

MICHAELIS ETTMULLERI *opera omnia Theoretica & practica, &c. Quarto Londini 1683.*

THis Author (for whom his former *Treatises* had prepared a welcom in the world) divides the Practice of *Physick* into ordinary and extraordinary, the former he looks upon to be defective in these two things; first in sufficient *Experiments* on which to ground a *theorie*, and secondly, in generous *medicines* as well universal as specifick, which should have their effect without Nature's too hard labour, the former to be supplied by Anatomy, the latter by *Chymistry*. In curing any disease he observes these five heads, the history of the distemper; the part affected, the causes, prognosticks, and method of curing. He looks upon it to be of the greatest consequence to distinguish between the Animal faculty placed in the spirits and *Genus Nervosum*; and the vital, whose seat is in the blood, and *Viscera*. He allows in the blood two motions, the circulatory, and fermentative, to this he supposes the concurrence of an Acid and an Alkali, the foundation of which motion is that *Seminal crasis*, which is preserved by a due use of the *res non-naturales*, and restored by proper medicines.

In the *Animal* faculty he considers its nourishment, which is *Chyle*; and its structure, the delicate *Fibres* of which are the instruments of sense and motion, on both which Scores it is subject to convulsive motions, when irritated; or Paralytical impotence when obstructed. These foundations being laid, he recommends *Sylvius*, and *Willis* to the Reader, and gives the necessary cautions for their Reading, looks upon *Sennertus* to be sufficient among the Antients, as containing the sense of all
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of them, & looks upon *Helmont* to be very faithfull where intelligible; and to be imitated as far as possible, since he suggests the best method of curing *à priori*; upon this *Theorie* his whole work is founded, and consists of an universal praxis divided into three parts. The first treating of the loss of appetite, and its consequences and cure of them; the second of nutrition vitiated, &c. The third, of the diseases of Women, to which he adds his *Chirurgia medica, & Collegium Consultatorium*.

To all this is added an appendix consisting of several *Traacts*, the first is *Valetudinarium infantile* in which he gives an account of the nourishment of *Infants* with milk and pap, as also of the diseases incident to them while in this state, the general causes of which he reduces to these two heads, *viz.* the retention of the *Excernenda*, especially that *Meconium*, and insensible transpiration; and secondly the ill giving of bad nourishment, or *vitiata lactis & errata pullis*. Hence springs that Acid juice, the different condition of which is the cause of that succession of distempers, infancy is afflicted with; to which he opposes those general remedies which shall destroy that Acid, incide, attenuate, and evacuate it, of which nature he gives particulars, in briefly handling each particular disease.

The next is his Treatise *de vi diaphoretica Opii*, which being already well known I shall give no farther account of, but pass on to the third which is *De Coralliorum Tinctura*, in which first he treats of the nature of coral, and after arguments on all sides concludes it to be a stony concretion in form of a Shrub, generated from a nitro-saline mineral juice impregnated with a sulphureous clammyness elevated by the subterraneous heat, through the pores of the bottom of the *Sea* where by the cold and saltness of the *Sea-waters*, it is congealed. After this telling us that only is a true *Tincture* in which there is a portion of the proper substance of the body from
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which it is extracted, with a concentration of the colour and virtue of it extracted and exalted by a proper *Menstruum*; this he applies to the pretended *Tinctures* of *Coral*, the last of which he mentions is of a certain *Chymist* at *Paris*, who with the phlegm of the distilled water of the Air gathered at a certain time, can extract not only the *Sulphur* but the *Salts* of *Coral*, which appear in a *Cubick* form upon evaporation in the *Sun*, the rest of the *tincture* swimming over it like juice of *Berberry's*, the conclusion is of the use of it, which he allows to be great in strengthening the tone of the inward parts, quelling the effervescencies of the blood, &c. which effects are alterable by the *Menstruum* with which they are drawn.

The fourth tract is *De præscriptione Formularum in Genere*, in which he considers the matter which consists of the ingredients of all three Kingdoms; the form is nothing but the order, proportion, manner of prescribing, and the certain texture into which the matter does by mixture combine.

Concerning the ingredients, respect is to be had to their quantity according to its three dimensions, longitude in their number, latitude in their dose, profundity in the mass or consistence; their quality is that apparent similitude and contrariety both in respect to one another, as to the body of the patient, so that he requires as previous to the writing a receipt the exact knowledge of the *Materia Medica*, and an exact skill in their preparation; and having layd down necessary rules and cautions to be observed in prescribing, he gives examples under several classes of Powders; Pills, Mixtures, Infusions and decoctions, and ointments; as to these latter he gives these two cautions, 1. that they consist of a volatile matter, and easy to be dissolved. 2. that nothing be mixt which will not admit of a total and equal solution.

Next follows his tract which he calls *Parva Magnorum Morborum initia*, where having proved by induction of several

several instances that Nature produces great effects from small and invisible causes, witness the *Animal Spirits*, the objections against whose existence he first removes, and then demonstrates, he discourses of the effects of imagination, of Poysons, of contagion, and other preternatural ferments as inconsiderable for their bulk, as monstrous in their effects, as also of the least prick of a Nerve, he concludes that as great diseases have those minute causes, so likewise their true *Remedies* are of small quantity, but of great efficacy.

His discourse *De usu & abusu præcipitantium* is divided into three Chapters, the first is *Historical* of the *Turgescency* and *Orgasmus* of the humours, to which are opposed *Remedies* that precipitate and consequently repress that exorbitancy, of these he gives the *History*, assigning to *Sennertus* the invention of the notion, and discoursing of the most considerable of them in each of the three *Kingdoms*. The second Chapter is *Theoretical* of the nature use & manner of working of them, & that founded upon the nature of precipitation in general, which he asserts to be found in the fluids of our body as well in a state of health as sickness. His third and last Chapter is practical wherein is discoursed at large how they ought to be given, and with what sort of *Medicines* most effectually mixed.

To this succeeds *De Morsu Viperæ*, where from the assertion of *Celsus* that the biting of any Animal is venomous, he easily proves that of the *Viper* to be so, and having considered and rejected the various opinions about the seat of Poyson in the *Viper*, and proved that it is by no means Poysonous when dead, but each part of it antidotal, he looks upon the anger of the beast, or the *Idæa furoris Archæi* imprinted on its teeth and *saliva*, to be that alone which makes his biting mortal; to this he adds the *Diagnosticks Prognosticks* and *Method of Curing*.

The last tract is *Medicina Hippocratis Chymica* which has been printed before, & in short is a demonstration of Hip-

erates's proceeding in his practice upon *Chymical* qualities, and not at all depending on the qualities of the elements, and at last concludes from specificall taſts that there are specificall remedies not to be found out by the common taſts and which conſiſt in the *Craſis* of concretes to be found out and conſerved by art, and by means of the liquour *Alkabeſt* ſomuch commended by *Helmont*, and confirmed by *Starkey* upon his own experience.

RAYMUNDI VIEUSSENS D. M. Mon-
ſpelienſis *Neurographia Univerſalis. Fol. Lugduni*
1685.

THis curious *Author* after a ſhort account of the generation of the different parts of the body, out of a ſeeming homogeneous matter, divides the *Brain*, taken in a large ſenſe for the whole *head*, into its outward and inward parts, theſe latter being the ſubject of his *firſt book*: in which he begins with the *Craſſa meninx*, which he makes to be double, the fibres of each membrane obliquely interſecting one another, deſcribes its cohæſions, ſinus's, Veſſels, and uſes both publique and private, and explains how it becomes ſo exquisitely ſenſible, and whence it has its motion in thoſe parts where it is movable. Hence he takes an occaſion for a very curious digreſſion about the motion of the *Heart*, and *Arteries*, theſe latter he aſſerts to be moved by the blood, and brings an experiment to prove it, and alſo makes uſe of it to confute the pulſifick faculty of *Galen*, and the Animal ſpirit of *Willis*, which by the annular fibres of their middle coat, is to dilate and contract them.

He denies the *Pia Meninx* to have any gland's, is very particular in the diſtribution of the *Veſſels* of it, and will not allow the *Rete Mirabile* (of which he has a diſtinct
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Chapter) to consist of any thing besides *arteries*. The brain is divided into the cinereous or glandulous part, and the medullary or fibrous, which from its figure and use he calls the oval centre of the brain, looks upon the *Corpus callosum* to be the true *Fornix*, and having given the description of all the internal parts of the brain, gives us likewise their use founded upon their structure, and so passes to the *cerebellum*, in which he describes both the *processus vermiformes*, gives an account of the *Valvula major Cerebri*, &c.

After the *Anatomy* of the *brain*, he discourses of the office of the brain and its parts, of the necessity and nature of the *Animal Spirits*, and *Suctus nerveus*, and in treating of the *Lymphæducts* of the brain, describes exactly the *Membrana pituitaria*, and twelve *Sinus's* in which the blood before it enters the brain cleanses it self from *Pblegm*, these he divides into four sorts according to their situation, *viz. in sinus Sphænoideos, ethmoidæos, frontales and maxillares*. having discoursed of the matter, place and manner of the production of the *Animal Spirit*, of its dispensation, and distinct ways by which it moves within the brain, &c. He treats briefly of the *Animal faculty's*, and concludes the first book with a short Chapter of judgment and Reason.

The *Second Book* is of the *Medulla Spinalis*, where he observes the method of his first book, and first describes the four membranes of it, with their office; then gives an account of its Vessels, and denies that the *Sinus venosi vertebrales* are joyned or accompanied by the *Sinus arteriosi of Willis*; looks upon the *Medulla* to be the brain prolonged, as the *Antients* likewise accounted it, both as to the generation, and distribution of the *Animal Spirits* through those thirty pair of *Nerves* which proceed from it, and upon this account is the fountain of sense, motion and nutrition to the parts below the head.

The *third Book* treats of the *Nerves*, where after the de-
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finition, and division of them into soft and hard, great or small proportionably to the labour they are designed for, he will not allow any of them to be sensibly hollow, not so much as the *optick* or *olfactory Nerves*, and as *ascribing* all their variety to the disposition of their pores, explodes as fabulous, the *Valves* some have supposed in them. Discourfing of the use of the *Nerves* he looks upon the common question, *viz.* Whether the *Nerves* are different by which motion and sense is made, to belong rather to the *Animal Spirit*, then to the *Nerve*, which likewise being uniform, the diversity of *Animal* action, doth not argue a diversity in either *Nerves* or *Spirit*, and having given us the number of the *pairs* of *Nerves* in the body, proceeds to describe them singly as they ly in the body. In his *last Chapter* he gives an ingenious account of the manner of the motion of the *Muscles*, founded upon the consideration of the mechanism of them, and the *vis movens*, which he makes out to be the *Animal Spirit*, and the blood, the necessity of both he proves from a palsy certainly ensuing upon the defect of either. All this Doctrine is illustrated by large and fair *cuts* answering the natural magnitude of the parts described.

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FINIS.