and inferior cervical ganglia, and has four plexuses, the two cardiac and two coronary, entirely devoted to its supply, but it has also numerous ganglia imbedded in its substance which are centres of nerve force for its own use over and above. (2) Next to the heart probably comes the radiating fibres of the iris. (3) Then the supra-renal capsules. (4) In the fourth rank stand I think the sexual organs, both male and female, and especially the testes and ovaries. (5) The organs of special sense, the eye, the internal ear, the nasal mucous membrane, and the palate. (6) After these organs must be placed the stomach, the whole intestinal tract, and the liver. (7) Then the thyroid gland, kidneys, spleen and pancreas. (8) Last of all come the lungs which receive in proportion to their size a remarkably small supply.

There is just one thing more to say about the anatomy of our subject before proceeding to its physiology, and that is to give you a list of organs supplied by the sympathetic and not by the cerebro-spinal nervous system; and it is as well that you should bear in mind that this division of parts is not absolute but relative, for as the sympathetic, in all its extent probably, has cerebro-spinal fibres mixed with it, so all parts which are supplied with nerves by it no doubt do receive some filiments from the cerebro-spinal system, but these fibres are small and few and are also probably modified in their functions by being so intimately connected as they are with sympathetic nerves; the division of organs therefore into those supplied by both systems, and those supplied by the sympathetic alone, though not an absolute division is still a real one; in this list we have then the radiating fibres of the iris, the arterial coats, the liver, the kidneys, the supra-renal capsules, the ovaries, the pancreas, and the intestinal tract, including both muscular coat and glands; and to this list I believe I may fairly add the body of the bladder and of the uterus.

Now as to the functions of the great sympathetic. Some physiologists, as Todd and Bowman, seem to consider that the sympathetic differs very little in its functions from the cerebro-spinal system, and that, at least in some points, its function is identical with the latter nervous system. There are some general considerations which make this view appear to me unlikely to be correct. (1) In the first place, though both nervous systems are made up of nerve cells and nerve fibres, yet both the cells and the fibres of the great sympathetic nervous system differ materially in structure from the cells and fibres of the cerebro-spinal nervous system, and it can scarcely be supposed that such different structures should not manifest some corresponding difference in their functions. (2) Secondly, the great sympathetic system, in the arrangement of its parts, in the great number and extraordinary diffusion of its ganglia, and in the immense number and complexity of its plexuses is too unlike the cerebro-spinal nervous system for us to suppose that their functions can be anything like identical. (3) Thirdly, the great sympathetic is distributed mainly to organs in the interior of the body that do not require, and are not endowed with sensibility, at all events to anything like the same degree as obtains in the case of the external organs which are supplied with nerves by the cerebro-spinal nervous system. (4) And lastly, if the great sympathetic has the power of exciting contractily in muscles at all, we shall see that this power is materially different from that possessed by the motor centres of the cerebro-spinal system.

What, then, are the functions of the Sympathetic Nervous System? I shall consider this subject by seeking to give rational answers, deduced from acknowledged facts, to the following five questions. (1) First, is it a motor nervous system, and if so, in what sense? (2) Second, is it endowed with sensation? (3) Third, does it control the functions of the secreting glands, as the gastric, intestinal, salivary, and lachrymal, the liver, kidneys, and pancreas? (4) Fourth, does it influence the general nutrition of the body, and if so in what manner? (5) Fifth, is it the nervous centre of the moral emotions?

Let us discuss these questions in their order.

(1) The first question is: Is the sympathetic a nerve of