

emotion of terror, the man suffers simply from fear, not from fear of something. It seems then clear to me that the great sympathetic is the nervous system acted upon by the abnormal condition of the stomach, which in its turn reacts upon the economy, and that consequently the terror in question is one of its functions. The lungs receive a very small supply of sympathetic nerves and we know that long continued disease of their tissue ending in death will often scarcely give rise to low spirits, never to extreme depression or violent emotion of any kind. The heart receives a very large supply of sympathetic nerves, and its diseases as fatty degeneration of its substance, and calcareous degeneration of its arteries, are accompanied by very great depression of spirits and often by agonies of terror. The common forms of so-called heart disease, that is, imperfections of the cardiac valves, and contractions of the cardiac orifices, are not, in the sense in which I am now speaking, disease at all; for there is in these cases no tissue change, there is simply a change in mechanical conditions. The liver is moderately well supplied with sympathetic nerves and there is a moderate amount of disturbance of the moral nature in disease of its tissue as in cancer, and in impairment of its functions as in congestion; but as disease of the liver, either structural or functional, seldom or never occurs without either structural or functional disease of the stomach accompanying it, it is difficult to estimate the amount of the disturbance of the emotions caused by the hepatic conditions themselves. Emotional conditions excited by diseases of the kidneys are undoubtedly due in great part to the destructive changes going on in these organs, but they are also to a certain extent due to the uremic poisoning which necessarily accompanies them, and so the effect of the blood change and that of the organic change mask one another. But the case most clearly in favor of my argument is beyond question Addison's disease of the supra-renal glands. You know that the number and size of sympathetic nerves sent to these small bodies is extraordinarily great. You also know that they receive no cerebro-spinal nerves at all. Any of you who have seen cases of this disease or who have paid attention to the literature of the subject, are equally aware of the extraordinary effect produced by disease of these bodies upon the moral nature. Long before the patient is obliged by the extent of his illness to abandon his usual occupations he is greatly troubled with listlessness, languor and low spirits; as the disease advances these symptoms increase and attacks of terror and extreme low spirits are common. Now to return to our old argument—the morbid action is in the supra-renal gland, the nerves which convey the impressions which excite emotional disturbance are necessarily here sympathetic nerves.—The nerve centre in which the emotional disturbance takes place is therefore the sympathetic ganglia—therefore the sympathetic ganglia are the nervous centre of emotional states.

(2) We ought next to consider the excitation of emotion by thoughts from association formed in the past of the species, or of the individual, but this subject is so large and in a condensed form would be so little satisfactory that I have reluctantly concluded to omit it altogether.

(3) The third and last class of emotional excitants which we are to consider is sense impressions acting upon the moral nature without the intervention of thought. The proper consideration of this part of the subject would alone occupy several such essays as I have time to read. I shall merely glance hastily at one instance of the class mentioned, namely: The excitation of emotions by sounds. All the infinite variety of sounds that strike upon the human ear may be divided according to their effect upon the human organism into two great classes, (a) those, namely, which, primarily excite ideas, and (b) those which primarily excite emotion. The noise of a carriage on the street, of fowl in the yard, of steamboats and trains passing, these, and thousands of other ordinary sounds, simply excite a mental recognition of what the sound proceeds from. But if you lie under pine trees on a summer's day and hear, without listening, the wind sigh and moan through the