

DR. GRANVILLE'S PARALLEL

BETWEEN THE PAPERS OF

PROFESSOR LAUTH AND DR. LEE,

ON THE STRUCTURE OF THE PLACENTA AND ITS CONNEXION WITH THE UTERUS.

To the Editor of THE LANCET.

SIR,—I proceed to redeem the pledge I voluntarily tendered at the meeting of the *Westminster Medical Society* held on the 9th instant, and repeated through your journal of the 16th, of proving the striking similarity that exists between Professor Lauth's views of the structure of the human placenta and its connexion with the uterus, published in the 1st volume of the *Repertoire d'Anatomie* 1826, and those of Dr. Robert Lee on the same subject, read before the *Royal Society* in November 1831.

As Dr. Robert Lee has publicly declared in his written address on this subject, read at the *Westminster Medical Society*, that he was wholly unacquainted with the existence of Professor Lauth's paper, and did not know in what work to look for it until after he had called upon me on the 5th instant; and as

Dr. Lee.

What was Dr. Robert Lee's object in writing his paper "On the Structure of the Placenta and its Connexion with the Uterus?" We gather it from the two following general propositions contained in that paper; propositions which embrace the whole of the alleged discovery of Dr. Lee, and the originality of which that gentleman, with two or three of his friends, stoutly maintain.

A

1st. "A cellular structure does not exist in the placenta."

2nd. "There is no connexion between this organ and the uterus by great arteries and veins." (*Phil. Trans.* 1832, Part I, page 59.)

Now let us see how these two gentlemen work out, or develop, as the French would say, these two propositions—the only possible meaning of which (constituting in itself the discovery) is so identically the same in both the French and English writers, that it is impossible to make any tangible distinction between them.

To obtain this result, so as to present it in an analytical form to my readers, it is necessary to read both papers over and over again; for it must be confessed, that no two

he repeated this solemn declaration once again, on being questioned by some of the members present on the 9th instant, no charge of plagiarism, even had one been intended, can be brought against that gentleman, although the singularity of the coincidence of his views with those of Professor Lauth, as I shall presently exhibit, will remain not a jot abated.

In the addition of the unprejudiced testimony of your reporter to that of Dr. Brown, Dr. Jewell, and many others, who would have spoken, had it been necessary, at the meeting of the 9th, respecting the manner, apparent object, and extent of my statement on this question on a former evening, and his belief derived from the events of the evening, that those statements were made from a sincere conviction of their truth in my mind, without premeditation or inimical feeling, only an act of justice has been done me, which I had a right to expect, and have never failed to receive, from impartial men. For the opinion of individuals of a different character, or who are actuated by different principles, I cannot entertain the smallest consideration. And now to business.

Professor Lauth.

What is one of Professor Lauth's principal objects in writing his paper "On the Connexion of the Placenta with the Uterus," anatomically and physiologically considered? We collect this from the two following general assertions which Professor Lauth puts forward as placing the question of that connexion in a new point of view, the truth and originality of which he maintains.

A

1st. "Quant aux cellules qu'on décrit entre l'utérus et le placenta, ou dans la portion utérine 'du placenta,' je n'ai jamais pu les decouvrir, malgré l'attention avec laquelle j'ai dirigé mes recherches."

2nd. "Il est prouvé maintenant qu'il n'existe pas de communication directe entre les vaisseaux utérins et ceux du placenta." (*Rep. d'Anat.*, vol. i, page 77, 1826.)

writers have ever done themselves so little justice in expounding their own discoveries, as the two individuals under consideration, for want of that *lucidus ordo* which is so essential in compositions partaking largely of the controversial character.

Both authors begin by stating how mistaken their predecessors have been in the views entertained on the subject in question, as well as in the experiments they made respecting it, and the conclusions drawn from them.

Professor Lauth.

Dr. Lee.

## B

## B

Professor Lauth affirms generally, that although, for a great number of years, anatomists and physiologists have considered and studied the mode of union between the uterus and placenta, and the reciprocal exchange of blood between them, none of them succeeded in giving us clear and distinct ideas of the structure of those parts and their functions. (*Repert.* page 75.)

Dr. Robert Lee more specifically affirms, that although every anatomist in this country acquiesced in the opinions of the two great Hunters, those authors were mistaken in their notions of what "they supposed to be the discovery of the true structure of the human placenta and its connexion with the uterus;" and, furthermore, Dr. R. Lee asserts, that Noortwich, Ræderer, and Haller, had not determined by their researches, in a satisfactory manner, "the connexion between the uterus and cells of the placenta." (*Ph. Trans.* page 59.)

Having thus cleared the way for their individual opinions on this important question, by showing that all those who had preceded them were in error, both our authors proceed to point out those sources of fallacy by which their predecessors were misled in making their experiments concerning the structure of the placenta and its mode of union with the uterus. The principal of those sources of error relates to the inject-

ing matter which Professor Lauth's and Dr. Lee's predecessors pretend to have pushed into the substance of the placenta<sup>a</sup> from the uterine vessels, and *vice versa*, by fair and direct communication; whereas in the Professor's and the Doctor's opinion, that result had been obtained by laceration of the decidua, which intervenes between the uterus and the placenta.

## C

## C

"If we inject the placental vessels," says Professor Lauth—

Dr. Robert Lee examines the injected uterus of Mr. Hunter instead of referring to any experiments of his own, and alludes to the injections made by the two great English physiologists, as well as by Noortwich, Ræderer, &c., and says:—

"Pas un atôme de matière à injection ne pénétre dans les vaisseaux de la membrane caduque (qui recouvre le placenta) et il ne s'en échappe rien non plus au dehors, à moins que la violence qu'on a employée n'ait produit une déchirure."—(page 77).

"The laceration of the deciduous membrane followed the artificial process, (that of forcibly injecting fluids) as well as the formation of deposits of injection in the vascular structure of the placenta."—"The Hunters were also misled, by the effects of artificial distention of the placenta from the extravasation of the fluid forced into the uterine vessels."—(page 63.) "Elsewhere the injection had lacerated the deciduous membrane, and formed deposits in the vascular part of the placenta."—(page 63.)

Again:—

"L'injection poussée dans les artères (de la mère) s'arrête entre le placenta et l'utérus, et forme des épanchemens plus ou moins considérables dans l'interstice de ces deux organes, si on a employé trop de force, la poussant."—(page 75).

Again:—

"Ces épanchemens (que forme quelque fois la matière à injection entre les deux organes) dependent du décollement du placenta et de la membrane caduque et de la rupture des vaisseaux qui l'unissent à l'utérus."—(page 77.) (The tortuous and numerous small bloodvessels from the inner membrane of the uterus to the decidua of Dr. Lee, page 60.)

"Flattened portions of injection were observed in this situation (between the inner surface of the uterus and the placenta) having in many parts the form of thin layers (épanchemens), which had obviously escaped from the orifices of the uterine veins."—(page 63.)

Having therefore, equally denied that any direct communication exists between the uterine and foetal vessels, it follows that both authors must repudiate this common notion of a maternal and foetal portion in the human placenta. Accordingly we again find Professor Lauth anticipating Dr. Robert Lee, or rather Dr. Robert Lee singularly coinciding with Professor Lauth.

## D

Professor Lauth says,—

"J'ai du examiner ce que l'on doit entendre par placenta foetal et par placenta utérin."—*"Malgré les recherches les plus minutieuses, je n'ai pu découvrir ces deux portions."* And farther on, "*Il n'existe donc pas de placenta utérin, tel qu'on l'a décrit jusqu'à présent.*"—(page 76.)

Well, then, as we are told by two different writers, the one in 1826, the other in 1831, and, in words, *almost identical*, or as nearly similar as the two languages will admit, what the human placenta *is not*, we will endeavour to make out, from different

## E

"Le placenta n'est composé que de la division successive des artères ombilicales, sur le chorion, artères qui, parvenues à l'extrémité des villosités qui le recouvrent, se replient sur elles-mêmes pour donner naissance aux veines. Le tronc qui résulte de leur réunion est la veine ombilicale."—(Page 76.)

Now here is a bold, clear, and distinct opinion, advanced by Lauth on the result of "*recherches minutieuses*," constituting a discovery (assuming that opinion to be correct) of the "real structure of the placenta made in 1826."

Having disposed of the main discovery, we next proceed to compare several secondary points, although equally important in the study of the structure of the human placenta, in which we shall find again the Scotch physiologist anticipated by the French professor.

## F

"La membrane caduque reçoit de nombreux vaisseaux, qui sont les continuations des vaisseaux utérins, ou qui sont, au moins, en communication directe avec eux."—(page 76.)

The professor had, moreover, insinuated that there is no communication by direct vessels *through the decidua*, when he stated that no injected fluid can be made to pass through it without laceration.

Thus far the two physiologists, being placed on parallel lines, appear to have advanced the same anatomical notions as to the supposed real structure of the placenta, or to its connexion with the uterus, and distribution of bloodvessels, and to have noticed, alike, the errors of their predecessors, the fallacy of previous experiments, and the incompatibility of their conclusions with real facts. Lastly, they have advanced, in support of all their several assertions, similar experiments. With regard to the latter, we infer from Lauth's statement, that he has made and repeated the experiments himself,—not so with Dr.

## D

Dr. Robert Lee states,—

"The facts which have now been stated warrant, I think, the conclusion, that the human placenta *does not* consist of two parts, maternal and foetal."—(page 63.)

parts of their memoirs, their opinions as to what it is, and see whether in that also they coincide. Look we, therefore, into the Strasburgh professor's lucubrations first, and next into those of Dr. Robert Lee.

## E

"Between the chorion and amnion and decidua, lie the ramifications of the umbilical vein and arteries, subdivided to an almost indefinite extent." Thus the placenta consists solely of a congeries of umbilical vessels."—(page 60.)

And here also we have a straightforward manly averment, constituting Dr. Lee's discovery. Pray let the reader point out the difference between the two discoveries, that of Dr. Lee being, moreover, like that of Professor Lauth vouched as the result of the "minutest examination?"

## F

"With the fibres uniting this placental decidua to the uterus, are mingled numerous bloodvessels proceeding from the inner membrane of the uterus to the decidua."—(page 60.)

The Doctor observes, moreover, that "there is no vestige of the passage of any great bloodvessel, *through the intervening decidua* from the uterus to the placenta."—(page 60.) Because no injection has ever passed through it without laceration.

Robert Lee, who leaves us to guess whether by "the examination of six gravid uteri, and many placentæ expelled in natural labour" (page 59), he wishes us to understand that he himself made actual experiments upon the former, and has now in his possession the result of those experiments to show to his brethren. I take it for granted he has; in which case the discovery of the real structure of the placenta now alleged\* would stand a fair chance

\* I shall show in some future communication, that the discovery requires many important modifications, and the real structure of the placenta is not to be found in the "Philosophical Transactions."

of being adopted, backed as it is by the opinions and experiments of Professor Lauth and Dr. Lee. But to whom the palm of priority of such a discovery belongs, my present communication will afford ample means of deciding. At all events, I have shown enough, I trust, to prove, that I was neither presumptuous nor inaccurate (as stated by one or two individuals) in maintaining that there exists a singularly-striking similarity between Lauth and Dr. Lee,—that Mr. North, in his *ardent* defence of the latter gentleman, was too hasty in asserting that he could not trace the shadow of resemblance beyond what must exist between the papers of any two men writing on the same subject,—that Dr. Copland must have superficially looked over both papers, holding “one in each hand,” when he states, that he found *nothing in common between them*!—and, lastly, that the commissioners to whom was intrusted the duty of deciding whether Dr. Robert Lee’s paper contained views sufficiently novel on the structure of the placenta to deserve a place in the *Philosophical Transactions*, and who decided in the affirmative, could not have seen Professor Lauth’s paper.

Before I conclude, I must be allowed to add, that there is one part of Dr. Lee’s anatomical statement, which Professor Lauth does not specifically touch upon, and that is, the distribution of the large openings of the uterine vessels in the inner membrane of the uterus. (page 60), over which the placenta covered by the decidua is directly applied. But as this observation is not claimed by Dr. Lee as a discovery of his own, inasmuch as he has represented *it by a drawing taken from one of those predecessors* (Rœderer) with whose accuracy he has found fault; it cannot, of course, form a part of the present analytical parallel.

After all, the reader of *THE LANCET*, and the editor in particular (whose decision, grounded upon the parallel herewith transmitted, it would afford me satisfaction to receive), must naturally feel desirous of knowing how the two writers, after having cut off all sort of direct communication between the uterus and placenta, proceed to account for the phenomena of growth in the fetus, and change in the blood that circulates through it (if any take place), dependent as those phenomena must be, on *some sort of connexion* between the mother and her offspring. And here it is where the only and real difference between Professor Lauth and Dr. R. Lee’s papers exists; but sorry am I to add, that that difference redounds highly to the credit of the former, who, like an eminent and minute anatomist, as he has always proved himself to be, pursues the subject of the structure of the placenta further than Dr. Lee has done, to

account for the phenomena in question. Thus, while the latter is satisfied with a *mere conjecture*, thus expressed;—“What-ever changes take place in the foetal blood, must result from the indirect exposure of this fluid, as it circulates through the placenta, to the maternal blood flowing in the great uterine sinuses,” to account for physiological results, which can only be proved anatomically; the former proceeds to describe the existence of certain lymphatic vessels between the foetal vessels, and those of the decidua placed over them, and which he states to have observed, which are capable of modifying the blood of the mother, in an indirect manner, so as to fit it for the peculiar objects of the growth and nutrition of the foetus. Mr. North, at the meeting of the 9th, chose to be merry on the subject of lymphatics, at the expense of the Professor of Strasburg, and pretended that, in good truth, the whole matter of that professor’s paper was contained in the last few lines, where he announced the existence of such lymphatic vessels. But he laughs *best* who laughs *last*; and inasmuch as my present communication will show that Mr. North was not quite correct in the second part of his averment, so will a future communication prove to him also, that the notion of lymphatics in the placenta is not a subject of so much jocularity as he imagines. I am, Sir, your obedient servant.

A. B. GRANVILLE, M.D.

Grafton Street, Berkeley Square.

20th March, 5 a.m.

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GLASGOW FACULTY OF PHYSICIANS AND SURGEONS.

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*To the Editor of THE LANCET.*

SIR,—As the ministry are about to bring in a bill to amend or abolish corporate bodies, I trust the medical corporations will not be forgotten.

The “Royal commission,” of which we used to hear so much, and of which we now hear so little, was to look after the affairs of the Scottish university.

It were well if they looked after the manner in which diplomas are granted by the College of Glasgow. Hitherto, degrees in medicine and surgery from that place have been considered respectable, but this feeling is fast diminishing. The trifling nature of the examination is destroying it. The examination is no test whatever as to the qualifications of the individuals examined. I could undertake to pass my youngest apprentice there with a few weeks preparation. I was educated at Glasgow myself, and would ill like to see the College go to ruin. It is on the road, however.