

Miscelaneorum capiti &, quâ ratione flexus contrarii curvarum ex Tangentibus inveniuntur, ostendi. Eadem ratione reperitur quoque $\mu\nu\alpha\chi\delta\iota\varsigma$ λόγος, ut vocat Pappus, & multa alia; quæ si explicare vellem, liber mihi scribendus esset. Nam & in Physico-mathematicis Usus quoque hujus Regula opinione major est: Licet enim falsum sit Axioma, Naturam agere per lineam brevissimam; verissimum tamen est, Viam sequi determinatam, &, ubi nullam invenit, agere doctus. De qua aliàs plura, si tanti Tibi visum fuerit: jam enim epistola modum excessi; ac vereor, ne, dum obscuritatem vitare satago, in prolixitatem inciderim. Adde tantum, me Regula mea Demonstrationem * habere facilem, & qua solis constet Lemmatibus; quod mirum Tibi fortasse videbitur. Vale. Dabam Leodii d. 17. Januar. C1717.

* Non dubitamus, quin rogatu nostro Illustris & Candidus hic Author Demonstrationem hic indigitatam Nobis etiam brevi fit communicaturus.

An Account of some Books.

- I. *A Discourse concerning the Origin and Properties of WIND, &c.* By R. Bohun Fellow of N. Coll. in Oxon. Printed at Oxford 1671. in 8^o.

THe Industrious Author of this Discourse, having consider'd with himself, how little Progress had been made, as in general, in the *History of Nature*, so, in particular, concerning the *History of Winds*, till our Voyages to the *East and West-Indies*, and the great advancement of Navigation in this and the precedent Age, furnish't us with so many new Discoveries and Improvements in all Natural knowledge, especially in the Motions of the *Winds and Seas*, that we must acknowledge the Insufficiency of the Theories received from the Schools of the Antients; having, I say, considered this, and withall met with frequent opportunities of conversing with the most Experienced of our Sea-Captains, giving him good information of the Course of the *Trade-winds*, the *Indian Monsoons*, the several sorts of *Brisés* in the African and American Climates, *Hurricanes*, and other tempestuous Winds: Endeavourereth in this Discourse to give a fuller Account of this Subject than former Writers have done, proceeding therein, as he assureth the Reader, with great caution, in seldom making use of any Account of Voyagers, but when several Relations did agree in the same Particulars, or when he

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found the Relators to be persons of un-suspected Integrity: Occasionally adding diverse Philosophical Reflections, in which he adhereth not to any one *Hypothesis*, but maketh use of several, as they to him seem to serve best for the Explication of the present *Phænomena*.

1. Then, he discourseth of the Opinions of the Antients, and compareth with them the Placits of the Moderns, considering *Wind* to be a Sensible Motion or Protrusion of the Air.

2. He examineth the *Local Origins* of Wind, and compriseth them under Three general Heads; as generated 1. In the *Lower Region*, by the Dilatation of Vapours or Air; by a surcharge of the Atmosphere; by the Pressure of Clouds, or the Elastical power of the Air. 2. From the *Earth* or *Seas*, as from Sub-marine or Sub-terranean Eruptions; where he gives divers Historical Instances of Winds breaking from under the Earth or Sea, and particularly of the famous *Mascarets* in the River of *Dordogne*, and the sudden Tumors in the Lake of *Geneva*. 3. By *Descension* from the *Middle Region*; where he makes their Gravity to be the Cause of their Descent, not their Repulse from the *Antiperistasis* of Contraries.

3. He ventures to explicate the Fluxes and Reflexes of the Air and Winds, and their Motions to several Quarters, and that, by the most Violent Impulse made that way where they find the *medium* most yielding, and fittest to propagate their motions.

4. He gives the reason, why some winds blow with greater violence than others; observing, that those which are nearest their *Local Origins* blow hardest, especially such as are re-inform'd by other auxiliary vapors as they pass.

5. He considers the *Essential Attribute* of Winds to be their *Transverse Motion*, and inquires into the various Causes of the same; discoursing withall of the other *Secondary Affections* of Winds; as their *Undulation*, *Repercussion* from Promontories, *Opposition*, &c. Where he endeavors

endeavors to explain, how it comes to pass, that one Wind blows on the Top of a Mountain, and a quite contrary in the Vally below ; and why in the main Sea, Winds keep the same Quarter a long time , but near mountainous Islands or Shoars they whistle up and down, and shift from one point of the Compass to another ; Observing also, that sometimes Contrary winds do rencounter together, and that by their ballancing one another a Calme ensueth.

6. He treats of the *Matter of Winds*, their *Limits* and *Extent*, and the *most Windy Seasons* ; giving an account, why they blow more in Spring and Autumn, than at other times.

7. He proceeds to the History of the *General or Trade-wind*, alledging the *Causes* why it blows constantly from the *Easterly* points, and imitates the Course of the Sun : Instructing us withall, where it is to be expected on this side of the Tropique ; as also of the *Variation* thereof in several *Longitudes*, and the Cause of the blowing of the *Westerly* winds *without* the Tropiques.

8. He treats of *Provincial* winds, such as wander not far from their native fountains, and terminat in those Regions that gave them birth.

9. He gives the History of the *Land and Sea-Brises* ; when they come in, or cease, in the *Straights*, on the Coasts of *Guiny*, and the *East and West-Indies* ; and what Accidents hasten or retard their approach.

10. He discourses of the *Anniversary Winds* ; their several species, and particularly those in the way to the East-Indies, called the *Monsoons* : How many months they continue the same Course on the Coast of *Afrique* and *India* ; together with the *Changing* and *Breaking up* of the *Monsoons*, and the danger there is then at Sea when they do so.

11. He examines the *Qualities* of Winds, derived from their *Constituent Parts*, or the *Medium* they pass through. Where he descends to the Consideration of the Properties of *Easterly*, *Southerly*, *Westerly* and *North-winds* ; inserting

divers remarquable Observations concerning them, and giving a Caution withall, to be used in Judging of the Qualities of Winds. Here also come in his remarques concerning *Het* and *Cold* Winds, and the examination of their Causes; concluding this Head not only with observing some *Unusual* Qualities of Wind, and the different odd Impressions they make upon other Bodies; but also delivering some proposals, for a more accurate Discovery of the Nature and Qualities of Winds, in relation to Navigation, Architecture, and several Trades and Mechanical Arts.

12. He inquires into the *Prognosticks* of Winds, from the different Appearances of the Celestial Bodies, from the Roaring of the Sea, the Resounding of Echo's, the peculiar Actions or Passions of some Living creatures, &c.

13. He subjoins an Historical account concerning *Whirlwinds* in general, and *Tornados*, *Hurricanes*, and other Tempestuous Winds; concerning which he delivers several uncommon and very remarkable Relations.

As to the whole matter, He is well aware, that it Will be hard to lay down any perfect *Theory* of Winds, in regard that the great *Inequalities* in the Superficies of the Earth; the several Obstacles and *Repercussions* from mountains; the different Situations of the places and *Mediums* in which they blow; the Distance of those Countries from the Poles of the World; their *Respects* to the Course of the Sun, whether they comply with, or resist, the *Natural Motion* of the Air from East to West, &c; have many intricate and nice speculations, not easie to be stated.

II. *Deux Machines propres à faire les Quadrans, avec tres-grande facilité; par le P. Ignace Gaston Pardies S. J. A Paris 1673. in 12^e.*

THe Learned Author, Professor of the *Mathematiques* in the Parisian College of *Clermont*, having found, that the difficulty, met with in the *Practick* of *Dyalling*, and
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in that tedious train of divers operations that are to be made in following the common method, generally taketh away the pleasure that would be in the exercise of a work that else is so curious and useful; is of opinion, that those Inventions will be much esteem'd, that shall make this practise easie. And in order thereto, he describes and explains in this Tract two *Engines*, which to him seem very proper for that purpose; forasmuch as he finds, that by the means of them a man may learn in less than an hour the way of making all sorts of *Dyals*, and may practise what he has learnt, as 'twere by playing, drawing them upon Walls and in his Chamber with the greatest facility.

He adds, that we are not to imagine, that the Use of these Instruments is but such a Mechanical Operation, where a man works blind-fold, not knowing what he doth: And he declares, that, as to *Operation*, those Practises that are simplest and surest are to be held the best and the most geometrical; and he is of opinion, that scarce any thing can be done with less trouble or with more certainty than by means of these Machines. But then, if the question be, to learn the *Theory of Dyalling*, he believes not, that it can be better done than by the Use of these very Engines; wherein he affirms that the Learner may easily be made to understand the Reason of all the Operations, the Respect of the Horary lines to the Course of the Sun, the Sections which the Arches of the Signs do make, and, in a word, the whole Science Gnomonique.

The Description and Explication of these Instruments doth so much depend upon the view of the Schemes, employed therein, that it cannot be well made without them: Which maketh us refer the Curious Reader to the Tract itself, now come over, wherein the necessary Schemes are annexed to the Discourse.