

An Account of some Books.

- I. *Traëtatus de NATURA SUBSTANTIÆ ENERGETICÆ, seu de VITA NATURÆ, ejusq; Tribus primis Facultatibus; Perceptiva, Appetitiva, Motiva, &c. Auth. Franc. Gliffonio, Med. D, & P. & Coll. Med. Lond. Socio, nec non Societatis Regalis Collegâ. Londini. A. 1672. in 4°.*

THE famous Author of this Philosophical Treatise endeavors to make it out, that matter is the Prime and Radical subject of *Life*; or, that *Life* is the inmost essence of matter, and inseparable from the same: And, because the very Essence of matter is subject to various Modifications, that thence its life also is capable of being variously modified, so as to be different in Plants and Animals; being in all their kinds varied by a strange diversity of Structure and Organization.

This Life our Author esteems to be the very Energetical nature of a substance, whereby it is fitted for Operation, that is, made a Principle of Perception, Appetition and Motion; not producible in his opinion by any external power, motion, texture, figure, organization, proportion, or connexion of parts, but by the sole First Cause of all things.

The same Life, as 'tis essential to matter, is here distinguish'd from the *Senses*; which to our Author are not the very first and simple perception of Nature, but some Organical Modifications thereof; forasmuch as, in his opinion, if there were no *Natural* perception, no modification or organization of matter would be able to change it into *Animal* or *Sensitive*; but a *Natural* one being given, this, flowing immediately from the substantial nature of the matter, will be subject to as many kinds of Modifications, as the matter it self is capable of. And it seems, that the main scope of this book was, to investigate those various Modifications of life; though the Author ingeniously confesseth, to have met with such difficulties in this argument, that as yet he hath not so much as gone through all the variations of *Inanimat* Substances; much less through those very subtile Formations of *Plants* and *Animals*.

If it be asked, How this *Natural* Perception becomes *Sensitive* or *Animal*; the Doctor answers, That disposed matter, finding it self capable, so far to raise its perceptions, as to redouble it, whereby it may be enabled to judge of its own acts and to behold them with delight, falls upon organizing,
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and adapts for every Sense as 'twere a double Organ, an internal and external ; and the same matter perceiving withal, that 'tis needless, there should be an internal one, appropriate for every external, it forms one only internal, Common to all the external, and by proper nerves connects each external to it. And this to him constitutes *Sensation*, which he saith is not performed without *redoubling* the act of Perception ; since, if a Nerve, by whose means Perception is redoubled, be any way intercepted, as in a *Gutta serena*, or in a Paralitick Member, there is no Sensation. So that, according to our Author, Sensation is Perception enobled and exalted, able to judge of its object, to reflect upon it with complacency, to suspend its action, to avert it self from one object to another ; whence Brutes themselves are by him observ'd to be in some measure capable of Discipline, and of reward and punishment.

From all which it appears, that here is asserted such a Natural Perception, as is anterior to, more general, and more simple than that of *sense* ; in which perception, accompanied with appetite and motion, our Author makes Original Life to consist, which to him is nothing else but the Energetical nature of any being subsisting by it self, since he understands not, that so noble a being as that is which subsists by it self, should be useless, and fit for no operation.

If any do object, that these general notions are too soon brought upon the Stage, and that *Particular* Forms are to be found out first, and thence we are to rise to the *Universal*, forasmuch as there is nothing in the Understanding which has not been first in the Sense ; our Author thinks this ratiocination to be grounded upon a false supposition, as if the particular reasons of things did incur into our senses before the universal.

There are too many things in this Treatise for such a Breviat as this must be, to take notice of them all. One particular there is, that seems very paradoxical ; which I shall but touch, and then conclude, it is, That this Author judgeth it to be more Philosophical, to hold a *Penetration of Substances* than a *Vacuum* ; and that a *Motion* not being to be denied, and consequently either a *Vacuum*, or such a *Penetration* to be asserted, the former of these being by him, as he thinks, disproved, the latter (*Penetration*) must take place.

II. Jeremiæ Horroccii *Angli Opera Posthuma: unà cum Guil. Crabtræi Observationibus Cælestibus ; nec non Joh. Flamstedii de Temporis Æquatione Diatriba, Numerisq; Lunaribus ad novam LUNÆ Systema* Horroccii. Londini, impensis Joh. Martyn, R. Societatis Typographi, A. 1672. in 4°.

THis *Horrox* is the same with him, that is the Author of that excellent Tract, called *Venus in Sole visa*, publish't by the famous *Johannes Hevelius* together with his *Mercurius in Sole visus*: who if he had not been snatch't away by an untimely death in the flower of his age, would certainly, by his industry and exactness, which did accompany his great affection to Astronomy, have very considerably advanced that Science. Now we have only left us these imperfect Papers, digested, not without great care and labour, by that Learned Mathematician Dr. *John Wallis* ; Wherein does occur,

First, the *Keplerian* Astronomy, asserted and promoted ; which this Author undertook, after he had spent much time, and taken great pains in acquainting himself with that of *Lansbergius*, which he at first embraced with so much eagerness and addition, that it was difficult to divorce him from it ; till at length, by the advertisements of *William Crabtree*, a sagacious and diligent Astronomer of that time, he found, that neither the *Hypotheses* of *Lansbergius* were consistent among themselves, nor his *Tables* agreed with Observations exactly made, nor the Precepts of them were well demonstrated or could be ; whatever that man boasted of the wonderfull agreement of his *Tables* with the Observations of former times: All which errors having been found at last by our Author himself, and withall the writings of *Kepler*, and the *Rudolphin Tables* by him search't into, he saw cause far to prefer them to the *Lansbergian*, because grounded upon *Hypotheses* consonant to Nature, and well agreeing with the Heavens: though he found cause by his accurate Observations to amend even these *Tables* ; yet without a necessity of changing the *Hypothesis*. In which work when he was well engaged, he was cut off by death very young, in the 23th year of his age. His first piece then, were his Disputations against the Astronomy of *Lansbergius*, in which he clearly demonstrates, that the *Hypotheses* of that Author do neither agree with the Heavens nor among themselves. Which argument he carried on so far, that having finish't the *four* first
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Disputations (as they are here to be found) he had begun a few sheets of the *fifth*, which was about the Diagram of *Hipparchus*, from which some have pretended exactly to demonstrate the Distance of the Sun. After which follow two Disputations more; the *one*, of the Celestial bodies and their Motion; the *other*, his Answer to the Cavils of *Hortensius* against *Tycho*. So much of the *First* part of this Volume.

The *second* contains a good number of *Extracts* out of this Authors Letters to his intimate friend and industrious companion in the Study of Astronomy, *William Crabtree*. In which occur many good Celestial Observations, interlaced with divers notable discourses concerning the Method of his studies.

The *third*, is a Catalogue of Astronomical Observations, as they were made by our Author, without allowance for the Eccentricity of the Eye; which he afterwards castigated by a correction fairly written with his own hand.

The *fourth*, is his New Theory of the Moon, together with the *Lunar Numbers* of Mr. *Flamsteed* upon it.

To these are annexed, *first* the Celestial Observations of *William Crabtree*, concerning *Saturn*, *Jupiter*, *Mars* and *Venus*; and then, Mr. *Flamsteeds* Dissertation of the *Inequality* of Solar days; wherein are demonstrated the *Prosthaphæreses* of the time, necessary to make an Equation, and proceeding from the Unequal motion of the Earth from the *Aphelion* to the *Perihelion*, and the Inclination from the *Equinoxes* to the *Solstices*, and *vice versa*.

III. Marcelli Malpighii Phil. & Medici Bononiensis Dissertatio Epistolica de Formatione Pulli in Ovo: Londini apud Joh. Martyn Soc. Reg. Typographum, ad insigne Campanæ in Cæmeterio S. Pauli, 1672. in 4^o.

THIS excellent Philosopher and Accurate Anatomist, a very Industrious and useful Member of the *R. Society*, having in a *Manuscript* presented that Illustrious body with his Observations upon the Formation of a Chick in an Egg as well before as after Incubation; and that Company having esteemed them very worthy the Press, as well to do the Author right, as to give occasion to others to inquire further into a matter so conducive for finding out the nature of Generation: We shall here give some accompt of this well-consider'd discourse; after we have intimated, that an English Physician, a worthy Membe-

Member also of the said Society, (Dr. *William Croon*,) hath likewise, by a curious examination of Eggs not yet incubated, very happily found, in conformity to the discovery of Signor *Malpighi*, the Rudiments of a Chick actually existent in the Egg even *before* incubation: Of which he produced a written discourse before the said Society *March 14. 1671*; which he affirmed to have been written a good while before, and which was read in part *March 28. 1672.* at the publick Meeting of the said Society: who do hope, that the said *Doctor* will make no difficulty, for confirmation and further excitement, to communicate also to the publick his learned Observations upon this subject. Which being thus premis'd, we shall now proceed briefly to take notice, that this Exercitation of Signor *Malpighi*, which came to the *R. Society*, *Feb. 22. 1672¹*, contains an account of his having, by carefull and diligent Observations, discover'd, that in *second* Eggs, as well *before* as *after* incubation, the first Rudiments and Lines of the principal parts of the Chick are contained in the Eggs; whereas in *Subventaneous* or *Adle* Eggs, instead of such a formation, there is found nothing but an un-form'd globous ash-coloured body, like a *mola*. Of these *prima stamina* or beginnings, this Author hath traced the progress, by observing their changes, after incubation, every six hours, for the two first days; and, after that, every 12 or 24, or 48 hours. In the doing of which, he hath observ'd many very curious and remarkable particulars, especially about the Priority of the Motion of the Heart *before* the production of *true* blood, though that liquor, before it becomes red, be, according to him, *before* the motion of the heart; as also about the said liquor first emerging, *viz.* whether it be a simple *colliquamentum*, or a *liquor vitalis*, or a *sanguis inchoatus*: concerning which he asserts, that the *Carina*, and the beginnings of the head, brain, and Spinal Marrow, do manifestly appear *before* the Collection of that Liquor, and its motion, and change into the nature of Blood: For which, and many other considerable particulars, since they cannot be treated in such an abstract as this without prejudicing the whole, we are obliged to remit the Reader to the future discourse it self.

IV. De MENTE HUMANA Libri quatuor &c. Auth. J. B. duHamel
P. S. L. Parisis A. 1672. in 12.

THE Learned Author of this Book treats in it of the Nature, Powers, Functions, and Immortality of the soul; delivering withal a solid Logick, illustrated by various and instructive experiments. This he doth in *four* parts;

In the *first* he inquireth into the nature, origine and progress of knowledge in general, and of *simple Perception* in particular; observing the chief defects of perceptions, together with their remedies, Attention, and Consideration, much helped by the study of the Mathematicks, and by Reces, &c.

In the *second* he treats, after the same method, of the *Judgment* of the Mind, the height and perfection of humane knowledge. Where he discourses largely of the *Criterion* and Mark of Truth, consisting principally in the clearness and distinctness of Perception, as that, whereby the mind *knows* the congruity of its knowledge with the thing known. Here he taketh occasion to examine *Pyrhonisme* or *Scepticisme*, professed by a Sect of men that speak otherwise than they think. Which done, he endeavours to shew not only, whence the Light and Evidence of Principles flows, namely from Eternal and Immutable Reasons and *Idea's*, forming and directing our knowledge, and begetting a certain and firm judgment in us; but also, how we shall come to see those Eternal reasons or that Intrinsic Light of Truth. To all which he annexeth those Propositions, that are, in his judgment, to be esteemed for Principles and Axioms so evident, that their Truth shineth forth by themselves, and needs no demonstration: Concluding this part with a considerable Enumeration *both* of the principal Causes of Errors, (which may be resolv'd into that main one, the *Confusion of Perceptions*, breeding either a hasty and un-advised, or a false judgment,) and of the Remedies of the same.

In the *Third*, he treats of *Argumentation* and its nature and origine; of Syllogismes and Paralogismes; and especially of the true way of Demonstrating; which latter he so performs, that little seems to be by him omitted of what hath been written by others that is considerable. And lest a naked and jejune delivery of Rules should prove tedious to the Reader, he hath made them grateful with abundance of uncommon and pleasing examples; and laboured, not only in a Logical but *Physiological* way to explain the cause, nature, windings and errors of Ratiocination. Besides, his purpose being to deliver a *Logick*, suitable not only to the old Scholastick, but also to the Modern and Experimental Philosophy; he discourseth copiously and instructively of *Induction*; shewing from the Excellent Lord of *Verrulam*, and the Illustrious *Robert Boyle*, how Natural Philosophy and all useful Arts may be improv'd and advanced by the hitherto too
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much neglected induction. Where he takes occasion to speak of and commend that way of finding out the *Efficient* causes of things, call'd by the newly mention'd Lord *Instantia Crucis*, because, like a Cross erected where more ways than one do meet, it shews which of them you are to take. Which, among others, he illustrates by the example concerning the Question of the *Cause of Gravity*. viz. Whether it be a Quality inherent in bodies, or the Magnetical power of the Earth, or the Circum-ambient Air or *Æther*? Alledging for this purpose an Experiment, seeming to him to be such a determining instance as hath been spoken of; made by Monsieur *Hugens* before the Royal Academy at *Paris*, and related at large by Monf. *Rohault* in his *Traite de Physique*, printed at *Paris* A. 1671. part 2. ch. 28. p. 122. to which we refer the Reader; hastning to

The Fourth and last part of this Book, which considers the Powers, Nature, and Immortality of the Rational Soul, and is solicitously employ'd in solving many difficultiēs occurring about this matter: Which being a subject not so proper to the design of these Tracts, we shall here forbear to enlarge upon.

V. A Letter of *Francesco Redi* concerning some Objections made upon his Observations about *Pipers*; together with a Reply to that Letter by *Moyse Charas*: Now both Printed in *English*, for *John Martyn*. Printer to the R. Society, at the *Bell* in *St. Pauls Church yard*, 1672. in 8^o; and formerly described in these *Tracts*, viz. *Numb.* 66. p. 2036. and *Numb.* 83. p. 4073.

VI. *De Gemmarum Origine & Viribus Exercitatio*: Auth. *Roberto Boyle*, Nobili Anglo. This Tract was also formerly, when it first came abroad in *English*, described, viz. in *Numb.* 84. p. 4095. and is now mention'd again, only to give notice to Forrainers, that 'tis printed in *Latin* for the same Bookseller, for whom was printed the *English* Edition.

Errata in this Tract.

Page 5053. l. 19. r. in its prisiint. p. 5055. l. 26. r. vehicle.

LONDON,

Printed for John Martyn, Printer to the Royal Society, 1672.