

An Account of two Books.

I. TRACTATUS DUO, *prior de RESPIRATIONE; alter de RACHITIDE, A. JOH. MAYOW, &c. Oxon. 1668. in 8°.*

THE Author in the former of these *Tracts*, having first given an account, how the Air by its *Elastick* force is inspired, and upon the dilatation of the Chest, caused by the intercostal Muscles, drawn upwards, rushes into the Lungs, which are thereby expanded, being nothing else but a Body made up of very thin little Membranes, in the form of innumerable small bladders; delivers his thoughts of the Use of Respiration, waving those opinions, that would have Respiration serve either to cool the heart, or to make the Blood pass through the Lungs out of the right ventricle of the heart into the left, or to reduce the thicker venal blood into thinner and finer parts; and affirming, That there is something in the Air, absolutely necessary to life, which is conveyed into the Blood; which, whatever it be, being exhausted, the rest of the Air is made useless, and no more fit for Respiration. Where yet he doth not exclude this Use, That with the expelled Air, the vapors also, steaming out of the Blood, are thrown out together.

And inquiring, what that may be in the Air, so necessary to life, he conjectures, that 'tis the more *subtile* and *nitrous* particles, the Air abounds with, that are through the Lungs communicated to the Blood: And this *Aereal Niter* he makes so necessary to *all* life, that even the Plants themselves do not grow in that Earth, that is deprived thereof, which yet, being exposed to the Air, and afresh impregnated by that fertilizing salt, becomes fit again to nourish those Plants.

And considering futher, what part this *Nitrous Air* acts, and what operation it performs in the *Animal* Life, he is of opinion, that this *Niter*, mixt with the *sulphureous* parts of the Blood, causeth a due fermentation, which he will have raised, not only in the Heart alone, but immediately in the Pulmonary vessels, and afterwards in the Arteries no less than in the heart. Examining also the reason, why Death so suddenly ensues upon Respiration suppressed, the Blood being then not yet unfit for motion, he inquires yet after another Use of Respiration, which maketh it so very necessary to Life. And considering with himself, that the Life of Animals consists in the *Distribution of the Animal spirits*, for the supply of which is required the Pulsation of the heart, and the Afflux of the Blood to the Brain, it seems to him, that Respiration is highly necessary to the motion of the heart, forasmuch as the heart is one of the Muscles, the motion of every one of which absolutely requires this *Aereal Niter*, so that without the same, even the beating of the Heart cannot be performed.

But

But here he declareth, that he seeth not, how that Explosion, by which the Muscles are so suddenly inflated and contracted, should proceed from the *Arterious Blood* and the *Nervous Juyce*. He esteems rather, that the *nitrous particles* proceeding from the inspired Air, do by the Afflux of the Arterious blood everywhere flow between the fibres of the Muscles, and lodge therein, and that the *animal spirits*, made up of a very volatile salt, and not much differing from the distilled spirit of blood, highly rectifi'd, do, as often as they are sent from the Nerves for motion, meet with the former *nitrous* and differing particles; by which mixture of a kind of *Volatile Spirit of blood*, and a *Salin liquor*, united together, is caused that sudden explosion, and consequently the inflation and contraction of the Muscles. To which Ebullition, *he saith*, may perhaps something also conduce the Blood, forasmuch as its *sulphureous particles*, conjoyn'd with the *Niter* inspired, may render that juyce *Nitro-sulphureous*, and yet more explosive. And thus he thinks the motion made in the heart, (a musculous substance) to be done no otherwise, than that in other Muscles. Whence he concludeth, that upon the suppressing of Respiration, when that darting Niter, so requisite to all motion, is deficient, the Cardiaque Nerves convey their influx in vain, so that the pulsation of the heart ceasing, and consequently the afflux of the Blood to the Brain, *Death* must needs follow; but yet that the Animal may live a while without Respiration, forasmuch as the Blood contained in the vessels of the Lungs, and impregnated with Air enough, may suffice to maintain for some few moments the motion of the heart.

And thus much of the first Tract, the *other* treating of the *Rickets*, examines in the first place, wherein Nutrition consists, and finds, That the *Nervous Juyce* performs not alone the whole office of that operation, in regard that besides it, the Blood diffused through the Arteries, hath no small share in that work, seeing that the nervous liquor mixt with the blood, causeth a certain effervescence, whereby the matter, fit for nutrition, is precipitated, and that for want of this nervous liquor, the Blood in this distemper of the *Rickets*, though it be laudable enough, yet being destitute of its one ferment, is not able to excite Heat in the parts, nor to execute the office of Nutrition. So that the *Rickets*, in the opinion of this Author, are a disease, caused by an unequal distribution of the Nervous juyce, from whose either defect or superabundance, some parts defrauded of nourishment, are emaciated, others, being surcharged, grow into a disproportionate bigness. Proceeding to assigne the *Cause* of this inequality in the distribution of the Aliment, he finds it not in the influx of the Brain, but in the obstruction of the spinal Marrow, whence it happens, that, that high way of the passage of the spirits being damm'd up, the parts, to be sustain'd and cherish'd by that nutritious Juyce, must needs languish, and fall into an Atrophy and the highest Consumption.

Having

Having assign'd this cause, he endeavours from thence to deduce all the Appearances and Symptomes peculiar to this Disease, and suggests that upon that ground it ought to be the main intention of the Physitian, to remove such Obstructions, and to strengthen the Nerves: subjoyning a general method for curing this Infirmitie, and specifying the principal remedies, both Internal and External, to be used therein; among which he chiefly recommends the spirits of *Sal Armoniack, Harts-horne, Blood, Urine, Scur,* as such, that by the high volatility and subtleness of their parts are able to dislodge those Obstructions, which cause this Disease.

II. A DISCOURSE concerning PHYSICK, and the many ABUSES thereof by the APOTHECARIES, London, A. 1668. in 8^o.

IN this Discourse are chiefly perform'd these *Two* things. *First*, The Interest of the Patient, in reference to *Physick* and *Physitians*, is soberly debated. And here, the *Patients* being they, who are most highly injur'd by the unwarrantable practises of those, that are in this Tract accused, the *Author* represents, that, although many intelligent persons among the People are sufficiently sensible of the Abuses, here manifested, and that it is of absolute necessity, some reformation be made; yet all are not thus perswaded, since we may daily observe, that many, who are less discerning, being deceiv'd by an *Imaginary* good, covet unawares their own ruine; and unless they be given to understand, which is the *Evil* and which the *Good*, by persons in whom they have reason to confide, they must necessarily run much hazard. The *Author* therefore hath here endeavour'd to undeceive them, discovering both the many inconveniences, they are lyable to, and the many things, whereof most Apothecaries are highly guilty, as Carelessness, Unskillfulness, Unfaithfulness on the one hand, and Intrusion into the Physitians Employment (the Practise of Physick) on the other: on all which accounts, he thinks, he hath demonstrated they are exceedingly injurious to the Publick.

In order to the Prevention of such intolerable Abuses of the People he makes this *Proposal*, That Physicians prepare and dispence their own Medicins, and shews at large, that the Advantages of such a Constitution will be many and great: As, that it will much abate the Expence of Physick; and the Medicins themselves will be more safe and effectual, than now they are, Interest obliging Physitians to have their Physick as good, as they can contrive or prepare; and that such a state of Physick of all other cannot but be most desirable, wherein *No Man having the Interest, can have the Power, nor any having the Power, can have the Interest to prepare Medicins unfaithfully*; wherein bad men shall be made good, and the good never be tempted to become dishonest: So that, if the *Sick* have regard either to profit or safety, they will address themselves to those Persons, who supply them with the best of Remedies, and at cheapest rates.

Secondly, As to *Physitians*, the *Author* tells them, that they must necessarily put their Affairs into some such method, as is here commended, if they have

have any concern for their *Patients*, or intend to improve *Pharmacy* it self Here he considers, that if *Physitians* depend onely upon what they read in *Books*, they shall never promote this Art beyond its present limits; and that, if *Physitians* in former times had not been knowing in *Simples*, examin'd their *Vertues* and *Temper*s, inquired into their effects, and mix'd them *with their own hands*, there had been no such Science as *Physick*; and therefore those things, which gave a being to this noble Faculty, ought to help to make it compleat; towards which as nothing can contribute more than the Improvement of *Pharmacy*; so neither can any thing promote that more, than *Physitians* taking it into their management. Besides all which, he thinks it most fit, that they, who *exercise* themselves in the *Præfise of Physick*, be satisfy'd, their *Medicins* are good; whereby their mind will be free and without any clog: which would add more difficulties and dangers to a thing, by it self hard and dangerous enough.

These and other Considerations, insisted on in this *Discourse*, will, in the Author's persuasion, induce all *Physitians*, who have respect to the Good of their *Patients*, Honour of their Profession, or own Reputation, to put *Pharmacy* into other hands, and better methods (for which he intimates, that a strong resolution is already taken) than those, wherein now it is; whereby they, who dishonour it (meaning the *Apothecaries*) will either be reduced to a sense and performance of their Duty, or sufficiently punished.

Besides all this, there are interspersed in this *Discourse* not a few particulars, both *Philosophical* and *Physical*; such as concerne the Improvement of *Natural Philosophy* by the exercise of *Chymistry* in the hands of discreet and able *Physitians*: the Discovery and use of abundance of *Generous Remedies*, hitherto industriously concealed by their Possessors from the *Apothecaries* and *Common Chymists*, upon the consideration, that they would make a preposterous use of them; such as are the *Essences of Plants* made by the Union of their *Volatile Spirits*, *Essential Oyles*, and fixed *Salts*, *Volatile Salt* or Spirit of *Tartar*, *Tincture of Corals*, *Essences of Pearls* and *Crabs Eyes*, *Valentinus's Tincture of Antimony*, his *Mineral Bezoar*, *Helmonts Elixir Proprietatis*, his *Laudanum*, the *Volatil Spirit of Vitriol*, the *Anodine Sulphur of Vitriol*, its *Essential Oyle*, the *Tincture of Gold*, &c. All which the Author assures to have seen himself, and declares himself ready to witness, that they have had extraordinary Effects. And he omits not particularly to insinuate, how much *Diet* can contribute to the cure or moderation of *Distempers*; and he affirms boldly, That there is scarce any *Chronical Disease*, that is cured by the *Shop-medecines*, which may not be cured with more certainty, ease and pleasure by *Drinks*, (joyn'd with a regular *Dyet*) as *Wine*, *Ale*, *Beer*, *Cider*, &c. impregnated in the time of their *Fermentation*, with the *Vertues of Simples*, *Animal*, *Vegetable* or *Mineral*, or their *Preparations* &c.

In the S A V O Y.

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