me to identify the typhus fever of this country with the marsh remittent yellow fever of hot countries, where violent disputes have arisen about its nature, some contending that it is, and others that it is not contagious. But the disputants would do well to view the subject more dispassionately, and to take into consideration the different types which the disease assumes, and, above all, the circumstances which favour or prevent the propagation of a disease by human contagion. In hot countries the secretions of the body are soon dissipated by the surrounding heat, and the modes in which the houses are constructed and ventilated are admirably adapted to prevent the spread of any contagious disease, even the small-pox; whereas, in this country, at least among the poor, their dwellings are so small and confined that they may be considered as nurseries of any contagion which may arise there, while the custom, not observed in hot countries, of having curtains about the beds, is calculated first to retain, and then to give out, any contagion which might arise from the patient. These and similar circumstances ought all to be taken into account in estimating whether or not the marsh remittent of hot countries be a contagious disease.

There is an opinion very prevalent in this country, that any fever originating from a common cause, such as cold, heat, intemperance, or the like, may become contagious in its progress. This opinion has probably acquired all its force from the prejudice of education; for it has happened in physic, as in other departments of human knowledge, that men believe certain things merely because they have been taught to believe them; and it is too humiliating, in general, to acknowledge that as an error which has been long cherished as a truth. This feeling has greatly tended to impede the progress of my own mind, but I could wish, above all things, to weed out every vestige of prejudice or pride, that I might have no discolouring or distorting medium between me and nature; but that, on the contrary, I might be enabled to see things as they really are, and to investigate them in the spirit of sincerity.

It is truly and beautifully observed, by Dugald Stewart, that the impressions and associations of our earlier life may be likened to the slender threads which fastened Gulliver to the earth; and that they are to be overcome, not by a sudden exertion of intellectual force, but by the gradual effects of good education, in breaking them asunder one by one. In regard to the point in question, that any fever originating from a common cause may become contagious in its progress, I cannot but believe it to be a fallacy resting chiefly on the sanction of speculative authority on the one hand, and passive credulity on the other; at least, I have never seen any fever which originated from a common cause become contagious in its progress.

If we attempt to draw our notions respecting the true diagnostic signs of typhus fever from the great medical sophist of modern times, Dr. Cullen, we shall be led into nothing but error; for his definitions of synocha, typhus, and synochus are, according to my observation, mere metaphysical abstractions, which have no reality in nature. What would seem to be meant by the word synocha is an intense fever, combined with some visceral inflammation; but inflammation did not suit Cullen's arrangement, and therefore the very essential upon which such a fever always depends is omitted in what he has called a definition, but which, in fact, is only a brief and most imperfect enumeration of symptoms. What would seem to be meant by the word typhus, is that combination of symptoms which occurs toward the close of any fever where the brain has suffered much, and where the powers of life are about to give way; but this is not typhus fever, and indeed we find that Cullen's definition does not include one genuine characteristic of that disorder, if the epithet contagious be omitted; and its contagious character is probably dependent upon circumstances which are adverted to before.

The mischief of adhering to Cullen's supposed definition of typhus has not been confined to this, that many men have not known what the genuine indications of typhus are, but an unnecessary alarm has been created, lest any common fever may become typhus in its progress, since Cullen expressly makes typhus to arise out of another disease; but do we ever see figs spring from thistles? or to speak more closely, do we ever see measles arise out of small-pox or scarlet fever? nay, did any man ever see true typhus propagated from any one of those diseases, even when they were accompanied with what Cullen has vaguely designated typhous, or typhoid fever?

If my observations be correct, it follows that typhus fever originates from one species of what is called *mal aria*, or marsh effluvium. The fact of intermittent, remittent, and continued typhus passing and repassing into each other, proves their common origin; and I infer, that this peculiar miasm is the sole cause of this disease, because I have never seen the combination of symptoms which it produces, in the remittent and continued forms, arise from any other cause. These symptoms I consider as peculiarly characteristic as those which attend small-pox or measles, and I firmly believe, that they arise from as single a cause. Small-pox, measles, and scarlet fever appear in all the districts of London apparently alike; but typhus is most remarkably prevalent, year after year, in particular districts. The cause is, that typhus alone arises, primarily, from a *mal aria*, or marsh effluvium, which is most abundantly generated in those particular districts, where many, or even most of the poor inhabitants are rendered prone to its influence by a bodily debility, the product of bad

food, pernicious habits, defective cleanliness, bad clothing, and the like enervating circumstances.

Whatever weakens the body predisposes it powerfully to typhus fever; and hence, during the prevalence of general distress among the poor, typhus fever will be sure to appear, provided the situation and season be favourable for the generation of *mal aria*, or marsh effluvium. So intimate is the connexion between the state of the atmosphere, and the rise and decline of typhus fever in the infected districts of London, that I have often, with tolerable accuracy, predicted its increase or decrease in those districts; and I am sure that I could, in future, predict this with still greater precision, if I always knew the degress of predisposition existing there, from physical and moral causes. In the course of some months, I shall have occasion to detail the whole facts in my possession, and then I shall offer what appears to me most interesting, respecting the circumstances under which this peculiar poison is generated.

This view of typhus fever not only leads to some important considerations respecting its prevention, but it is likewise calculated to remove that universal alarm which the unqualified doctrine of contagion always excites. If any man were to ask, why typhus fever prevails so much in some districts of London, and so very rarely appears, in solitary examples, among other districts, he will find a satisfactory answer to that question in the difference of localities; the infected districts being, in general, comparatively low, closely built, badly ventilated, imperfectly drained, and filthy, while the very contrast of this description mostly obtains in those districts which are freest from *mal aria*, and through which, as now constituted, typhus fever never has extensively prevailed, never can extensively prevail.

It has become the custom to establish fever institutions, and this cannot be too much applauded and recommended; for such institutions afford the greatest benefits to the sufferers themselves, and protect the public, to some extent, by removing certain cases which might be propagated by contagion.—But if fever institutions be solely relied upon as preventives of the spread of typhus fever, they will necessarily lead to a very imperfect result, inasmuch as the primary source of the disease would then be disregarded; and it therefore follows, that the most important thing to be performed in the way of prevention, is first, to remove all those circumstances, as far as possibly can be done, which favour the generation of *mal aria;* and, secondly, to remove, in like manner, the predisposing causes among the poor, which lay them so open to the influence of this noxious agent, by debilitating their bodies.

The government of this country acts wisely in leaving most public institutions of a benevolent kind to the public; but as typhus fever not only regards the welfare of the individual, but of

the community at large, it has a peculiar claim to the attention of the legislature; and I am so satisfied about the primary source of this disease, that I believe, if the legislature were to take up the consideration of the subject, on the grounds above suggested, the prevalence of typhus would be shortly lessened, not only in London, but in Ireland, or in any districts where it is wont to appear in the United Kingdom.

If *mal aria*, or marsh effluvium, be the primary source of typhus fever in London, it is probably the primary source of typhus fever all over the world.

In the present advanced, and still advancing, state of chemical science, it is not, perhaps, hoping too much, that something may be accomplished towards ascertaining the nature of this *mal aria;* at all events, by drawing the attention of scientific men towards it, many facts will be elicited which may prove highly useful, as far as the pervention of typhus is concerned.

Before closing these desultory remarks, I cannot help suggesting to those who may practise where the plague prevails, the propriety of ascertaining whether or not that disease be really a modification of typhus fever. Till the time of Procopius, the word plague seems to have been applied indiscriminately to any febrile disease which happened to be extensively prevalent; but since then, the best authorities seem to have limited the term to that fever in which buboes and carbuncles are apt to appear. Between the most accredited histories which we have of the plague, and many of the symptoms of typhus fever, there is a most remarkable similitude; but it is right in me to state here, that I have never seen, or, it may be, have never noticed, an instance of typhus fever where the glands of the groin were affected, though I have seen several in which the parotid glands were affected, and some in which carbuncles existed. But as I have never been in foreign countries, I can only recommend others to pursue the inquiry here suggested, and would wish it to be pursued strictly through the investigation of facts; for the past annals of physic abundantly show, that the secrets of nature are not to be developed by any ingenious speculations carried on in the closet.

The discovery and communication of truths connected with physic, have been the leading objects of my professional life; and being now fully persuaded that I formerly committed an error, in supposing human contagion to be the primary source of typhus fever, it becomes a duty in me to acknowledge that error without reservation. A certain degree of warmth, moisture, and the decomposition of vegetable matter have appeared to me essential for the generation of *mal aria;* and its suppression, or diminution, will perhaps be found chiefly to consist in establishing proper drains, in removing putrid accumulations of vegetable matter, in instituting every species of strict cleanliness, and in freely ventilating the habitations of the poor. The preceding

view of the origin of typhus, would lead to important considerations in the future construction of the houses of the lower orders, but I shall enter fully into these hereafter ; and shall at present only observe, that whenever typhus fever does prevail, it will be important, not only to separate the sick from the healthy, but to remove if possible, those physical and moral causes, which by debilitating the body, so powerfully predispose it to be acted upon by this noxious miasm.

THE END.