contact is necessary to spread the disease.

Do you suppose that the disease is revived annually by some new cause, or an old cause of a prior year?—I am not sufficiently master of the facts, to give more than an opinion upon the subject, although I should think the plague never wholly vanishes in those countries, but is called into action by the return of the former causes at the period, when it again rages.

Assuming that no plague has occurred at any of the quarantine establishments ever since their being established, which is about a hundred years, how do you account for none of the persons at the establishments having been affected with the plague?—I should doubt whether the fact was an universal one, as lately the plague has shown itself in the lazaretto at Venice; and is stated to have appeared in that of Malta, in 1813.

The question is intended to be confined to England?—I should consider that as arising from the length of the voyage, which in general is greater than that of the length of quarantine; and the improbability that the disease should be retained during the whole of that time.



E. Ash, M.D.

(13 May).

You would rather conclude, that the infection does not arrive in the goods, but perishes before they arrive?—I think it most probable it does not, though on so important a question decisive proofs and experiments would be required; but that in a shorter voyage the infection might be communicated in the goods, as in the case of the plague at Malta, and some of the late pestilential diseases which have appeared on the coast of Italy.

Do you think it is confirmed, that the plague at Malta was occasioned by the importation of goods?—I should wish to decline speaking positively on that question; I have not had documents enough before me, either to assert or deny that that was so, but think it highly probable.

Do you consider our quarantine establishments of use?—I conceive them highly useful; but perhaps the period of time is rather longer than is required in some of the regulations.

Do you mean for persons particularly?—I mean for persons particularly.

Is the plague contagion in any degree similar to that of small-pox?—The contagion of small-pox differs from that of plague, as it depends on a specific virus, more active in its propagation than that of any other disease with which we are acquainted, and less liable to be dissipated by any precautionary measures. The contagion of plague is in all probability considerably to be regulated by ventilation, by measures of cleanliness, and by precautions of a similar nature.

*Peter Mere Latham, M.D. called in; and Examined.*

P. M. Latham,  
M.D.

(13 May).

ARE you acquainted with the subject of the Plague?—I know nothing of the plague from my own observation.

Have you formed any opinion from reading, or otherwise?—From what has been written concerning the plague, I should conceive that the fact of its contagious nature is as well established as any fact in medicine.

What mode would you consider it best to pursue, in order to ascertain whether it is or not contagious?—The only mode which is sufficient to establish a fact of that kind, is by purposely subjecting individuals to its influence, a course that it would be unjustifiable to adopt, for the sake of experiment merely.

What would be the best mode of ascertaining, whether it is contagious, from facts which have occurred?—I consider that the facts which have already occurred are so sufficient to prove its contagion, that it is hardly necessary to institute further experiment.

It appears that a Frenchman was taken on board the *Theseus* man-of-war, in the Mediterranean, having upon him at the time the plague, attended with suppuration and buboes; he was three weeks on board this ship, got well, and not one person on board the *Theseus* got the plague; would you consider that as tending to a conclusion, that it is not contagious?—If it was ascertained that a considerable number of the crew came absolutely into contact with the person of the infected individual, I certainly should so consider.

It appears that some persons did communicate with the Frenchman who was ill, and went afterwards among the crew; one or two attended him?—I stipulate for the condition of a considerable number having been brought in absolute contact, because we certainly do find very extraordinary instances of insusceptibility to contagion in particular individuals; for instance, we find certain individuals to whom we cannot communicate the contagion of the vaccine pock, and even of the small-pox, where we have the choice of all the most favourable circumstances for communicating them.

Should you consider a person having the small-pox taken on board a King's ship, with a crew of five hundred persons, and not all of them having had the small-pox, they would remain exempt from the small-pox?—I should not consider it likely.

Then the contagion of plague is very different from that of small pox?—In all probability the contagion of different diseases is influenced by particular laws.

It would appear therefore, that the contagion of the plague is not so diffusible as small-pox?—Probably not. I do not wish to be understood as insisting upon an analogy between small-pox and plague. But I only wish to state, that the instances of individual insusceptibility of the vaccine and variolous infection which are known to me, would forbid me to decide that the plague was absolutely not contagious, from one or two, or three instances of failure, to communicate it even under circumstances conceived to be the most favourable for the purpose.

It is understood by a certificate from the Custom House, that the plague has never appeared at any of our quarantine establishments in England, to what do you attribute that?



that?—If we consider the distance between England, and any part of the Levant from which the plague can be conveyed, it must appear that each individual of the crew will thus be subjected as it were to a double quarantine, the quarantine which takes place during the voyage, and the quarantine of forty days after he comes here.

Should you suppose, that during that period the infection must have arrived in some goods from the Mediterranean?—It should appear that medical men are less acquainted with the length of time in which the rudiments of contagion may reside in goods, than they are with the period of their residence in the human body.

Should you conclude it most likely that the disorder has not arrived at the quarantine establishments in those goods?—I should think it most likely.

Do you consider the quarantine establishments as beneficial and necessary to this country?—Certainly.

But upon the assumption of the probability that the infection would not arrive at them, they would become useless?—With respect to individuals of the crew, I should consider some modification might be with safety introduced into the quarantine laws; but with respect to the goods I can really give no opinion.

Is it not more natural to conclude, that if the infection had arrived in the goods at any of our quarantine establishments, some of the expurgators of goods might have been affected with it?—It is most likely.

Do you consider the plague as a similar disorder to the typhus fever?—I have no means of judging.

Do you consider the typhus fever as contagious?—Certainly.

You have stated, that if the plague had been conveyed in goods, there was a probability that the expurgators would have been affected; is it your opinion that the precautions taken on board the quarantine hulks might prevent such an effect, even if the plague had been conveyed in goods?—I do not know to what quantity of ventilation the goods are exposed, or what is the process they go through; it would probably depend upon the quantity of ventilation.

Is your opinion more conclusive, that the infection does not arrive in the goods, or that it does arrive, and that the ventilation dispels it, and renders it innoxious?—Indeed I am unable to have any confidence in my opinion upon that subject.

*James Frank, M. D. called in; and Examined.*

HAVE you been in countries where the Plague existed?—Yes, I have.

What is your opinion of its contagious effects?—That it is highly contagious.

How do you form that opinion?—I was upon the expedition with Sir Ralph Abercrombie in the year 1800, and had the first establishment of the plague hospital at Aboukir. The army landed in the month of March, and was perfectly free from the disease till about the middle of May; when a person from the commissariat dépôt at Aboukir was reported to be ill, and it was said that he had the plague; he was removed from thence to the hospital, which might be the distance of about a mile, and confined in a tent by himself; he had been ill about four-and-twenty hours before at the dépôt, and it was supposed that he was intoxicated, that his disease arose from excess; he died. I think, on the second or third day, two more persons, from the same dépôt, in a day or two afterwards, were reported to be sick in the same manner, and they were sent to the same place. It was doubtful whether it was the disease; and then it became a question how it had got to the dépôt. There were two reports; one, that it was imported by a Greek boat from Cyprus with Cyprus wine; and the other, that it was brought from Rhamanch by the Arabs, where it was known the plague had been raging. It was afterwards said that a man had died on board this Greek boat. The impression upon my mind is, that it was brought by this Greek boat; the disease had been at Cyprus and upon the coast of Syria; and Brigadier General Koehler, and the detachment of artillery under his command, had fallen victims to the disease, and died at Jaffa three months previous. I have stated, that I had the superintendence of the plague hospital at Aboukir, and consequently the arrangement for the accommodation of the plague patients, though not the immediate charge of the sick; for it had spread from the attendants, who had caught the disease from those persons above-mentioned who had died, to the sick of the hospital. My whole arrangements were made, upon the principle of its being contagious, to prevent its spreading to the army, which was in the lines before Alexandria, at a distance of ten or twelve miles from the dépôt. The hospital at that time consisted of the wounded men after the actions of the 8th, the 13th and the 21st of March. There were very few sick, who were placed in some rude huts, which the French had built;

*P. M. Latham,  
M. D.*

(13 May.)

*James Frank,  
M. D.*

(13 May.)



*James Frank,  
M.D.*

(13 May).

for there was no house whatever at Aboukir, the village having been destroyed; and among those sick the plague patients were sent, it having appeared that the disease had been communicated to them by the attendants upon the first plague patients; and as it was impossible to say who had got the plague or who had not, I recommended that the whole should be guarded by sentinels, and that the whole should be thrown into quarantine: this was effected. The disease increased in the huts at Aboukir; and the medical officers, and the servants attending upon those patients, were almost all seized with the disease, and several of them died; three or four hospital mates died. From these facts I should state, that it is my opinion that it is a contagious disease; for had it not been so, there would have been an equal number of patients, or probably more, among the wounded than there were in the huts; the wounded men, who were in tents and in temporary buildings, being separated from the huts at least half a mile, or probably nearer a mile. These precautions having been taken, of throwing the whole of the plague patients, as soon as circumstances would admit, under quarantine, I think, kept the army upon the lines before Alexandria very free from the disease; for I believe there were very few, if any, cases of plague sent from thence to Aboukir.

Had any of the army at Aboukir the plague?—The plague was almost entirely confined to Aboukir; there could have been but very few, if any, of the army before Alexandria who had the plague, during the whole of the time that the plague hospital was at Aboukir.

Have you any idea of the number of military that took the plague?—I have no return, my papers were all lost; but I should think that return might be got from the army medical board; I should think about three or four hundred; they were chiefly from the sick in the huts, chiefly among the patients and servants; I do not recollect any cases that were sent from the lines, they were chiefly confined to the peninsula of Aboukir, and principally among the huts.

How long did the hospital remain at Aboukir?—I think it was broken up in July.

Were there any plague cases in the hospital at that time?—I believe there were two or three; they were very trifling cases; I think they were sent to Rosetta; I was at Rosetta at the time it was broken up.

Were there a great many deaths?—I do not know what was the proportion of deaths; I should think about one in four, but I do not speak from certain knowledge; that is the impression upon my mind.

Did you happen to hear of any cases of plague having occurred in the army that advanced to Cairo?—There were plague hospitals established at Rosetta; and I imagine those cases must have been sent from the army which advanced to Cairo, or from the troops which remained at Rosetta.

Have you any knowledge of the disease originating from any local circumstances in Egypt?—No, I have not.

Is it not considered to be endemic in that country?—It is epidemic and endemic both; that is to say, there are particular places where it rages more especially; from what I understand, it does not break out every year, or every two years, or every three years.

What do you suppose to be the cause of the plague?—I do not know the cause; but the plague itself appears to me to be a specific contagion, that is brought into action by some particular constitution of air.

Do you suppose, that its revival annually is an originating, or that it depends upon former circumstances?—That is very difficult to say; probably it is conjecture that it depends upon a certain constitution of air to bring it into action; but it is very sure that there is a certain range of temperature upon the thermometer, that is necessary for its appearance; the great cold of Constantinople puts an end to it, and the great heat of Cairo puts an end to it.

That goes to the termination of it?—Yes, but the same applies to the beginning of it; for it never begins in great cold nor great heat.

Does it begin as a new revival, a new origin, or is a seed or virus latent brought into action by circumstances of air or other circumstances; do you suppose the seeds of it remain perpetually?—Yes; and that it is brought into action by a particular constitution of air.

How do you account for the expurgators of goods in our quarantine establishments, not having had the plague for so long a period?—It is a certain fact, that the plague is destroyed by ventilation; it is also certain, that it exists only in a particular constitution of air; I can very readily imagine, that the constitution of air required is not present,



present, though the seeds of the disease may be present, and that it is not called into action; whether the constitution of the air renders the body susceptible of taking the disease or not, is a very difficult question, or one impossible perhaps to answer.

Would you consider, that its not having been called into action by any thing whatever, at our quarantine establishments, for upwards of a hundred years, there is ground to conclude, that the quarantine establishments are useless?—No.

Do you consider, that it is equally communicable from goods as from persons?—Equally.

As there have been no persons arriving at the quarantine establishments having the plague, is it not fair from that circumstance to conclude, that the infection has not arrived in goods?—I stated, that I thought a particular constitution of the air was absolutely necessary, what that may be I know not, but I perceive that the disease rages under a certain temperature, or in a particular state of atmosphere. I conceive that that is not present; I suppose, that if the goods were infected when they were put on board at Smyrna, or any other place, they would arrive in the same state here, because I do not see how those goods can be ventilated whilst they are in bales, nor see how they can be exposed to air upon the passage.

If a person infected with the plague, on board any vessel in the Mediterranean, was coming to Great Britain, should you suppose that he would either die or become cured, for want of that proper and appropriate state of the air?—He would die or be cured upon the passage, if the voyage was very long; if he lived, he would probably arrive without the seeds of the disease about him.

From no person having arrived infected with the plague for so many years, do you not consider, that it is almost impossible for a person to reach our quarantine establishments, with the plague present in him at the moment of his arrival?—I think the length of the voyage, as to persons, would sufficiently purify them.

And cure them?—Yes; if the disease manifested itself it would go through its course, and the person would recover or die; but if it did not show itself, I do not believe the disease would remain latent so long.

Perhaps you consider, that it would not be possible to introduce a person from the Mediterranean, infected with the plague, into our quarantine establishments, in consequence of the length of voyage?—After a long voyage, I should certainly say not; I only speak with respect to the persons and to their clothes, which have been exposed to the air during the voyage.

Your opinion of such security is confined entirely to the persons and their clothes exposed to the air, but has no reference to the circumstance of their touching any goods on board that may have the infection?—Certainly.

Is it your opinion, that a cargo of goods might arrive from the Levant in this country, and bulk not being broken, should be again carried back to the Levant; and then on returning to that state of atmosphere which calls into action that disease, might affect the inhabitants of that country, though it would not have infected the inhabitants of this country, if the bales had been opened?—That is a very difficult question to answer; because, though the state of the atmosphere in the Levant might be favourable to bringing into action the contagion, yet it might not be so here; and that that state of the atmosphere is necessary is very obvious, because it is only at certain times that the disease shows itself in those countries, at Smyrna, at Aleppo, at Grand Cairo, and at other places.

Would the conveying infected goods into a climate less favourable to the spreading of the disease, not destroy the infection so as to render them incapable of conveying the infection, even under circumstances the most favourable for the spreading of the disease; for instance, in the Levant?—I think it probable that infected goods will retain the infection, unless exposed to the air; and therefore, whenever they are exposed to the air, the persons handling them are liable to infection if certain circumstances are favourable to bringing out the contagion.

Do you believe, that the plague ever did exist in this climate?—Yes.

The true Levant plague?—The true Levant plague. I believe it did in the year 1665.

Is it your opinion, that there must have existed some peculiarity in the state of the atmosphere at that period, which was favourable to the spreading of the contagion?—I think there must have been some concurring causes which brought it into activity; the atmosphere alone can never produce the plague. The plague, I have stated before, is a specific contagion, producing a specific effect upon the body.

Although no instance has occurred in this country of the plague, since the year 1665, is it safe to conclude that circumstances might not arise which might be

conductive



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M.D.

(13 May.)

conducive to the spreading of that infection?—I think that circumstances might arise that would be conducive to the spreading of the infection.

Is your opinion, that the quarantine is necessary, founded on the chance of such a recurrence, or on any other cause?—Certainly founded on the chance of such a recurrence.

Do you consider the plague of 1665 to have been imported into England?—The impression on my mind is, that it was imported.

Do you consider the cause of the plague not having appeared in our quarantines, to have probably occurred from the infection not having arrived, or from the attention paid to ventilating ships arriving from the Mediterranean?—Very probably, to the excellent mode of ventilation.

And not so much the annihilation of the infection, from the length of the voyage?—No, certainly not.

Have not you often heard of cases of persons, who have been in close contact with plague patients, never having taken the plague?—Yes, I have; I myself am one; I have frequently touched plague patients, and never had the disease.

Then it is not so active a contagion as small-pox?—The contagion of the small-pox, when it produces the confluent disease, is often as fatal as that of the plague; it exists in a state of activity in tropical climates, which I believe the plague never does. The plague varies at different times in Egypt; I speak of the plague which I saw in the country in which I was. When it first breaks out, which is about the month of January or February, the cases are few; but they are more violent in their symptoms; as the season goes on the disease becomes milder, but more frequent, in consequence of a greater number of persons being exposed to the infection; it then declines, and ceases altogether at the summer solstice.

Does it cease about the 24th of June invariably?—At Cairo; but it is sporadic upon the coast in July, after the summer solstice.

Do you consider it more contagious, when it is the most violent?—Yes, I do; certainly.

Have you known any instances of medical men inoculating themselves for the plague?—Yes, I have; Doctor White.

Did he die of the complaint?—I believe he died of the complaint, but that is uncertain; he never would suffer himself to be examined whilst he had the disease. It was known he had inoculated himself with matter taken from a pestilential buboe; that he had a shivering fit, and was frightened; that he got up at night and washed his wrist with some volatile alkali, with the hopes of preventing absorption: but he died in the course of three or four days afterwards.

Whether of the plague or not, you are not certain?—I do not know whether he had buboes or not; I should say, but it is merely from hearsay, that he did die of the plague; he never would suffer himself to be examined by the medical men, while he had the disease.

Was his body examined after his death?—I believe not.

Were you acquainted with Doctor White?—Yes.

Have you heard him give his opinion respecting the plague?—Yes, I have.

What was that opinion?—That it was not contagious.

Richard Harrison, M.D. called in; and Examined

Richard Harrison,  
M.D.

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HAVE you had any opportunity of seeing the Plague?—I was at Naples in 1816 and 1817, during part of that time the plague raged severely at Noja, a town situated about 150 miles from that place; and I have had frequent conversations on the subject with the medical men who had the direction of the sick during that time. I saw, also, at Naples, in the spring and summer of 1817, several persons labouring under a contagious disease, which corresponded with the descriptions generally given of the plague; but will not assert it to have been that disorder. The mortality from it was so great, that our consul was in doubt whether it would not be right to give public notice of the circumstance.

Describe the appearances of what you consider to be plague?—I consider the plague as a typhus fever, with the ordinary symptoms more severe; and in addition, broad purple spots, carbuncles, buboes of the parotids, but more generally in the arm-pits or groin.

Do you consider the plague as contagious?—Assuredly.

And the typhus fever also?—Yes; assuredly.

You consider the plague as a high degree of typhus, and coming under the same classification?—The two diseases may probably arise from different causes, but they



they frequently so nearly resemble each other, differing only apparently in degree, that I think it possible they may be produced from the same cause. I would not be understood to say positively, that I consider them as the same disease.

You are not sure that you have seen the true plague?—No; I saw some cases at Naples labouring under the symptoms I have before mentioned.

If a case of that kind had occurred at Constantinople, would it not have been considered as decisive of the plague?—I should conceive it would.

What do you suppose to be the cause of the plague?—Contagion I should think.

From the revival of former virus, or the occurrence of another originating cause?—I conceive it may be propagated in both ways. The causes which first produced it might produce it again, although it had entirely disappeared; or the disease constantly existing may be of so mild a character as to escape attention, awaiting favourable circumstances to render it active.

You consider that local causes alone might revive it annually?—I should think very probably, under favourable circumstances, in the Levant; but in Europe the disease is only spread by contagion, for the separation of the healthy invariably preserves them.

Do you consider it very similar to small-pox contagion?—I cannot draw a comparison; I consider the two diseases as so different.

Is the contagious quality of it so likely to communicate the disease as small-pox?—I can conceive the plague existing, and yet not very contagious; and I can conceive it existing and extremely contagious; and precisely the same with the small-pox.

Do not you consider the small-pox contagion as more diffusible than the plague?—I should think it difficult to institute the comparison.

To what do you attribute our not having had any plague case in Great Britain for so long a period?—Having had notice only last night, I have scarcely had time to give it a thought. I conceive when a cargo is shipped in any part of the Levant, the sailors of the ship are necessarily employed in taking in the cargo. Under these circumstances, if the plague existed, I do not suppose the ship would arrive in England before the disease had made its appearance; and I suppose when the plague breaks out on the voyage, the vessels put into the nearest port where quarantine can be performed, and are there subjected to the usual precautions. This may be only one reason among others.

Do you consider goods equally communicable of the disease, as persons?—From all I have heard, inquiring of those who have seen the plague very repeatedly, and what I have read, I conceive equally.

How do you account for the expurgators of goods in Great Britain at the quarantine establishments never having taken the plague?—I should suppose the plague makes its appearance before the ships arrive in England, and I conceive the goods liable to give the plague, have undergone purification in foreign lazarettos before their importation into England; and we frequently find a typhus fever, probably from this cause, in a lazaretto; of this I had examples during my attendance on the sick in the quarantine establishment at Naples.

Do you know that the goods are promiscuously shipped at Smyrna, whether or not the plague rages there?—With that I am not acquainted.

Assuming that to be the fact, how do you account for those goods upon their arrival in Great Britain, not communicating the disease at the quarantine establishments?—I should suppose the plague makes its appearance before the ship arrives, and consequently the necessary precautions have been employed.

The fact being that goods are shipped at Smyrna, even in times when the plague rages furiously, and those goods arriving at the quarantine establishment in Great Britain, how do you in those cases account for the expurgators of goods not having the infection?—Although we have authentic accounts of the plague existing at nearly every temperature, still we find it is less virulent at one temperature than at another; perhaps other causes may conspire with temperature to increase its destructive effects. The degree of temperature, and other favourable circumstances for the propagation of plague, not existing at the time the affected goods arrived in England, may have prevented the dissemination of the disorder. But should such circumstances exist, we may again be visited by the plague, and even a typhus fever may have been produced in this country by such goods; for we know that a mild case of plague resembles much typhus fever.

It appears from the Custom-house return, that nothing of that kind has appeared at the quarantine establishments ever since their origin; from that circumstance would



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you not conclude the infection did not arrive?—To give a satisfactory answer to that question, would require more reflection than I have been able to give to this subject.

Do you consider the plague of 1665 to have been imported into Great Britain?—I feel unequal to answer that question.

Do you consider the quarantine establishments as useful?—As very useful; but I should conceive, from what I have seen in the quarantine establishments here, at Venice, Naples, Malta, and other ports of the Mediterranean, that considerable modifications might take place; amongst many other examples, I might instance a circumstance which occurred to myself. I arrived at Dover from Naples in seventeen days, but neither myself, luggage, or carriage, underwent any where quarantine; whereas my other luggage, which I left at the same time, came by sea, and arrived in England a considerable time after me, underwent the usual quarantine. Couriers, who travel with the greatest expedition, do not perform quarantine; although ships, which have taken a long time to perform the voyage from the same place, are frequently obliged to undergo it.

You consider that the regulations might be modified, both with respect to persons and goods?—With respect to goods, I am unable to give an opinion; but I should assuredly think so with respect to persons.

Mr. John Jenkins called in; and Examined.

Mr.  
John Jenkins.

(13 May.)

HAVE you been lately in quarantine?—Yes.

Where at?—Standgate Creek.

How long?—I was eighteen days there in quarantine; I was discharged this day week.

Were there many persons in quarantine with you?—Several; there were five pilots on board the *Lizard* discharged all on one day; there were persons lying in quarantine, who were taken out of other vessels, on account of foul bills; the vessels came from Alexandria; we were detained there longer than our regular time of quarantine, in consequence of a pilot having been put on board, three days after we were put on board; we should have been cleared in fifteen days but for that.

Do you find your own mess on board?—We are allowed so much from the ship, for provisions, while we are on board.

In case of being ill, can you get medical attendance there?—There is a doctor attends every day.

Was any body ill?—Nobody ill, we were all perfectly well; I never knew a pilot to be ill in the quarantine, since I have been a pilot, which was the year 1808.

Did you ever know of any person being affected with the plague, on board the quarantine vessels?—I never heard of any.

What is the longest time that you ever heard of persons remaining in quarantine?—I have heard of a vessel lying sixty days, she came from a place where the plague raged very much; she was taken away from the creek and scuttled; this was before I was a pilot.

Have you ever seen, while they were taking goods on board the lazarettos, that other goods were delivering from the lazarettos?—Yes, on the other side of the vessel.

Do you know how they examine the goods?—They rip open the bales and air them.

Do they open them entirely, to the very heart?—I cannot say exactly to the very heart, but they open them so as to give them air, and when the time of airing is out they pack them afresh, and sew them up.

How many men are there on the Lazaretto establishment?—I cannot say; I believe there are on board the lazarettos that take the goods in, twelve, fourteen, or sixteen hands, master and mate, and guardians.

Are the pilots detained there after the goods are cleared?—Our regular time is fifteen days, after we are put on board the convalescent ship; but when another pilot comes on board, after we have been there four or five days, it is very hard for us to be kept on account of that pilot three or four days longer, the vessels that we have been up with there having been loaded at Alexandria; those vessels lie thirty days.



*Martis, 18<sup>e</sup> die Maii, 1819.*

SIR JOHN JACKSON, BARONET,

In the Chair.

*John Mitchell, M. D. called in; and Examined,*

HAVE you given your attention, in any particular manner, to the subject of contagion in the Plague?—So far back as 1802, on graduating at the university of Edinburgh, I published a dissertation on continued fevers, wherein the subject of contagion in fevers, as well as the plague, engaged a large share of attention. I have ever since that early period of my professional life, felt a particular interest in the question respecting contagion in these diseases.

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Have you ever seen the plague?—No; I have had no actual experience in the plague, never having been abroad in the countries where it has prevailed; and I have never seen it here, for a very good reason, that there is no record of a single instance of it, since the last great plague in London in 1665.

To what cause or causes would you attribute the freedom of this place from the plague?—It is difficult to give a direct answer to the question; but I beg leave to state, that the diseases of a place are in their nature, even although they go under the same name, as subject to variations, as are the manners, customs and circumstances of its inhabitants. At one time in this country we had well-marked agueish and asthenic or inflammatory complaints; now we have few instances, at least in London, of pure agues, and our inflammatory complaints degenerate into asthenic congestions or defluations. We have had a change from nervous to bilious ailments, and this not founded on the caprice of medical systems, but in the nature of the complaints themselves. In Sydenham's time, whose works are full of the descriptions of the epidemic fevers of London, dependent on particular constitutions of the atmosphere in various years, it was computed that 66,000 out of the 100,000 died in London of fevers. This large proportion of fevers is now supplanted by other diseases; and even our fevers are not of the same complexion they were in those days, for we are strangers to the symptoms in them denoting their former pestilential or malignant quality. But certainly, if any causes could have contributed to the immunity we enjoy from the plague and bad fevers, they are to be found in the greater cleanliness and less crowded state of the inhabitants, with the widening of the streets, and the better and more general construction of common sewers and drains; to which may be added the profusion of water now distributed through the Metropolis. There is a passage in Assalini, an eminent surgeon, who accompanied the French in their expedition to Egypt, and who has published the result of his investigations on the Plague, so very much in point, that I would beg leave to quote it. After stating that the present visitations of the plague in Egypt were unknown in the days of its ancient grandeur; and that the ruins of entire cities destroyed and overwhelmed, with the majestic remains of monuments, in part submerged and surrounded by water, afforded sufficient evidence of the revolutions and changes which the whole surface of Lower Egypt had undergone. He proceeds thus: "At this day, the lakes, the marshes, and the filthiness which one finds in the cities of Lower Egypt, are the principal causes of the frequent diseases to which they are subject, and which can never be eradicated until we have found means to purify the atmosphere of their environs. This important advantage may be obtained, by draining off the waters of the lakes and filling them up; by keeping the cities clean, paving them; and giving a free exit to the rain water, which stagnating in different parts of these cities, becomes corrupted, and conjoined with filth, infects the atmosphere. By similar operations, several cities and provinces in Europe, America, and the Indies, have been rendered healthy. I have no doubt that the salubrity which we enjoy at this day in France and Italy, is the result of the amelioration of agriculture and the perfection of the arts."—As Dr. Mead (who has written on the plague, although he never saw it, has mainly contributed, by his authority, to establish the quarantine regulations of this country,) speaks in a particular manner of Grand Cairo, stating it to be quite a seminary for the plague, I would beg leave to solicit attention to the state of that city, as illustrative of the causes of plague. The streets are narrow and winding, amid a multitude of houses which

crowd



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crowd one another; and it is so exceedingly populous, (several families residing in one house, and a number of people in each room,) that Savary informs us, two hundred persons live within a compass that would accommodate thirty in Paris. A great canal, besides, passes through it, into which all manner of filth and carrion is thrown; causing an intolerable stench. Notwithstanding all this, however, it is remarkable that the plague, as well in this city as in others of the same part of the globe, has its chief seasons; for it breaks out or becomes epidemic only when the hot sultry winds from the south, blowing across the sandy plains and deserts of Arabia and Africa, begin to set in. The blasts of these winds are most pernicious to animal life; according as they are described by travellers, under the names of the Simoon, the Samiel, the Kampsin, and the Scirocco. It would seem that they contained a large portion of hydrogen or inflammable gas, and that in their full force, (for the greater levity of this gas, it is probable, causes them to rush in currents,) they extinguish every principle of irritability in the living fibre: persons killed by them, speedily become black and spotted, from extravasated blood. But to return, it is a fact, that so soon as these winds cease to prevail, (and I may here mention that the same winds have been with justice considered, by the most early writers, the chief causes of epidemic diseases, particularly by Hippocrates and Pliny; who say, that the pestilence travels with them from the southern to the western parts of the world,) the disease abates. When, again, the winds from the north-eastern quarters, called by Hippocrates the Etesian, or annual gales, set in, the season of health returns. Conformable to these facts, I may add what Assalini states, "I constantly observed, (he says,) that whenever the winds from the south and south-west prevailed, the number of sick and of deaths was always increased. The contrary happened in fine weather, and when the wind came from the north." As the rising of the Nile happens about the same time these healthy winds begin to blow, covering the muddy and slimy surface of its banks, and washing away all the filth which had been accumulated in the stagnant waters and canals, with which it communicates, the cessation of the plague in many places of Egypt, is calculated almost to a day. Now, if to the filthy and dirty state of the cities in Egypt and the Levant, the pestilential effects of the regular returns of these enervating winds may be attributed, it is very easy to comprehend how London, as Sydenham gives us to understand, in a like crowded and narrow, and dirty state of the streets without drains, such as it was previous to the great fire, should now and then have been subject, in particular constitutions of the atmosphere, to visitations of the plague. But Sydenham's computation of a visit from it every thirty or forty years, founded on speculations about the cycle of particular constitutions of the year, was certainly inaccurate. That particular states or constitutions of the atmosphere, occasionally visit us, affecting the health, as well of the animal as of the vegetable creation, is known to all; for every person must have, more or less, experienced their effects. There was something of the kind lately, during the prevalence of warm southerly winds; when I may state, that people in general felt enervated and languid, easily going into clammy perspirations; and so many were affected by hoarseness, and defluxions and coughs, that it was like an epidemic influenza. It is very pertinent to this subject, I mention, that an author who has written on the climate of Great Britain, expressly takes notice of the influence that these African winds have even on our atmosphere, something like the Scirocco in Italy, only in an exhausted or spent degree. Such winds, or states of the atmosphere, must have double, or what I would term active power, when they act in concert with spots or places where mephitic air, or exhalations abound, from crowded neighbourhoods, stagnant waters, and the imperfection or want of common sewers, &c. It is a wise provision of nature, that such miasmata should not be so ready to mix or continue in union with the healthy proportion of the elements composing the mass of the atmosphere. The effects of them, however, must be more severely felt in some places nearer their source, than we are; and accordingly, some parts of Italy and the south of France, suffer much from them. From such considerations, I am induced not to entertain a doubt that they may, with much justice, be reckoned amongst the causes of the several fevers which of late years have infected the islands of the Mediterranean, and places on the coast of that sea.

You think the plague is of an analogous nature to fever, and dependent on the same general causes?—I am inclined to think so, only that the causes are influenced by the climate and atmosphere of the place, and by the manners and circumstances of its inhabitants. Some, however, following Dr. Cullen and Dr. Mead, neither of whom ever saw the plague, will have it to be an eruptive disease, such as the measles or the small-



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small-pox, and dependent like them on a contagion, *sui generis*, either immediately applied from a person sick under it, or mediately, by substances imbued with it. In the first case, it is now insisted, that actual contact with the diseased is necessary for its production; in the latter, it is said, that those substances, technically termed *fomites*, will, without proper ventilation and exposure, retain the *seminum* of the disease for any length of time, so that it may be carried to the most distant parts of the world. I may remark, however, that it is not every substance which is generally accounted fit for retaining, and afterwards diffusing the contagion. Porous substances, such as wool and cotton, are said to be the most dangerous *fomites*. But there really seems a good deal of systematic caprice on this subject. For it follows from the principles of the quarantine laws, that one may take a pinch of snuff from a plague patient, if the box be made of wood or shell; but a gold or silver box must not be touched, since it is charged with the poison. Again, you may break bread with a plague patient, provided it be cold; but if it has been touched by him while hot, you run great risk of being infected.

Do you conceive it of any moment, whether the plague be considered a species of idiopathic fever, or an eruptive disease?—I certainly do; since if the plague observed the same general laws of eruptive diseases, running, like small-pox, a stated course, and affecting a person only once during life, I should be disposed to consider it, like small-pox, dependent upon a specific contagion. Those favouring the doctrine of contagion, aware of the support this gives to their opinion of the contagious nature of the plague, maintain that the buboes and carbuncles occurring in it, as much make it an eruptive disease, as the pustules in the small-pox do that malady; and they assert, that those in whom such buboes have gone through the process of suppuration, are equally exempt from it for life, as those are from small-pox, having undergone them. I may observe, that a Dr. Pym, lately engaged the attention of Government, in a publication on the yellow-fever of Gibraltar, which, he says, was contagious, by a speculation about a like exemption from it in those who had once suffered this fever. As to the correctness, however, of this gentleman's opinions about the fever of Gibraltar, the Committee perhaps have already had evidence.

Have you any facts to state, to impugn these opinions held about plague?—Yes; in the first place, admitting it to be true that a person receives the infection of plague from another labouring under it; unlike small-pox, the plague breaks out at no stated period after exposure. In the second place, admitting that the buboes and carbuncles (which I by-the-by may here mention, happen in some bad fevers, admitted *not* to be the plague) are in fact true specific eruptions, there are innumerable instances of admitted plague; nay, I may say, it is very common,—where there are neither buboes nor carbuncles in the whole course of the disease, which oftentimes comes to a favourable crisis by sweats. And in the third place, where there are buboes and carbuncles, unlike the small-pox, they happen at an uncertain period of the disease; and so irregular is their course, that we cannot, as in the pustules of the small-pox, mark the *dies morbi*. Again; as to a person who has once passed through the plague, being secure against it for life, in consequence of the buboes suppurating regularly, the authors who bear witness to the contrary, are numerous on this point. I would, in particular, mention Dr. Russell, both because he is a strenuous supporter of its contagious nature, and because his account of the phenomena of the disease, from actual experience, is the most full and accurate we have. He met with no less than twenty-eight cases of re-infection, not relapse, in the course of only three years practice; he gives a written detail of ten of them, in four of which the buboes in their first attack had dispersed, in other six there had been the proper discharge from the eruptions; of the remaining eighteen, which are not detailed, the buboes, he says, in a majority of them had suppurated; and of the whole twenty-eight not more than six or eight terminated fatally. In concluding on this point, he expresses himself very strongly to the effect, that patients whose buboes had dispersed were not more liable to be attacked again, than were those where there had been a copious discharge from the eruptions. After such stubborn facts, it might be unnecessary to oppose to the opinions of Doctors Mead and Cullen (which last, although he places it among the eruptive diseases, yet calls it a typhus highly contagious) those of other able men who have actually seen the disease. I may mention, however, Assalini, who calls it an epidemic fever, as well as Sydenham; who, after saying that malignant fevers are of the same species as the plague, only not so violent, treats, for such reason, of the cause and cure of both in the same chapter.

You conclude then that the plague is not a peculiar eruptive disease, but a fever; perhaps you mean a species of *typhus*?—The word typhus is very much abused,



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being applied in almost every case of fever, and we therefore hear so much about it, and the "contagious fever of the metropolis," that people are under the constant apprehension of a widely-spreading and dangerous disease. I have seen the fears and credulity of many so wrought on, that the house where a fever patient lay sick, was deserted and shunned by the very relatives. Inasmuch, however, as *typhus* implies a fever of a continued nature, I do not think plague a species of it, since its phenomena not to mention the causes I have stated, as originating it, more properly rank it under the class of intermittents or remittents. In fact it bears every character, only in a more malignant degree, of the asthenic remittents of warm or unhealthy situations. In the same plague, there are all the symptoms of these fevers, many of which may be called putrid, without buboes or carbuncles, which are considered pathognomic of the plague. Sydenham tells us, the plague usually begins with chilliness and shivering, like the paroxysm of an intermittent. In the more mild and favourable cases, particularly at the beginning, it observes an evident remitting type or form; and even in bad cases, remissions and exacerbations are marked by the expression of the countenance; for in the latter, the muddiness of the eyes which remains in the former, is strangely blended with a redness or lustre, giving a wildness to the look and an indescribable appearance of confusion to the countenance. Dr. Russell's most numerous class of cases, all of them had remissions with exacerbations throughout; and favourable crises happened on the odd days, the third, the fifth, or the seventh, by sweating, like the fevers of warm climates, where a tertian type, simple or variously compounded, most universally prevails. Assalini informs us, that the deaths in his patients happened on the third or fifth day. Now it is a fact, receiving universal assent, that no species of intermittent fever or remittents are contagious. It is likewise a fact, which will not admit of contradiction, that many of the fevers, particularly of warm or unhealthy places, are as dangerous and fatal, carrying fully more devastation with them than the plague. Such epidemics, however, which in former days, from the horror and dismay they created, were attributed to contagion, as other phenomena, in the days of superstition and ignorance, were to supernatural causes, now fall under the cognizance of more philosophical views. It is the conclusion of a very sensible writer on the plague, who appears to have well studied his subject, that the miasmata, which in Germany and England produced tertians, in Hungary pestilential fevers, in Italy remittents, in Syria and Egypt seem to occasion the plague. It is the prejudice of system and the dogmata of the schools, like Monkish superstition, which have upheld this phantom of contagion; and it is only since our army and navy afforded a wide field to practitioners for actual observation on these diseases, that the trammels of system and the dogmata of the schools have been shaken off. But a short while ago, the minute accounts we had of the importations of fevers into the places where they broke out, were received as gospel; as much so as are yet, by many, similar accounts respecting the plague. The yellow fever, for instance, according to a Dr. Warren, who wrote on the fever of Barbadoes, emanated from the plague of Marseilles in 1720. A fever was again imported into the West India islands, according to some from the coast of Bulam in Africa, according to others from Siam in the East Indies. It was this same fever, whose importation into Philadelphia caused such ravages; and at last it became a great traveller, inasmuch as it frequently visited Gibraltar, Cadiz, and other parts of the Mediterranean. I myself recollect the time when it was an unpardonable heresy to attack in a single point this doctrine of febrile contagion, so riveted were physicians to it. I have lived, however, to see many of the opinions and arguments I dared at that time to advance against the common belief in it, and which called forth the anathemas of the profession against me, verified in the field of observation and experience. I trust the time is not far distant, when a similar revolution of sentiment shall be the fate of the plague; the absurdities and notions respecting which, it is painful to contemplate, have caused such a waste of human life. Here, instead of permitting the wretched inhabitants of a place to flee the scourge that visited them, they were condemned to breathe a pestilential atmosphere, becoming daily more infected, from the number of sick with whom they were shut up; every hope of retreat was cut off from them; for even their own abodes, where death and horror raged, they were prohibited to quit, under the pain of death more certain. How revolting to humanity these shuttings up were, need not be stated; and how futile they proved, with other schemes of expurgation, to extinguish the distemper, experience has only to be appealed to. The plague has its seasons, and like other epidemics, is not to be controlled in its ravages by means so ill-directed as these, founded on such erroneous notions; and to be convinced of this, it is only necessary to refer to Russell, most  
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of whose facts, whenever they are concerned with the notions to which he is wedded about contagion, are at a like variance with his conclusions. His words are precisely these: "From what has been said of London, Aleppo and Marseilles, it would seem as if there was little observable difference in the mode of its (the plague's) termination in cities where purification was practised, and where it was not."

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You do not then believe that the plague is a contagious disease?—No, I do not think it is, nor fevers in general; but as much misunderstanding arises from the promiscuous use of the term "contagion," as well as "infection," I would beg leave to give some precision to their import. They are in many cases synonymous, but "contagion" should be more properly confined to a *somewhat*, capable of separate or self-existence, and of propagating its species *ad infinitum*, through its operation on the human body; while "infection" should rather denote a quality or affection of a substance or body. Hence, in common language we more correctly say, *the air is infectious* than that *it is contagious*; and it is more proper to speak of the infection of the atmosphere, or the contagion in the atmosphere, than *vice versa*. Nor does contagion in common language imply actual contact; for there is no necessity for this contact in small-pox, nor, as it is understood by all those of whom contagion is the creed, in fevers. It is very much owing to the indefinite use and acceptation of these terms, that authors, from Thucydides down to Sir Gilbert Blane, have contributed to swell the catalogue of contagious diseases. The former, in his description of the plague at Athens, from stating that those who approached the sick became affected by it, is cited as authority for the contagious nature of the plague. The latter, from similar circumstances of contiguity, asserts the scurvy to be contagious. Let us take the scurvy as an example, which Sir Gilbert Blane has obliged us with, of what has been called a contagious disease, although his opinion thereon has not yet become general, not having like the plague been sanctioned by the prejudices of centuries; and by examining into the circumstances connected with it, the misconceptions respecting contagion, as well as the misapplication of the term contagious, will be made very manifest. Here then is a disease, the genuine offspring of "inactivity, gloom, damp and unwholesome food," spreading amongst the crew of a ship; like every other disease, some are affected with it before others, and contiguity afterwards seems to regulate its progress. If perchance even a healthy person should be dropt among the sick, he soon becomes diseased. Let however an enemy heave in sight to rouse the crew, or let the sight of land cheer them, the disease readily vanishes; or let any one or the whole of them be removed to a healthy place, and it will communicate itself to no one. An ideal matter of contagion therefore in the above example, from contiguity and sameness of circumstances, is thus made the active agent; whilst these circumstances, viz. inactivity, the general causes resulting from damp and bad living, dejection of spirits communicating itself by sympathy to all within the sphere of sympathy, not to mention the unhealthy state of the scorbutic bodies, are not taken into account, or at most are only reckoned subordinate. Just so is it with respect to plague; just so is it with respect to all epidemic and endemial fevers. They come under parallel circumstances. We find this parallel in a recent instance of epidemic fever, which happened at Cadiz. We find this parallel in old hacknied instances which happened at the Oxford assizes, and the Old Baily. In the first instance, Sir James Fellowes, although he has scented out the whole track of the contagion, with the very spot whence it started, acquaints us that so soon as the inhabitants were roused by the bombardment of Cadiz, and that they began to leave the houses they had been shut up in, the fever took its departure. In the latter instances, arising as it is well known, from the sudden diffusion of mephitic air introduced into close and crowded court rooms, those infected, as it is admitted, propagated the disease to no one. But how different, let me ask, would circumstances have proved in the case of small-pox; and how improper therefore is the term "contagion" under circumstances where there is so wide a difference. If however this term is still to be retained, where without contiguity, and the same concatenation of circumstances, the disease cannot be propagated, it would at least be right to add the epithet "perishable" to it; since such contagion but vegetates on the spot, and would perish in the attempt to make it exotic. It were, however, far better to use a different term, and as expressive of a fact, that people are infected from an infectious atmosphere, &c.; "infection" may thus be used in contradistinction to "contagion." With such precision of language, we may then talk of the infection of the plague, equally as we would talk of the infection of yellow fever, or of the infection of influenza, without inspiring the alarm which a word at present synonymous with contagion, is calculated to do; nor would it be long, ere a general conviction should follow, (and the observations of an eminent physician,



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physician, when treating of the plague and yellow fever, are tantamount to this) that were it even possible to import a case of plague, the disease would not be propagated, unless at the same time Turkey climate and Turkey manners were imported along with it. But it is needless to mention our present state of society renders this impossible.

Is the opinion you give respecting fevers, founded on any ample source of actual observation and experience?—It is founded on my observation and experience while I resided in the Royal Infirmary of Edinburgh, for about three years, as physicians assistant or senior clerk; and in private practice I have not met with any circumstances to shake it. This hospital, during my time, received all the sick poor of the place, as well as those from His Majesty's naval and military forces stationed there.

What was the number of sick usually accommodated in this hospital?—I think the house could ordinarily accommodate from two to three hundred; sometimes it was very full, sometimes it was rather thin. At one time, whilst a fleet of Russian ships of war rendezvoused in Leith Roads, we had so great an influx of sick on us, that we were obliged to open additional wards and employ extra attendants. By far the greater proportion of the sick laboured under a bad fever, which prevailed on board their ships; I have seen, I dare say, as many as twenty brought to us in one day.

At what season of the year was fever most prevalent?—I think in the autumnal and winter months.

Were the patients ill of fever placed promiscuously through the different wards, with those labouring under other complaints?—No; we had two wards, called The Fever Wards, for male and female patients respectively; but yet these wards were not solely for cases of idiopathic fever, they were equally appropriated to the reception of other acute diseases or topical inflammations attended with symptomatic fever; as inflammation of the lungs and bowels, rheumatism, small-pox, &c. requiring greater quiet and stricter attendance. But I ought, however, to state, that there were two wards in the house open, during the sessions of the medical classes, where fever cases were received promiscuously with others; these were the clinical wards, entirely under the charge of some one of the medical professors of the university, appointed for the time being, to exemplify the practice of medicine to the students, and to deliver clinical lectures on the cases of the patients thus free at all times to their inspection.

Can you state to the Committee any facts, falling under your own experience and observation, with respect to the non-contagious nature of fever?—First, as to my own personal experience; I have to repeat, that I lived about three years in the Royal Infirmary of Edinburgh. It was my regular duty to visit the sick three times a day; in the forenoon, before the physician's visit; at mid-day, in company with the physician; and in the evening alone. This evening visit generally occupied a considerable time; since, at the bed-sides of the patients admitted through the day, I had to make memoranda in writing of every fact and circumstance connected with the case; ascertaining the state of the pulse, skin, &c. for the purpose of being recorded in the Journals of the House. Frequently this evening duty was exceedingly severe; it was particularly so during the time the Russian sick were received into the infirmary, when it was not unusual to receive on the same day, ten or a dozen fresh cases; most of these were bad fevers, and the subjects of them so exhausted,—some even in *articulo mortis*,—and withal so filthy and dirty, that I could not refrain from lending my assistance to strip of their clothes, and get them comfortably laid in bed. Notwithstanding all this exposure in my own person to every way by which it is conjectured febrile contagion is received, by breath, contiguity and contact; notwithstanding likewise, that I was called for successive nights out of bed to the fever ward, where I have remained administering in cases of extremity, wine and cordials, and occasionally obliged to draw off the water of the patient by means of the catheter, an operation necessarily exposing me to the effluvia arising whilst the bed clothes were turned down, yet I never caught fever. In the second place, as to my observation in the infirmary, I have to mention, that with the exception of the Russians, it was rarely, in the history the patients on admission gave of themselves, that contagion could be implied as the cause of fever, from their having been near others ill of it; in comparison to the great number where no such source of contagion could be recognized. The military from the castle, for instance, were free from suspicion of this kind; and so likewise, were many labourers suddenly seized with fever in the open fields during harvest. Nor did I observe, that any of those patients, whose cases required the quiet of the fever ward (although greatly debilitated from the treatment deemed necessary



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necessary for inflammatory complaints) ever caught fever, although mixed and remaining convalescent with fever patients. Neither did I observe, when a patient in some of the other wards in the house (and I would particularly mention the lock-up or venereal ward, as the patients here were oftentimes much crowded) was seized with fever, as sometimes happened, that he communicated the disease to the patient whose bed was contiguous to his own; and much less, that it spread through the ward. I may add, that in the clinical wards, where fever patients were indiscriminately mixed with others, the disease never spread through it. In short, I will state, that I never saw an instance of contagious fever in the Royal Infirmary of Edinburgh; and if it be allowable, I may add the testimony of Dr. Rutherford, the able physician under whom I acted, to the same effect. He had been physician to the house for many years; and a man more accurate in observation, or more gifted with ability in his profession and enlightened by general science, is not, as the many who know his modesty will acknowledge, to be met with.

Would you attribute your own exemption from fever, as well as the fact that it was never propagated through the infirmary at Edinburgh, to any particular measures or precautions?—An idea prevails amongst the public, that medical people carry something about them to keep away infection. This however is erroneous. With respect to myself, I entered and did my duty in the fever ward as cheerfully as in the other wards of the house. Having had no fear about catching fever, I banished all dejection of mind, than which nothing can more favour an attack of fever. At the same time it is proper to observe, that those employed amongst the sick, cannot sufficiently often avail themselves of the opportunity of enjoying the pure fresh air; since the atmosphere of an hospital, vitiated by the effluvia and morbid excretions of a number of diseased people, cannot be wholesome. With respect to the prophylactic measures of the house, they consisted altogether in cleanliness, and good pure air, to which the excellent construction of the house, with its lofty and spacious wards, materially contributed. On a dry day, the windows were thrown down from the top. I do not recollect an instance of fumigation; and white-washing was ordinarily practised only once a year. Instead of wooden flooring, which for a long time retains the moisture left after scouring, our wards were paved with flat square tiles; and thus the hurtful effects of damp were obviated, as well perhaps as an impurity of the air. For there is reason to believe, that moisture long retained, suffers decomposition, wherein the hydrogen is given out whilst the oxygen is absorbed. Hence, in my opinion, the impropriety of frequently white-washing the rooms, and daily mopping the floors, under the idea of destroying contagion. At least I have repeatedly witnessed in private practice, every symptom of fever aggravated from scouring a sick chamber; and it is one of the first directions I give, to abstain from such practice.

We hear of frequent instances of medical men and others employed about the sick, becoming the victims of fever, what account do you render of this matter?—It really does not accord with my observation, that medical practitioners are frequently the subjects of fever. In the great plague of London, for instance, it is said only five physicians died of it; at the same time the sympathy of the public is now and then excited by reading in the newspapers an account of some victim to "contagious fever" through his philanthropy or ardour in the profession. But the idea which this is calculated to produce on the public mind, as to the contagious nature of fever, will, on a little reflection, be found very unjust and erroneous. For, in the first place, I may from my own knowledge state, that a great concourse of students, perhaps two hundred, perambulate the wards of the infirmary at Edinburgh daily, and yet in the course of the season, I will venture to say, that not two or three on an average are seized with it. And in like manner it may be affirmed, that the instances are rare where even the nurses employed night and day about the sick are seized with it. In the second place, admitting that instances of infection are as numerous as rumour would assign, there are circumstances casually present, and accidentally operating, to which such seizures ought in justice to be imputed, rather than to "contagion," which, according to the hypothesis, must always be present and always operating. I would here mention the peculiar circumstances attendant on medical students, many of whom are young men who have changed an active country life for a sedentary one in town; and above all, spending much of their time amid the putrid effluvia of a dissecting-room. And this leads me to particularize a fact, I learned in conversation with an eminent practitioner attached to Guy's hospital, very illustrative of the misconceptions which readily go abroad to the public about contagion, viz. that in some two or three deaths which happened



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amongst the pupils, about a twelvemonth ago, the cause ought rather to have been placed to the destructive influence on the constitution, of the *septon*, with which in a manner their frames were saturated, than to the "contagious fever," about which there was so much talk. I would again call attention here to a circumstance I have already spoken of, and that is the atmosphere of an hospital, which at times, from some prevailing sickness crowding it, or other casualty, cannot miss to become, as it were endemial of disease amongst its inhabitants, or those frequenting it. Something of this kind happened in the infirmary at Edinburgh, in the beginning, when the filthy Russian sick overstocked the house, inasmuch as a few of those resident and living in it were infected by fever. But this very circumstance, whilst it showed the local influence of bad air, militated most strongly against the doctrine of contagion. For, of the very insignificant number I have stated to have been attacked by fever, the majority were in noways connected with the wards where the fever patients were placed; on the contrary, from the superior ventilation and cleanliness kept up in these wards, those employed about them appeared the most defended from the influence of the local and unwholesome atmosphere. Independently, however, of this fact, it is indisputable, that not one of those who had been seized with fever, when removed from the focus where they had caught their illness, communicated it to a single individual. In the third place, in corroboration of what I have stated, I would appeal to the evidence given before the Fever Committee, where, when due regard was had to cleanliness and ventilation, we can scarcely, *and not even scarcely*, recognise, that ever their "contagious fever" was propagated, although many at the same time lay in the same place ill of it. Having therefore on the one hand, a virtual admission to this effect, from the supporters of contagion themselves; and on the other hand, knowing that fever arises where fever-contagion never entered, as in the holds of ships, &c. &c. or from grief, fear, watchfulness, &c. &c.; nay, as it is certified to us by physicians of credit, that it has infected those going near a person in small-pox as well as in other complaints, is it not evidently absurd to talk of a specific contagion in fever, when such an endless variety of causes produce it? It seems here that we grasped at a shadow for a reality; and hence there cannot fail to be too many instances where, pursuing this "will-o'-the-wisp," and neglecting the true causes of fever, we have, by our measures, but added to the causes of mortality, which we busied ourselves about checking.

Much of the evidence you have delivered, being applicable to the doctrine of contagion in general; would you confine yourself to the plague, and give the Committee the result of your inquiries thereon?—The same views and principles which guide us in forming an opinion of the causes of fevers, must guide us in the plague; for if the causes of the plague are not identical with those of fevers, (and some authors on contagion say, that of the plague is identical with typhus) the difference is dependent on modifications of climate and atmosphere; just as a fever, generated from the same unhealthy causes a-board ship, shall vary in its phenomena according to the place where the ship may be. Moreover, the accounts given of the origin and introduction of the plague into places, are of a like complexion with those of fevers; and if the accounts here are now believed to be fabulous, it is fair to infer those of the plague are so likewise; particularly, as they seem even more marvellous; and would, I think, with any one not absolutely hoodwinked by the mists of contagion, carry their own contradiction with them: yet it is to these marvellous tales that the origin of the contagious nature of the plague is to be traced.

Could you furnish the Committee with some of the early accounts as to the plague?—The first I shall beg leave to mention is given by Alexander Benedictus, who tells us, that in consequence of shaking a feather-bed, which had been thrown aside in the corner of a house seven years before, a plague was raised at Wratelaw, which carried off 5,900 people in twelve weeks. The same author gives an instance of the effects of the pestilential contagion, which had been shut up in a rag for fourteen years. Hieronymus Fracastorius and Forestus say, that about 1511, when the Germans were at Verona, twenty-five soldiers died, one after another, from putting on an old leathern coat; and that, ere the cause was discovered, 10,000 persons perished. The coat was then, very prudently, burnt. Another author, Victor Trincavellius, relates, that at Justinoples, in Italy, some cords which had been made use of in burying the dead of a former plague, twenty years before, infected the person who found them behind a box, and caused the death of 10,000 people. Our countryman, Dr. Mead, relates, on the authority of Sir Theodore Mayerne, that some clothes, fouled with blood and matter from plague sores, being lodged between matting and the walls of a house in Paris, gave the plague, several years after, to  
a workman



a workman who took them out, which presently spread through the city. The same author discovered that the Plague of London, 1665, was carried to Poole, in Dorsetshire, in a pedlar's pack, and to Eham, in the Peak of Derbyshire, by a tailor's box; but he leaves us in the dark as to the manner by which it was conveyed to other places in England, over a great part of which he says it spread.

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Are you in any way acquainted with the histories of plague, in so far as it has visited different countries, for the last two or three centuries?—Ingram, who writes on the plague, gives an historical account of it, in this respect, from 1346 to 1665. I would only, however, beg leave to give the history of its invasions, for the first three years of this period; when observing a direction from about south-east to north-west, it travelled through China, India, Syria, Turkey, Greece, Egypt, Africa, Sicily, Italy, Pisa, Genoa, Savoy, Provence, Catalonia, Castile, Germany, Hungary, Flanders, Denmark and England. The bare recital of this carries with it the impossibility of accounting for the introduction of this scourge into so many places of the habitable globe, on any other principles than those of atmospheric influence. Even the notion of flights of birds transporting the contagion in their plumage, would obtain less credit, than a similar one, that its introduction into the houses of the Franks during their seclusion, may be caused by some importunate cat escaping from the cage where she had been confined, bringing it back in her tail.

Is it said in what part of England the plague at this time first appeared?—Dr. Russell, who has inquired into the subject, states, that it first appeared in the seaport towns of Dorsetshire; thence passed into Devonshire and Somersetshire as far as Bristol; and though the Gloucestershire people cut off all communication with that city, yet at length it reached Gloucester, Oxford and London. This was the great plague which happened in Edward the Third's time; and we have it from history, that whilst Edward, and his rival Philip of France, were thinning the inhabitants of either country by their sanguinary conflicts, pestilence carried off one-fourth of the inhabitants of the western world. London, as might be expected in those days, suffered the full force of its raging violence, for in one year there were above 50,000 buried in Charter-house churchyard.

You are doubtless aware of the accounts that have been given of the introduction of the plague into London in 1665, and into Marseilles in 1720?—There is not a shadow of proof of the importation of the plague into London in 1665, as is said, from Holland, where it is stated to have been brought by a bale of cotton from Turkey. It seems a bare assertion of Dr. Hodges. This same Dr. Hodges tells us, that the first instances of it occurred in Westminster, where about the end of December 1664 two or three people died suddenly in one family. Other accounts state its first appearance to have been in like crowded and unhealthy places, viz. St. Giles and Clare-market; all of which, I may observe, are places remote from the Custom-house or quays, near which, on the supposition of its importation, it should rather have broken out. If, however, it did appear in December 1664, it must have slept a good deal; for by the bills of mortality only four died of it, from its very first appearance till the second week of May 1665. It was in June it began to spread, sometimes being in one part of the town, and sometimes in another. It reached its height in September, and in December it very suddenly subsided. As to that of Marseilles again, the King's physicians, sent expressly to investigate the cause of the plague there, broadly deny that it came by *Chataud's* vessel. But the accounts themselves of this vessel bringing it, carry on their face strong marks of improbability. In the first place, there was a clean bill of health from the place the ship took in her cargo. She left Sidon, on the coast of Syria, the 31st January 1720, and did not arrive at Marseilles till the 25th of May, making a long voyage of four months. In the second place, admitting the plague was on board of this ship, how happened it, that after three of her crew died at Leghorn, none of the rest should have fallen sick till two days after her arrival at Marseilles, when one of the sailors died. And it is here proper to observe, that although she put into Leghorn, where these men died, she did not carry the disease there; on the contrary, the physician and surgeon of the lazaretto there, after inspection, granted a certificate that these men died of a malignant fever, the consequence of bad provisions, a circumstance very likely to occur from the length and badness of the voyage. In the third place, how happened it, that a cabin boy, who must all along have been with the ship, did not die till some time after a quarantine officer, who had been put on board on her arrival at Marseilles, died? The quarantine officer died on the 12th of June, and the cabin boy on the 23d. But besides this ship of *Chataud's*, the contagionists of those days were obliged to have recourse to other ships for bringing the



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the contagion ; viz. a Captain *Gabriel's* arriving on the 13th of June, and a Captain *Ailland's* arriving on the 23d from Sidon. Both these ships, however, having brought foul bills, were placed under strict quarantine. Last of all, they are obliged to give countenance to an idea, that the crews of all the different vessels smuggled small parcels of their goods, in order to account for the disease appearing in different quarters of the city, particularly in the Rue de l'Escale, a filthy part of Marseilles, like our St. Giles. There chances, however, to be a gratuitous admission on the part of the medical attendants of the lazaretto, that a bad fever had been previously prevailing ; and Monsieur Didier, the physician, gives some cases which occurred even before the arrival of *Chataud's* vessel, bearing every resemblance to the plague, inasmuch as parotids and carbuncles were amongst the symptoms.

Are you acquainted with any author later than Dr. Russell, who has written, from his own experience, on the plague ?—Yes ; Assalini, in particular, writes entirely from his own experience in Egypt. He traces, with the greatest care, the progress of the plague in the French armies ; and whilst he clearly shows its local origin, he satisfactorily disproves its spreading by communication. It appeared amongst the French army sometime after the taking of Jaffa ; and it occurred amongst a division of them in Syria after crossing the Desert. Whilst it was raging in Alexandria and Damietta, it did not spread to them in Upper Egypt, notwithstanding that men and officers and pacquets were daily arriving from those places. He states the same fact as to soldiers arriving from Syria. So far indeed were the French from fearing the plague would spread by communication, that it was a practice they came to adopt, of removing not only individuals but troops from unhealthy spots ; because they found this the best means both of recovering the sick, and of checking the spreading of the disease. Assalini's statements receive the fullest corroboration from an author of great respectability and intelligence, Sir Robert Wilson. As what he says on this subject, in his history of the Expedition to Egypt, is very much to the purpose, I would beg leave to quote a passage. "The fact (he says) must be stated, that the English and Turkish armies which marched to Cairo, passed through a country where the plague filled almost every village ; that they communicated, without any precautions, in the most intimate manner with the natives, established their ovens at Menouf, where the plague raged violently ; that the Turks even rifled the diseased in the pesthouses of Rhamanieh, and at Cairo dug up the corpses recently buried, and yet that no individual instance occurred of the malady in the armies ; whilst the troops, who remained stationary at Aboukir, were severely afflicted, and of whom 173 died : yet neither at Rosetta, nor Alexandria, did the fever show itself." Both these authors bear ample testimony against the assertion, that the plague is annually imported into Egypt and Syria, from old clothes and merchandize coming to Alexandria from Turkey, since the English strictly blockaded the coast for four years, and yet it generated annually. Assalini pays no regard to another assertion made, attributing it to goods left infected in the magazines at Alexandria and Damietta, the year before ; nor can any one give attention to such an assertion, after he shall hear what Dr. Hodges says of the plague in London, in 1665 :—"The people, (he states,) who had retired into the country, were so little afraid of the infection being preserved in linen or household goods, that on their return to town, they without any scruple entered the rooms of the sick, before the people were quite dead, and went into the beds, where the sick expired, even before they were cold, and before they were cleansed from the stench of the deceased ; but yet none caught the distemper." I may add, that I have been informed, that when the plague appears at Smyrna or Constantinople, it always first shows itself in the bazaars, and in those where cloths and skins are usually sold ; and I have been told by the same authority, that the bazaars in those cities are close covered streets ; precisely the sort of ill-aired places, where mephitic vapour is likely to be engendered among clothes and skins. This mephitic vapour may be a cause of fever, although it is a very different thing from a specific virus.

Does Assalini give any particular instances to disprove the propagation of plague communication ?—Yes ; he says, "As soon as any one of our men was attacked, two Turks led or carried him to the hospital. There is no doubt that several of them shared the clothes of infected persons, without contracting the disease." In another place he states, that three soldiers ill of it, and admitted into an hospital, died two days after ; but that of sixty persons with whom they had intercourse in this hospital, not one was seized with it. Desegnette and Larray, the one physician in chief, the other surgeon to the army, exposed themselves freely without taking the disease. Larray, besides performing the operations in the disease, examined several

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of the dead bodies; and Desegnette shewed Assalini two punctures, which he had made on himself with a lancet dipped in the pus of a buboe. In opening the buboe of an officer, the pus and corrupted blood spouted on his own hands. He has slept in the sheets which had been washed by a female patient, who died the day after. A young German, the wife of one of the soldiers, came to consult him, and during his absence, laid herself on his bed for a quarter of an hour; he went to visit her the following day, and found her expiring. He amputated the thigh of a soldier, whom he found to be in a pretty tolerable state the day after, and who ultimately perfectly recovered; although he was placed between two men who died of the plague with buboes, the night after.

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Do authors on the plague specify any period after exposure or contact, that the disease seizes?—We have some wonderful accounts of the subtlety and instantaneous effects of the plague contagion. Thus Boccacio, in his description of the plague at Florence in 1348, relates that he saw, with his own eyes, two hogs instantly fall into convulsions, and die in less than two hours, after snuffing about with their snouts, and gnawing some pieces of bread that had been thrown out of the house of a poor man dead of the plague. Forestus tells us of a young man seized with the disease, only by thrusting his hand into an old trunk, wherein was a spider's web, which in an instant raised a plague sore. There is a like story in Van Swieten, of an apothecary who was seized with a blister and carbuncle on the leg, only from kicking up some straw in which his servant, ill of the plague, had lain eight months before. The carbuncle took a long time to heal, but he received no other injury with respect to his health. Another person was seized with the plague, only from holding a bit of thread. A woman of Zealand removed into Almeria in Germany, having exposed some clothes to the sun, some children playing on them, received the infection, and all died. A man dropped down dead of the plague, by standing on a Turkey carpet. A lady by smelling at a Turkey handkerchief, died of the plague on the spot. It is needless to observe, that such stories (and a long string more of them might be added) are by no means consonant with the general laws of the animal economy. But they receive a direct contradiction from Russell himself. Amongst the many thousands he saw ill of plague, he says he never met with an instance where the person was sensible of the stroke of contagion at the time. He thinks he has seen examples after some hours, as well as after two three or more days. He does not think he met with any longer than ten. As there are like traditions about people struck down and dying in opening bales of goods in the lazarettos, I would beg leave to give Assalini's report thereon. "It has often been said, that in breaking open a letter, or on opening a bale of cotton, containing the germ of the plague, men have been struck down and killed by the pestilential vapours. I have never been able to meet with a single eye-witness of this fact, notwithstanding the inquiries which I have made in the lazarettos of Marseilles, of Toulon, of Genoa, Spezia, Livournia, Malta, and in the Levant; all agree in repeating that they have heard of such an occurrence, but that they have never seen it happen. Among those whom I have interrogated about this fact, I may name Citizen Martin, captain of the lazaretto of Marseilles, who for thirty years past, has held that situation. This brave and respectable man told me, that during that time he had seen opened and emptied some millions of bales of cotton, silk, fur, feathers, and other goods, coming from several places where the plague raged, without having ever seen a single accident of the kind."

Do you consider it likely, from the nature of it, that facts tending to prove contagion are likely to be ascertained?—Not so likely as those that prove against.

Then they can only be presumptive facts?—Only.

Why?—Because the people who take disease are exposed to the very same causes of disease; bad air, the same way of living, and other circumstances connected with contiguity.

Have you ever heard of plague in England since 1665?—No, never.

If infection had arrived at any of the quarantine establishments, it is probable that some of the inspectors of goods must have taken the plague?—If it was infectious like the small-pox, they must.

To what do you attribute their not having taken the plague?—Because it was never brought.

Do you suppose the plague of 1665 to have been imported?—No.

Do you consider the fact of the plague not having appeared at the quarantine establishments for 100 years, to be any sufficient reason to infer from thence, that the plague was not imported?—There is the strongest reason to believe, that if in the course



John Mitchell,  
M. D.

(18 May.)

of 100 years it has not been imported, it is incapable of being imported; because Russell and various other authors tell you, that the quarantine laws are frequently eluded, and that ships may have clean bills of health before they were aware that the disease had broken out.

What do you think is the effect, notwithstanding the plague has never appeared in quarantine establishments, of persons being constantly shut up for 15 and 20 days?—It is hurtful to their health.

But do you suppose there is any reason for it, from the occurrences that have taken place?—I cannot see any reason for it.

Do you consider the plague not having appeared in persons arriving at the quarantine establishments, as any reason to infer that it has not arrived also in goods?—I think there is no reason whatever to infer that it has arrived in goods.

Is the contagion of plague any thing similar to that of small-pox?—The contagion of small-pox is a specific matter, and no cause whatever but itself will produce small-pox; but as to plague, it is supposed to be produced from a great number of causes.

Do you consider that the seeds or causes of small-pox remained latent from year to year, and are brought into action by the atmosphere or some other causes?—I think they do.

Do you suppose the plague is revived in the same manner, continuing from seeds or some causes lying dormant all the winter?—No, I do not.

How do you account for its revival annually?—It happens from several causes combined; for instance, in Turkey it breaks out at stated times there.

Owing to what?—The chief exciting cause seems to be the particular state of the air and winds blowing from certain quarters, from the south.

And do you suppose that to be the whole cause, and no seed?—My opinion is, that no seed is ever left by it.

So that it is from the same causes recurring annually?—The same causes recurring annually, and the filth and dirt of the people.

Do you consider the quarantine establishments of any use?—No; except so far as places to air goods that may have engendered mephitic stench or vapours in the course of the voyage, such as woollens, skins, &c.

Do you consider the plague contagious?—No.

Do you consider that the contagion of plague is mere matter of fact, which any person can ascertain as well as medical men; or do you think the means of judging of its existence belongs peculiarly to professional men?—It is matter of fact which every person may examine; but medical men, from their knowledge of diseases and the analogy they can draw in them, may throw a good deal more light upon the subject, and explain the causes much better, than persons not acquainted with the science of medicine.

What is the fair and rational criterion to establish the existence of contagion?—The same effect should always follow the same cause. If, for instance, we find, that no cause whatever but itself will produce small-pox, or communicate it to others, we have fair ground for considering it as a contagious disease. But if we find a vast variety of causes will produce fever, we should hesitate before we come to the direct conclusion, that it is a contagious fever.

Is it not a satisfactory proof of contagion, that a person, removing from one lodging to another, communicates the same disease to some other person?—That is a strong proof of contagion, and it is what happens in the small-pox, or measles.

In cases of fever, where persons have been removed to some other place, and have not communicated the fever to any body else, you would naturally conclude, that that fever was not contagious?—Yes.

What was the consequence of the Black Assize of Oxford in 1657?—I think I have already stated, that the illness was communicated to almost every one present.

How many took the disease?—I think it is stated, about 300 died in Oxford.

Was it ascertained as a fact, that any one of those 300 communicated it to any other person?—As far as my recollection serves, there was no instance of the kind; but there is a similar instance recorded, as having occurred at the Old Baily sessions. Sir John Pringle tells you, that the fever did not spread, there being, in his opinion, no particular state of the air to favour the spreading of that fever.

State to the Committee the cause of the infection at the Black Assizes at Oxford?—It is stated to have been owing to the great number of people who had been brought out of a gaol, loaded with filthy clothes, and every kind of mephitic exhalation about them; and as soon as they came into the air, the mephitic vapours they thus



thus introduced, produced the same sort of effect upon the surrounding auditory, as the unhealthy winds which prevail in Africa, and which are said to be sufficient to knock a person down.

Did the judge take it?—I think it is stated, that all that were there took it.

Do you consider that malignant fever at all similar to the plague, or going under the general classification that includes plague?—It may be included under the general description of plague; for plague may be considered under the general description of fever.

Does the same medical classification include that of fever and plague?—Medical classifications are quite arbitrary. If you look at the broad face of nature, you must include plague under fever, and consequently fever and plague under the same classification.

Is it within your knowledge, whether the persons whom you have before described as being brought into court at the Black Assizes at Oxford, were labouring under disease?—I think it is stated that they were not.

*Charles McLean, M. D. called in; and again Examined.*

DO you wish to add any thing to what you have already stated in evidence?—I beg permission of the Committee to offer some emendations and additions, which I deem necessary to complete my evidence. In regard to my definition of epidemic diseases, I would amend it thus: "Epidemic are generally diseases produced by such causes as are capable of simultaneously operating upon any given portion or the whole of a community, and of affecting in a similar manner the same persons repeatedly, even in the same epidemic, and the same season." An epidemic which proves mortal to great numbers, is called a pestilence. For my former definition of contagious diseases, I request to substitute that which follows: "Contagious diseases are such maladies as are capable of being propagated in a certain succession, by means of a specific virus, by contact of a sick person with a person in health, to all who have not become unsusceptible of its infection, or are not at the time labouring under a disease of an equal or greater degree, but incapable of being produced by any other cause. The matter thus propagated from person to person is called 'Contagion,' the contagion of small-pox, &c. 3. 'Infection' includes contagion, and differs from it only in being more comprehensive." An infectious disease is a disease capable of being propagated by means of a specific virus, whether by contact of persons, by the air, (the qualities of the air itself are not here meant, it is considered merely as a vehicle) or by goods, wares or merchandize, to all persons circumstanced as described in the preceding definition, but incapable of being produced by any other cause. In respect to general diseases, their virus is capable of infecting the same person only once. If it were even true, that in some cases the small-pox is capable of affecting the same person repeatedly, such cases would constitute only exceptions to the general rule, and could not affect the general argument. The state of persons or cities afflicted with a disease propagated by specific virus, whether it be communicated by contact of persons, or by any of the other specified modes of infection, or supposed to be so propagated, is always, and only designated by the term "infected;" an infected person, an infected city. The application of the same term to the state of persons or cities labouring under diseases occasioned by the noxious qualities of the atmosphere, or the other causes of epidemic diseases, is therefore obviously improper, and productive of an injurious confusion of ideas. 4. To the question, whether I have, of my own knowledge, known the plague to occur, without the disease spreading, I answered in the negative, conceiving it at the time to relate solely to cases of imported plague; but finding, upon reflection, that the question may admit of a much wider interpretation, it appears necessary, in order to be correct, that my answer should be different. The instances of plague affecting individuals, without the disease being propagated, which came under my immediate observation, whilst at the Pest Hospital, near the Seven Towers, are remarkable; and, in my opinion, conclusive of the question. Three successive priests, the purveyor, the interpreter, and all the attendants on the sick; several persons who were in the hospital for sore legs, or other local ailments; and some poor women and children, in health, who were there upon charity, amounting in all to about 20 persons, were not in any single instance, affected with the disease, although there was a constant succession of pestilential patients; and although a great proportion of the persons mentioned were *ex officio* necessarily in frequent contact with the sick; and many

*John Mitchell,  
M. D.*

(18 May.)

*Charles McLean,  
M. D.*

(18 May.)



*Charles McLean,*  
*M. D.*

(18 May.)

of the others slept in the same apartments with them. The purveyor, or some of the servants, went of course daily to the bazaars or markets, to purchase provisions, and to dispose of the clothes or other property of the dead, and without using any precautions, or occasioning any alarm. I have myself, with the interpreter, repeatedly walked into that part of Constantinople, which leads to the Golden Gate, in the vicinity of the Seven Towers, several times even during my illness, and entered coffee-houses, or traversed chaans and bazaars in the body of the town, frequently in collision with the passing multitudes; assured that there was no danger of my communicating the disease to any one, either directly in consequence of my own malady, or indirectly from the patients; and finding that no apprehension of such a danger was entertained by the inhabitants of that quarter (being chiefly Mahomedans) although they must have been generally aware, that we came from the Greek Pesthouse, there being no other persons in the Frank dress, or but very rarely to be seen in that part of the town. But neither from this communication, nor from the constant transfer of the clothes of the dead, was any malady propagated; for this obvious reason, that, although the cases which did occur, were in general of sufficient intensity to prove fatal, the epidemic constitution of the air did not prevail so uniformly, or to such a degree, as to render its effects liable to be confounded with those of a specific contagion. To the reasons which I have already assigned, for considering epidemic and pestilential diseases as never depending upon contagion; I beg to add the following. 1. Generally, because the laws of epidemic and those of contagious diseases, as I stated in my work upon the subject, are not only different, but incompatible; and because pestilences observe exclusively the laws of epidemics, of which they are but the higher degrees. 2. Because no adequate proof has ever, in any single instance, been adduced of the existence of contagion in pestilence. From its first promulgation to the present day, the doctrine has been nothing more than a series of gratuitous assumptions. 3. Because had pestilential diseases been contagious, consequences must have followed, which have not taken place. Being capable of affecting the same persons repeatedly, they would never cease, where no precautions are employed (and in such case no precautions could avail,) until communities were extinguished: Turkey would long ago have been a desert. 4. Because phenomena now take place, which, if pestilence were contagious, could not happen. Instead of the laws of epidemic, they would observe only those of contagious diseases. 5. Because a superabundance of irrefragable proof has been adduced, showing that pestilence never arises from contagion; and because the assumption resorted to, in order to elude this proof, that "to the effect of contagion, a particular state of the atmosphere is necessary to produce the disease," is only, in other words, an acknowledgement that a particular state of the atmosphere is its real cause. 6. Because, for centuries before any intercourse, direct or indirect, was established between this country and the Levant, or rather as far back as history extends, pestilence was at least as frequent in England, as in the 16th and 17th centuries, when our commercial intercourse with Turkey was considerable. 7. Because, when the free states of Italy traded both with the Levant, and with the north of Europe; when they were the carriers, not only of the merchandize, but of the troops of the principal powers of Christendom, engaged in the crusades; and when they possessed Smyrna, Cyprus, Candia, Scio, Cephalonia, Caffa, and even Pera, a suburb of Constantinople, no apprehension was then entertained, under a constant intercourse, of pestilence being propagated by infection, nor any precautions adopted by any nation for the prevention of such a calamity. 8. Because, during the century and a half which has elapsed since 1665, and in which there has been no plague in England, our commerce and intercourse with the Levant have been more extensive, and more rapid than at any former period. 9. Because there is no reason to believe, that in modern times, pestilences have undergone any revolution, in respect either to their nature or to other causes, further than may depend upon the advancement or retrogradation of countries respectively, in cultivation, civilization, and the arts of life; or upon an alteration in the seasons. 10. Because, as contagion, where it does exist, is sufficiently palpable, (it did not require the evidence of inoculation to show that small-pox depends always upon that source, and never upon any other,) if it were the cause of pestilence, its existence could not, for thousands of years, have remained concealed. It must have been discovered, and demonstrated to the satisfaction of the world, by the ancient physicians; and could not now have been a subject of controversy among their successors. 11. Because no person has at any period of history been known to arrive in England, from the Levant, labouring under pestilence. 12. Because no person employed in purifying goods in the



the lazarettos of England or of Malta, has ever been known to be affected with pestilence, which could not have happened if contagion had existed in the goods; and because such goods could not be uniformly exempt from contagion in particular countries, if that were the cause of plague. If in other countries, expurgators of goods in lazarettos have been known to be affected, it must have been from other causes.

13. Because, after three hundred thousand deaths from plague have happened in one season, in Grand Cairo, two hundred thousand in Constantinople, and one hundred thousand in Smyrna, as we are told has repeatedly occurred in those places, and the clothes of the dead have been worn by their surviving relatives, or sold in the bazaars, and worn by the purchasers, the disease, instead of spreading wider and wider, as would inevitably have happened, if contagion were its cause, (since in that case it could not fail to be carried in the clothes,) has on the contrary, regularly declined and ceased, at the usual periods. 14. Because, in those countries in which the plague is supposed to be introduced by means of contagion, conveyed by travellers or goods, as Egypt, Asia Minor and Syria, it never occurs epidemically, but at particular seasons; although in the other seasons, travellers and goods from places in which the disease prevails, continue equally to arrive. And because in other countries, as Persia, which maintain a similar uninterrupted intercourse with places liable to frequent attacks of plague, that disease never occurs. For detailed illustrations of the facts and inferences stated in my evidence, as well as for proofs of other matters which I may have omitted to state, I beg to refer the Committee to my printed work, intituled "Results of an investigation respecting Epidemic and Pestilential Diseases, including Researches in the Levant, concerning the Plague," and to the summary, which I have presented to them in manuscript, on the subject of epidemic diseases. In conclusion, I may observe, that the question of contagion in epidemic diseases, as acknowledged even by its advocates, is entirely one of fact, not of physic, of which all persons of liberal education are as competent to judge as physicians; and that plague does not, according to the modern misapplication of the term, designate any particular disease, but is the general name of several calamities.

*Charles McLean,*  
*M.D.*

(18 May.)



# APPENDIX.

- N° 1.—Letter from the Council Office, Whitehall, to the Chairman of the Committee, enclosing Correspondence with the College of Physicians - - p. 99.
- N° 2.—Letter from the Office of Committee of Privy Council for Trade, to the Chairman of the Committee, enclosing Letter from Sir James Gambier, His Majesty's Consul in the Netherlands - - - - - p. 100.
- N° 3.—Letter from the Commissioners of the Customs to S. R. Lushington, Esq. enclosing, Abstract of the Reports received from the Collectors and Comptrollers at Rochester, Portsmouth, Falmouth, Milford, Bristol, Liverpool and Hull, in return to the Board's order of inquiry, respecting Quarantine and Plague cases - - - - - p. 101.



## APPENDIX.

## —N° 1.—

SIR,

Council Office, Whitehall, 13th March 1819.

Appendix,  
N° 1.

IN conformity with the orders of the Select Committee, dated the 11th instant, respecting the Contagion of the Plague; I herewith transmit to you the following Correspondence;—viz.

- 1st.—Copy of a Letter from Mr. Buller to the College of Physicians, with the first Volume of Dr. Maclean's work, with the Copy of a Summary of his Arguments thereon.—Dated the 16th February 1818.
- 2d.—Copy of a Letter from the College of Physicians, in Answer thereto.—Dated the 31st March 1818.
- 3d.—Copy of a Letter from Mr. Buller to the College of Physicians, with the second Volume of Dr. Maclean's work.—Dated the 30th September 1818.
- 4th.—Copy of a Letter from the College of Physicians, in Answer thereto.—Dated the 7th November 1818.

I am, Sir, your most obedient humble Servant,

CHEYWYND.

Sir John Jackson, Bart.

Chairman of the Select Committee  
respecting the Contagion of the Plague.

(Copy.)—Enclosure 1.

SIR,

Council Office, Whitehall, 16th February 1818.

I AM directed by the Lords of His Majesty's Most Honourable Privy Council to acquaint you, that their attention has recently been called to a Publication by Dr. Charles Maclean, which he has communicated to their Lordships, on the subject of Epidemic and Contagious Diseases, and particularly with reference to the Plague.

The subject is obviously of so much importance to the welfare of mankind in general, that the Lords of the Privy Council do not feel that they could pass by Dr. Maclean's communication without notice; and their Lordships naturally look to the enlightened Members of the Royal College of Physicians, as being eminently calculated to furnish them with the most valuable information, and to elucidate a subject which is no less interesting than difficult; under this impression their Lordships have directed me to transmit to you a copy of the printed volume, published by Dr. Maclean, together with a written summary of his argument, which the Doctor has prepared by their Lordships direction; and to request that you will submit the same to the consideration of the Members of the Royal College of Physicians, in order that they may report, for the information of the Lords of his Majesty's Most Honourable Privy Council, the view which the College take of this question, and more particularly, their opinion on the following propositions, as stated by Dr. Maclean, viz.

1st.—Whether it be sufficiently proved, that Epidemic Diseases do not depend upon Contagion, and that consequently, quarantine and other regulations of plague police are not only useless but pernicious.

2d.—If not, what additional proofs are considered necessary.

3d.—Whether the doctrine of Contagion, as the cause of Epidemic Diseases, be still deemed to stand in whole or in part, confirmed and unshaken, and all the establishments founded upon it worthy of being continued.

I am, Sir, your most obedient humble Servant,

(Signed)

JA<sup>S</sup> BULLER.The President of the  
Royal College of Physicians.



Appendix,  
N<sup>o</sup> 1.

(Copy.)—Enclosure 2.

SIR,

College of Physicians, March 31, 1818.

I HAVE the honour to transmit to you, for the information of the Lords of His Majesty's Most Honourable Privy Council, the following Answers to the Questions proposed by their Lordships to the Royal College of Physicians:—

1st.—We are of opinion, although some Epidemic Diseases are not propagated by Contagion, that is it by no means proved that the Plague is not contagious, or that the regulations of plague police are useless or pernicious. We are persuaded, on the contrary, from the consideration of the experience of all ages, and some of us from personal observation, that the disease is communicable from one individual to another.

2d.—The additional proofs which would be required of the non-existence of Contagion, must be such proofs as would be sufficient to counterbalance the general opinion of medical and philosophical authors and historians, from the times of Thucydides, Aristotle and Galen, to the present day; so late as the year 1813, the contagious nature of Plague was fully ascertained by the British medical officers in the Island of Malta.

3d.—The doctrine of Contagion appears to us to be wholly “unshaken” by any argument which Dr. Maclean has advanced; at the same time we think it probable, that some of the personal restrictions enforced on the establishments for quarantine, might be modified, without risque to the public safety.

I have the honour to be, Sir, your most obedient Servant,  
(Signed) CLEM. HUE, Registrar.

To James Buller, Esq.  
Council Office, Whitehall.

(Copy.)—Enclosure 3.

SIR,

Council Office, Whitehall, 30th September 1818.

I AM directed to acquaint you, that the Lords of His Majesty's Most Honourable Privy Council have, since the receipt of your letter of the 31st March last, received from Dr. Maclean a second Volume of his Work on the Non-contagious Nature of the Plague, which the Doctor has represented to their Lordships, as containing additional proofs of the accuracy of his views upon that subject; and as being in consequence not unlikely to lead to some variation in the sentiments of the College of Physicians. Although the Lords of the Privy Council cannot undertake to say how far this may be the case, the importance of the subject induces them again to bring it under the consideration of the College of Physicians; and I am therefore directed to transmit to you, a copy of the second Volume of this Work, and to request that you will lay the same before the College for that purpose.

I am, Sir, your most obedient humble Servant,

Clement Hue, Esq.  
Registrar of the College of Physicians.

(Signed) JA<sup>s</sup> BULLER.

(Copy.)—Enclosure 4.

SIR,

College of Physicians, November 7, 1818.

I AM directed by the President and Fellows of the Royal College of Physicians, to acknowledge the receipt of your letter of the 30th September; together with a Copy of the 2d Volume of Dr. Maclean's Work on Epidemic and Pestilential Diseases, and to state to you, for the information of the Lords of His Majesty's Most Honourable Privy Council, that nothing contained in Dr. Maclean's second Volume, has altered the opinion expressed by the College in their former report.

I have the honour to be, Sir, your most obedient Servant,

James Buller, Esq.

(Signed) CLEM. HUE, Registrar.

Appendix, N<sup>o</sup> 2.Appendix,  
N<sup>o</sup> 2.

SIR,

Office of Committee of Privy Council for Trade,  
Whitehall, 20th April 1819.

BY direction of the Lords of the Committee of Privy Council for Trade, I have the honour herewith to transmit, for the information of the Select Committee, respecting the Contagion of the Plague, Copy of a Letter from Sir James Gambier, His Majesty's Consul in the Netherlands, on the subject of the Quarantine Regulations established in that kingdom: I am to add, that the translation of the Quarantine Laws to which Sir James Gambier alludes, has not yet been received at this office.

I have the honour to be, Sir,

Your most obedient humble Servant,  
THOMAS LACK.

Sir John Jackson, Bart.  
&c. &c. &c.

(Copy)



(Copy.)—Enclosure.

Appendix,  
N° 2.

SIR,

The Hague, 3 April 1819.

IN compliance with Lord Castlereagh's desire, communicated to me in your letter of the 16th ult. I have made inquiry respecting the Quarantine Regulations established in the United Netherlands, and find that the following is the system now practised in this regard:

No vessels whatever of any nation arriving in these ports are subjected to quarantine, excepting such alone as come from the coast of Barbary. These latter are immediately visited, and carefully inspected by a medical person, who reports thereon to the Marine Department at the Hague, which department determines, from the nature of the report, to what extent quarantine shall be enforced in the particular case. The vessel in the interim remains under the surveillance of a guard-ship.

I have obtained from the Minister of Marine printed copies of the several laws and ordinances of the kingdom, relating to this subject; but as these have been delivered to me in the Dutch language (they being not extant in any other), I have taken measures to get translations thereof, which I shall transmit to the Foreign Office. This, however, cannot be immediately effected, as they are rather voluminous.

The Minister of Marine has likewise informed me, that a commission has been appointed by the King of the Netherlands, to inquire into the subject of the Quarantine Laws, to report thereon, and to suggest any further regulations that may be considered necessary.

I have, &amp;c.

(Signed)

J. GAMBIER.

J. Planta, Esq. &amp;c. &amp;c. &amp;c.

## Appendix, N° 3.

SIR,

Appendix,  
N° 3.

THE Commissioners having received an order from the Select Committee of the Honourable the House of Commons, respecting the Contagion of the Plague, dated the 11th instant, directing that there be laid before that Committee,

"An Account of all cases of absolute Plague in any Lazarette in this kingdom, from 1619 to the present time;"

I have it in command to transmit to you an Abstract of the Reports received from the Collectors and Controllers of this Revenue at the Quarantine Ports on this subject; and to signify the request of this Board, that the Lords Commissioners of His Majesty's Treasury will, agreeably to their Lordships standing order, be pleased to be the means of the same being presented to the before-mentioned Committee.

I am, Sir,

Custom House, London,  
29th March 1819.

Your most obedient and very humble Servant,  
D. CURLING,  
in the Secretary's absence.

S. R. Lushington, Esq.  
&c. &c. &c.

## Enclosure in N° 3.

ABSTRACT of the Reports received from the Collectors and Comptrollers at Rochester, Portsmouth, Falmouth, Milford, Bristol, Liverpool and Hull, in return to the Board's Order of Inquiry, on an Order of the Select Committee of the Honourable House of Commons, respecting the Contagion of the Plague.

ROCHESTER.—The books and records at this port do not go farther back than the year 1716. A proclamation relative to Quarantine appears to have been issued on the 25th August 1720, and the first regular Quarantine establishment appointed at that time, although in a letter in 1722, allusion is made to the former Quarantine in 1709, when sheds were erected for airing goods at Hoo Fort. In the year 1721, permission was granted to air goods on the decks of the importing ships, or in hired craft; and this practice seems to have continued until the year 1755, when the first floating lazarette was established at Standgate Creek.

There is not any record of a case of absolute Plague in any lazarette at this port having occurred, from the earliest period that can be traced to the present time; but the following cases of strong suspicion, as to the cargoes of the ships being contagious, appear to have occurred:—

In 1721, the ships "Turkey Merchant," and "Bristol," with their cargoes, were taken from Standgate Creek out to sea, and burnt, in pursuance of an Order in Council, dated the 28th July 1721.

In 1792, a chest of goods burnt, imported in the "St. George," from Zante.

In 1800, the ships "Aurora," "Mentor," and "Lark," from Mogadore, were destroyed, with their cargoes, pursuant to an Order in Council of the 7th January 1800 (grounded upon a representation of the committee, consisting of His Majesty's physician and others), great suspicion being entertained of the same being infected with the Plague. The master of the "Lark" died at Mogadore, where the disease was raging at the time the vessels sailed; and it was reported, that nearly all the persons who assisted in loading the ships, also died of the plague.



Appendix,  
N<sup>o</sup> 3.

In August 1814, a large quantity of hare skins, imported in the "Lucy," from Smyrna, were burnt by order of Dr. Pym, upon a report made to the Lords of the Privy Council, from the Consul at Smyrna, that the persons who were employed in removing and packing the said skins, had died of the Plague.

PORTSMOUTH.—It cannot be ascertained, that any case of absolute Plague has ever occurred at this port, on board any lazarette. No regular lazarette was appointed until the year 1805, previous to which time it was the usage to hire vessels for the airing of goods.

FALMOUTH.—The officers at this port are not aware that any case of what is usually called Plague, has occurred; but have stated, that a disease, highly contagious, has frequently occurred there, and been arrested by precautionary means.

MILFORD.—No case of absolute Plague has occurred at this port. The first lazarette established here, was in the year 1806; previous to which it was the practice to hire vessels to air goods on board, subject to Quarantine.

BRISTOL.—No instance is on record of any case of absolute Plague having occurred at this port, from 1619 to the present time. Lazarettes were first established, pursuant to the Act of the 26 Geo. 2, cap. 6; prior to the passing of which Act, no information can be obtained as to what regulations were adopted for the due performance of Quarantine.

LIVERPOOL.—The officers at this port have not any knowledge of the Plague having had existence in any lazarette, or other vessel there. The first regular lazarette was appointed in the year 1815; and previous to that time, and for about forty years before, it was the practice to hire vessels to air enumerated goods on board, and prior to that period, such goods were aired on board the importing vessel.

HULL.—The officers at this port cannot find recorded in their books, a case of absolute Plague in any lazarette, during the last 200 years.

Hired lazarettes were first employed at this port in the year 1774; before which time it was the usage to employ labourers on board the vessels placed under Quarantine, in airing their cargoes.









