try of the Society, collectively and individually. The plates, we may add, are executed in the best style by Stewart.

II.

Observations on the Laws governing the Communication of Contagious Diseases, and the Means of arresting their Progress: (Read before the Literary and Philosophical Society of New-York, on the 9th of June 1814.) By David Hosack, M. D. F. L. S. &c. &c. 4to. pp. 84. New-York, 1815.

We were for some time at a loss whether to consider the observations before us as an original communication, or as a published book. For the actual manuscript we were indebted to Dr Chisholm, to whom they were originally addressed as a letter, and upon the very same day we received them from their author, enriched with numerous notes, printed in a style of luxury which would please the most fastidious lover of fine paper copies. By considering it as a book, we are enabled to condense it within moderate limits, and occasionally to add such observations as have occurred to ourselves in perusing it, while the possession of the manuscript entitles us to quote from it without any reserve.

Our readers will recollect, in our fifth volume, a very excellent paper upon the subject of contagion by Dr Hosack, in which he very laudably endeavoured to narrow the ground of controversy concerning contagious and infectious diseases, by arranging them into three classes.

"The first embracing those diseases which are communicated exclusively by contact; as the itch, syphilis, hydrophobia, &c., which are never conveyed through the medium of the atmosphere.

"The second including those diseases which are communicable both by contact, or the near approach to the sick, and by the atmosphere, as measles, small-pox, scarlet-fever, &c., which are communicable in every season of the year, and in every climate; in a pure as well as in an impure air, though more readily by means of the latter than the former, and with which persons are rarely infected more than once in their lives.

"Under the third class are enumerated those diseases which are only, in general, communicable or contagious through the medium of an impure atmosphere; the air being rendered thus impure by the decomposition of animal and vegetable substances, as in low, marshy
countries; or by concentrated human esfuvia, as in camps, jails, hospitals, or on shipboard; but the same diseases, I alleged, in a pure air, in large and well-ventilated apartments, when the dress of the patient is frequently changed, all excrementitious discharges constantly removed, and attention paid to cleanliness in general, are not usually contagious, or, under such circumstances, are very rarely communicated from one person to another. In this class I included the plague, dysentery, typhus fever, in its various forms of jail, ship, hospital, or lake fever, and the yellow fever.” pp. 5, 6.

Dr Chisholm, in reply, approved entirely of the two first classes, but requested his friend to reconsider the third; and the present publication is the result of his renewed consideration of the subject.

“ In my first communication, I acknowledge I have stated my observations without so full a detail of the facts themselves whence my conclusions were deduced, as perhaps ought to have been exhibited. To the European reader, unacquainted with the peculiarities of yellow fever, more especially as it has appeared in the cities of the United States, my first statement may perhaps appear defective in that evidence which is so justly expected upon subjects of this nature. This evidence I shall now endeavour to supply, and thereby to confirm the correctness of the classification which has been proposed. Varying for the present all inquiry relative to the nature or properties of the contagious principle secreted by the diseased body, or the chemical qualities of the atmosphere deemed necessary for its propagation, or the manner in which the contagion diffuses itself, I proceed to observe, that the history of each disease enumerated in the third class, viz. plague, dysentery, typhus in all its forms, and yellow fever, furnishes evidence of the correctness of the remark, that they are governed by a law peculiar to themselves; that they are contagious or communicable in a foul atmosphere; but that they are never or very rarely so in a pure air, where the sick enjoy the benefits of cleanliness and ventilation.

“The same evidence, I trust, will demonstrate another truth, that these diseases are in no instances epidemic, as they have been impro-

perly denominated by most practical writers; but that their sphere of operation is, with very few exceptions, confined within the limits to which the vitiated atmosphere extends, in which they may be engen-
dered, or into which they may be introduced; and that, in this re-
spect, they differ from ordinary epidemics, which appear in differ-
ent and distant parts of the same place, and at the same time.'

“ That the plague, when once generated, whatever may be the sources whence it derives its origin, is communicated by a peculiar virus secreted by the diseased body, will not, I trust, be questioned at this day. Independently of the facts contained in the writings of Thucydides, Lucretius, Mead, Dr Patrick Russell, and others, showing the contagious nature of the plague, the communication of this
Disease by inoculation, as performed by Matthias Deggio, Dr Whyte, and the Russian surgeon, noticed by Sonnini, have recently established the fact of its propagation by a specific secretion, beyond all possible controversy." Pp. 7, 8.

Dr Hosack then proceeds to adduce a number of facts to show that the plague, in common with the other diseases associated with it, dysentery, typhus, and yellow fever, is only communicable through the medium of an impure or vitiated atmosphere. We shall quote what he says in regard to yellow fever.

"The facts which have been ascertained relative to the communication of yellow fever, furnish no less conclusive evidence that this disease, like those already noticed, is or is not generally contagious, depending on the qualities of the air to which it may be communicated. The history of every visitation of this disease in the United States establishes this truth. It has not only regularly made its first appearance in our sea-port towns, and in those places where the air is most impure; at that season of the year, and in those seasons when such impurities acquire their greatest virulence; in those houses which are most crowded with inhabitants, and where there is the least attention paid to cleanliness; but, wherever the same disease has been thence conveyed to other parts of the same city or town, or into the country, it either was propagated or extinguished, according to the local circumstances of the place to which it was so conveyed.

"Dr Lining, in his description of the yellow fever, which was introduced into the city of Charleston in 1732, 1739, 1745, and in 1748, observes, that, although the infection was spread with great celerity through the town, yet, if any from the country received it in town, and sickened on their return home, the infection spread no further, not even so much as to one in the same house. He remarks, that the disease was generally more fatal to those who lay in small chambers not conveniently situated for the admission of fresh air. The yellow fever with which the city of New-York was visited in 1791, and which was introduced by a vessel from the West Indies, and rendered memorable by the death of one of our most respected citizens, General Malcolm, who was the first victim to the epidemic of that season, is thus recorded by Dr Jonas Addoms, in his excellent dissertation on that disease:

"About the middle of August 1791, a contagious fever appeared in the city of New-York, which first discovered itself near Peckslip, a part of the city thickly inhabited, its houses generally small, and badly ventilated; many of the inhabitants were in indigent circumstances, which is a frequent cause of the want of cleanliness. Here it raged a considerable time; it then began to spread, as some attendants on the sick became infected who lived in other neighbourhoods. By this means it was carried to other families, and most generally could be traced to this source. It likewise proved more particularly fatal near the place where it first appeared than in any other
part. Thus at length it spread through the city, until about the middle of October, when the weather growing a little cooler, the disease greatly abated, and in a short time disappeared.'

"Dr Addoms, the author of that dissertation, since that time resided many years in St Croix, and being associated with a celebrated physician of that island, the late Dr Gordon, had ample opportunities of seeing the yellow fever in all its forms. During his last visit to this city, not long before his death, he informed me that the disease which he had seen in New-York, in 1791, was precisely the same which he afterwards saw in St Croix, and which frequently prevailed during his residence there, more especially among Europeans newly arrived within the tropics. He also remarked, at the same time, that this disease always acquired new virulence, and was rendered highly contagious when introduced among soldiers crowded in barracks, or on shipboard.

"In the yellow-fever of 1793, which was introduced into the city of Philadelphia from the West Indies, it is conceded, on all sides, that the disease made its first appearance in Water-street, and that all the cases of this fever were, for two or three weeks, evidently traced to that particular spot. It is also a fact well ascertained, that in the vicinity of the place where the infection was first received, the air was, at the same time, in a very offensive condition, from a quantity of damaged coffee which was exposed upon the dock, and under circumstances favourable to its putrefaction and exhalation. From that place the disease gradually infected a considerable part of the city, the Northern Liberties, and district of Southwark, and did not subside until terminated by frost, after having proved fatal to nearly five thousand persons.

"It is also to be remarked, that its ravages were chiefly confined to the poor, and to those parts of the city where the houses were small, and the least attention given to cleanliness and ventilation. In the language of Mr Carey, 'it was dreadfully destructive among the poor. It is very probable that at least seven-eighths of the number of the dead were of that class. The inhabitants of dirty houses have severely expiated their neglect of cleanliness and decency by the number of them that have fallen sacrifices. Whole families, in such houses, have sunk into one silent undistinguishing grave. The mortality in confined streets, small alleys, and close houses, debarred the free circulation of air, has exceeded, in a great proportion, that in the large streets and well-aired houses. In some of the alleys, a third or fourth of the whole of the inhabitants are no more. The streets in the suburbs, that had the benefit of the country air, have suffered little. It is to be particularly remarked, that, in general, the more remote the streets were from Water-street, the less of the calamity they experienced.'

"'Though the disease,' says Dr William Currie, 'was highly contagious, the influence of the contagion was circumscribed to a narrow sphere.'

"As a further evidence that it did not depend on a general condi-
tion of atmosphere, the same author remarks, 'that while this formidable disease was making such ravages in the city, the country, for some miles around, was never more healthy.' In another work, Dr Currie has very explicitly admitted the qualified contagiousness of yellow fever, observing, 'that it is only contagious in situations where the air is confined, and the exhalations of the sick are permitted to accumulate, through neglect of frequently changing the bed and body linen of the patient.'

"Similar facts are recorded of the visitation which New-York experienced of the same disease in 1795. Upon another occasion I shall make public the evidence which is in my possession, indubitably proving the importation of the yellow-fever of that season from Port-au-Prince. In that year the disease appeared upon the east side of the city, first affecting some seamen who had received the infection from a brig directly from Port-au-Prince; from thence it spread in the vicinity from Dover-street to Peck-slip; but throughout that season it was confined, in a great degree, to that part of the town where the local condition of the atmosphere was peculiarly favourable to its diffusion; for not only an unusual quantity of filth was accumulated in Peck-slip, but at that very time a great number of emigrant poor had arrived from England, Ireland, and Scotland, so that the numerous lodging-houses, especially in that neighbourhood, were unusually crowded: add to this, that the weather was uncommonly moist, and thereby peculiarly calculated to spread the infection. According to the statement made by Dr Bayley, it was particularly fatal to the emigrants of that very summer; for, 'out of nearly eight hundred persons who died,' he observes, 'not more than one hundred and fifty were citizens of New-York.'

"In another part of the same statement he remarks, 'so limited was the operation of the contagion, that the number of those taken sick in low situations, compared with those residing in more elevated parts of the city, may be computed as twenty to one.'

"In 1798, New-York was again visited with this scourge of our sea-port towns. During the months of August, September, and October, about two thousand persons fell victims to this disease, at the end of which time, a keen frost put an almost instantaneous termination to its progress. The disease of that season first appeared at the ship-yards in the neighbourhood of New-slip, and, as in former years, was introduced from the West Indies. After cutting off several persons in the neighbourhood in which it commenced, the same vessel was removed to another slip, also on the east side of the city; from thence the disease was communicated by those who worked on board to a thickly-settled part of the city, where the houses are small, the streets narrow, and chiefly occupied by the poor, viz. Cliff-street, John-street, Ann-street, Fair-street, Eden's-alley, and Rider-street; at the same time, however, it still continued to extend its ravages in the vicinity of the place to which the poison had been first communicated, and to some other thickly-settled parts of the town, to which it was subsequently conveyed. In a short time afterwards it was in-
Dr Hosack on the Laws of Contagion.

July

...produced into Pearl-street, and in that part of it between Burling and Peck-slips, where it spread very extensively. In that season a number of circumstances concurred to diffuse the contagion in that part of the city; a great quantity of rain had fallen, so as to overflow the cellars in Pearl street, which were, at the same time, stored with salted provisions; these were soon afterwards spoiled, and loaded the atmosphere with a highly offensive vapour; the disease raging at that time in that neighbourhood, acquired new virulence, and, for the most part, followed the course of the vitiated atmosphere; beyond the limits of which, says Mr Webster, the disease exhibited little infection. Indeed, the extension of this disease, as has already been frequently observed, was so circumscribed within the limits of this impure air, that it became very generally believed, that, in that season, whatever may have been the case in former years, the disease exclusively arose from those domestic sources, more especially from the putrid provisions. But that the yellow fever of that season did not derive its origin from the spoiled beef is evident, not only from the fact that the disease had already previously appeared in other parts of the town, and even in that very neighbourhood, before those heavy rains had fallen, and their pernicious effects were perceived; but also, that those tainted provisions, unaccompanied with the specific poison of the disease, did not of themselves communicate infection to those who were constantly exposed to their effluvia.

"Mr Edmund Prior, the inspector-general of beef at that time, informed me, that of forty persons whom he had employed in examining the beef, and in removing and emptying such barrels as were found in a putrid state, not one was taken ill of the yellow fever. But Dr Chisholm and Dr Stewart have abundantly shown, that decomposed animal or vegetable matters will not of themselves produce the pestilence; and that this disease is generated in the human system, and communicated from one person to another, by a peculiar secretion from the morbid body. My object is to show, that when such virus is introduced into a certain state of atmosphere, the disease is readily contracted, but that beyond that atmosphere it is rarely infectious.

"Although the diseases which have been noticed are rarely communicable in pure air, and are not generally contagious in the country, it is not less true, that in some few instances it appears, either that the virus, as secreted from the diseased body, is alone, in sufficient quantity, or possesses a sufficient degree of virulence, to produce such diseases; or that, by means of the impurities collected about the diseased individual, occasioned by inattention to cleanliness and change of clothing, the retention of his excretions, or the confined air of his apartment, the virus itself becomes multiplied, and thereby the means of communicating the disease from one to another are in the same degree increased: for it is a fact not to be questioned, that instances of yellow fever, as well as of the plague, dysentery, and typhus fever, have been occasionally infectious, even in the more pure air of the country, though it must be acknowledged, that such cases are of rare occurrence.
It is observed by Dr Rush, whose records of the several visitations of the yellow fever in the city of Philadelphia will be lasting monuments of the facts which they contain, as well as of the impressive and eloquent manner in which they are related, "that out of upwards of one thousand persons who have carried this disease into the country from our cities, there are not more than three or four instances to be met with of its having been propagated by contagion." Such instances, however, have occurred in New Hampshire, as related by Dr Spalding; in Connecticut, as stated by Dr William Moore of this city; on Staten Island, in 1798, as recorded by Dr R. C. Moore; at Huntingdon, on Long Island, in 1795 and 1798; and at Germantown, in the vicinity of Philadelphia, as related by Dr Wistar. But these very exceptions, if they can with propriety be denominated exceptions, manifestly prove the specific character of those diseases, and that they are propagated by a specific secretion peculiar to each disease, whether it be plague, dysentery, typhus, or yellow fever. Indeed, to use the emphatic expression of the Edinburgh Reviewers on this subject—"In the present state of medical knowledge, it would not be at all more absurd to deny the existence of fever altogether, than to maintain that it is not propagated by contagion." But, in the language which Dr Mead has applied to the plague, we may say of all the diseases of this class, "that a corrupted state of the air is, without doubt, necessary to give these contagious atoms their full force."

"If it were necessary, I might go on to cite every return of the yellow fever with which the United States have been visited, to show that the progress of the pestilential poison has ever been commensurate with the impurities of the atmosphere, and that, when sufficiently diluted with pure air, it ceases to propagate itself.

"It is probably owing to this impure condition of the atmosphere that the various fevers, and the greater mortality of diseases in general, are to be ascribed, which physicians have frequently observed to precede the appearance of pestilential disorders, and to announce their approach, and which have led many to conclude, that the pestilence itself was thus engendered by local circumstances, and not imported. Facts of this nature have served to mislead the editors of the Medical Repository, and many other late writers, who thus confound the exciting and predisposing causes of disease; who do not discriminate between the inflammable materials and the spark which lights the flame; but have identified the domestic circumstances which have served to diffuse the poison of yellow fever with the peculiar virus itself, by which that disease has been introduced into the various cities of the United States.

"The same local circumstances, I believe, will go far in accounting for the 'pestilential state of the air,' the 'secret constitution of atmosphere,' so often recorded by writers on epidemics; at the same time that they teach us that the diseases now under consideration are only epidemic in as far as the vitiated state of the air is itself epidemic.
"I, however, wish it to be understood, that I do not exclude the influence of bodily predisposition, the passions of the mind, and many other circumstances, in aiding the propagation of pestilential diseases." Pp. 23—32.

From these observations, it appears that Dr Hosack, although of opinion that yellow-fever is really a contagious disease, employs all the facts adduced by the non-contagionists, to prove the domestic origin of the disease, in order to establish that, besides the existence of contagion, an impure atmosphere is necessary for its propagation. In this way he becomes a kind of mediator between these opposite sects, and accounts for many facts, which one or other have never been able to explain satisfactorily; but we verily believe, that none of those who have entered keenly into the controversy will ever become converts. The non-contagionists will never admit the operation of contagion under any circumstances whatever, and the contagionists, though they may admit its becoming more active in a vitiated atmosphere, will find, in Dr Hosack's own publication, abundant proofs, that contagion alone is sufficient for its propagation. For example, from his appendix, they will triumphantly quote the statement of facts by Caspar Wistar, Professor of Anatomy in the University of Pennsylvania, in which a vitiated atmosphere seemed not to contribute to the propagation of the disease.

"The disease which produced the fatal effects now to be related, commenced in the family of Elizabeth Johnson, a widow, who lived in the main street of the village of Germantown, about six and a half miles from Philadelphia.

"The person first affected was her child, Betsey Johnson, who had been in Philadelphia from the third to the seventh of August, in a neighbourhood where several cases of the fever had already appeared. She returned home the seventh, and on the ninth of the same month was attacked with the yellow-fever, which terminated fatally in four days.

"Fourteen days after her death, viz. August 27th, Mrs Duy, the next neighbour of Mrs Johnson, who had visited Betsey several times during her illness, was attacked with a fever supposed to be of the same kind, and died at the end of four days.

"On the thirtieth of August, the wife of Charles Hubbs, who also lived near to Mrs Johnson, and had visited both Betsey and Mrs Duy, once at least during their respective indispositions, but had not been in Philadelphia for many months, was attacked with unequivocal symptoms of the yellow-fever, in its most malignant form, and died the 2d of September.

"Mr Duy, husband of the above-mentioned Mrs Duy, was attack-
ed sixteen days after the death of his wife, viz. September 18, and died also, after an illness of six days.

"A few days after the death of Mrs Duy, an English gentleman and his wife, of the name of Fisher, who had fled from Philadelphia on account of the fever, went to board with Mr Duy, and were placed in the chamber occupied by his late wife during her illness: they were also attacked with fever. Mrs Fisher was taken, September 19th, and recovered in a few days, but Mr Fisher, who was attacked four days after his wife, died with the black vomit, the 27th September.

"At the same time, the disease reappeared in Mrs Johnson's family, in a young female servant, who was very ill, but recovered. Soon after the attack of this girl, Mrs Johnson herself was taken ill with the same disease; she had visited both of her neighbours, Mrs Duy and Mrs Hubbs, while they were sick, she also had assorted the clothes of her deceased daughter, four or five days before her own attack commenced, but had not been in Philadelphia for a month. Her disorder continued eight days, and terminated the 28th of September, with convulsions and the black vomit.

"A few days before the death of Mrs Johnson, Elizabeth Stern, a woman who lived in the family, was attacked with fever, and became very yellow. Her symptoms appeared moderate at first, but after lingering a fortnight she also died. —The wife of a tenant of Mrs Johnson, who lived in a separate part of the house, but used the same yard, was attacked before the death of Elizabeth Stern, and recovered with great difficulty.

"The last victim to be mentioned, was one Stephen Post, an old man, who lived at a distance, but worked in Mr Duy's barn, while the bed was there on which Mrs Duy died. He was also attacked with fever, and died in a few days.

"These melancholy circumstances occurred in a village which has long been remarkable for its salubrity, at a time when the other inhabitants enjoyed their usual health. In most of the cases, the disease appears to have been contracted at the house of Mrs Johnson, which, before this distressing period, had been eminently distinguished by the health and longevity of its inhabitants. The family were extremely neat, and it may be asserted with confidence, that the premises were never more clean than they were at the time of this truly affecting catastrophe. What cause but contagion is adequate to the production of such a disease among persons so situated?"

The remainder of this elaborate paper is occupied with the exposition of a hypothesis, to account for the manner in which a vitiated atmosphere contributes to the virulence of contagion. In supporting this hypothesis, he mentions some facts, which we are unwilling to pass over.

"The well known facts relative to the communication of jail fever to the judges presiding at the Black Assizes, in 1577, and a similar
infection being communicated to the judges on the bench, and other persons present, at the sessions held at the Old Bailey in 1750, while the prisoners themselves remained in health, insensible to infection, furnish incontestable evidence of the effects of habit in diminishing the sensibility to the poison of fever: and with regard to the yellow fever, it assuredly has not been the case in the United States, that those who were most accustomed to the impure air of the place in which the disease prevailed, were more susceptible of the disorder than those who had recently arrived from the pure air of the country, or from the more elevated parts of the town. On the contrary, those who were least accustomed to the impure air of the city, or of the infected spot, were uniformly observed to be most susceptible of the contagion. Those, too, who enjoyed the most vigorous health, and the most robust constitutions, the reverse of that condition of body which would be the effect of a residence in impure air, were more readily infected upon coming into the atmosphere impregnated with the contagion, than those who had remained constantly exposed to its influence. Whatever differences of opinion have existed among the physicians of the United States, as to the origin of the disease, they are all perfectly agreed relative to the facts which I have just stated. Indeed, Dr Chisholm himself inadvertently admits the same to be true; for he observes, that, in the West Indies, sailors, soldiers, and young men, especially those who have recently arrived from Europe, and are least accustomed to the climate, were more obnoxious to it than others.

“Another argument in favour of this explanation is derived from the fact that this disease has, in several instances, been introduced into our cities, without extending beyond the individuals who have introduced it; manifestly owing to the active exertions of a vigilant police, at the same time that every attention was paid in preserving cleanliness about the persons of the sick. This was remarkably the case in the year 1804, when the yellow-fever was introduced at the Wallabout, on Long Island, and in 1809, when the same disease prevailed at Brooklyn. In each of those years the fever was introduced into this city by persons who had received the infection on Long Island, but, owing to the circumstances just mentioned, it was not communicated to others; while the same disorder, owing to local circumstances, spread in the vicinity of those places on Long Island where it had first appeared.

“During the year 1811, the yellow fever was also introduced into the city of Amboy, New Jersey, from the Havanna, but did not spread beyond those persons who were first attacked in consequence of their immediate exposure to the air of the infected vessel. The local circumstances of Amboy, its elevated situation, its dry and sandy soil, its wide streets and spacious houses, their distance from each other, and the remarkable cleanliness of the town, most satisfactorily account for the sudden extinction of the disease, while the evidence of its importation must be admitted to be conclusive.
“But there is another circumstance which particularly merits attention: in every epidemic visitation of the yellow-fever, several days, viz. from eight to twelve, or fourteen, have generally elapsed between the first cases that appeared, and the communication of it to other persons, even in the same neighbourhood; insomuch that not only our citizens, but the physicians themselves, have been led to doubt the existence of the disease, and to stigmatize as alarmists those who first announced the deadly visitor. I can never forget the occasion, in 1795, when that venerable and experienced physician, the late Dr John Bard, assembled the physicians of this city to announce to them the first cases of this disease which he had observed in the family of his friend, Mr Jenkins. The physicians met, but declared they had seen no other fevers than what they had been accustomed to observe every year, and even doubted, on that occasion, the correctness of Dr Bard’s observations, relative to the nature and character of the disease to which he called their attention: but that accurate observer had been too familiarly conversant with the yellow-fever as it appeared in New York in 1713 and 1702, and too well knew the pathognomonic symptoms of that disease to confound it with the fevers of our own climate: he, accordingly, in the most emphatic language, replied to their doubts, “Gentlemen, within a fortnight you will all see and acknowledge the West India yellow-fever to exist in our city.” The event is well known. The same interval between the first cases of the disease and its subsequent diffusion in the neighbourhood where it first made its appearance, is noticed by almost every writer who has recorded the yellow-fever in the United States.

“A similar interval has been frequently noticed in the history of the plague. Dr Russell, in his account of the plague of Marseilles, in 1720, observes, “that from the 12th of July to the 23d there was a deceitful pause, during which the popular apprehensions began to subside. The physicians were reproached with ignorance in having mistaken ordinary fevers for the plague. The disease, however, in this interval, had continued to spread in the street, Rue de l’escale, where it made its first appearance.”

“It has also been remarked of the plague, as well as of the yellow-fever, that the infection spread most rapidly when the atmosphere was not only heated and loaded with moisture, but when it was least agitated by wind or thunder storms. During those calms when the air may be said to be relatively at rest, it has been uniformly remarked, that the contagion of the yellow-fever has multiplied itself most extensively, as was always very apparent by the greater number that was seized within five or six days after such close weather had been observed, all which circumstances certainly conspire to promote the fermentative process that has been contended for.

“This is not all: whenever the yellow-fever has been introduced into the cities of the United States, its first extension has always been slow and gradual. Upon several occasions its boundaries have been accurately defined by our board of health. This, as I have stated
on a former occasion, was remarkably the case in this city in 1805. The disease, in that year, was confined, for some weeks, to a small portion of the eastern side of the city, and, as stated by the board of health, "not a case occurred, in any part of the town, that was not referable to that as its source." This fact being ascertained, the board accordingly forbade intercourse with the infected portion of our city, and ordered an abandonment of that part of the town, threatening violent measures if their orders were not immediately complied with. In a short time after, the infection extended a few streets further; the board of health again defined its limits, and again declared that still not a case had occurred that could not be traced to this part of the city as its source.

"Will not the same assimilating or fermentative process furnish the most satisfactory solution of the fact noticed by Boerhaave, Cullen, Lind, Russell, and many others, that fomites are more to be dreaded than the excretions alone proceeding from the diseased body? Not, however, in the manner those authors suppose, that such fomites acquire greater virulence; but that by the same process the specific poison has been more extensively multiplied by means of the atmosphere and foul excretions which are involved in the clothing worn by the sick; and that by the same means the danger of the infection has been increased in the same degree that the poison has been multiplied. As a further evidence, too, that the contagion is multiplied, but not more concentrated, as those writers have imagined, it is a fact established by every writer on those contagious diseases, that the first cases of every epidemic are uniformly the most fatal; but that, as the season advances, the danger of taking the disease is increased, while the disease itself has, perhaps, become even milder than it was in the commencement."

From all these facts and observations, Dr Hosack draws the following conclusions:

"1st, That an impure atmosphere is indispensably necessary to multiply and extend the specific poison constituting plague, dysentery, typhus, and yellow-fever.

"2dly, That the impurities of the atmosphere do not produce their effects, in the manner suggested by Dr Chisholm, by increasing the susceptibility of the system to be acted upon by the peculiar virus of those diseases.

"3dly, That, instead of predisposing the body to be thus acted upon, the reverse is the fact; that the predisposition of those who are most exposed to such impure air is less, while those who reside in the pure air of the country are most, liable to be infected when exposed to the contagion.

"4thly, That the impurities of the atmosphere are fermentable materials, to be called into action by the specific ferment of those diseases, aided by heat, moisture, and a calm state of the atmosphere, and that, as far as such atmosphere extends, and the circumstances
favourable to such fermentative or assimilating process continue, so far as these diseases become epidemic, but no farther."

For his inquiries into the laws of contagion, so far as they have gone, we acknowledge ourselves indebted to Dr Hosack; and we are persuaded that many an acrimonious controversy would be avoided if they were better understood; but there still remains a great deal to be discovered and ascertained in regard to them, for, unluckily, most of those who have written concerning them come prejudiced to the investigation; and, instead of deriving general laws from an extensive view of facts bearing upon the subject, they rather endeavour to render plausible some position which may support their opinion concerning the contagiousness or non-contagiousness of a particular disease. This is one of those subjects where an a priori consideration may be advantageously connected with a reference to facts. We mean, that by pure reason, as a Kantian would term it, a scheme of every possible case, whether in regard to classification, or to circumstance, or law, might be drawn out, and afterwards filled up with such facts as were applicable to each. In this way we would discover in how many important points our information was still deficient, and how much of our scheme we should be under the necessity of leaving blank.

III.

Delineations of the Cutaneous Diseases comprised in the classification of the late Dr Willan: being a Republication of the greater part of the Engravings of that Author, in an improved state, together with a New Series, which will comprehend the remainder of the System, as completed in the Practical Synopsis of Dr Bateman: the whole being intended to illustrate the Principal Genera and Species described in that Work. By T. Bateman, M. D. F. L. S. Physician to the Public Dispensary, and to the Fever Institution. London, 1815.

This work does not stand in need of our commendation. The utility of the study of cutaneous diseases cannot be disputed; and as conducive to that important end, the publication of Dr Willan was unrivalled, not only in this, but in any other