moral dispositions of the highest and of the lowest orders of society often approximate at some points, because the one is comparatively placed above, and the other beneath the influence of public opinion; and, in like manner, a similar relaxation of the body is sometimes produced, from superfluous luxuries and late hours in the first, and from the deprivations of penury in the last. But as there is still much moral worth in the higher, and in the lower classes of society, so there is also much physical energy even in large towns; and the sum of both will be vastly increased if we take into account that middle order where the soundest minds and the soundest bodies are perhaps the most numerous. In speaking, therefore, of any medical treatment as applicable to London we should recollect, that we speak of an empire itself, of a place comprehending upwards of a million of people whose modes of life are exceedingly diversified; and so far from asserting, in one sweeping clause, that this or that practice is suitable or unsuitable in London, we should endeavour to ascertain the various peculiarities of each class of the population, and to point out those circumstances in each which materially or even slightly relate to the expediency of modifying the methods of cure. Perhaps at a future period I may communicate some particulars on this topic, but as these will probably be very limited, I would recommend an extended investigation to those practitioners who live in the metropolis: for if the peculiarities here alluded to were correctly registered with all their practical bearings, the facts communicated would go far to remove much of the uncertainty which exists respecting the influence of the habitudes of civic life on the body. But to return to the common continued fever, it may be remarked, that in every rank of society evacuations are, upon the whole, better sustained than in typhus, there being in the former nearly always more force and fulness in the pulse, and less general depression than in the latter. These differences are not only observable at the beginning, but during the greater part of the common continued fever, so that general and, especially, local bleeding may often be beneficially used at a period when it would be highly hazardous in the genuine, contagious typhus (33).

The common continued fever attacks people of all ages and constitutions, but especially those exposed to the vicissitudes of the weather in a weakened state; and indeed what is popularly called cold is by far its most usual cause, though sometimes it arises directly from the excitation of heat, and occasionally from errors of diet, and fatigue of body combined with mental anxiety. It is often rife in summer when the atmosphere is moist, the heat in the middle of the day rendering the system susceptible of the chills of the evening; and for the same reason the inhabitants of the warmer regions are much afflicted with it, as they are liable to be exposed to a burning sun in the day, and to the cold damp dews at nights. The different gradations of this disease from its mild, its moderate, and excessive excitements may be found in the epidemics of Hippocrates, who has even detailed some of those cases, which, on account of the re-action not having been developed, strictly deserve the character of congestive; yet our systematic writers, following the example of the ingenious Cullen, have not marked these modifications of this disease, but obscured or lost them in nosological refinements and distinctions. The common continued fever has been distinctly noticed by Willis, and the works of Sydenham abound with descriptions and discussions respecting it, though both these authors assign to it various appellations; in fact all those fevers of a continued type, which Sydenham noticed as so particularly connected with certain constitutions

(33) After a careful comparison of the symptoms of the common continued fever, as described in the text, with those of typhus which have been detailed in the preceding section, we are forced to the conclusion, that in their pathology and treatment there are no essential grounds of distinction between these two forms of fever. Contagion alone, then, if we admit it to be an attribute of typhus, constitutes the difference between these diseases. In a practical point of view, however, we have already seen that our author does not consider this difference as of sufficient importance to require any modification in the principles of treatment which should govern the practitioner in typhus.

of the atmosphere, are clearly varieties of this complaint. Moore in his Medical Sketches has given a tolerably distinct outline of it in what he calls the inflammatory fever; but the best delineations of it are to be found, under different names, in the writings of our naval and military practitioners, whose labours, in ameliorating the miseries of war, improved the practice, and adorned the science of physic. There cannot be a doubt but this disease appears in all climates. It is certainly most prevalent in those where the atmosphere is most variable, and agreeably to my observation, it is one of the most frequent disorders of Great Britain, even when limited merely to those modifications in which the head is slightly or severely affected. Cullen has made an approximation towards elucidating these modifications of the common continued fever, under the terms syncocha and synochus; but though the vital principle of genius pervades his nosology more than any other of his works, yet his definitions, neither applicable to the simple nor complex cases, show that his ideas were not distinct on this subject. Agreeably to his notion, in synocha, the heat is greatly increased, the pulse frequent, strong, and hard, and the sensorial functions only slightly disturbed. Now in the mildest variety of the common continued fever, the heat is not greatly increased, and the pulse is seldom precisely such as he has mentioned, while in the more urgent, the sensorial functions are more disturbed, and the pulse varies, being contracted and small in some, strong and full in other patients. The definition of synochus involves that of typhus, and is one in all respects so exceedingly important, and, if I mistake not, so exceedingly erroneous in a practical view, as to demand a more minute examination.

Cullen defines synochus to be a contagious fever compounded of synocha and typhus, synocha in the beginning and typhus in the progress and towards the termination. This is one of those bold assertions by which men of genius apparently simplify an abstruse subject, and thereby at once captivate a multitude of minds; and the truth is, that this single assertion has actually had an immense influence on medical opi-

nion and practice in modern times. If synochus be a contagious disease, why was it not made a variety of typhus? And if it be not a contagious disease, why should it be made a part of typhus? Even from Cullen it would appear that synocha is not a contagious disease, and as, according to his definition, synochus is synocha in the beginning, it is not therefore contagious at that time; and if it become really typhus in its progress, then a contagious essence is generated which did not before exist, then indeed one disease has actually been converted into another having a perfectly new attribute. But have we any other example in medical literature where an ordinary disease not having the property of contagion at the beginning is converted during its progress into a specific disease having the property of contagion (34). If the fact be as implied in the definitions of this illustrious pathologist, it surely forms an anomaly in our historical records. The described modifications of the common continued fever, the synocha and the synochus, arise from ordinary causes, such as cold, heat, and the like, but typhus arises from one specific cause—contagion: now in the course of my experience I cannot recollect a single instance where a fever proceeding from such ordinary causes was changed into one possessing the specific contagion of typhus, and therefore I am strongly disposed to conclude that the thing never happens; though upon a point of such vast concernment it does not become me to speak with positive assurance, as the opinions of many discerning men are on the opposite side of the question.

(34) This is a point which has given rise to much discussion. By many physicians it is believed that all fevers, towards their close, or when they have assumed a *putrid* tendency, are necessarily contagious. This opinion is evidently the result of misconception or ignorance of the changes which take place in the system under the influence of febrile action, and is rejected by the best pathologists of the day. In this country, it is, however, believed that under peculiar circumstances a miasm is excreted from the body in disease which will generate typhus fever in its severest form. This miasm is different from contagion, inasmuch as it is not an *essential* attribute of any one peculiar disease; neither is it a secretion, as the latter undoubtedly is, under all circumstances.

The acute and learned Dr. Bancroft, and an anonymous author alike distinguished for talent and research,* conceive that contagion directly originated in the first instance from the Deity. As it is self-evident, that the first case of contagious fever was independent of any other case, it is natural to ask how has contagion been produced? When the ancients were puzzled by any physical phenomena, they always had recourse to supernatural agency for an explanation, and thus inquiry was suppressed; and now to consider contagion as a direct emanation from the Deity is surely as unphilosophical, since as far as we know, the Deity operates on matter not directly, but through fixed and secondary laws. It is therefore more consonant to the general analogies of nature to suppose, that the various specific contagions have originated from combinations of physical elements, and that these contagions have afterwards propagated themselves by the peculiar powers impressed at their first generation. But if this view of the subject be correct, why cannot we trace the origin of particular contagions to various eras in the history of physic, and why do not fresh contagions now arise from the combinations of physical agents? In answer to these questions it may be remarked, that there is a limit fixed to physical combinations, and that as the world has existed so many ages, most if not all of the combinations that could take, may have long since been completed; and hence we have no distinct record in history of the generation of particular contagions, and hence too, perhaps, we have not sufficient reasons from past experience to expect the generation of any new one, except in some great revolution of time. If indeed the Deity had assigned no precise boundaries to the formation and propagation of contagions, the human race could scarcely have struggled against their destructive influence; but happily their number is so few, and their modes of communication so far ascertained, that it is within our compass to limit their progress, nay perhaps to destroy their very existence. For if it should be

* See a most able article on the Contagion of the Plague and Policy of the Quarantine Laws, in No. 26, p. 439, of the British Review.

found true, that the genuine typhus, like the small-pox, measles, and other known infectious distempers, invariably proceeds from a specific poison, then not only typhus but all these distempers might probably be eradicated, by preventive expedients. To give an example, it can hardly be doubted that the small-pox might be banished from this country, even independent of the excellent aid of vaccination, by dividing the towns and country into so many medical districts, with appropriate Boards of Health; so that as soon as ever any case of small-pox appeared, the patient might be immediately removed from all intercourse with Society, and only restored when recovery was complete;—when all chance of propagation had ceased, from the thorough destruction of every thing like fomites, and from so strict a cleansing and ventilation as to extinguish the contagion or dilute it to an efficient and harmless degree by atmospheric air. It would really seem from history that most of the contagious diseases have been generated not in every climate of the globe but only in certain ones, and this remark particularly applies to the East, whence some of the deadliest have issued. Even granting for the sake of argument that a contagion once destroyed might be regenerated *de novo* in the place of its first birth, still its diffusion in that and other nations might be prevented. If the suggestions of such philanthropists as the venerable Haygarth had been properly attended to, what lives even in this country might have been saved, what domestic afflictions might have been averted; and since we cannot but regard the whole world as united by one common bond of brotherhood, what a pity it is, that some enlarged plan is not formed to shield mankind as much as possible from the calamities of contagious diseases. To many this may appear the language of enthusiasm, but nothing ever great or good was accomplished without some infusion of that active principle, which when properly directed may be made to lessen our physical wants as well as to adorn our moral and intellectual nature; and surely if nations would cordially league together for the general good, our social condition, in many respects, might be considerably ameliorated by mutual interchanges of all the best charities of life—and

then mind at last might be every where rewarded for acts of beneficence, and for discoveries of utility.

If it be the fact, as I am inclined to believe, that genuine typhus always originates from contagion, how can the present epidemic be accounted for, which has raged in so many parts of the united kingdom for at least the last three years? My own observation would lead me to infer that what has been so generally called *the* Epidemic is not one specific fever, but three fevers, especially different in their exciting causes; and these fevers are, namely, typhus proceeding from a specific contagion, the common continued fever proceeding mostly from atmospheric influences, and a peculiar fever which arises from the huddling of many human beings together, in confined and filthy situations. A few words, therefore, shall be said about the distinguishing signs of each of these affections.

Cullen defines typhus to be a contagious disease, in which the heat is little increased, the pulse small, weak, and for the most part frequent, the urine little changed, the functions of the sensorium greatly disturbed, and the powers much diminished. Contagion is certainly the first essential of typhus but in the simple and inflammatory forms of the disease, the heat is often considerably increased, and the pulse neither small nor weak, though always quicker than natural; and in the congestive forms of the disease the heat is either not increased, or concentrated in some particular parts, while others are frequently even below the ordinary standard of health. As for the urine it is often much changed in the course of the simple and inflammatory varieties, while in the congestive it is usually paler than natural at first, but in the progress of the complaint is sometimes tinged with bile. With the exception, therefore, of the contagious attribute, we cannot rely upon the circumstances just enumerated, as any way strictly pathognomonic. The disturbance of the sensorial functions, however, and the prostration of the moving powers are remarkably characteristic of true typhus. In the most frequent forms of the common continued fever, the patient has uneasiness in the head, but he has a bright

eye and a countenance indicative of no mental depression or despondency, and he lies in a position which displays some command of muscles, and can move about the bed or get up with a tolerable effort: on the contrary in genuine typhus, the eye always wants animation, the countenance has a dull, wearied, depressed, and often desponding expression, and the patient lies in a comparatively relaxed position, and moves himself more languidly, almost like one worn out by loss of sleep, and from some unusual fatigue. In the common continued fever, the patient commonly has not much inaptitude of mind, often answers questions readily, and in a pretty firm voice, without much increased agitation of the breathing; whereas in typhus, the answers are mostly given with languid slowness and reluctance, and much speaking obviously disturbs the respiration. In the common continued fever, the skin is generally of a brighter red than natural, especially on the cheeks; on the contrary, the skin is always more or less of a dusky colour in typhus, and an admixture of it may be best observed in the flush of the face. This duskiness of the skin is one of the proper symptoms of typhus, and seems to arise from some change in the constitution of the blood, which I have almost invariably seen darker on dissection than in ordinary fevers. In the worst cases, this duskiness increases in the progress of the disease, and lessens in those that assume a mild aspect. So very characteristic is this cutaneous duskiness, that I think I could distinguish typhus by it at any time, if two patients were presented to me, the one labouring under that disease, and the other under the common continued fever. In typhus the tongue has an early tendency to become brown and dry—in the common continued fever it is always white, and often even somewhat moist for the first week: in typhus the pulse is variable as to force and frequency, but it is seldom very resisting to pressure—but in the common continued fever it mostly resists firm pressure of the finger, from the freer stroke of the heart.

The above remarks are certainly most appropriate to the first and middle stages of the ordinary instances of typhus and

of the common continued fever; for in the last stage of both, many of the symptoms so approximate as to make them more nearly resemble each other, though then the one *is*, and the other is *not* contagious (35); at least I have seen many patients in the advanced stage of the common continued fever with those signs deemed putrid, and yet never knew any of them infect their attendants with typhus. When however an accurate history cannot be obtained of the primary cause and previous symptoms of a case, in which the diagnosis is in the least degree doubtful, we should adopt measures proper to guard against contagion: even if time should prove such precautions to have been unnecessary in some instances, it is the safe side to err upon in the main; and where there is any ground for just hesitation, what practitioner ought to risk human health and life in the vain confidence of his own discernment? That constitutional derangement which, by a general term, we designate fever, is but an effect which proceeds from different sources; and that effect may be so modified at its commencement or acme as to express the real nature of the disease. But at advanced periods, the character of numerous acute complaints, accompanied with fever, is marked by many common symptoms; and these often become so predominant as to obscure those pathognomonic appearances which were conspicuous in the first stages. I have known some sensible men of considerable experience, who have been led to doubt even the existence of the distemper which I have called typhus, and deemed contagious. They became sceptical on this point from having never known any continued fever, unaccompanied with an affection of the skin, spread by

(35) American practitioners have not, in general, received from foreigners, that share of credit to which they are so richly entitled for the originality and extent of their views concerning contagion. The labours of Rush, Miller, Mitchill, and others have thrown a flood of light on this long agitated question, and almost entirely subverted the erroneous doctrines which had for so long a period kept undisputed possession of the schools of medicine. In this country, their influence has been universally felt. In proof we need only refer to the fact that there is not a Journal published in the United States which ranks itself on the side of contagion.

contagion; and believe that the disease here described under the name of the common continued fever, has erroneously been supposed to be contagious from the marks of malignity often attendant upon its progress. It is known that contagion is an invisible essence, which like the human mind, is only manifested by its operations; and as the operation of other powers so frequently resembles that of certain contagion, we cannot be surprised if we should sometimes be mistaken or doubtful as to the contagious or non-contagious nature of a disease. It was unquestionably far too much the fashion at one time, to refer continued fevers to contagion, and this has been most satisfactorily shown, by many British and American practitioners; but in abandoning one extreme, we must not run into another, and doubt or deny, that any fevers of a continued type are contagious, except the exanthemata. It is certain, that if a number of individuals be exposed to marsh miasmata, or to a cold, wet, or very variable atmosphere, they may become affected with fever at different periods of their exposure; and thus a presumption might be formed, without any just foundation, that the disorder propagated itself from one to the other by contagion. Yet where no such causes as the above operated, if a continued fever, with certain peculiar signs, seized person after person, and only attacked those who had been exposed to the sick or to their attendants, could we reasonably doubt its being contagious? In the course of my experience I have collected some curious histories, from patients who had no theory to support, which proved that whole families and relations had been implicated, during their intercourse, from one case of typhus; though the visits which some of these persons made to each other, as alternately attacked, had often been short, or at considerable intervals, on account of the great distances at which they resided. Having frequently, I repeat, met with such facts, I cannot but express my firm opinion that typhus is a contagious disease, the evidences indeed of which to my mind have been as convincing, in its successive seizures of different individuals, as that a flame if not prevented will spread from house to house: and as in this respect, therefore, I believe it to be signally dis-