

which is required during labour." In these opinions, Dr. Lee stands alone: and when we remember that his views and opinions have been formed whilst tracing the gradual development of a layer of muscular fibres, which, as it were, springs into existence as the uterus increases in size, we have a ready explanation of the singular errors into which he has fallen. Had Dr. Lee but paid attention to Lobstein's caution he would have saved much time and much unpleasantness.

In addition to these structures upon the body of the uterus, large ganglia have been described as situated at the neck of the uterus, and on the vagina.

DR. LEE'S VIEWS.

The utero-cervical ganglia. At this junction of the hypogastric plexus with the branches from the sacral nerves, is situated a large ganglion; "it appears to consist of six or seven smaller ganglia, which are united together by nervous cords." "It is nearly two inches in breadth, exceeds in size the semilunar ganglia of the great sympathetic, and constitutes only a small portion of the nervous system of the human uterus." This ganglion is considered "as the centre of nervous supply to the uterus." (*The Lancet*, p. 457.) It enlarges during pregnancy, and returns after parturition to the original condition in which it was before conception takes place.

The vesical ganglia, called "the external middle, and internal ganglia." "Several large, flat ganglia are situated about midway between the os uteri and ostium vaginae." "From this great web of ganglia and nerves on the sides of the vagina, by which it is completely covered, numerous branches are sent to the sides of the bladder." The nerves to the vagina are described as "many large, broad nerves."

The plexus on the side of the vagina has been known since the time of Waller, who figured it in 1783. Tiedemann, in 1822, has also given a representation of it, and calls it a "plexus gangliosisus;" whilst Dr. Lee differs from these authors in the very large size which he gives to this "nervous ganglionic plexus," or "utero-cervical ganglion," and in the very large size of the nerves which pass from it.

In this instance, as in the preceding one, we are asked to believe that the distinguished anatomists, whose names I have already quoted, could carefully dissect these parts, and yet fail to discover a structure "nearly two inches in breadth, and which exceeds in size the semilunar ganglia of the great sympathetic." Had they committed so great a piece of inattention, we might, with great reason, have questioned the accuracy of the whole of their works. But it fortunately happens that the error lies with Dr. Robert Lee, who mistook a mass of fibro-cellular tissue, enclosing in its centre some small ganglia, for a true ganglion, consisting of "cineritious and white matter, like other ganglia." Whilst Dr. Lee has applied the term, "nervous ganglia and plexuses" to muscular tissue on the body of the uterus, he has descended lower down, and called a mass of fibro-cellular tissue a "nervous ganglion," and, descended still farther, he has described the fibro-cellular tissues on the side of the vagina as "large flat ganglia." Much confusion has thus arisen from the profuse mode of describing all tissues as nervous; but the real error lies in Dr. Lee not distinguishing one tissue from another.—*Lancet*, October 27, 1846.

MR. BECK'S VIEWS.

At the junction of the hypogastric plexus and branches from the sacral nerves, several small ganglia exist. The largest measure about the one-eighth of an inch in diameter. These ganglia, together with the plexus in which they are found, are surrounded with a thick layer of fibro-cellular tissue. This tissue is of considerable firmness, in consequence of the nerves and ganglia being in this situation, much exposed to injury. None of the nerves from these ganglia are sent to the uterus, nor does it undergo any increase in size in pregnancy, nor any change after parturition.

From the plexus formed by the junction of the hypogastric plexus and branches from the sacral nerves, branches pass off to the bladder, vagina, and rectum. Those to the bladder and vagina are about the one-sixtieth of an inch in diameter, those to the rectum being much smaller. Several minute ganglia are formed on these nerves.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Meeting at Southampton, September, 1846.

SECTION OF PHYSIOLOGY.—PRESIDENT: PROFESSOR OWEN.

Thursday, Sept. 10th.—Dr. Fowler read a paper "On the Relations of Sensation to the higher Mental Processes."—The author observed that man, when viewed as a whole, should be considered as consisting of a body constituting the instrument of the mind, as the telescope is of the eye *adjustable* but not *adjusted*; that its indications are perceived through the medium of the *muscular sense*, as the images reflected or refracted are the signs of external objects to the eye. Animals have adjustments ready made; man has to learn his. To see, to hear, and to touch, as an artist, or even in the common usages of life, a man just couched is as an infant; till he can adjust he sees, as we do with an unadjusted telescope, merely a vague sight. This gives rise to *search*. To see with intelligence we must *look*, that is, exert the combined adjustments; this constitutes an appreciable distinction between *sensation* and *perception*. The unadjusted impressions pass the mind as vague trains of thought, linked and associated sequences, the machinery of reveries and dreams. That searching to obtain well defined perceptions is effected by adjustments, attention to our own *working observation* will afford abundant proof; but a more protracted attention is necessary to prove, and to convince a man, that his *memory* and *powers of conception* equally depend on the mind's perception of a *reiteration of the adjustments of sensation*. But that this is so we have proof, in the *corporeal actions* induced by conception being like those produced by sensation by presence of the objects. This conception of savoury food excites secretion in the salivary glands—of insult, the gesture of anger, &c. In the *power of forming and giving fixity of tenore* to conceptions men differ widely. It is to this power Dr. Johns alludes, when he says, that whatever can make the past, the distant, and the future, prevail over the present, raises us in the scale of thinking beings. Now, Dr. Darwin and Dr. Brewster have shown that these conceptions are effected by adjustments of the body; in other words, that the "mind's eye," is, in fact, the body's eye. To have vivid conceptions disposable by our volition forms the orator, the poet, the sculptor, and the painter.

After numerous illustrations of this faculty and allusions to it by the poets, the author stated that these sensations, perceptions and conceptions do not exist in an insulated state; the adjuncts by which they are affected are so linked and associated by retransmissions that they reciprocally call up each other. This *linked association of adjustments* he took to be the machinery by which the *association of our ideas* is effected, and that the *propensity of our structure to these functional adjustments* constituted all we had of *ideas* which had been denominated *innate*; and he considered that this reciprocating perception from different sources of sensation (as the eye and ear,) gave birth to the ideal theory of "species, images of forms and colour of things without their matter" of the old metaphysicians. In conclusion, the author contended that Mr. Hume's opinion on the non-existence of the idea of power, and of cause and effect, (except as antecedent and consequent,) and the arguments and facts adduced against that opinion, receive an elucidation from the consideration of the modes of action of the muscular sense, of which both Mr. Hume and his adversary were quite ignorant.

The Secretary read a paper by Dr. Scarle, "On the Cause of the Blood's Circulation through the Liver." After alluding to the powers which circulate the blood in the system generally, the author declared it to be still a problem by what combined force the portal circulation was carried on in the liver,—one cause of the general circulation being apparently absent, namely, the oxygenation of the blood in the arterial system, in the portal system the blood being deemed wholly venous. The solution of the problem depended, he thought, on the fact that the stomach and bowels were (like the cutaneous,) a respiratory surface, by which the portal blood becomes oxygenated to the necessary degree. In support of this view he adduced the experiments of Majendie, who found 11 per cent. of oxygen in the stomach of criminals examined after decapitation, and carbonic acid and nitrogen in the intestines; the source of this oxygen he believes to be the air swallowed with the food and saliva, and in combination with cold water. This oxygen he believes to be absorbed by the veins and lacteals, and communicated as a source of power to the portal vessels. He deemed the absorbing power of the gastric and mesenteric veins