

kind. It may be said, that every Art tends to give the Mind a particular Turn; and that the only way of maintaining it in its natural Rectitude, is by calling in other opposite ones, by way of Counter-balance. Thus we find nothing more perverse and unsufferable than a mere Mathematician, mere Critic, Grammarian, Chymist, Poet, Herald, or the like; and the proper Disposition is only to be had from a just Temperament or Mixture of 'em all.

I OWN this is not the way to make a very great progress in any Art; but at the same time it is the only way to hinder our being spoil'd by any; and becoming Creatures rather of *Homer* or *Aristotle's* making, than God's: and receiving our Tastes, Views, Relishes, at second hand, rather than from Nature her self. This, however, is only to be understood with regard to personal Benefit. For no doubt the Publick is better provided for, by the mere Pursuers of particular Arts, than the general Appliers to all: since each is hereby brought to greater Perfection; and the Mixture and Temperament, wanting in the Individuals, is found in the Whole.

TO conclude, the ultimate View of a Work of this, or any other kind, should be, the forming a sound Mind, *i. e.* a System of Perceptions, and Notions agreeing to the System of Things, or in the Relation thereto, intended by its Author. The End of Learning and Study, is not the filling our Heads with other Mens Ideas; that is an Inrichment which may prove for the worse, if it carry any ill Quality with it: Richness is not the chief thing aim'd at; 'tis only a Circumstance, or Matter of a secondary Consideration: Soundness is the first. There are many Manures which the Husbandman dares not use, by reason they would corrupt the Land, at the same time they enriched it; and lay the Foundation of a Disease, which would in the End impoverish, and make it spend it self in unprofitable Weeds. A little pure Logic, or Theology, or Chymistry, in some Peoples Heads, what Mischiefs have they not produced?----But it must be owned, Mens Heads are not so soon fill'd: the Memory is not so tenacious as we imagine; Ideas are transient things, and seldom stay long enough with us to do us either much good, or harm: Ten to one but what we read to-day, is forgot again to-morrow. And what chiefly makes new Ideas of any signficancy, is their extending and enlarging the Mind, and making it more capacious and susceptible.----But neither is this Enlargement the last Aim; but is chiefly of use, as it contributes to the increasing our Sensibility, to the making our Faculties more subtil, and adequate, and giving us a more exquisite Perception of things that occur; and thus enabling us to judge clearly, pronounce boldly, conclude readily, distinguish accurately, and to apprehend the manner and Reasons of our Decisions. In which view, several things may be useful, that are not so much direct Matters of Knowledge, as subservient to the same End; for instance, much of the School Philosophy, which by exercising and exciting the Mind, has a kind of collateral tendency to sharpen its Faculties; and needs only be read, not retain'd, to produce its Effect.----But neither does the Matter end here: Even this does not amount to the full and adequate End of Knowledge: This is only improving the Organ; and there must be some farther End in such Improvement. No Man sharpens his Weapon on the sole Consideration of having it sharp, but to be the fitter for use. Briefly, then, our Faculties being only so many Inlets, whereby, and according to the Measure whereof, we receive the Intimations of the Creator's Will, or rather, the Effects of his Power and Action; all the Improvements made in 'em, have a tendency to subject us more entirely to his Influence and Direction; and thus make us conspire, and move more in concert with the rest of his Works, to accomplish the great End of all things. In which our Happiness and Perfection consists; the Perfection of a single Nature, arising in proportion as it contributes to that of the $\text{T O} \Pi \text{A} \text{N}$.

E R R A T A.

- I**N the Article *Angle*, Page 97. Column 1. Line ult. for *Centre L*, read *Centre I*.
 Article *Mean Anomaly*, l. 10. insert *Fig. 64*.
 Article *Asymptote of a Logarithmic Curve*, insert *Fig. 33*.
Centre of Oscillation, l. 11. for *DEHB*, r. *DFHB*.
Centripetal Force, l. 2. for *Fig. 24*. r. *Fig. 25*.
Centrobaryc, Corol. VI. for *divided into two MD*, r. *be bisected in D*, and for *m O*, r. *in O*.
Chord, p. 211. col. 2. l. 26. for *Fig. 7*. r. *Fig. 6*.
Circle, p. 221. col. 1. l. 27. for *DE* r. *DF*, and l. 36. insert *Fig. 7*.
Circumscribing, for *Fig. 32*. r. *Fig. 29*.
Commutation, l. 3. after *Earth* insert *at S*, and for *Fig. 24*. r. *Fig. 26*.
Compasses, for *Geman Compasses* r. *German Compasses*.
Composition of Motion, l. 27. for *as far as e e*, r. *as far as e e*.
Conchilis, l. 7. for *EE* r. *EF*.
Cone, p. 300. col. 1. l. 13. for *Diameter of its Base*, r. *Diameters of its Bases*.
Contact, l. 15. for *cuts* r. *touches*.
Crepusculum, p. 344. l. penult. for *Sum of*, r. *Sum's*, and p. 345. l. 2. and 3. for *PZ the Elevation of the Pole PR*, r. *PZ the Complement of the Elevation*, &c.
Curve, p. 361. col. 2. l. 26, and 59. for *Tab. Analysis* r. *Tab. Geom.*
Cycloid, l. 4. for *Tab. Analysis* r. *Tab. Geometry*.
Declinator, l. 25. for *Centre E*, r. *Centre F*.
Designing, l. 10. for *Fig. 9*. r. *Fig. 15*.
Diagonal, l. 77. for *BS*, r. *BE*.
Horizontal Dial, l. 9. for *Meridian Line B*, r. *Meridian Line AB*; and l. 16. for *DC*, r. *DE*, and l. 22. for *a BCDH*, r. *abcdH*.
East Dial, l. 11. for *AC*, r. *DC*.
Primary Dial, l. 20. for *EE*, r. *EF*.
Line of Distance, for *Fig. 10*, and *11*. r. *Fig. 12*.
Division in Lines, insert *Tab. Geometry*, *Fig. 17*.
Eccentric, for *Fig. 11*. r. *Fig. 1*.
Equation, p. 335. col. 1. l. 15. for *given Position*, r. *given in Position*.
Flying, l. 20. for *Temporal Muscles* r. *Pectoral Muscles*.
Geocentric Latitude, l. 11. for, *e T Q* r. *e t q*.
Latus Transversum, for *Fig. 5*. r. *Fig. 1*. and for *GLRO* r. *DLRO*.
Logistic Spiral, for *Fig. 11*. r. *Fig. 22*.
 Article *Concave Mirror*, Law II. after *F* insert *Fig. 34**.
Paracentric Motion of Impetus, for *Fig. 25*. r. *Fig. 24*. and dele *T*.—*Paracentric Solicitation of Gravity*, dele *Fig. 26*.
Parallax of Longitude, for *Fig. 28*. r. *Fig. 29*.—*Parallax of Ascension*, for 29. r. 28.
Parallelogram, l. 17. for *Fig. 39*. r. *Fig. 41*. and l. 19. for *CH* r. *CD*.
Particula Exfors, for *Augment* r. *Argument*.
Perspective of a Triangle, l. 14. for *since a, b, and are the Appearances*, r. *since a, b, and c are the Appearances*.
Inclined Plane, Law IX. after *AC* insert *Fig. 58*. and in the Corol. of the same Law insert *Fig. 60*. and in Law XIII. for *BAK* r. *FG*.
Projectile, Law III. after *describe a Parabola* dele *in a Medium uniformly resisting*.
Pump, Artic. Structure of a Forcing Pump, l. 1. for *in a Cylinder* r. *a Cylinder*.
Pyramid, l. 70. for *DF* r. *DE*.
Sinical Quadrant, l. 2. insert *Fig. 18*.
Quadrature of the Ellipsis, l. 2. for *Circle*, r. *Curve*.
Rectangle, l. 22. for *Fig. 41*. r. *Fig. 61*.
Rectification of a Parabola, for *Conjugate Axes* r. *Conjugate Semiaxes*; and after *Hyperbolic Space*, add *CQMA*.
Rectification of the Cycloid, l. 1. insert *Fig. 27*.
Reduction of a Figure, l. 11. for *Fig. 64*. r. *Fig. 65*.
Refraction, l. 9. for *B*, r. *F*.
Retrogradation of the Sun, l. 2. for *AN*, r. *AM*.
Rhomb, Article I. insert *Fig. 19*.
Screw, Art. IV. for *to be applied in K*, r. *to be applied in D*.
Sculpture in Marble, after *another Plummet like that of the Model*, insert *Tab. Miscellany*, *Fig. 2*.
Secant, l. 4. for *Circle B*, r. *Circle in B*.
Sector, p. 45. col. 1. l. 41. for *Lines* r. *Sines*.
Sine, p. 81. col. 1. l. 63. for *the Arch EFC*, r. *the Arch FC*.
Sine-Complement, l. 2. for *AE*, r. *AH*.
Solid Angle, l. 3. for *Fig. 30*. r. *Fig. 31*.
Star, p. 122. col. 2. l. 20. for *Fig. 31*. r. *Fig. 7*. and l. 24. for *the Star C describing an equal Arch CDH*, r. *the Star D describing an Arch equal to CDH*.
Triangle, p. 242. col. 2. l. 41. for *AC*, r. *BC*.

N. B. The Figures relating to each Art are placed fronting the Name of the respective Art, in the Body of the Book; and are refer'd to under that Title: as, *Tab. Architecture*, *Tab. Geometry*, &c.—To each Figure is also annex'd the Word for whose Exemplification it serves: So that the Reader may either go from the Word to the Figure, which exemplifies it; or backwards, from the Figure, to the Word which explains it.