

PHILOSOPHICAL TRANSACTIONS.

Monday, December 9. 1667.

The Contents.

An Account of the Experiment of Transfusion, practis'd upon a Man in London. A Narrative of some Trials of Transfusion, lately made in France. Some New Experiments of Injecting medicated Liquors into humane Veins, together with some considerable Cures performed thereby. An Extract of a Letter written from the Bermudas, giving an Account of the Course of the Tides there; of Wells both salt and sweet, digg'd near the Sea; of the Whale-fishing there practis'd anew, and of such Whales, as have the Sperma Ceti in them. A Method for finding the Number of the Julian Period, for any year assigned, the Number of the Cycle of the Sun, the Cycle of the Moon, and of the Indictions, for the same year, being given. An Account of some Books. I. PETRI LAMBECII LIB. PRIMUS PRODROMI HISTORIÆ LITERARIÆ. II. THOMÆ CORNELII PROGymNASMATA PHYSICA. III. LES ESSAYS de PHYSIQUE du Sieur de LAUNAY. IV. FRANCISCI DU LAURENS SPECIMINA MATHEMATICA, duobus Libris comprehensa.

An Account Of the Experiment of *Transfusion*, practis'd upon a *Man in London.*

This was perform'd, Novemb. 23. 1667. upon one Mr. Arthur Coga, at Arundel-house, in the presence of many considerable and intelligent persons, by the management of those two Learned Physicians and dextrous Anatomists Dr. Richard Lower, and Dr. Edmund King, the latter of whom communicated the Relation of it, as followeth.

THe Experiment of Transfusion of Blood into an *humane* Vein was made by Us in this manner. Having prepared
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the *Carotid Artery* in a young Sheep, we inserted a Silver-Pipe into the Quills to let the Blood run through it into a Porringer, and in the space of almost a *minute*, about 12 ounces of the Sheeps blood ran through the Pipe into the Porringer, which was somewhat to direct us in the quantity of Blood now to be transfus'd into the Man. Which done, when we came to prepare the *Vein* in the Man's Arm, the Vein seem'd too small for that Pipe, which we intended to insert into it; so that we employed another, about one third part less, at the little end. Then we made an incision in the Vein, after the method formerly publish'd, *Numb. 28*; which method we observ'd without any other alteration, but in the shape of one of our Pipes; which we found more convenient for our purpose. And, having open'd the Vein in the Man's Arm, with as much ease as in the common way of Venæ-section, we let thence run out 6 or 7 ounces of Blood. Then we plant'd our silver Pipe into the said Incision, and inserted Quills between the two Pipes already advanced in the two subjects, to convey the *Arterial* blood from the Sheep into the Vein of the Man. But this Blood was near a *minute*, before it had pass'd through the Pipes and Quills into the Arm; and then it ran freely into the Man's Vein for the space of 2 *minutes* at least; so that we could feel a *Pulse* in the said Vein just beyond the end of the silver Pipe; though the Patient said, he did not feel the Blood *hot*, (as we reported of the subject in the *French Experiment*) which may very well be imputed to the length of the Pipes, through which the blood pass'd, losing thereby so much of its heat, as to come in a temper very agreeable to Venal Blood. And as to the quantity of Blood receiv'd into the Man's Vein, we judge, there was about 9 or 10 ounces: For, allowing this Pipe $\frac{1}{3}$ less than that, through which 12 ounces pass'd in *one* minute before, we may very well suppose, it might in 2 *minutes* convey as much blood into the Vein, as the other did in the Porringer in *one minute*; granting withall, that the Blood did not run so vigorously the second *minute*, as it did the first, nor the third, as the second, &c. But, that the Blood did run all the time of those two minutes, we conclude from thence; *First*, because we felt a *Pulse* during that time. *Secondly*, because when upon the Man's saying,
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He thought, he had enough, we drew the Pipe out of his Vein, the Sheeps blood ran through it with a full stream, which it had not done, if there had been any stop before, in the space of those two minutes; the blood being so very apt to coagulate in the Pipes upon the least stop, especially the Pipes being so long as three Quills.

The Man *after* this operation, as well as *in* it, found himself very well, and hath given in his own Narrative under his own hand, enlarging more upon the benefit, he thinks, he hath received by it, than we think fit to own as yet. He urg'd us to have the Experiment repeated upon him within 3 or 4 days after this; but it was thought advisable, to put it off somewhat longer. And the next time, we hope to be more exact, especially in weighing the Emittent Animal before and after the Operation, to have a more just account of the quantity of Blood, it shall have lost.

A Relation

Of some Trials of the same Operation, lately made in France.

1. *M. Denys*, Professor of the *Mathematicks* and *Natural Philosophy* at *Paris*, in a Letter of his to the *Publisher* relateth, That they had lately transmitted the Blood of four *Weathers* into a *Horse* of 26 years old, and that this *Horse* had thence received much strength, and more than an ordinary stomach.

2. The same person was pleased to send to the same hand a printed *Letter*, written to the *Abbot Bourdelot* by *M. Gadroys*, being an *Answer* to a Paper of one *M. Lamy*, and confirming the *Transfusion* of Blood by new Experiments. In this *Answer* the *Author* is vindicating the *Transfusion* from Objections; where first he takes notice, That, whereas the *Objector* undertakes to refute the Experiments made, by simple *Ratiocinations*, it ought to be considered, that the *Quodlibetical* Learning of the *schools* is capable enough to find Arguments *for* and *against* all sorts of Opinions, but that there is nothing, but *Experience*, that is able to