

was sent over formerly, with some other Rarities, but the Vessel miscarrying you received them not.

An Extract out of the 3d and 7th Venetian Giornale de Letterati, concerning the Formation of Fætus's.

THe Author of these Journals, proposeth in the *third* of them this Inquiry, *viz.*

Wherein consists the *causa formatrix* of the *Fætus*; whether in the native Heat, as the Ancients taught; or in Motion, as the Moderns are inclined to believe: And if the latter, whence that motion proceeds, and here it is diversified for the conservation of various Species's?

The Journalist having been informed, that Signor *Gieronimo Barbato*, publick Professour of Practical Physick at *Padua*, and Physitian in *Venice*, had written a Book upon that subject, and illustrated it with new Anatomical Diagrams, all ready for the Press; did, it seems, obtain the perusal of the Original Manuscript, and permission withal, to make an Extract thereof, which in this Journal he presents the Curious with, to stay their desire whilst the whole Dissertation is printing. This Breviate we thought fit to *English* here out of the *Italian*, as followeth;

The Author, Signor *Gieron. Barbato*, first delivers the chief Sentiments of the Ancients and Moderns concerning the *Formative Soul*; shewing that from variety of those Opinions there results nothing but darkness. He also mentions some others touching the use of the *Testicles*, whom he modestly refuteth, animadverting upon some Errors both of old and new Anatomists. Then he discourseth of some principal parts constituting the same, which he thinks have not been rightly observed hitherto: And beginning with the *vasa pampiniformia*, he affirms, that they are made up of a great many Arteries, and of one only Vein, and that this vein, being considerably big, is circularly scituate, that so it may the more conveniently unite it self, by a curiously contrived *anastomosis*, to those many Arteries. Then he describeth the *Use* of these *Pampiniform* vessels, informing us, That the said Arteries are not *directly* inserted

ted into the substance of the Testicles (as the most famous Anatomists have believed ;) but that they form, on the side, another membrane hitherto un-observed, (altogether different from the *Albuginea*, and the two others, call'd the *Elytroides*,) which being made up of vessels, resembleth the *Meninges* of the Brain, and is by him esteem'd to have the like use with it. And thereupon he shews, that from the Arteries of that Membrane do proceed some small Arteries, for the most part double in their origin, but afterwards becoming one, and so passing into the substance of the Testicles ; but when they are come to the center of them, returning to the abovesaid membrane without being accompanied by the veins : Where he renders a reason, why in the substance of the *Testicles* there are no veins ; and shews, that in the return of the said arteries there appear some other small vessels, which contain no aliment, but only seminal matter ; and that these do frame in the midst of the Testicles another whitish small membrane, very like the *Septum lucidum* ; which membrane, receiving vessels from all the parts of the Testicles, except from the back-part, does therefore grow crooked there, and thereby hath deceived that famous Anatomist Dr. *Higmore*, perswading himself that it is a round and pervious vessel. Moreover he saith, that the Curvature of the said little membrane serveth for a kind of ventricle, to purge away an aqueous moisture, separated, by means of the medullar substance of the Testicles, from the seminal matter contained in the vessels. He observeth further, that the small membrane restrains it self towards the upper part, and it being such an one as consists of minute vessels, there remain yet in that place some of them, though very small ones, which may be observed by a Microscope to be disseminated in that little coat, which passeth into the *Albigunea* near the *Pampiniform*, and is inserted into the *Epididymis* ; whence passing through a glandul above the *Epididymis*, it there deposeth a waterish humidity, like that which the double membrane brings with it from the center of the *Testicles*, and which through the *Lymphatic* vessels

is conveyed towards the *Urethra*, and comes away before the ejaculation of the *semen prolificum*. And the said litle vessels afterwards multiplying themselves exceedingly, and being divided into small Cells, do with a wonderful curious contrivance form the *Epididymis*: Where he discovers the error of him, who believed the *Epididymis* could be sever'd from the Testicles without laceration; assigning withal the Use of that part differently from all other Anatomists. Thence he passeth to the *Parastatae Varici-formes*, which emulating the *Epididymis*, appear also to be full of pretty big vessels, situate after a curiously contrived manner, and make a nobler shew than that of the *Epididymis* it self, it having the resemblance of an Heart. And declaring the use of the *Parastatae*, he saith, that they do not terminate in a *nervous* body, but plainly in a *Nerve*, by him call'd the *vas deferens*, which, he esteems, carries nothing else but store of animal spirits, which yet according to him are not generated in the Brain, (nor transported by the Nerves into the Testicles,) but in the small vessels, which make up the medullar substance of the very *Testicles*; which being at last obliterated in the *Parastatae*, are changed into a thick membrane, of which is formed the *vas deferens*, sensibly pervious; that so, by the abolition of the lately mention'd small vessels, it may receive abundance of feminal spirits, called *animal*, they being produced from one and the same matter, and in one and the same manner. And that they are so, he further proveth from this observation, that the two litle Nerves, taken notice of by Anatomists, are inserted only in the external part of the Testicles, receiving their internal sense and motion from the said spirits, generated as above. And here he maintains, that these Spirits are the Sensitive and Moving Soul, and consequently the *Anima formatrix*, and that there is no other proximate instrument, save the *Intellective* soul, *qua deforis venit & divina est*.

Besides he endeavours to prove that opinion to be false, which holds the *Seed* to be an Excrement of the last Aliment, and maketh it out, that a small quantity of Seed ex-
cerned,

cerned, enfeebles more than the loss of much Blood. He refuteth those that have taught the original of the Seed from the Brain; as also those, that have believed it to proceed from the whole Body. He assigneth the manner, how this Spirit is corporified and incrassated, and why 'tis so? proveth experimentally, that being subtilized by the warmth of the *Uterus*, it becomes a very fine Spirit; refuting, on this occasion, the opinion of *Galen*, importing that from the corpulency of the *Semen virile* the spermatick parts are generated, and asserting on the contrary, that these are formed *de sero utili sanguinis menstrui*. By the same Experiment he undertakes to evince, that *Dr. Harvey* was mistaken, believing the *Uterus* to be immaterially made fecund, when he found nothing of a seminal body in the wombs of all those Animals open'd by him. Besides he teacheth, how the *Semen* is mixed *cum menstruis*; and how it is moved suitably to the diversity of kinds. He examineth, how the solid parts are generated; and refuting all other opinions about this point, he maintains that they are produced all at once, though they be discern'd at different times, according to the greater or less necessity of those parts. He shews, how they become sensitive, and begin to have life, contending that they are not nourish'd till they are sensible. He explains, from what cause and for what end the Heart is moved; what thing the *punctum saliens* is, and upon what account it hath been reputed to be the Heart. And having attempted to resolve many difficulties, he thinks he hath determined many other curious and considerable particulars by experimented principles.

Dr. Wallis's opinion concerning the Hypothesis Physica Nova of Dr. Leibnitius, promised in Numb. 73. and here inserted in the same tongue, wherein it was written to the Publisher, April. 7. 1671.

Clariss. Vir,

L Egi ego semel atque iterum, quam impertuisti, Dn. Leibnitii Hypothesin Novam, de qua opinionem meam petisti,
 Autho.