

Body: Not to say, how little it favors of the rankness of the Kidneys, and how much it resembles that, which it was, before 'twas taken into the Body. And methinks, the conveyance of the Milk into the breast hath much affinity with this of the Urine into the Bladder; the sudden pressing whereof into the Papps after the Nurtles drinking ordinary Milk could no more be explained by the ordinary doctrine of *Circulation*, than this of the urine into the Bladder, till the shorter cut was hit upon by the *Ductus thoracici*; though ordinarily it may be strayn'd in from the Arteries, as the *Serum* also in the Kidneys; onely in a Milk-flood Nature finds some other Channel there, as here in a Water-flood.

*Lastly*, Sometimes things are shed forth at the Niples, almost as much surprizing as this, we have spoken of, at the Neck of the Bladder. But I am perhaps too prolix in my reflexions, of which I desire you to believe I have as mean thoughts, as the Candidst of Readers shall. I am, &c.

Woodbridge, sept. 18. 1668.

II. Joh. Hevelii *COMETOGRAPHIA*. Printed at Dantzick A. 1668. in large Folio.

**I**N this curious and learned Volume the Illustrious Author hath with great industry endeavour'd to explain the *whole Nature* of *Comets*, their Place, Parallaxes, Distances from the Earth, Beginning and End, the several Appearances of their Heads and Trayns, together with their admirable motion; And all this by means of one constant and fit *Hypothesis*, by which he judgeth that all the *Phænomena* and *Questions* touching *Comets*, hitherto known, may be rationally and conveniently explained and demonstrated: All illustrated by 38 Schemes in *Folio*, engraven by the Author himself; as the whole Book hath been Printed at his own charges. To which is added both a *Particular* explication of the *Comets*, which appear'd A. 1652, 1661, 1664, 1665; and an History of all the *Comets*, recorded by Historians, Philosophers and Astronomers from the *Noachical* Deluge unto this day, enriched with the Authors Notes and Animadversions, and a general *Table*, representing, as it were, in one view, the most remarkable particulars observed in all *Comets*, *viz.* concerning  
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the time of their first apparition, their duration, place, motion direct or retrograde, slow or swift; the bigness, figure and colour of their Heads, and the bigness, shape and position of their Tayles.

He begins his enumeration and History of the *Comets* from *A.* 1656. after the *Creation of the World*, or from *A.* 2292. before the *Nativity of our Lord*; where the Reader will meet with a great and pleasant variety of the shapes, colors, brightness, magnitudes, &c. of *Comets*, together with the various consequences, noted by Authors and Men of an *Astrological* and *Divinatory Genius*. He reckons up about 250 *Comets* in number; not as if there had not been many more, but because no more have been Registred in Ages, either negligent of, or less knowing in such matters. He also takes notice of more *Comets* than one appearing at once, whereof there are to be found such Examples, that several times have been seen *two*, sometimes *three*, and twice *four* together; which latter he observes to have happened *A.* 1579. and *A.* 1618. He notes some of the forme of a *Wheel*, some of that of an *Horn*, others of the shape of a *Sword*, *Dagger*, *Zable*, *Javelin*, *Hallebard*, *Dragon*, *Beard*, *Flaming Pillar*, *Timber-beam*, *Dish*, *Shield*, *Tube*, *Pyramid*; others with two or three *Tayles*; others, *Trayn-less*; others so resplendent, as to enlighten the *Night* considerably, yea as bright as the *Sun*, obscuring all other *Stars*; some round, some ovall, some square; others having their *Train* discontinued and interrupted in one or more places, as if it were absorbed by the *Sky*, and emerged again; others having *Tayles* like *Peacocks*; others such, as extended themselves into the length, some of 30, some of 40, 45, 60, 70, 100 degrees and above.

He takes notice, that before the Noble *Tycho* no *Comet* hath been exactly and fully observed or described; and he gives a large account not onely of the *Comets* of the said *Tycho's* Observation, which appear'd *A.* 1577. 1590, but also of that, which was seen *A.* 1607, (accurately described by *Longomontanus* and *Kepler*) and of those of 1618, especially that famous one of the same year, which at first was 71 *Semi-diameters* of the *Earth* distant from the *Earth*, but at last farther from it than the *Sun*, in regard it had towards the end a lesser *Parallax*, than he: besides that it had

had an extraordinary Trayn, sometimes 45, 60, 75, yea 104 degr. long; as also that for some time it shone all night, and now and then seem'd to break out into Lightning. To all which he adds the Observations of the Comets seen A. 1647, 1652, 1661, 1664, 1665, of which the last four were diligently observ'd and are exactly describ'd by himself.

As for the *Theory*, whereby the Author renders an Account of all the *Phænomena* of Comets, he supposeth, that they all move in a *Streight Line*, by which supposition (first suggested by *Kepler*) and no other, that he can imagine, he esteems that all the Appearances of them, how insoluble soever else they seem, may very easily be explicated, especially supposing the Sun in the Center of the Universe, and the Annual motion of the Earth; though he suggests also a way of saving the said *Rectilinear* motion even without destroying the systeme of *Ptolemy*. But yet he would not be understood so strictly in asserting that *streight* motion, but that Comets may more or less deviate from that streightness, both in appearance, and really; the *former* arising from the various sight of them, and their various distance from the Earth and the Sun, and the Annual motion of the Earth; the *latter*, from the matter of their Bodies and *Nucleus's* (as he calls the substance of their *Head*) not increasing nor decreasing uniformly on all sides. To which he adds the consideration of a motion impress'd, and that of an Inclination of the Cometick Disk to the Sun, as two other Causes, why Comets may now and then, especially about the beginning and end of their appearance, somewhat digress from their streight course. Where he alledges, that he hath much laboured to give an account of Comets by a *Circular* motion, but could not possibly satisfie himselfe in it, nor answer the *Phænomena* of most, though perhaps that *Hypothesis* may serve to salve some of them.

But then, to explaine that *Trajectory rectilinear* motion, he subjects the Comet of A. 1652. to a very rigid *calculus*, to shew, how that line is to be delineated, and how that way is applicable to all other Comets.

Further, to render a *Cause* of this motion, he supposeth, that, as all Celestial Bodies move about their *Axes*, their Atmosphere wheeling perpetually round about with them; so the matter,

which exhalet from the Sun and the other Planets, not onely issues out of them in a straight way, but also, whil'st those Bodies, together with their Atmosphere, move round, turnes constantly about with them, till it desert the said Atmosphere. To which he adds, that the matter of those exhalations are of the like nature with our Terrestrial Vapors, in that they are apt to condense, and after a while to be dissolved, and to return again to their first principles. Having supposed this, he assumes farther, that Bodies turn'd round, the longer they move, and the greater the Circle is, they move in, the greater *impetus* and vehemence they acquire, tending alwayes to recede from the Center to the Circumference, and being separated and set at liberty from their vertiginous or circular motion, they continue to be moved (as long as no stop intervenes,) but no more in that *circulary*, but in a *straight line*, *viz.* in the *Tangent* of the Circle.

After this manner he concludeth, That as soon as vapors exhale or are expelled out of a Celestial Body, whether it be the Sun or other Planets, into the Atmosphere incompassing it (which that they do, he endeavours to prove) they still acquire more and more force to move from the Center or the Planet to the Circumference (by vertue of the swift circumrotation of the Atmosphere, which together with its Body or Planet is turn'd round about,) till at last, being ejected out of their Circle into the free Sky, and more and more supplied with the accession of the like matter, they make up the Bodies of Comets, and then move in a straight line, obverting one side to the Sun, as Clouds do theirs to our Earth.

Having laid down this, he deduceth thence the explication of the *Phænomena*, and Questions, hitherto observed and raised in and about Comets, *viz.* How they increase in bulk, and commonly with much quickness near the Sun? Why they are made up of several *Kernels*? Why not all Cometick matter is moved towards the same quarter of the Heavens? How it comes to pass, that at one and the same time more Comets than one are produced, and that they meet one another, and by their mutual concourse change one anothers motion; or break into parts and so constitute several Stars? Why all Comets are not visible to us? Why there are more Comets in one Age, than another? Why

Why they do not alwayes move equal spaces in equal times; nor alwayes in a Line *precisely* streight, ( there being almost none such in Nature but sometimes with an Inclination of its Diske, so as to make a *Parabola*, yet never the Segment of a *Circle*? How they observe two motions, an External, and Internal or Natural? How one of the flat sides of the *Cometick* Diske respecteth the Sun, as the *Magnetick* Needle does the North-Pole? Why the Motion of Comets is swiftest, where the Sun-beams fall perpendicularly on it? Why the motion of a recent *Cometick* matter is made *spirally*? Why that *Spiral* is not the same in all Comets? Why one Comet moves much swifter than another? Why the motion of one and the same Comet increaseth and decreaseth? How a new Comet issues out of its Atmosphere? That the densest Comets move swiftest. That, though the motion of Comets be unequal, yet 'tis not irregular. Whether Comets alwayes are most vigorous in the middle of their way? When Comets describe a *Semi-parabola* only? Why Comets are almost never perceiv'd by Us, when they first emerge out of their Atmosphere? That the motion of Comets hath a conformity with that of Ships. That the Sun does the same in the deviation of Comets, what a Pilot or Ship-master doth by the meanes of Cables in the direction of Sayling. That Comets, like Ships, describe sometimes an entire, sometimes a *Semi-parabola*. That it appears by the inflexion of the Trajectory line, whether the way of the Comet be *Circular* or *Elliptick* or *Paraboli-cal*. Why this motion is rather *Paraboli-cal*, than *Hyperbolic*? That the greatest deviation of Comets from the line of direction is scarce of two degrees; though 'tis not altogether improbable, but that in some it may be a little greater, especially in those, that traverse through a much vaster space of the Heavens, than others, and are of a very long duration: That the matter and figure of a Comet, and the *impetus* at first impressed, make much to its motion: That Comets, which come out of larger Atmospheres, and from about their *Æquator*, and are of a compact body, are swiftest, and especially those, that have their rise from the Sun. How the motion of the *Spots* of the *Sun* may be compared with that of Comets? How the greatest velocity and tardity of the motion of Comets may be limited? That there is a *Libratory* motion in Comets as well as in the Moon, &c.

The

The Curious are hereby advertised, that the Author hath thought fit to lodge with the *Publisher* a number of Copies both of this *Cometography*, and of all his former Works, viz. the *Selenography*, *Mercurius in sole visus*, *Venus in sole visa*, *Epistola de motu Libratorio Luna*, and the *Prodromus* and *Mantissa* concerning the two Comets of *An. 1664*, and *An. 1665*. All which Books being order'd by the Author to be vend'd here, for an Exchange into the longest and best Telescope, that can be made by *English Artists*; those that are desirous to be furnish'd with them, may please to address themselves to the *Publisher*, who is ready to give them further information herein.

II. Renati Des Cartes *EPISTOLÆ*; Pars I. & II.  
Londini A. 1668. in 4°.

**T**Hough some few of these *Letters* were by the Author himself written in *Latin*, yet the farr greater part of them having been by him written in *French*, they are now come abroad all Translated into *Latin*, for the benefit of those, that are unskilful in the other Language. They contain very many Philosophical questions and matters, of all sorts, and an Explication of many difficulties, to be met with in the other Works of the Illustrious Author; and were written to some of the most Eminent persons for knowledge and learning of this Age. The intelligent Reader will find here an incredible and exceedingly delightful variety of Subjects, *Geometrical*, *Arithmetical*, *Musical*, *Optical*, *Mechanical*, *Physiological*, *Medical*, *Metaphysical* and *Moral*.

There is a *Third* part of the same Authors Letters yet remaining un-translated, which is like to follow very shortly, with some other Tracts, concerning *Man*, and the *Union of the Rational Soul with the Body*; whereof the former was written by *Descartes* himself, the latter by the Ingenious *D. Dela Forge*, upon *Cartesian Principles*.

III. Scrutinium Chymicum *VITRIOLI*, Auth. Joh. Georgio Trumphio, *Saxone, Med. Licentiato. Fene 1667.*  
*Consisting but of 8 or 9 sheets in 4°.*

**T**HIS Author endeavours in this small *Tract* to shew the Nature, Difference, Choice, Qualities and Vertues, (especially in *Physick*) of *Vitriol*, together with the various wayes of preparing both dry and liquid Medicins out of that Mineral Juyce. The way of making *Vitriol* used at *Goslar* in *Germany* (the Authors Native Country) we shall thence extract and give here verbatim, as follows ;

*Fit & Goslarieſe Vitriolum per cocturam.* Poſtquam enim terra vitriolata ex vicino monte Rammelo in officinas coctorum delata fuit, facto lixivio, in abeno plumbeo totum Vulcano negotium committunt. Hic poſtquam fideliter ſuam navavit operam, perque deſinitum coctioni tempus crepitantes ſubminiſtravit flammæ, liquor ille coctus exhauritur, inque cados ligneos inſignis peripheriæ & altitudinis tranſmittitur. Super hæc vaſa lignea adornantur, tranſſorum in morem, trabecula perforata. His foraminibus adaptantur, & firmantur calami arundinis, qui ad fundum uſque vaſis immittuntur. Ubi itaque congelafcit, poſt aliquod temporis intervallum adherent calamis chryſtalli vitriolati, eximium præbentes oculis ſelamen, pelluciditate ſua cum Sapphirina gémma decertantes.

Here he examins, why Vitriol will onely be boyled in Leaden Veſſels, and alledges divers opinions concerning it.

He alſo mentions an Experiment, which ſeems pretty, if true; viz. that Vitriol, placed cloſe to Amber, will loſe its colour and pungency.

He takes notice, when he ſets forth the praiſes and uſes of this Mineral, that it alone may well make up the fourth part of an Apothecaries Shop, and cure the fourth part of Diſeaſes. A Paracelſian aſſertion!

He forgets not the Sympathetick Powder, made of this ſubſtance; nor its vertue in ſtopping pertinacious Hemorrhagies; alledging an Example of a Country-man, who having been ſorely wounded in his Skull, ſo that the bleeding could not be ſtopp'd any other way, had by the application of this vitriolate powder preſent help, and ſoon after a perfect cure of his wound.

*R. Vitrioli Goſlar. in Solis radiis ad album calcinati uncias VIII, pulv. Gummi tragac. puriſſimi i. unciam. Miſc. invicem diligenter, ut fiat pulvis ſubtiliſſimus ſympatheticus.*

#### IV. Franciſci de le Boe Sylvii PRAXIS MEDICÆ Idea nova, Lib. I. Lugd. Batav. in 12° 1667.

**T**HIS Treatiſe was not long ſince tranſmitted to the *Publisher* by the *Author* himſelf, and there is perhaps as yet never an other Exemplar of it in *England*; which is therefore intimated here, that our Stationers may be invited to ſend for ſome Copies of it over, the Book ſeeming to be both very ingenious, and conſiderable.

There are in this *fiſt* part of the *Idea* conſidered thoſe Diſtempers, which reſpect the diſeaſed Functions *Natural*, as in the *ſecond* part he intends to conſider thoſe, which regard the diſeaſed *Animal* Functions, and in the *third*, ſuch as belong to thoſe, that are appointed for *Generation*.

Of every Diſtemper he endeavours to diſcover its nature, cauſes, concomitants, remedies, of which laſt he delivers a great number of preſcriptions, which he varieth according to the various tempers and humors of Patients.

He intermixes abundance of Philoſophical Speculations and Remarks, among which are ſome concerning Fermentation; the noxiousneſs of all ſuch things, as either deſtroy or dull the Acid Spirit of the Body in the work

Of Nutrition; the dominion of the three Humors in the Body of Animals, viz. the *Gall*, the *Pancreatick Juice*, and the *Saliva*, and their Mixture, either immediate or mediate, with the Blood returning to the Heart; as also their great influence, when they are vitiated, in disturbing the Effervescence of the Blood, as well as their power and vertue, when they are temper'd together in a due proportion, to cause a regular motion in the blood, and to convert meat into good nourishment: Farther, about the Change of the Chyle into Blood, and where that change is begun, where advanc'd, and where perfected: About the alteration made in the whole body of Animals by the Spermatick *Aura*, as to their Voice, fatness, sweetness, &c. About Respiration, and how that may cease for a while in *Syncope's* and *Hypochondriacal Suffocations* without death; about Sneezing, the Hiccocke, Yawning, Pandiculation, and their Causes: The alteration, which the blood of the left Ventricle receiveth in the Lungs by the inspired Air, and the *Saliva*, or some other glandulous liquor: Of the Pulse; of the Plenty of Animal Spirits and its cause; of the return of Feaverish fits by intervals, together with the cause thereof, &c.

### E R R A T A.

UPON a second and more leisureable perusal of some of the former *Transactions*, there are found left the following faults, of which some may be so material as to prejudice the sense; viz. p. 641. l. 1, 2, 3. the Author of the Book, there spoken of, thinks it more suitable to the tenor of that Book, to change those words, *A new method analytical for giving the Aggregate of an infinite or indefinite converging Series*, into these, *A new method Analytical, whereby in general he gives the termination of a converging series conditionally, and in two particular cases does the same absolutely.* Compare N. 37. p. 734. l. 27. et seq. Besides, p. 654. l. 24. leg. MDCLVIII. p. 725. l. 22. for 70 *loids* r. 70. *Combs.* p. 746. l. 24. *tam aperta.* p. 749. l. 6. *ducatur* pro *dicatur* p. 750. l. 9. *ang lum solidum.* l. 20. *Est quidem.* p. 754. l. 32. *elegantis.* p. 755. l. 31. 0,000485203, —. p. 756. l. 1. AHGN. p. 758. l. 11. *caplana.* *ibid.* l. 20. 83b<sup>o</sup>, &c. *ibid.* l. 23. *completes.* *ibid.* l. 28. ADES. p. 764. l. 8. leg. = oLoi, *numerus.* p. 778. l. ult. *seu pro fin.* Some literal and Grammatical faults, as *quadraturæ pro quadratæ*; p. 753. l. 12 *homogencorum pro homogeneorum*, p. 778. l. 39. and such like; the Reader will be pleas'd to mend himself.

### F I N I S.

In the S A V O R,

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