

er those organs supplied by the cerebro-spinal nervous system are those which are first and most affected.

(A) We have then to consider in the first place emotional excitants and to try to determine from their seat and nature which nervous system it is that they act upon in giving rise to an emotional state. Now emotions originate (1) spontaneously, that is from some condition of the body or part of the body; (2) they are excited by thoughts through associations formed in the past; (3) they are excited by impressions received through the senses without the intervention of thought.

(1) A complete list of the instances in which emotions arise spontaneously, or from some condition of the body or part of the body, would be much too long to be recited here. I will first mention one or two physiological conditions, and then proceed to the pathological. The most prominent among these physiological conditions which give rise to emotional states is undoubtedly that set which underlies the development of sexual passion. The material part of these conditions is certainly an active and healthy state of the testes or ovaries; for if all the other conditions be present and this organ alone be either absent, or materially injured by disease, or immature, or atrophied, or functionally inert from age, or any other cause, this particular emotional state cannot be produced, while the absence or disease of no other organ will operate as a positive bar to its existence. The presence in the mind of the image of a person of the opposite sex, although to the unthinking it seems to be the chief factor in the production of this emotional state has in reality nothing at all to do with it in any fundamental sense, for the feeling may exist without any such image being present, and the feeling being fully aroused it may with many people be readily transferred from one mental image to another; whereas if the feeling were dependent upon the image this could not happen. It is in this way that we may account for those cases frequently seen in which a man upon a very short acquaintance marries a second woman upon the breaking off of an engagement with a first. Again, in the higher animals—in whom we must admit a psychological condition in sexual matters almost if not quite identical with our own—though some of them will not transfer their affections from one object to another, or will do so only with great difficulty and after a certain period of mourning, yet in others there seems little or no cohesion between the mental image and the emotional state, so that the sexual glands being active and the emotional condition in question being present, the individual upon whom the sexual favours may be bestowed is a matter apparently of entire indifference. These considerations seem to me conclusive against the theory that the emotional state is dependent upon the mental image, and the grounds given above seem also to establish the position that the state of the sexual secreting glands is the real determining cause of the emotion. This being the case we have next to ask with which nervous system are these glands most intimately connected? You know what the answer to this question is. The ovaries receive no nerves but from the sympathetic, and the testes, as we showed above, receive nerves from the cerebro-spinal system only because they are exposed and require to be endowed with sensibility for their protection. But if sympathetic nerves be the connecting link between the organ whose condition excites the emotion and the nerve centre in which that emotion arises, that nervous centre must be the sympathetic ganglia.

Hunger and thirst are probably true emotional states, and the arguments which follow would apply to them as well as to other emotional states having for their basis certain conditions of the stomach, but as they are not by any means universally looked upon as emotions I shall pass over them and proceed to discuss those alterations in the moral nature which are due to fullness and emptiness of the stomach.