THE PREFACE.

TIS not without some Concern that I put this Work in the Reader's Hands; a Work so disproportionate to a single Peron's Experience, and which might have employ'd an Academy. What adds to my Jealousy, is the little measure of Time allow'd for a Performance to which a Man's whole Life scarce seems equal. The bare Vocabulary of the Academy della Crusca was above forty Years in compiling, and the Dictionary of the French Academy much longer; and yet the present Work is as much more extensive than either of them in its Nature and Subject, as it falls short of 'em in number of Years, or of Perions employ'd.

THE Reader might be here led to suspect something of Disingenuity; and think I first put a Book upon him, and then give him Reasons why I should not have done it.---But his Suficicions will cease, when he is apprized of the Advantages under which I engaged; which, in one Sense, are superior to what had been known in any former Work of the Kind; all that had been done in them accruing, of course, to the Benefit of this. I come like an Heir to a large Patrimony, gradually raised by the Industry, and Endeavours of a long Race of Ancients. What the French Academists, the Tiffins de Tromp, Dacier, Chenuel, Swane, Cunen, Harris, Wulfius, and many more have done, has been subservient to no Purposes. To say nothing of a numerous Class of particular Dictionaries which contributed their Share; Lexicons on almost every Subject, from Medicine and Law, down to Heraldry and the Manage.

Yet this is but a Part. I am far from having contented my self to take what was ready procured; but have augmented it with a large Accession from other Countries. No part of the Commonwealth of Learning, but has been traffic'd with on this Occasion. Recourse has been had to the Originals themselves on the several Arts; and, not to mention what small Matters could be furnished de proprio pen, the Reader will here have Extracts and Accounts from a great Number of Authors of all Kinds, either overlook'd by former Dictionaries, or not then extant; and a Multitude of Improvements in the several Parts, especially of Natural Knowledge, made in the last Years. I should produce Instances hereof; but I hope this would be needless, as it is endless; and that there are few Pages which will not afford several.

SUCH are the Sources from whence the Materials of the present Work were derived; which, it must be allow'd, were rich enough not only to afford Plenty, but even Profusion; So that the chief Difficulty lay in the Form; in the Order, and Economy of the Work: To dispose such a Variety of Materials in such manner, as not to make a confused Heap of incongruous Parts, but one consistent Whole.---And here it must be confesse'd there was no Affluence to be had; but I was force'd to labour wholly on my own Bottom. Former Lexicographers have not attempted any thing like Structure in their Works; nor term to have been aware that a Dictionary was in so much capable of the Advantages of a continued Discourse. Accordingly, we find nothing like a Whole in what they have done: And hence, such Materials as they did afford for the present Work, generally needed further Preparation, ere they became fit for our Purposes; which was as different from theirs, as a System from a Censor.

THIS we endeavoured to attain, by considering the several Matters not only absolutely, and independantly, as to what they are in themselves; but also relatively, or as they respect each other. They are not treated as so many Wholes, and so many Parts of some greater Whole; their Connexion with which, is pointed out by a Reference. So that by a Course of References, from Generals to Particulars; from Premises to Conclusions; from Cause to Effect; and vice versa, i.e. in one word, from more to less complex, and from less to more; A Communication is opened between the several Parts of the Work; and the several Articles are in some measure placed in their natural Order of Science, out of which the Technical or Alphabetical one had remov'd them.

FOR an Instance.---The Article Anatomy is not only consider'd as a Whole, i.e. as a particular Combination or System of Ideas; and accordingly divided into its Parts, Humane and Comparative; and Humane again subdivided into the Analysis of Solids and Fluids, (which are refer'd to in the several Places in the Book, where they themselves being treat'd of, refer to others still lower, and so on) but also as a Part of Medici: which accordingly it refers to, and which it itself refers to another higher, &c.;---By which means a Chain is carried on from one End of an Art to the other, i.e. from the first or simplest Composition of Ideas appropriated to the Art, which we call the Elements or Principles thereof; to the most complex or general one, the Name or Term that denotes the whole Art.

NOR is the Pursuit stop here: but as the Elements or Data in one Art, are ordinarily quasias in some other subordinate one, and are furnish'd thereby; (as here for Instance, the Elements of Anatomy are furnish'd by Natural History, Physics, and Mechanics;) and Anatomy may be consider'd as a Datum, or Element furnish'd to Medicine We carry on the View farther, and refer out of one Art or Province into the adjoining ones, and thus lay the whole Land of Knowledge open: It appears indeed with the Face of a Hindrances; but 'tis a Wilderness thro' which the Reader may pursue his Journey as securely, tho not so expeditiously and easily, as thro' a regular Parterre.

IT may be even said, that if the System be an Improvement upon the Dictionary; the Dictionary is some Advantage to the Reader; and that this is perhaps the only Way wherein the whole Circle or Body of Knowledge can be deliver'd. In any other Form, many thousand Things must necessarily be hid and overlook'd: All the Pins, the Joints, the binding of the Fabrick must be invisible of course; all the lesser Parts, one might lay all the Parts whatsoever, must be in some measure swallowed up in the Whole. The Imagination, first'd a
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and amplified to take in so large a Structure, can have but a very general, indistinguishable Perception of any of the Parts. — Whereas the Parts are not less Matter of Knowledge when taken separately, than when put together. Nay, and in strictness, as our Ideas are all Singulares or Individuals, and as every Thing that exists is one; it seems more natural to consider Knowledge in its proper Parts, i.e. as divided into separate Articles denoted by different Terms; than to consider the whole Affembhige of it as its utmost Composition: which is a thing merely artificial and imaginary.

AND yet the latter Way must be allowed to have many and real Advantages over the former; which in truth is only of use and significance as it partsake thereof: For this Reason, that while Writing is in its own Nature artificial; and that the Imagination is really the Faculty it immediately applies to; Hence it should follow, that the most advantageous way is, to make use of both Methods; To consider every Point both as a Part; to help the Imagination to the Whole; and as a Whole, to help it to every Part. — Which is the View in the present Work — so far as the many and great Difficulties we had to labour under would allow us to pursue it.

IN this View we have endeavoured to give the Substance of what has been hitherto found in the several Branches of Knowledge both natural and artificial; that is, of Nature, first, as it appears to our Senses; either spontaneously, as in Natural History; or with the Affihance of Art, as in Anatomy, Chemistry, Medicine, Agriculture, &c. Secondly, to our Imagination: as in Grammar, Metaphysics, Poetry, &c. Thirdly, to our Reason: as in Physics, Metaphysics, Logicks, and Mathematics. With the several subordinate Arts, varying from each; as Architecture, Painting, Sculpture, Trade, Manufactures, Policy, Law, &c. and numerous remote Particulars, not immediately reducible to any of these Heads: as Heraldry, Philology, Antiquities, Customs, &c.

THE Plan of the Work, then, I hope, will be allowed to be good; whatever Exceptions may be taken to the Execution of it. It would look extravagant to say, That half the Men of Letters of an Age might be employed in it to advantage; and yet it will appear, that a Work accomplished as it ought to be, on the footing of this, would answer all the Purposes of a Library, except Paradise and Incumbance; and contribute more to the propagating of useful Knowledge thro' the Body of a People, than any, I had almost said all, the Books extant. — After this, let the Reader judge how far I may deserve Censure for engaging in it, even disadvantageously; and whether to have failed in so noble a Design, may not be some degree of Praife.

BUT, it will be here necessary to carry on the Division of Knowledge a little further; and make a precise Partition of the Body thereof, in the more formal Way of Analysis: The rather, as an Analyst, by flowing the Origin and Derivation of the several Parts, and the Relation in which they stand to their common Stock and to each other; will afflit in retorting 'em to their proper Places, and connecting 'em together.

KNOWLEDGE, is either

Natural and scienfical, which is either

Natural and, consisting in the Perception of Pheno-

ment, or External Objects, or NatUral History, and which according to the different Kinds of Such Objects, divides into

Meteorology, Hydrology, MeUrology, Phytology, Geology.

The Body, consisting in the Perfection of Phenom-

ena, or External Objeets; and which according to the different Kinds of Such Objects, divides into

Mathematics, Physics, and Natural Philosophy.

Mathematics, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

Arithmetic, Geometry, Trigonometry, Conic.

Physics, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into


The Body, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

Architecture, Sculpture, Trades, and Manufactures.

Philosophy, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

The Military Art, Fortification, Survey, &c.

Natural Philosophy, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

Anatomy, Geography, Hydrology, Navigation.

Natural History, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

Animals, Vegetables, Plants, Hunting, Fishing, &c.

Philosophy, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

Poetry, History, &c.

The Body, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

The Sciences, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

Chemistry, Physics, and Natural Philosophy.

The Body, consisting in the Perception of the Insufficiency of the Human Understanding; and which according to the different Kinds of Such Objects, divides into

Mathematics, Physics, and Natural Philosophy.
I MIGHT here have ended my Preface, and perhaps the Reader would be willing enough to be thus dismissed. But something has been already started which will require a further Disquisition.—The Distribution we have made of Knowledge is founded on this, that several Branches thereof commence either Art or Science according to the Agency or Non-agency of the human Mind in respect thereof: It is therefore to take the Matter up a little higher; and explain the Reason and Manner of this Operation. To consider Knowledge in its Principles.
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The P R E F A C E

TO be a little more explicit—Words are the next Matter of Knowledge; I mean, of Knowledge consider'd as it now stands, communicable, or capable of being transmitted from one to another. We should have known many Things without Language; but it would only have been such Things as we had seen or perceived our selves. The Observations of others could no way have been added to our own; but every Individual must have gone thro' a Course for himself, exclusive of all Advantages to, or from, Contemporaries, Predecessors, or Successors. It is evident that, in this Cafe, nothing like an Art, or Science, could ever have been, or even in the Mind of the most sagacious Observer; The little Syntax of Knowledge, especially to a Being whose Views were all to terminate in himself. Add, that, as the chief Occupations of his Observation would be of the same kind with those of other Animals; 'tis probable his Knowledge would not have been very different, whether we consider its Quantity or Quality. 'Tis confest that all our Knowledge, in its Origin, is no other than Sense, whereas it should follow, that one Being has no natural Advantage over another in its Disposition for Knowledge, other than what it has in the one, Experience, or Extent of its Senses.

'TIS, in effect, to Language that we are chiefly indebted for what we call Science. By means hereof our Ideas and Notices, the Things in their own nature merely personal, and adapted only to private use, are extended to others, to improve their stock: and thus, by a kind of second Sense, we get Perceptions of the Objects that are perceived by all Mankind; and are, as it were, the Prophets, to Things at all Distances from us: We hear Sounds made a thousand Years ago, and see Things that pass a thousand Miles off. If the Eagle really sees, the Raven smells, and the Hare hears, further and better than Man; their Sense, at best, is but narrow, in comparison of ours, which is extended, by the Artifice of Language, over the whole Globe. They see with their own Eyes only; we with those of the whole Species. In effect, by Language, we are upon much the same footing, in respect of Knowledge, as if each individual had the natural Sense of a thousand: an Accidence which alone must have set us far above any other Animals. But at the same time, this very accession of a multitude of Ideas more than naturally belong'd to us, must have been in great measure useless: without certain other Faculties of ordering and arranging 'em; of abstractive, or making one a Representative of a Number; of comparing 'em together, in order to learn their Relations; and of compounding, combining 'em, &c. to make 'em act jointly. The Effect hereof is what we call Discursing and Philosophizing: And hence arise Discursive, Theories, &c. To carry these Part, or Point of Knowledge; such as do not, have no Buses in the Language, and ought of Consequence to be thrown out of doors. It follows, that the Vocabulary of any Language, is representative of the several Notices of the People among whom it obtains: I mean of the primary or absolute Notices; for by the Construction of these Words with one another, a new Set of Secondary or Relative Notices are express'd. To carry these Part, into this, it is to be observ'd, that the several Objects of our Sense, with that other Set of Things analogous hereto, the proper Objects of the Imagination, are represented by fixed Names*; denoting, some of 'em, Individuals; others, Kinds, &c. Now, the, which make the first or fundamental Part of a Language, 'tis obvious, are no other than a Representation of the Works of Nature, as they exist in a kind of still Life, or in a State of Independence one upon another. But in regard we do not consider the Creatures, as thus quite isolated, or as being convertible among us; we are hence put under a necessity of framing another Set of Words, to express these Variations, and the Actions to which they are owing, with the several Circumstances and Modifications thereof. By this means, Nature is remov'd out of her dormant Confinement, and thrown in Action; and thus may occasional Deformations be framed, accommod in the present State of Things.

HENCE arize two Kinds of Knowledge; the one absolute, including the fleeting Phenomena: the other relative, or occasional, including what is done, or past, with regard to them. The former is in some Sense permanent; the latter merely transient, or historical. The first is held forth, as already observ'd, in the Vocabulary: the second vague, and uncurriculum'd by any Bounds; being what fills all the other Books extant. In effect, this last, being in some measure casual, may be said to be infinite: for that every new Cafe, i.e. every new Application and Combination of the former, furnishes us with a new Accidence. Some Parts which have been more cultivated than the rest; either on account of the Goodness of the Soil, or its easy Tillage, or by reason they have fallen under the Hands of industrious and able Husbandmen. These Spots, being regularly laid out and planted, and conveniently curricul'm'd or fenced round, make what the we call, the Arts and Sciences: And to these have the Labours, and Endeavours of the Men of Curiosity and Learning in all Ages, been chiefly confin'd. Their Bounds have been enlarg'd from time to time, and new Acquisitions made from the adjoining Walle, but still the Space

43 RHETORIC, or the MEANS OF PERSUASION; as

44 HERALDRY, or the CONSTRUCTION of COATS; consisting of Field, Charge, Figure, &c. as Crofs, Chevron, Bend, Pale, &c. with Addition, Difference, Quoarting, &c. Composed of Colors, Metals, Points, &c. Born on a Sable, Sable, &c. Accompanied with Argentors, Argent, Crofs, Mantling, Metes, &c. Decor, Embellishments, Ensigns, &c. and described by Aralokian.

45 POETRY, including the Consideration of VERSE; as
Metre, Rhyme, Accidence, Harmony, move, Lyrick, Epigram, &c. (as well as, on the other hand, the Art, &c. of Translation, Metre, &c. &c.) as well as, on the other hand, the Art, &c. of Translation, Metre, &c. &c.)

46 GRAMMAR, or the CONSIDERATION of LANGUAGE; as

* Note.
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ground they poffefs is but narrow; and there is room either to extend 'em vaftly, or to lay out new ones. They thew like the Cyclopes at a distance: apparent runs montes in Gargulis alpha.

They were divided by the Diocles, the number of Provinces, under di-

\textit{v}flected Nature, and have thus remain'd for time immemorial, with little Alteration. And yet this Distribution of the \textit{Land of Science}, like that of the Face of the Earth or Heavens, is wholly arbitrary and occa- 

sional; and might easily be broke thro', and alter'd, and perhaps not without advantage. Had not Alexander 

and Cefar liv'd, the Divifion of the Globe had doubtless been very different from what we now find it; and the 

Globe had found its own laws, and the сфere of 'em would perhaps have been different. The first Divifion of the 

\textit{Land of Science}, and the manner in which it was laid out, is the work of the \textit{Esteem} of the Geo- 


tographers; and for their learning and care, we are to thank them. And the future \textit{Columbians} and \textit{Bacchus's}, by opening new Tracts, have carried our Knowledge a great way further; yet the Regard we bear to the ancient Adventurers, and the eftablished Divifion, has made us take it up, with all their Inconveniences, and the strain and stretch, to make our Discoveries quadrate thereto. I do not know whether it might not be more for the general Interest of Learning, to have all the Inclosures and Partitions thrown down, and the whole laid in common again, under one unất 


guish'd Name. Our Inquiries, into such caves as could not be opened or explored by the actions of Men, should 


be led to explore, and pursue many a rich Mine and Vein, now doomed to lie neglected, because out of the 


ART and Science are indeed two Words of familiar Use, and great Importance; but, I doubt little un- 


derstanding. The Philosophers have long laboured to explain and ascertain their Notion and Difference; but all 


their Explanation amounts to little more than the Substituting one Obscure Notion for another. Their At- 


ttempts usually terminate in a confused Chirp, and take down the Relations resulting from Light to a Subject. 


Nor in the far fmore, however it may have escape'd Notice; but evidently lies in an Abufe of Lan- 


guage, whereby those differing Words come to be applied to Things of the fame Nature, and each of 'em 


differs wholly different. Whence, any Definition that can hold of 'em universally, must needs be 


very abstractive, and general; and may hold of almost any thing and; and of confecution can express 


very little of the Essence, and obvious Phenomena thereof: 'To come at which, we must be at the Pains of a 


new Invention.


TO SCIENCE, then, belong such Things as Men may discover by the use of Reasoning, and Sense: Whatever the Mind defires in virtue of that Faculty whereby we perceive Things, and their Relations, is matter of Science: Such are the Laws of Nature, the Affections of Bodies, the Rules and Canons of Right and Wrong, Truth and Error, the Properties of Lines and Numbers, &c. Science, in effect, is the Refult of mere 


Reason and Sense in their general or natural State, as imparted to all Men; and not modified, or circumscribed 


by any thing peculiar in the Manner of a Man's Mind; nor does the common Ideas of Experience corre- 


spond to the Ideas he has referre to him. Conseqently, Science is no other than a Series of Deductions, or Conclu- 


sions which every Perfon, endowed with those Faculties, must, with a proper degree of Attention, see, feel and 


draw: And a SCIENCE, i.e. a form'd Science, is no more than a System of such Conclusions, relating 


to some one Subject, orderly and artfully laid down in Words, to give Others the Labour and Expence of 


making 'em at first hand. Thus a Perfon who has all the Ideas express'd in Euclid's Definitions, and fees 


the Deduction of each of them in his Assumptions; which no Man acquainted with the Language can be 


supposed without, as it is in his Power, with Attention and Industry, to form all the Theorems and Problems 


that follow: He has nothing to do but to range those Ideas orderly in his Mind, compare 'em together, one 


by one, in all their Changes, and put down the immediate Relations observ'd in the Comparisons, i.e. their 


parity, imparity, &c. And after the Relations of each to each are thus got; which make a kind of primary 


Propositions, to which the Subject and Contents of the Science in Comprehension. By such means, without any other Helps than Penetration and Perseverance, might he make out an infinite Number of Propositions: more by half than Euclid has done; there being a new 


Relation, i.e. a new Proposition, resulting from every new Combination.


TO ART, on the other hand, belong such Things as mere general Reason would not have attained to: 


Things which lie out of the direct Path of Deduction, and which required a peculiar Cafe, or Ability of Mind to 


see, and to give it a name. And here it is plain, that such a Denomination would be thought unphilosophical. It may, perhaps, be more 


just to consider the Reason, here, as modified, or tinctured with something in the Complexion, Humour, Manner of 


thinking of the Perfon*; or as restrained or diverted, out of its proper course, by some Views, or 


Notices peculiar to him.---The Difference between Art and Science, amounts to much the same as between 


\textit{Wit} and \textit{Humour}, the former whereof is a general Faculty of exciting agreeable and surprizing Pictures in the 


Imagination, by the associating of Ideas, which at the same time have both a notable Diversity and a Con- 


gruity,--all the latter, a particular one. The former is pure and absolute in its kind; the latter tipt with 


something foreign and complexional.


*TIS efficent to \textit{Art}, therefore, as to \textit{Humour}, to partake of the Perfon from whom it proceeded; and 


consequently there are as many Arts, as Inventors of Methods of performing, or doing things. Hence, there 


is no coming at an Art, other than by learning it. A Perfon left to his own Thought, will scarce ever hit on the same thing, unless either we suggest it to him by some 


other Art; for the Art is in great measure ideantical, and partakes but little of the Genius and Humour of the Inventor.---There is no such thing, properly speaking, as studying an Art, or learning a Science: The first, every Man befriends the Inventor must be taught; the latter, every Man must teach. In effect, 


to attain to an Art, there is some previous Knowledge requir'd, which a Man's own Reason would never have 


suggested; whereas a Science requires no more than clear Ideas, and close Attention. With these \textit{Hips} a Man 


may of himself go the whole length of a Science, so far as it is properly a Science. Indeed if the Improv- 


ers, or rather Writers thereof, have gone a jot out of the common way, in compliance with their own personal 


Views, they may have so far adulterated the Science, and put it on the footing of an Art. And to this very 


Caufe are owing a great part of the Difficulties we meet with in attaining the Sciences: They red an'st from 


want of Sense, i.e. of Clearness and Precision in our Perceptions, and want of Perseverance and Attention to 


'em. These render Geometry itself, little other than an Art: We want Preliminaries to it as to other Arts. 


And thus every Science is an Art to some People, and only to be attained, as we do to the Sciences of Arts, by 


Habit, and Remembrance; instead of Contemplation, and Reflection, cog'd; and engross'd by 


Genius and Original Combination, cannot rise to the heights of Science, than when pure and refid, it can defend to 


the depths of Art.


* Fid. Boffii, Traite du Poème Épique, Li. i. c. 1. Locke, on Hum. Underland. Lib. ii. c. 11.
AN Art and a Science, therefore, only differ as less and more pure: A Science is a System of Deductions made by Reason alone, undetermined by any thing foreign or extrinsic to itself: An Art, on the contrary, requires a number of Data and Pолнutata to be furnished from without, and never goes any length, but at every turn it needs new ones. 'Tis the Knowledge or Perception of these Data that in one Sense constitutes the Art; the red, that is, the doctrinal Part, is of the nature of a Science; while the improvement of the Art, in this light, appears to be a Portion of Science, or general Knowledge, considered, not in itself, as Science, but with relation to its Circumstances, or Appendages. In a Science, the Mind looks directly backwards and forwards, to the Premises and Conclusions: in an Art we also look laterally, to the concomitant Circumstances. A Science, in effect, is that to an Art, which a Stream running in a direct Channel, without regard to any thing but itself and its own particular object, is to the same Stream, run out of its proper Course, and running in a different one difformed Part, is of the nature of a Science, when Art and Reason allow of water. Gardens, turn Mills, and other particular Purposes. In which case, the Progress of the Stream is not considered with regard to itself, but only as it concerns the Circumstances of the Works: every one of these Works, lay each part thereof, are so many Data, which modify the Course of the Stream, and vary it from its original Habituation. 'Tis easy to trace the Progress of the former, from its Rise to its Tide; in regard it flows consequentially: But a Man ever so well accustomed with an Engine, of himself will never be able to imagine, in the second, for want of Acquaintance with the Circumstances, which his Reason can never find out, in regard they depend on the Genius, Humour and Caprice of the Engineer who laid the Design. These are so many different Characters, or Conditions of Art and Science: But there is a Difference between 'em prior to any of these, and of which there are only Consequences. The Origin of 'em all lies higher, in the Principle of Action or Operation above specified; namely, as the Mind is either active or passive therein. With regard to this, those Things may be said to belong to Science which we only see, or perceive; which flow from the Nature and Constitutions of Things, by the Iole Agency of the Author thereof; subservient only to His general Purposes, exclusive of any immediate Agency or Intervention of Ours: And, on the contrary, those Things belong to Art, wherein such Science or Perception is further modified and circumstan- tiated in our Mind, and directed and applied by us, to particular Purposes and Occasions of our own. - From hence arise the former Differences or the Mission of each: As Science is according to the Measure of the Artist's natural Faculties, in respect of Quantity and Degree; and to the Complete and Calt of his moral Faculties, in respect of their Quality. The Perception, even of Matters of Art, is of the Nature of Science; so that thus far the two agree: And their Difference only commences from the superinducing a further Modification, in the Matter of such Perception, and the giving it a new Direction to some particular End. By means hereof, which Stances involve only the accidental, and is contained in them, as a general Frame, and adapted to the particular View and Aim of the Artift, (which is the mere Result of his particular Disposition, Humour, Manner of thinking, Situation, Occasion, &c.) and conducted according to his particular degree of Knowledge, and Address, which is the Effect of a particular Set of Objects, and a particular Organism of Body. In a word, in Art there is a moral View or Motive superadded to the natural Science, or Perception, which Motive is the principle, or primus Motive of Art, and some Member of the Body its Organ or Infrument. And from such a new Principle, Art a new Set of secondary Perceptions, analoguous to the natural and primary ones. The whole, therefore, ends in this, That Science arises from a natural Principle, Art from a moral one; or even, as moral Matters are also in one Sense natural, Science may be said to be of divine Original, Art, of human. From this View may appear the deficiency of that established Definition of Art; Art is habitus mentis cum velle ratione operativo; A habit of the Mind operative according to right Reason; which is evidently taken from a particular Consideration of the Subject. If it be the Character or Condition of Art to proceed according to right Reason; then, the more and purer this Reason, the more perfect the Art. But, in a great part of the Arts, Reason appears to have very little to do; and the less, as those Arts are in greater Purity and Perfection. - Thus it is in Poetry; a Man that would undertake an Ode, or an Epic Poem on the strength of his Reason, would be miserably out. All his Efforts would never carry him above the humble Sphere of Verification, where he must be contented to wait for an Impulse of another kind. So far is Reason from leading the way, that it can scarce follow at a distance, so as to keep in sight. The Principle of Motion is evidently something other than Reason; others, the greatest Philosophers would be the best Poets, and vice versa. People do not know of a Reason, who yet are powerful in Poetry. The Poetical Talent we have seen follow some People to Bedlam, others in a way that has convinced us, that which is still more, some People have thirsted after it. Poetry is found an Appendage of one kind of Lunacy, and accordingly pales among Physicians for a Symptom thereof; nor is it to be questioned, but, upon a Computation, Moerfelt might number double the Poets with any other Spot of the like Dimensions in the Kingdom. - Let not this pass as any Reflection upon the Poets: A Spice of Madness is not so unrepresentable a thing as some imagine; and a Man that is feated on the Bench, finds himself in the best Company in the World. Some of the greatest Physicians, Poets, Prophets, and Legislators; I might have said Divines, Fathers, and After- ticks too, of all Ages, are confess'd his Affiliates. 'Tis remarkable with what Respect and Awe the Antients treated People supposed to be touch'd: The very Names they call'd 'em by import the utmost Veneration, and place 'em, as it were, at the Threshold of austerities. One of their most common Appellations, Numinis afferat, it was the most just that can be thought. So that Censorial, a Share of Fury and Enthusiasm, is held by them a fine quod non, a Circumstance absolutely necessary to become any thing extraordinary; and hence so many Proverbial Expressions to that Purpose: “No great Genius fine aliqua mixtura ducere non potest.” We may add, that the Poets themselves have an hundred times expressly attributed all their greater, and happier Thoughts, to Enthusiasm, Exaltcy, and Fury; and the same Perfection is its Matter, it being a Word that can be used with a new Practice, to take a formal leave of Reason, at first setting out, and call a Muse for their future Guide: which, to talk out of the Poetical Style, is as much as to Say, They reign themselves over to the Conduct of Genius and Imagination, which they now find strong and prevalent in 'em. Thus inspired, a new Scene of Objects arises; Cables on Cables; they see things invisible to other Eyes, that is, the Phenomena of their own Fancy, which exist no where else. For the one Man's Reason perceives, all others, equally good and perfect, will perceive, even by the same light, and vice versa. Poetry gives to every Poet a Personall权, with which a personal Thing, arising from the particular Disposition or Organism, which is different in every two Persons, whereas Reason springs from the general one, which is the same in the whole Species. -From such prevalence of the Imagination, arises what we call Poetry, making, forging, inventing, which is common
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To all Men in a greater or lesser degree: Philosophers have a little of it, the Poets a great deal, but the Lunatics scarce any thing else.

It may look strange to say that the Principle is precisely of the same kind in 'em all. We are to consider it, in the two first, as Constitution; in the latter as Disease: In the one 'tis perpetual; in the other only occasional: In the one, arbitrary and uncontroulable; in the other, limited and restrained. The Barque, in the first case, being the Property of mere accident, is made ready, under the foresight of Calamity, and is used to hold her; and in the other, fails out of choice, as finding the Wind favourable and the Voyagers determined. The difference little more than a difference in Degree, between the Fifctions of the Poet and the Lunatic: The moving Present of the Poet is in both, tho' its Effects be various. If the proper Balance and Adjustment between the Powers of Reason and Imagination be wanting, yet they still retain their Nature; as the Wind is the same whether the Pilot directs the Helm or not.

Some People give more ear to Authority than to Reason: So much it may not be amiss to observe, that this Doctrine is contumenc'd by the Antients; who, in some passages, seem to have had clearer and juiter Notions than the Moderns; as being less embarass'd with the Jargon and Rhetoric of the Philosophical Learning. Philosophy, with them, was one degree more simple, and obvious, and uncommonly so. Nature was not yet cover'd and conceal'd under so much Elucidation, but afforded more frequent and nearer Views of her-self.---Accordingly, the Divine Plate, in his Phedrus, afferts, "That Enthuiaism and Maona are one and the same Thing, which hath a long , and cogent Discourse, to prove that it must be so: And among the several Species of Enthuiaism, he expressly ranks Poetry. In efeks, Thomaus and Boleslaw, make two of the principal Branches in his Division of Enthuiaism, or Inspiration. And Pinarte, he divide Enthuiaism somewhat differently from Plate; yet clearly agrees with him in making Poetry a Species of it. Nay, the most revered of all the antient Critics, Longinus, declares, that "the Poet is poical'd with a kind of Enthuiaism; that he believes he sees what he speaks; and represents it so to others that they catch the Enthuiaism, and like it likewise."---Add, that speaking of the Grators; he does not scruple to use Trivipar iberismata, as synononous with Maona.---But this you and I, we must confeder'd more fully hereafter.

THE Principle then of the Art of Poetry is something other than Reason; and I know of no Art that has more of the Nature and Essence of an Art, than Poetry: Nothing that can fathom, build, produce things, &c. at that rate: Sculpture, Architecture, Agriculture, &c. are Arts, but in a much inferior Degree;---And yet, turning another side of Things, Poetry will scarce appear to have anything of an Art in it, but rather to be all the Work of Nature; wherein human Thought and Study have the least hand. It is produced by a natural Dominance superior to that of Reason, i.e. a more immediate Action of the Author of Nature.---But the fame may be said of most of the other Arts; and where Art produces Effects, we mean Nature does so. The Poet's Imagination may be considered as a Field, wherein the Author of all Things shews his Handy-work, by the Production of a Set of Objects which existed not before: New Images arise here, like new Plants, according to the settled Laws of the Creator; so fruitful is the Womb of Nature! New Worlds innumerable arise out of a single old one, or the Generative Body.

THE Fadicate Arts, as some love to call 'em, i.e. those from which permanent Effects arise, may be confeder'd so as many secondary or derivative Nature, rais'd by Engravement from the old Stock, and spreading or projecting out from this, or that part thereof.---Here, at first sight, Man appears somewhat in quality of Creator; the Potter's power over his Clay has been a Shadow or Similitude of that of the Deity over his Works; and yet the Potter, at best, is only accacary or occasional to his own Productions. Nature, that is, the Power or Principle of Art, This Motion, by which we owe this visible Frame and all the Appearances and Alterations therein, acts by fixed Laws, which necessarily produce different Effects, according to the different Circumstances of Things: Thus a glass Globe being wristly revolved about its Axis, and a Hand applied to its Surface; feels hot, emits Light, attracts Bodies, &c. i.e. is a hot, luminous, electrical Body, tho' without these Conditions it has nothing of those Properties. So Gunpowder, otherwise a Mafi of dark, inert, motionles Matter; being only touched with a lighted Brand, instantly blazing up, and smokes, with Noise; perhaps bursts a Body, or sets fire to a Building, or a Direction, and levels a Tower, or other Work. Now, nothing arises here but in consequence of perpetual'd Effects; which impress the Mind with Power, whenever by any means they come under these or other Circumstances, shall have thee or other Effects. This is, that Bodies in Nature more different than the fame is from itself, under the different Circumstances of Contiguity or Non-contiguity with this, or the other Body, e.g. a Spark of Fire. But both States are equally natural; and in effect there must be a Law of Nature for the one, as well as the other.---Now the Agency of Motion is not this, but that he has it in his power to put Bodies in such Circumstances as are necessary to bring 'em under this or that Law, and cause this or that Effect to take place. And this we call Art; and by this means we can produce a number of things, or bring 'em into act, which otherwise would have remained in eternal Non-entity, or barely in Potentia. Man may be made to create 'em, but no otherwise than the Apotheon creates the Blister, or the Gardner the Apple; i.e. those Effects would necessarily have arisen, upon the same Poition of the Cantharides and the Cuts, or the Scion and Stock, if there never had been any Apotheon or Gardner in the World.

We may define the Works or Productions of Art, therefore, to be all those Phenomena or Effects which would not have arose without the Agency or Intervention of Man. Now Man can only be said to act or intervene, so far as what he does is of his own Source or Principle, without being moved or directed by any estabilished Law of Nature, i.e. so far as he is exempted from the Influences of any necessary Laws of Nature concurring, however remotely, to such Effect: So that if, as some Philosophers have maintained, Man were not really and truly a free Agent; there would be no such thing as Art, in the Sense here understood; but Art would only be a name given to that Sytem or Series of Effects, to which Man is made by Nature, and in her hands, subjacent, and might with equal reason be attributed to such Effects as any other natural Production, e.g. a Plant, or Mineral, is sublative.

HAD it not been for the improved Writers, we should not have known but that the whole Sytem of our World is a Production of Art; the Refult of a new Application of Things made by some created Being, in virtue or conquence of some pre-estabilished Laws of the Almighty. Our general Laws of Nature, and Motion, might be taken for that particular Circular Cause of the more universal one; special Influences, emerging out of some more general one, which it self was not perhaps the firs't effect. Thus there might be an infinite Series or Subordina'tons of the Laws of Nature, each more universal, extensive, and, as we call it, more metaphysically, i.e. nearer the Source of Power and Action, than other.

SOMETHING like this, we actually see in our own little Sytem: The Mineral World is sublative to the Vegetable; and this to the Animal. Mineral Matters, under certain Conditions which bring them under the Laws of Vegetation, pass into Plants; and from particular Applications of Parcels of Plants, Animal
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Substance arise. Under other Circumstances, the fame Matters become subject to other Laws, i.e. other Actions of the Creator, for Laws are no other) and return the way they came; Animals into Plants, and these into Minerals. Nothing can be more simple and uniform than the whole Diffusion: A Body is only what it is, in virtue of a Law of Nature, i.e. of the Will of the Creator; and consequently 'tis this alone can alter it. Hence, a piece of Matter, under the different Circumstances of Motion or Rest, Contiguity with this or with that Body, falling in with new Laws; by the Concurrence and Activity thereof, becomes a Means of exhibiting different Forms and Occurrences: on occasions, a different Decreation, of natural Things: And to the Means whereby those Circumstances are determin'd, we give the Names of Generation, Corruption, Putrefaction, Fermentation, Vegetation, Animation, Alimation, Accretion, &c. which are all accountable for on the fame Principle. 'Tis no more wonderful, a Fungus, with all its Furniture of Flowers, Seed, &c. should arise from a Mixture of Earth and Dung; than to behold so wonderful a Body as Flame, arise from a casual Collision of Flint and Steel; or Air from the mere Diffusion of Matter.

We fear, then, how far Man is concern'd in the Productions of Art. Our Endeavours are contriv'd by Nature to be Means accedent to the Law's taking place, from whence the Effaces are to arise. We are part of the Chain whereby the Effect is connected to the Cause. The Circumstances are in our Power on which such, and such Laws depend; and thus far we may be said to be Authors of the Cale of Art: supposing that there is nothing higher, or other; and that the Chain of Events ends with us, the Chain of Art is not subsum'd to that of the Almighty. But if there be other superior Laws which restrict those fame Circumstances, and which are not in our Power, i.e. if the Circumstances necessary to the former Law, be themselves supplied necessary Laws, and the immediate Work of Nature; our Agency will dwindle into nothing. The omnipotency that can be said of us in such case, is, That we are Active in respect of the one, and Passive in that of the other; which to most Men may appear a kind of degradation. The Station can't be for'ted, unless our Desire or Inclination concur thereto; so far our Excellence depends on us: But are our Desires and Inclinations in respect thereto of our own growth; or do they arise naturally, in conformance of an Apprehension of Good, and Advantage in the Subject? That is, does any thing appear good and advantageous to us absolutely and of itself; or what the Cause represents to us as to? And do we direct or pursue this seeming Good, from any Principle or Tendency that is in us, other than what we owe to his Laws? The Difficulty terms to amount to this; whether our Faculties of understanding and judging be Objective or Subjective; or whether we have any allegate, that 'tis such Relation constitutes the Faculty; and therefore that the Question ends in this, Whether our Faculties are from God or our selves: i.e. whether they can be the Causes of themselves? I should suspect some Sophists in the Cale, at present I have not leisure to detect.

But having traced the Agency of Man thus far, we must be obliged here to desist; and from the Factual Arts resume the Consideration of the Author one; i.e. pass from what Art does out of us, to what it is in us: or rather, from the Arts whose Source is supplied in our selves, and which proceed outward to those whose Source seems without us, and tend inward: That is, from those which arise from our Observation and Reason, directing us how to minuter Occasions to the Laws which obtain in the external World, to those which flow into our Imagination, and furnish Occasions to the Laws which obtain in the Internal World. An Inquiry which may perhaps furnish us where the Reader can consider, that an ample Volume of the Principles above establisht; and a further Insight into the Origin and Cause of Science and Art; and the Nature and Measure of our Agency and Passion therein.

We have already spoke something concerning Poetry; not for its own fake, but as a proper Instance to illustrate the Nature of Art in. It makes the lowest Article in our Analysis; which, in reality, is the highest in the Scale of Art; there being a fort of progressive Rising from the Beginning of the Analysis to the End. It begins with the first Matter of Knowledge, the common Objects of our Sense, and proceeds thro' the various Modifications they undergo by the other Faculties of Imagination and Reason, till those sensible Objects become so much our own, are so assimilated to us, and as it were humaniz'd; that they are part of our selves, and obey and take Directions from our Will, and minister to all our Views and Purposes; of which, this is a sort of producing Images and making Fables, is in one Sense the highest; inasmuch as the greatest Effaces here arise from an above Rational Origin. And at last, in the Moral and Ethical Matter, the Poet introduces us to the Principles above establisht with the Author, that this little suffices, even to make new Worlds. In effect, the Poet seems, as it were, to fit nearer the Spring of Action than other Men; and to have only to do with the general and higher Principles thereof, which command and direct a Number of other subordinate ones, that he himself is not aware of. The Art of Poetry, therefore, will hold proportionally of all the other Arts; and we have only kept to that, because the Influence or Influence is here confedently the purest, and the near to Heaven of all others. The Principle or Spirit of Poetry, may be said to be that of Art in general; and hence many Authors make no scruple to make all Arts the Invention of Poets; Thus it is Homer is often complimented with being the Father of all Arts. This has, indeed, an Appearance of Truth; but 'tis only an Appearance: For Homer, supposing him the Inventor of Poetry, or at least the best Poet; has no other Title to the Invention of other Arts, than what he derives either from a greater Share of the Spirit whereby they are produc'd, than other Poets. As much may be given by the Poet's Art to the Spirit whereby it is generated, and brought forth other Arts; or from the Seeds and Principles of Arts and Inventions, which his Imagination was so prompt withal, and which he disseminated over the World, where many of 'em, by due Cultivation, have sprang up into the Form and Maturity we now see them.

The Mind is allowed to be passive in respect of the Matter of the Art of Poetry. We need not quote the Poets to prove it: No true Poet ever questioned his Inspiration: Every body knows that their whole System is built on the Supposition. And hence the Stories of Apollo and the Muses, of Helicon and Parnassus, the Dreams of Pindar, and the Aelian Maidas: with a thousand other Reveries. But the Philosophers, and Criticks also, give 'em their Sufferages, and attest their Inspiration, in the strongest Terms. Plato has already cited this to the Purpos: He contends, at large, that all Poetry is "by immediate divine Inspiration, in the proper, and literal Sense of the Word." Aristophanes confirms it: "\nonos \ntov 
Poetry comes by divine Inspiration."
And Plutarch says as much. It is, indeed, with the Rhetorics, Raccias in general, the Poets, the Theatrical, Moral, and Ethical: Fick to all which, he affers, the Appellation, \ekatheseis, or \ekatheseis \eu \x03 \x0d \x03 \x04, equally agrees. And not only so, but they hold the Enthusiasm communicable from one to another. It arises from the Poet, as its Centre, and is diffus'd, or extends; in a less degree of Inteventes, the further it receeds from him. Plato affers, that the \rheuxis, or those who fug and reares the Poets Works on the publick Theatres; may, and the Spectators themselves,
were all divinely injur'd, in some degree: which he illustrates in the Cafe of a Needle touch'd by a Magnet, which communicates an attractive Property to another Needle; that, to a third; and so on, with a continual Diminution.—Nor does the Effect end here, but the Professors of other Arts, as Sculpture, Criticism, and even Philosophy, it fell, borrow their Flame and Inspiration from this Fire. Thus Phidias declared he was inspired to make that wonderful Statue of Jefjer Olympos, by the reading of Homer: And thus Aristeo may be said to have been inspired to write his personal Poems: The like is said of Longinus, that he was inspired by the Muses, or with the Fire of a Poet's Soul.

BUT after Poetry, Rhotorick comes nearest, and shares most of the Spirit thereof, even more than Criticism. Accordingly, Plato, in his Dialogue intitled Memnon, allows that "as we say Pythians, Prophets, and Poets are divinely inflamed; so do Orators." Elsewhere he adds, "That they are certainly infir'd of God, and plainly possidied." So Delos. Marcarnagelis ¥• relates, that "Democritus did plainly inspir'd." And in the Poet's Paradox, it is said that Men could not cause a long his Audience, that they were possidied at second hand, and "brought to do many things against their own Reason, and Judgment." And Zephyrius, his professed Enemy and Antagonist allows much as much. I need not say that Pindar and others, make of the like of Cicerons, in the Influence of his Oration to Cesar, for Ligarius.

SOMETHING like this has been observed, even in the Cafe of Prayer to God: Several Heretics are on record for poifficing their Hearsers that way. Hacket, executed for Blasphemy under Queen Elizabeth, is said, by the historian, "to have ravish'd all that heard him at his Devotions; and converted many in spite of their Professors."

"Teeth!" and Saratov relates, the People were so deracinated that "God diacryst his Tongue." St. Bajf even affirms, "that our Prayers are never right or acceptable, till the Aerd thereof entirely melts away, so to "that God possest us in some extraordinary manner." And hence the learned and pious Cajsanon establishes a new kind of Enthusiasm, which he calls Scaphitisc, or Precariment, as he does divers others, as Muscular Enthusiasm, Mechanical Enthusiasm, &c. To say no more, the Author last mentioned makes no scruple to make even the "ordinary Delights and Benefits Men receive from the Harangues of Orators, Sophists, Preachers, &c. the Effect of Divine Inspiration, as being as much could never arise from mere Reason. And Pindar, and others, make of the like, that the Soldier feels in Battle, of the same kind with that which infir'd the Prophet, Orator, and Poet **.

We have here little less than a System, sufficient to account for most of the Phenomenas in the Animal World, on Principles of Eunthesis, Reason, it may be observ'd, has here little to do; and it should seem, that Man ought rather to be defined, Animal Eunthetique, than Animal Rational. And yet this is only a few, out of the manifold Phenomenas which are to be accounted for by Immediate Agency and Inspiration of the Deity. We find the same Principle in every Art, every Invention, every Discovery, where a natural and mysterious Connection is perceived between the Discovery, and something known before, i.e. where the Reason of such Discovery, is not apprehended by any intuitive Knowledge. What has no immediate Dependence either on what we perceive by Sensation or Reason, comes by the Vehicle of Inpiration, i.e. of Imagination or Invention, for there it ends. The Imagination may be called the Medium of Art, as Sense is of Science. The Faculty of Reason, can make no great Discoveries; it can only advance from one Step to another, which must be always real and true, from which reason, and from even from the Deity, and from nothing but the Deity. And even from the Deity, and from nothing but the Deity. And even from the Deity, and from nothing but the Deity.

THE Truth is, when we say, such a Thing is the Effect of Enthusiasm, or Inspiration; speaking, I mean, of profound Matters; (the Inpiration, for instance, of Scripture, being Matter of a very different Consideration, and quite beside our present Purpose,) this does not remove it out of the ordinary Course of Things; for it does not put it on any other Principle, different from that whereby Causes and Effects proceed each other in the physical World. We can account for the Phenomenas of the Imagination, as well as tho' of Sensation. They have their respective Laws, like other things; which they are Subject to; and to which we have Arts, and Procedes appropriated. In effect, all the Inspiration here spoke of, may be produced without any great Conjuration.—If the Reader will not take Omission at this novel Philosophy, he may be convinc'd of it. And it, in the Imagination of the Author, is of near the same Nature, as we do not know any immediate Correspondence or Connexion between any one Sound, and any Idea; its no more strange that one Heav'n, and excite by it, than another. There is a Law of the Creator, whereby a certain Order and Succession of Vibration in the Air, is always real and true, and evident from the Occasion of certain Perception in our Minds; and as the Circumstances of this Vibration are alter'd, a different Idea arises: i.e. to every different Combination of such Circumstances, a different Idea is attach'd; to utal and ordinary Combinations, ordinary Ideas; and to unusual and extraordinary, extraordinary Ideas. And hence there is, perhaps, no Idea, no Image whatever, but may be raised by means of Sound. Now, I do not know what Common Sense is, unless it be, the hearing, common Ideas. Just so far as new Perceptions are rais'd in us, in Exclusion of the old ones; we may be said to be removed out of the present World, if we got into another Syrem; the Phenomena which now present themselves to us, being so far different, from what were before, that not one of his former Perceptions, would still be, to another Peron in the same Place, but under other Circumstances. On this Principle, we shall scarce find any thing but might be produced by Mufick; especially when to the Force of well-adjusted Instruments, which the Antients seem to have think'd much more, and understand better, than we; was added to the Solennity of a Temple, and the suppos'd Reflexe of a God, whose Statue there flood before "em; with the awful Rites of Invocation, and such Ceremonies with their Glasthematics, Dances, and all the Devites which could be thought of; to ungh the natural Sense, and Reason, which we find is, when the Sounds are given in such a Manner that, we might well be, when most duly look'd to. Few People are able to stand up against mere Mufick; which, unpleased with any thing else, has been made to produce, and remove setted Madnes; cure Fevers, drive Poisons to kill themselves, and their Friends. 'Tis not long since the Italian died, who had reduced the turning of People made for his Mufick, into a regular Art; which he could depend on at any time.---The Reader that has nothing to turn his Mind upon this Head, may confilt the Articles, SOUND, MUSICK, TARANTULA, &c. in the Body of the Book.

* Pope's Essay on Criticism. *
† Delos. Quaest. Dea. *
‡ Apud. Callist. ubi supra, p. 374. *
§ Epigrams in Anab. Græc. *
** Newent. in Philos. Tom. I. Contemp. 14.
2, THE Inpiration of Poetry is of a finer, and purer Kind; and needs artificers and Apparatus to produce it in an Imaginacion naturally diplo'd for it. The attentive Consideration of some interesting Objec't, usually suffices to let it a going. And the Gentleman of that Faculty have all Nature to chuse out of: The finest Seanc'ons, the most agreeable Seene's, and the most moving Objects. Hence it is, that they are continually raving on " Groves, and Stades, and Gods, and Nymphs, and Duns, and Flames." How do they ri't in the Meadows trim'd with Daisies and Yellow Brooks, and Roses wide, "Eyeing and Barb'ing" the "hills of iv'y singing Trees." Sometimes, they rai'v up " Knights, and Squires, and Maids forlorn; or, Lover pendant on a Willow Tree, or Lady wading by a River's Side." Then, "Tials and Tournaments, and Feasts of Arms; Pomp, and Feat, and Revelry, with Maque and antique Pageantry; "Stories of Tithes or Pelf's Line; or the Tale of Troy divine; Of Arthur and Cambogian Bold; of Cambal and of Algurifis, and who took the Canaanite Wife."—If these things be any thing, they are gloomy, and solemn, and dispiriting. But when the Imagination is dear to Nature, we may now expect to see " the red Bolt, or fork'd Lightning g charge." Earnest Pills and Tempelds foment roid in vain: if by chance they do, the "ill-boding Raven's Crook" is ready at hand; or else " the far-off Curfew sounds, or some wide watery Shore, swinging flow with solemn roar." And now for "hateful Ebon Shades, and flagged low brow'd Rocks." Next enter "horrid Shapes, and Shrieks, and Sights unholo: Gorgons, and Hydra's, and Chimeras dire." Images of things most moving to Sense, readily appear and settle in the Imagination and our association comes to being mixed, and combined in the Imagination, with others there before; new Efforts arise from 'em, in consequence of the Laws of the Creator: much as intelligibly as Fire and Flame, upon mixing two chemical Liquors.

SCALIGER, in his Poetic, makes two Kinds of Emanations, or Poets divinely inspired. The first, those on whom the Inspiration falls, as it were, from Heaven; without any thought or feeling, or at least by means of Prayer and Invocation. The second, those in whom it is procured by the Fumes of Wine.

ALL that is required to the first, is only a delicate, pregnant Imaginacion; susceptible of any feeble Imprisons that may happen to be made in the Course of Things; and ready to take fire at the least Spark. The Surfaces of the finer Fluids, we find, are kept in continual motion by the rare Tropor of the Atmosphere, tio us inodorable: And thus the Air is never so fusty, but that the Ape leaf feels its Impulse, and bends and trembles to it; when others require a ruder Gust to move their leaves, too. Thus, too, the Spirit of a Soul, is moved when there, in the Temples and the Hinges, the Trunks of a Hundred Oaks, now yield like the reed.

And, accordingly, we read, in ancient History, of whole Nations being at once seiz'd with the poetical Fury. Few of the Cities of Greece, not even Athens, it self, with all its Philosophy, but has one time or other labour'd under these epidemic Enthusiasms.

We have already observ'd, that Invention is the Principle, or Source of Poetry. An excellent modern Poet adds, that "tis this which furnishes Art with all its materials; and that without it, Judgment is itself can, at bel, but feal widly. Now, this Faculty of Invention it self, is ususally no other than a Delicacy, or Readiness of taking Hints: but even at moat, what we are said to invent, is only what results, or arises from something in us already. There is no new Matter got by inventing: that can only come by the way of Sense and Observation, and is, that from the Memory of certain Things, i.e. the Comprehension of certain Ideas to the Mind; certain new Ideas arise, according to the Order of Things. The light of full of Ideas, on various Occasions, to compound its Ideas, and many of 'em so oddly and boldly, that we take its Productions for new Things; and thus we think invent 'em, because they did not exist in us before in that form; tho the Matter or Elements thereof did. There is no more real Invention in the Poet, than in the Taperly or Moscow Worker, who ranges and combines the various colour'd Materials furnish'd to his hand, so as to make an Assemblage or Picture, which before had no Existence.

The Reader who has any doubt about this, need only take the first five lines of Poetry that comes in his way, to be convinced, that all that is new and moving in it, is no other than new Composition or Combination of feable Ideas. In the Is Algeio and Is Penyfino, for instance, two of the most poetical Pieces in our, or perhaps any other Language; how easy it is to resolve all that is so magical and ravi'ing, to the new, uncoath, and frequently wild and romantick Assemblies of Imagery. Indeed, who can contain himself at the "Beauty of the Land," &c. andＬａｅｏ and the "Leaves of the Tree," the "Pastoral," &c. "Cloud, while rock ing Winds are piping loud." To hear the Lark Begin her Flight, and sing the thistle the "dull Night:" Or the Cock with lively Din, flatter the Rear of Darknen thin: Or listen how the Hound and "Horn, loudely roufe the flembering Morn." Or, see glowing Embers thro' the Room, teach Light to "counterfeit a Glowm." —Or storied Windows richly light, calling a dim religious Light.—Or hear Orpheus "figue Such Notes as warbled to the String, drew Iron Tears down Plato's Cheek." —Or Verte with many a "window open, as you get out, with warm and Crying, the melting Voice "tho Mæs running; unwitting all the Chains that tie the hidden Soul of Harmony."

PERSONIFICATION, which is of that Extent and Importance that it is ususally held the Life and Essence of Poetry; is a vast Source of new Imagery. By this, not only different Objects, but different Systema and Worlds, are combined and blended together; and what belongs to one Kind of Beings, Man, is attributed to every other. By the help of this Object, the Invention being occassion'd, all the Characters and Properties belonging to the human Kind. Thus, an Arrow grows impatient, and thris to drink the Blood of a Foe; or lathers and stops half way, both to carry Death, &c. So an Action of the Body, Laughter, is above represent'd as it self laughing, ready to burst its Sides. And in the same Piece we have one of the Planets, the Moon, represent'd as trick'd up and fronzed; and again, as kercbied, and in a decent Undres, and thus going a Hunting. To tell us, that a fine Spring Morning, attended with a gentle Gale of Wind, is very pleasant, preciously,—" Zepli' with Aurora playing, as he met her once a Maying, on a Bed of totes blue, and fresh blown Rose," and in Dew, fill'd her with a Daughter fair, yclep'd in Heaven Euphronie, and Mirth on Earth. How con- fident with the Nature of Things, that a Breath of Air should lay an early Hour of the Day down; and that from a green Gown thus given, a Paffion of the Mind should in time be brought forth? In effect, the Inpiration of the Poet amounts to little more than relating things that are naturally incongruous. He presents the Fruits of the Worlds, and by difference contriving the whole by dfferent ways, does not make any thing, he only patches: He does not invent, he only tranfigure. Nor has he the least Power to move, other than what he derives from the Novelty and Strangelenes of his Combinations; to which nothing exits in the ordinary System, any thing conformable. To say no more, if Invention furnishes Art; Memory furnishes the Invention; and Senfation the Memory, where all Knowledge originally commences. And the whole Pro- cef is neither nothing but the Action, or Operation of the Deity in a Coure of Laws. In a word, the Kind the Inpiration and Creation are excited by is Miness of Wine; Ca- fasheen is perfectly frighted at it; judging it the highest Strain of Impet, to suppose a Man may be divinity

* Pope in Idiot's Guide.
infringed by the Fumes of Liquor.—And yet I don’t know whether his Fright be not founded on a Misappre-
ception. If Stegler or any other Person allege, that the Juice of the Grape may be an Occasion of such an
Effect, I, as a Man of Reason, and not a Sot, can make the Laws that concurt to Invention take place; I do not
find in any Book, or in any Religious History, that religion has to do, here or in any other Place. I will leave
out of view the Power of the Prophets; the People of all Nations have it, though none of God’s Creatures, not even the Vilest, but occasional
ministers. The Antients did not think so mean a thing of it: they were great Orators; on purpose to prejudice over
it; and it even had the largest Share in their most solemn Ceremonies of Religion.

THE Infraction of Orators, bears a near Relation to that of the Poets; to being somewhat grogger, it
becomes more technical, and demands more Industry, and Art.—Quintilian tells us how a Rhetor is to get infring'd ;
not byfupine folly and glossing at the next moveable, and carefully turning things over in his Mind; but by
an affecting and dense Age, and to mix and confound the Subject, and present, and strongly representing to himself the Time, the Occasion,
Etc. He adds, that no one ought to pretend to be an Orator, unless he have this Art of Infraction at com-
mand; so that he can raise it at pleasure.

WHAT has been said above, contains some of the general Principles of Enthusiasm, and their Connection
with other physical Effects: and 'twill be easy to trace and pursue the fame, where they appear in other Cales,
and with other Circumstances. Thus the Infirction excited by the Orator in his Audience, is resolved, by Ca-
fanbus, into the Mufick of the Speaker, i.e. the Tone and Cadence of his Voice; and the Tactics, or order and
placing of his Words: In which last, how fimple, and trivial over it may be, the great Masters on this Subject allow somewhat mysterious and unaccountably forcible; and accordingly make it the principal Part of
Rhetorick. And yet there is nothing in the Whole, but what refults from the Powers, Properties, &c. of the
several Letters, confider'd as so many Sounds, artifically combin'd. In effect, there is some Reshoot, or Dimen-
sion, and some Method, or Numbers in all Diction; much more in that of Oratory: And Mufick it self has no Charm in
this, that it serves frantises, and not to raise its

NOR must it be omitted, that the use of Metaphors contributes its share to the Effect. The Secret whereof
consists in this, that they are, as it were, accommodated to the Senes; and present such Images to the Imagi-
nation, as move us most when perceived in the Way of Sentiment.

As to that Enthusiasm felt in Prayer, its Caufe is not far to seek. The Powers of Rhetorick, and Mufick;
and of a peculiar Fervour of Imagination, rais'd by an Apprehension of the Precedence of God, &c. will go a great
West. We may say, that the ancient Heathens made use of Dithyrambs in all their most solemn Prayers; which
Prachus observes, are peculiarly fit to fir up enthusiastic Dispositions. A Man that rides Pindar's Horse,
cannot well fail of going at a great rate.

But the most extraordinary and unaccountable kind of Infirction is still behind, viz. that of Prophecy,
Divination, discovering of Cures by Dreams, &c. which yet may all be produced by Art; and accordingly,
have all been taught and studied like other Arts: not to say, alloyed, practised like them. But a Livelihood,
Schools and Colleges of Predictors, and other Prophets, &c. were numerous both among Jews and Gentiles; and
here, there was little in their Discipline, but what may be referred into Prophecy. Their Prophessers have
said, all the Means above mentioned, all the Springs of Enthusiasm, were used; and frequently combin'd together, to
make the more compound and extraordinary Effect. The Sight of vast Objects, as Rocks and Mountains, wild
Prospects, solitary Groves, gloomy Caves, furious Rivers, Seas, &c. which we find to work so strongly on the Mind,
were indulg'd, and often changes, and sudden Transitions made from one to another. Such unusual Ob-
Jects necessarily suggested unusual Ideas; which the heighten'd by proper Applications to all the other Senes. And
when the Man was at length got out of the ordinary System of Thinking, into another more unusual and ex-
traordinary, tho' equally phical, or if you will, mechanical one: what he uttered was judged all
oracular: It was not his Sense, or Reason that spoke; and therefore it must be that of God himself. And among a large
Train of Objects which presented themselves to him, some of 'em could not want an Analogcy to Things that
were really to come; at least, in the Opinion of a Person already possified with the Notion thereof. It may
be ludged that, as for the Prophets themself, they had their Share in producing Futurity; the Events whereof parooked of
the Predictions, some more, others less, according to the Objection of Possibility of the Parties concerned in
them. In effect, the Revelations still retain something of the Means made use of to raise 'em. Thus, if
the other were either agreeable or displeasing, the other would be of the same Kind; And hence a Revelation
was artificially produced of the Complexion required: which was the very Apex of the Art. So that
the Divination, when most perfect, really suppos'd a natural Knowledge of the Thing demanded, and was a

As to Dreams, &c. there was a Formula for 'em; the Circumstances whereof might be appropriated to
raise in the Imagination an Idea of the Thing required.—After a number of Ceremonies, the Party was to
sleap in the Temple: Pellelus incubuit first, femmuneque præcis. And the Priests had not only the placing of
his Body, and the Trewing of his Bed; but also the Management of Odours, Sounds, &c. in the Night-time.
So that if any natural Means were known for the Cure, here was room enough to fudge it to the Patient's
Interest. Prophecy was made according to 'em, and as it were put into their Hands. But, if no proper Re-
medy were known; as, 'tis probable, they hardly entered for these sciences; perhaps at random, how strongly might it operate, when informed by the Opinion of its coming by Miracle and
Infirction? We see what the bare Presence and Affurance of a Physician will frequently do; even cure Dis-
orders far out of the Reach of his Skill: and what an Improvement would it not be to the Faculty, to have
this further Afflination of a little Shew of Religion and Ceremony?—A deal more might be said on this Head, from
the Practice of Exorcism, Amulets, Phylacteries, &c. to which the Reader may turn in the
Book; as also to the Articles of Divination, &c. in the

IT appears then, that 'tis in vain that we pretend to prevent the Order of Nature. Sentiment does and
must inevitably precede Imagination, which cannot by any human Means come to the smallest Grain of any
thing, but what passes thro' that Canal. There is no harm in saying, that such Things are of Divine Infirction,
and the Millifex lies in supposing, that there are more so than others; that what appears only to the Imagination,
more so than God than what appears to Sentiment: which is, in effect, to say, that we have some Knowl-
edge, which we do not receive from Nature.

* Indit. Lib. v.
* Council 3. of Oaze.
** Livy, relating the horrible Riots of the Saturals, says; "Men,
would have been taken as it was, fall into strange fantastical
"nations of body, and break out into Prophesies." Vuln. mentes capi
"tum agricultura sanitatis corporis visibilis. Dec. f. c. 3.
NO body can imagine, that what we have said tends to exclude God, and Providence out of the World; but rather to establish, and confirm them in it. So far is it from shewing, that the Deity has no hand in the Production of such and such Effects; that it shews, nothing else has any. The Whole is His; and the Agency of Man is only circumstantial. For, what necessary Connexion between any of the Means here used, and the Effect? And in whole Hand but God's, could such incompetent Infrumens produce such Ends? In reality, we not only confine his Presence and Agency in the great and extraordinary Phenomena; but fee and admire it everywhere, in the meaner and more usual Events. Nor does it appear to me, that the Difficulties of Religion are a Point quite foreign to the present Purp', the Inspiration and Prophecy we have spoke of is all natural, and ordinary; and does not any way preclude the Deity from more extraordinary, and miraculous Manifestations of his Will. On the contrary, if weak Man can do so much, acting subordinately to certain Laws of Nature, and by means of others; what may we not conceive of the Author of those Laws, whenever in the Will of his Councils, he shall think fit to interpose: as, in the two great Difpensiones whereof the World is Wring'd round.

BUT, if we have not made Philosophy encroach too far on Religion; it may, perhaps, be objected, that we have made Religion of too much Concern in Philosophy; in that we are continually recurring to the dernier Refor, the Deity; which is held unphilosophical. — But let it be consider'd what it is to philosophize, and whether our Theories amount to anything more, than Enumerations of Laws, i.e. Actions, of the Creator? 'Tis certain, all the Structures of our Minds, are formed by Different Species, i.e. by Cover'd Causes; by the downwards Flowing of the Origin of an Animal, than of a Spark of Fire. The usual System of Generation amounts to no more than Augmentation: it supposes the Animal already form'd, and only undertakes to enlarge, and flow how it arrives at its Bulk. An Animalcule is to be given us, either in feminine, or in ews, or we labour in vain; Affirmation being all the Generation we have any Idea of. We find our selves left, and bewild'red, when we come to think. How the dim Speck of Entity began, and here begin to confes, and mount the Imperfection of our Knowledge. As if there were any Difficulty here, which did not equally obtain in every Step of the Process. All the difference is, in the one Cafe we are sensible we only know the What, and in the other we also think we know the How: Which is a Delusion: And were it not for the Paradox, one might almost affirm, that we know those Things best, which we think we know the least. For that here we more immediately see the real Cafe, without the Cloud and Embarrass of Occasions, which at other times confus us. Occasions, are Causes, with respect to us, the second Rank of Things; whereas, to the great Seer, the Cafe is, that which is the Door to the real Cafe. Whence, the greater number of Occasions we perceive the further is the Cafe apt to be involved, and the more Attention is re¬quired to extricate it. And by this way alone can Philosophy lead to Atheism. — Our Knowledge, in effect, is all relative; it respects our selves, and the ends, more or less immediately; and is chiefly applied in the Arts, and Affairs of Life, where Occasions are Causes: And hence we take a Tincture, which we carry with us thro'out; and apply, unawares, the same Notion when we come to philosophize, where we are less interested, and consequently our Knowledge purer and more absolute. And thus we are betrayed falsely to confound Art with Nature's First Cause with Second; God with our Selves: all which must be done, ere the Philosopher can commence Atheist.

THIS is not distinguishing between Causes and Occasions, has produced an infinite deal of false Reflections to the great detriment of our Philosophy, and palpable Knowledge. We continually over-think the Man, and lose sight of the End, in admiring what is close to us. We are willing to leave God out of the Affair as far as we can, and only have recourse to him when we are at a pinch. He is rarely wanted, unless now and then, for a Miracle, or so. The Deity is not to interpose, nisi dignus sit suadere Nostis, till we have occasion for him; i.e. till the Cafe becomes so obvious and glaring, that the Charm is broke, and we are forced to see him in spite of all our Prejudice. The Occasions are so visibly inadequate, that our Confidence cries out, and necessitates us to look to, and confes a Cafe. — But, tho' we be well enough contented to find him at the End of the Chain; alas he must be alofo at every Link, or the Whole will fall to pieces. He is not more concern'd in forming the original Stamen of a Fectus, than in nourishing, assimilating, or bringing it to Light. We can as easily conceive the first Formation of a piece of unorganiz'd Matter into an Animal, as any other Production of Nature; or even, as we call it, of Art. Generation is effect'd after the same manner as the Cafe: one will account for the Cafe, that which is the high Station, will always be left for the Child. If the Figure of a Man arise out of a Mafs of Clay; it is by any other Operation than that of Nature, which according to the Position of the Hand, determines the Parts of the Clay to move in this Di¬rection, or that; according to certain Laws of Motion, and Percussion? And if the Cafe be afterwards hard¬en'd, upon flaming to the Fire; is it not by the same Nature acting by certain other Laws, the Set or Collec¬tion whereof makes the physical Process called Evolution? The Hand, you'll say, was the Occasion. But what is an Occasion? I doubt we have no just Idea to that Word, and that it implies somewhat of a Cause, at least; at least, if any thing of Causality be denot'd by it. Considering that we say, Light is the Occasion of Shadow, Joy of Sorrow, and every thing of its Contrary. If a piece of Phosphorus, upon becoming con¬gugous to Air, immediately begin to siboke, and produce Fire and Light, with all the wonderful Phenomena thereof, as Colour, Refrangibility, Reflexibility, alternate Fits of early Reflection and early Traffination, have different Powers in various Natures, the different Cover'd Appearances of a Rainbird, exhibit the Species of Objects, act on and confuse Bodies, give Sentences of Heat, Cold, Life, and all the Properties permanent, and immutale for ever; What a System of Laws, what an infinity of Springs must be play'd for all this? No Circumstance whereof is in our hand, beside that of Contiguity or Non-contiguity with the Air: which, for our own Glory, we dignify by the Name Occasion, and suppoe some¬thing in it analogous to Cafe, and thus put our selves in some measure on a footing with the Almighty: — We may now hear of the Cafe, what God would be to us; and without Heat, all Motion and Action, must be at an End: So that it may even be said to be owing to Fire, that there is a World. And yet how easy is it to produce what thus contains in it all Things? In effect, Fire is an Occasion; and contributes just as much to the Existence of the World, as we do to that of Fire. When we are doing, we might as well go on, and make our selves the Cafe, or Occasions of the Universe; or which we are, in the very same Sense, as our selves the Cafe: which is the Principle in it: the French word Religion, is found equally so to Philosophy. So constant is the Nature of Things! One Error is suficiente of almost all Truth: One Wheel amiss in the Machine of Knowledge, makes the whole a Lye.

Of this, many of the Antients feem to have had a juster Notion than we; as, in effect, they may be said to have had more Religion than we. — Their Mythology, which is suppos'd to be their Physics, speaks of nothing else but God, under various Forms and Shapes, i.e. in various Views and Relations. The Poets, from Homer to Virgil, have bestowed their first personified God, on the first Genius who contributed to the Art of Religion, they called Jesus, which they conceiv'd as his reigning Attribute; his judicis was Jesus, the Confort of Power; his Judaism, Minerals, the Oispring of Jesus' Brain: &c. And thus it is they are to be understood, when they

say Jupiter did so, and so Jews percutted the Trojans: Minerva instructed Telemacus, &c., which seems to be all the Polytheism the Inventors were guilty of; the after-Ages, not perceiving that this was the Work of Poetry and Fiction, absurdly took it in another Sense.

In effect, the whole Physics of the Antients, was no other than a Theology; as all just Physics ought to be. The old and true, the traditional, as I may say the accepted opinions of both the Sciences, and erecting 'em into Provinces both of Religion and Ignorance; which will never be dry'd up, till the two be dry'd up: then shall we become other, and laid together again. To run any length in either of these, without having recourse to the other; or in any manner of considering the Actions of Authors affect to do, is downright inconsiderit. Some of our Systems of Theology, one would take for pure Inspiration through; as if the Authors suppos'd they could know anything of God, otherwise than by means of Sensation, and Phenomena: but as we have seen, in Enthusiasm it fell not pre-suppose Sense, or could arise without it.---And, on the other hand, some of our Philosophers seem to have refined God out of the World, by whom all things is in subsist; and which, in Sersen's Philosophy, was no other than the God himself. They have made us an Univerze so fine, that it may stand of it itself, without any God, i.e. without any Cause, at all: Occasion is the highest Cautlion they require. This is to abstract with a wittnes; to digg through the Knowledge of the Cause from that of the Effect, and vice versd; whereas there is no knowing any thing, either, other than by the Reasoning of one to each other.

I MAY add, that the further either of these Sciences is carried, on this footing, the more idle and extravagant it will become; and that the one tends to downright Madness, and the other to downright Atheism. On the one hand, to make a System without a God, is nothing less than to be a God one's self: The Author's Imagination must supply the Place of a Deity, by animating the Mafs, and giving Connection to the Seoet Parts and Members, i.e. by establishing the Relation of Cause and Effect, which is the very thing that denotes God. Yet even such a imaginary System it fell, cannot arise without God, acting by his Laws upon the Imagination, in the Course of Things; so as to produce such Effect: And thus what tends most directly to exclude God, does at the same time suppose him.---And, on the other hand, to make a God without a System; that is, to give a Theology or Doctrine of God, without a Physiolog, or that of the World, is in effect, to make a God, not to find one. 'Tis to make an Effect antecedent to its Cause: 'Tis to do, I am afraid, to say what I

I AM afraid I may seem to have been too long absent from my Subject; but it has been all along in my Purpose, to repeat Recapitulation will convince the Reader, that we have not wander'd far out of the way.---We have shewn where the Knowledge originally riles; that Sensation is its only Source; that what comes this way, comes by the Agency of the Divine Agent, which is either modified in the Memory or Imagination, where new Affemblages are frequently made, which is called Imagination, that it is continually altering, by the Admission of new Ideas from without; but still remains subject to the Laws imposed by the Creator, so that nothing happens therein, but in consequence of such Laws.---Thus far the Mind appears merely passive; And thus it stands with respect to the Matter of all Knowledge and Art.---It remains, now, to consider its Form, or the Matter of which Knowledge becomes Art, i.e. becomes subservient to human Purposes, and under the Direction of human Reazon.

HERE, therefore, a new State of the Mind, Activity, and a new Faculty thereof, Reazon, come in play: the Foundation and Office whereof, will be certain, by inquiring, What is there in the Artiff's, e.g. Homer's, Mind, that concord with his Inpiration or Intention, to the Production of his Poem? This will be found to result from an Induction of a particular Kind, i.e. to form, for an Indication, or Desire to produce some Piece, in the way of a Fable, that shall strongly represent the Milchifes of Ilios among Confederates; and, secondly, a Knowledge of the Means necessary to that End, or an Acquaintance with certain Rules and Measures which tend to produce such Answers.---The first is a Moral View or Motive, which has already been laid down as the Spring or Principle of all human Action, and which is founded on the Apprehension of Good or Advantage to arise from such Poem. The second, viz. the Knowledge of the Means, stands on the common Founding of the Knowledge hitherto differ'd off of.

The MEans and Measures of an Art, make a kind of preliminary Doctrine, necessary or conducive there to, called the Theory of the Art; which, also, in one Sense, may be consider'd, as another Art, distinct from the former: At least, to come at it is the Bifnefs of another Art.---If, for instance, a certain Office, or Set of Motions of the Body, be constituted by Nature the Occasion of a poetick Inspiration; and such and such Images and Ideas arising herefrom, be constituted the Occasions of such and such Passions in the Mind of a Recipient, by such a Moral View, and such a System, and such a Memory; viz., an Aversion to Emnly, and Contention: To form an Art productive of these Effects, it must be subdivided into new and other Ideas, such or the like Effects, to arise from such or the like Causes; and argue or infer, that 'tis probable thefe Motions, or these Images, are the Occasions thereof: and consider and collect the Order, Manner, and Circumstances thereof, to form the Art, or Method.---So that we have here, as before, 1st, Matter, viz. Phenomena, first furnished by Sensation, and prov'd in the Memory; 2nd, Form arising from the Moral View, which led us to frame an Art, and in order thereto, to consider and dwell on the Phenomena, compare 'em together, and infer something from 'em.---It appears, therefore, that we have two Arts of Poetry, very different from each other; coming from different Causes, differing to several Purposes, and rarely found, in any degree, in the same Perfon. The first Art Homer has in perfection, the second, Arieftile.

BUT for all their difference, the two are really of the fame general Nature, and Kind; and only differ in point of Degree, and Subordination; as they are nearer to, or further from, the Principle of all Knowledge and Art.---If, for instance, we consider Homer, we have seen, was inspir'd: He derived his Art only from Nature acting in him the ordinary Course of Things, and furf preposing Objects to his Sense, then to his Imagination: And others are inspir'd from him, i.e. derived from the Inspiration from Nature thro' his means; among whom is Anreilef: Nature, as she appears to the Senses, is Homer's Subject: as she forms her self in Homer, is Arisilef; by which time the Inspiration is grown a degree cooler, and less forcible, and the Ideas thus excited at second hand moving the Mind less, it can attend more freadily to 'em, and perceive their Relations better. In the first, it falls like Lightning, immediately from Heaven; the second may be compared to the Reflection of the same. The reft of Homer, i.e. the existing and calling up his Ideas and Images, does, as it were, impregnate Arieftile's Imagination; and the whole Poet is the Nourry into the Philosopher's Garden, to be further cultivated. Accordingly, Arisilef applying his Apprehensions to the Idea, or Image, 'em, which Homer was not aware of; or, closer on all Sides, perceives divers Relations and Analogies between 'em, which Homer was not aware of; and applies (I mean) to the Warmth of his Poem, and the quick Succession of new Ideas, would not give him room to attend to. These Analogies he calls Rules, or Laws; the Affemblage or System whereof, make what we call a Homer's Art of Poetry.

* To the hono quo contemnere & munum eft & Deo; & facri ejus famus & membros. Epis. 92.
THE like Proceeds might be observ'd in the several other Arts. Thence we have hitherto chiefly kept to, have been of the symbolical Kind: we shall here give an Instance of what we call the real Kind, viz. Architecture. An Albanian Sculptor, then, observing Acanthus growing up under a Basket, is pleas'd with the Figure it presents, and sets the Head or Mantle of the Figure on the Capital of a Column on the Model thereof: And by a number of like Steps, an entire Order gradually arose; and, in time, a whole Art. Things thus advanced; and another Peron fixing a Building framed after such manner; he attentively examines the several Members, their Forms, Proportions, &c. and puts 'em down in writing: And thus does another posterior Art arise. And between the two, there still remains the Subordination already observed, between and among confederate and related Ideas, i.e. the Rules thus formed being concerned in the same Subject in Words, or Language, supply the Office of the external Objects they were originally deriv'd from, and prove Occasions of raising Ideas or Images in the Imagination of future Artists, to be imitated in the proper Materials.

The Arts, then, of Poetry and Architecture, come first in at Homer's, and Callimachus's Sense, in the simple Idea of natural Phenomena, or Objects; which meeting with Ideas in the Memory, or Imagination, and coming to be compared and combined therewith, by the Agency of the Moral View or Principle, as a natural and unfeigned Poem, as advantageous and desirable, new Productions arise, e. g. a Poem, or a Building: which coming at length under the Cognition and Consideration of Reaon, certain Relations or Analogies are discovered therein, which tend to propagate, and produce the like at any time.---Reaon returns Rules for Matter; which Rules, prove like the Philosopher's Stone, which tends to turn all Materials it is applied to, into Gold; and the Materials thus transmuted, like the pretended multiplicative Virtue of the same Gold, from every thing they are applied to, produce Rules again.

Reaon, in effect, which is the last Faculty the Matter of Art arrives at, is the first from which the Form or Rules thereof, which are to propagate it, arise. In which view, Reaon may be laid down as the Principle of this secondary Art, or Theory; as Imagination of the primary one, or of the Matter. We shall see the Effect of the first Laws, even in the latter Art: External Objects strike the Sense, and Imagination so strongly; that they reach to Reaon; which, like an infinitely elastic Substance, reflects 'em back again; and then return to the Objects of Sense, and so in a Circle.

This seems to make the two Arts differ very widely: And as Reaon appears our highest Faculty, (inasmuch as 'tis this alone that tends to produce, and multiply) and accordingly, all our Knowledge appears proportionally higher and purer, as Reaon is more concern'd therein: the Rules or Theory of an Art, appears of infinitely nearer Consequence than the Matter thereof. The former is in some Sense active, and the latter, like the Alimphes, tends to produce new Things, new Worlds, new Systems without end; the latter is mere Pallion, and ends in base Pseudo-Poetry.

Yet, Aristotel's Rules, it must be observ'd, do not tend to produce Poetry; I mean, not the Matter of Poetry; but only the Form. Aristotel's Art is not the Art of Poetry in that Sense; as its Rules don't tend to produce the Enthusiastic. They only give the human Part, and relate what Reaon observes in the Productions of the Imagination, i.e. what there is in it that is a proper Object of this Faculty, and comes under its Notice. In effect, Poetry is only subject to Aristotel's Rules, as there is Reaon, not as there is Inspiration or Invention in it.

The Source of Poetry, we have seen, lies out of Poetry, in a higher Ground; and to turn the Stream upon us, is the Bifurcation of this other Art of Inspiration. The immediate Inspiration, is not so immediate as we might imagine. It is not the ultimate Principle of Art, but is it self subservient to another further, or purer Inspiration, or Invention. And the same will hold of the Rules of this last Art, themselves, which will require others; and so in infinitum. At least, the Series will be infinite, if we only take our selves, and our own Agency into the Account.---

To clear up this a little further; it is to be observed, that the Art, e. g. of Poetry, is not only the Refruit of another higher Art, as above laid down; but, as it consists of Matter and Form; there are each of 'em the Subject of a particular Art, and each of 'em requires another higher Art to produce 'em.---The Means, for instance, necessary to Inspiration, or the Invention of Images, make one Art; and those for their Application to the present Purpuse, another. So that the Art of Poetry refolvs itself into two subfordinate ones; the first of which may be called the Art of Inspiration, the other the Art of Judgment, or Criticism; each of which has all the Characters of an Art, and is Matter and Form.---Nor does the Matter end here: For as each of these subfordinate Arts, consists, again, of Matter and Form, each of 'em refolvs lower into two other Arts: and the same may be said of each of these, and so on. So that there is really an infinite Series of Arts, previous to any one, and accessory thereto; all distinct from each other, the all of the same general Nature and Kind, and only differing in Point of Order, or Subordinaty. They arise subordinately from the same Cause, and tend subordinately to the same End: Which Difference, or Subordination, as already noted, arises only from their greater, or less distance from the Principle of all Knowledge, Sensation.

Upon the whole, sensible Nature furnishes the Matter of them all, by means of the Imagination, and moral Nature the Form, by means, or light of Reaon.---The former Proposition has been sufficiently discussed. It remains to inquire a little further into the latter: For, that Reaon furnishes the Means, &c. must be further qualified, ere it be receiv'd.---Our Reaon, it is to be observ'd, does not perceive any necessary and immediate Connexion between the Means, and the Effect; for there really is none. Consequentially Reaon cannot be the Author of 'em; in regard, the Medium is wanting whereby it could possibly attain 'em. So that they must be procur'd by some other Canal; which will at length be found to end in Sensation. In effect, ere we know that such Means conduct to such End, we must first have observed, or found it by Experience. Our Memory suggests to us, that such or the like Causes, have been found to be such or the like Effects; which is the only Foundation we have to expect any thing from 'em on the present Occasion.---Thus, if Homer's Reaon direct him to retire into a Place free of Noise and Disturbance, at a time when his Mind is clear and in due Temper; and there to apply himself with Attention and Earnestness, to think on his Subject: In consequence of which Means, new Ideas and Images present themselves; some more immediately relative to the present Purpuse, others left: Whence comes all this, but that Homer remembers, such the like Ideas as are now wanted, to have been acted upon the like or such other Images? And if, among the Crowd of Images he traffic only such as are most proper, and immediately conducive to his End, and throw aside or expel the rest; whence is this, but that he remembers such, on former Occasions, to have contributed more fully to Ends like his own; than such others? So that the whole Proceeds appears to be little other than Remembrance, which, we know, refolvs into Sensc.
BUT, Memory, it is to be here noted, deals only in past Things. It informs us, that on such an Occasion, such Means, under such Circumstances, produced such Effects: But its Notices are mere retrospective, or historical; and relate only to those numerical Means, Occasion, Circumstances, \
&c., which can never recur, nor appear again. So that Memory speaks nothing to the present Cafe; nor gives any Directions how the particular Purpose now in view is to be attain'd. Its Language is only this, "Such Means did produce such and such Effects."—To make the Application of past Things to present, is the Office of Reason; which comes in when Means, Occasion, &c., are metamorphos'd, and becomes so to, such others will now do so." And consequently his Reason that, in strictness, prefers the present Means. 

OUR Inquiry now draws towards an Illus; and it only remains to shew, in what manner Reason attains this End, &c., what farther or higher Means there are, whereby it is enabled to furnish Meafures for the present Exigent, from the Circumstances of past ones.—This it effects by certain Perceptions of Similitude and Difference, Parity and Imparity, Congruity and Incongruity, between former and present Means, Occasions, &c. By virtue of this, the Mind infers, and makes inferences, such Means as were followed by such Effects; and such others, by parity of Reason, will be followed by such Effects. So that "Means" here implies not such Means as were followed by such Effects; but such others, by parity of Reason, will be followed by such Effects; and "and such Differences between former and present Occasions and Circumstances there must be such and such other correspondent Variations in the present Meafures, to keep up the Congruity. All which resolves into that comprehensive Word, Analogy.—Thus it is found, that every Means, every Step of an Art, includes what has been already shewn of the whole Art; and consists of Matter, furnished by Memory, from Sense and Ob- 

A ND thus it is Reason that makes all our historical Knowledge of any Significance to us. 'Tis this that makes former Cafes subservient to the present Occasion. We may look upon this, as the Instrument or Faculty of transferring; whereby the Effects of former Times and Places, are brought over to the present ones. Without this, Sense would lose its chief use; and Memory, with all its Copia, be no other than unclest Lumber.—'Tis this Faculty alone that arranges our sensible Ideas into any thing of Subordiiny. Memory only presents 'em such as they are in themselves, and that are distinguih'd, and independent of each other; being connected by nothing but their Com- 

A ND thus we are got to the bottom of all our moral Faculties, Define or Inclusion. That is, if such one Reason; which, from these few sensible Relations, infers numerous others, e.g. from the Comprehension of two Things, in respect of Time, Place, &c., it concludes that some new Appearance perceiv'd in the one, was occa- 

A ND as it is we come by the Relations or Perceptions of Cause, Effect, Action, Passion; Property, Quality, &c. So that, to this Faculty of Reason, we owe the whole Science of Physics; which is no other than the Doctrine of this or that; where the Mind is compell'd by Reason, from Contrast, and Analogy, 

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THUS far, therefore, we see but little that looks like Activity, even in the Faculty of Reason. But Reason has not been yet thrown into its Height. Tho’ it has its Origin in physical Matters; andNEW it was self-reflecting in the Establishment of Causes, Properties, &c.; it reaches much higher, and is seen in its Perfection in Metaphysics; where its Proportion and its Excess to Reason, is principally seen in its general Property, &c. And hence the Doctrine of Quality, Quantity, &c., in the General or Abstract. —Nor does the Matter flop here; but the Mind still proceeds to erect a new and most magnificent Science of Quantities, Analogies, Proportions, &c., hereupon: founded on this Principle, that "so far as a thing unknown, agrees or is like to another thing known; so far is such former thing, its Nature, Effects, &c., known;" A Science infinitely extensive, and productive of Proofs and Inferences of infinite Strength, in being founded from nothing to another; And of Infinite Certainty, as being founded on a self-evident Proposition. —It proceeds by Definitions, Axioms, &c. But as the Things themselves which are its Subject, are only Ablatums, which are but a kind of Shadows of real and sensible things; so are its Definitions, which cannot be said to be Definitions in the same Sense as those of a Concreter, e.g. a Plant, an Infrmsament, or the like; insomuch as if they do not excite any Image or Idea in the Mind. And hence the Difficulty under which the Writers of the Principles of Mathematicks labour, to give Intelligible Definitions of Unia, Species, Number, Part, Whole, &c.

It’s Axioms are only Duplicates of some Proposition, or the same thing express’d in two manners; the one direct, the other implicit; properly call’d Identical Propositions. —Thus that Axiom, "The Whole is equal to its Parts," easily resolves it into this other; "The Whole has the Nature and Characters of a Whole," which amounts to this, "A Whole is a Whole."

To illustrate the Progress of the Mind in this new Scene: Suppose, for instance, a Ball, or Sphere; and let it be divided into two Parts. —Our Senses do not inform us that the two Segments thereof are equal to the whole one; On the contrary, they represent them as very unequal; and 'tis Reason alone that finds their Equality. The Cause hereof, is, that the Figure, &c. of the divided Sphere, are the things the Eye takes cognizance of, are very different from those of the whole one; and that the Quantity or Substance, in which alone the Equality consists, is no Object of Sense, but only of Reason; which informs us that the two Segments of the whole Sphere are of the same Figure. —Thus if we cannot by the Senses discover it, we find it necessary, i.e. included in the Nature and Notion of a Whole, that the Sphere be equal to its Parts; and thus, by analogy, pronounce the same Ratio universally between every Whole and its Parts, and so make an Axiom which is the Foundation of a new kind of universal Knowledge. In effect, to say that the whole Sphere is equal to its Parts, is no more than to say, the Quantity or Substance is not altered by any Alterations made in its Figure, Place, Number, &c., which is as much as to say, that the Substance is the Substance, the Sphere, the Sphere.

From such Axioms, it proceeds to Theorems and Problems; every one whereof is resolvable into Theins and Hypothezeths; each of which may be again resolvido into Axioms or Identical Propositions, which is called Demonstrating. In fine, all Demonstration supposes Identical Propositions, and turns on 'em; and its Certainty arises from no other Principle, but the Identity or Sameness of the Thing implied in such Propositions, with the Thing expressed.

It appears then, that the whole Process consists in abstractive, or setting aside the sensible Idea that gave the first Occasion, and considering the Relations thereof by themselves, as if they had distinct, independent Existences. By thus excluding the Confideration of the physical Ene, Sensation and Imagination are of course excluded, with all the Action and Inpiration annex’d to 'em; and thus in Reason left in full play, without any thing to supercede, or divert it. —Thus we may be said to make a new World, and furnish a new System of Creatures; and a new Doctrine, which is, as it were, the Shadow of the former. Metaphysics, and Mathematicks, in effect, are the Science of Enia humano, or rationis, as Physics of Enia nature, or sensus.

But such Abstracts, e.g. Quantity, Measure, Weight, &c., the no immediate Objects of Sense, have yet a Connexion with things which have, whereby they become of the utmost import in the World. There is that Relation established between the Faculties of Sense and Reason, that tho the Objects of the one be not cognizable by the other, yet the Communication between 'em is by the all-wise Creator made very near and intimate: Such Dimensions, Weight, &c. are combined by him with such Effects, Motions, Reinfances, &c.; and prove the Occasion of such and such Effects: which is the great Principle of all human Action, and all truly artificial Production in the World.

By Y means of this Communication, the first Impulse is brought back again from the highest pitch of abstract Mathematicks, to the first Objects of Sense, from Fluxions and Differences, the first parts of the Pala et infini Reason has ever travelld to, to the gilding and most palpable Objects that strike every Sense. And thus are Action and Passion, Sensation and Reason, Art and Science, found to reciprocate, and produce each other.

Having thus disked the Nature, and Characters of Art and Science; it remains to settle the Notion of a TERM of Art; a Diction as little understood as any thing in Language. Art and Science, we have observed, are Denominations of Knowledge under this or that Habit, sc.; and Words are Representatives of the several Parts thereof. The whole Compass of Words, in all their Cales, is supp’d equivalent to the whole System of possible Science; tho' it is only a small Part thereof that is actual, i.e. only a few of the possible Combinations are, or ever will be, made.

The Buffs of Knowledge, then, is not cur’d out among the Body of Words: but they don’t bear equal Share. Creatures are of several Kinds; we have dealt with 'em accordingly; and many, besides, more less significant, at pleasure: some stand for large Tracts, or Provinces; others for little Speces, or petty Divisions thereof. In effect, the Order wherein we attain our Knowledge, has occasion’d us to make a kind of Sortment and Package, if I may use the Word, in the Matter thereof. Tho the Mind only sees and perceives Individuals, which alone are the Proper Objects thereof; yet it has a Power of combining and compounding them together, for its own convenience: And hence its progress from Particulars to Generals; from Simple, to Complex. —Hence we come to have Words of all Orders, and Degrees; from the Simplicity of an Atom, to the Complemest of the Universe. 'Tis pleasant to trace the Mind bundling up its Ideas, and giving Names to the several Parcels; to observe, for instance, how it proceeds from the simple Idea, Thinking, to the more complex one, Knowledge, thence to the more complex, a Science, thence farther to Scientific, &c.

Indeed ‘twas very few of our Words that express single, or simple Ideas. The Reason is, that observing certain Mathematicks to spring between the several Ideals; as, of the Diffrerence, Subject and Attribute, &c. we don’t so much consider them absolutely and independently, as under such Circumstances and Relations to each other. The great Readiness and Propensity of the Mind to combine, and bundle up its Ideas, and thus pay, or receive 'em in Parcels, has left us very few simple ones; I mean, very few Names which denote only one Idea. The Words Atom, or Mathematical Point, usually imply several Ideas; in regard, we are led to the First and the Second, to the Complete and the Instantaneous. Not to mention the consider the Atom as hard, heavy, and invisible; as the Principle of physical Magnitude; as contributing to the Constitution of Bodies, &c. Even the primary Qualities themselves, as hardnes, heaviness, &c. imply that they are in their own

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Nature are so far combined with particular Circumstances, e.g. their Cause, Effects, &c. that their Names become none of the leaf complex.

NOW, what we call a Term, consider'd as to its Nature and Origin, is no other than a Word which denotes an Affemblage, or System of Ideas relating to some One Point, which the Mind artfully complicates or affables together, for the convenience of its own Operations." Or, "a Word which comprehends several or whatsoever Relation to each other, whereby they represent some complex piece of Knowledge, to the Mind for the convenience." &c. Or, "a Term, which holds several different Ideas combin'd togeth.

ther in a Relation such as they appear'd under when we first had 'em as a standing Phenon.

men, and took Meafures to have 'em fix'd or retain'd in that Quality.

THE Effect of Terms is, that by virtue thereof, we are enabled to receive, or communicate Knowledge with more ease and dispatch; forasmuch as having proper Combinations thereof always ready made, we are fard the easier to begin, the more detailed, and detailing in Individuals; much as in Arithmetic, to avoid the Embarass of a large Number of Units, a Decia, a Tenth, a Sixtieth, or Sixtis; With the like View, on some occasions, we make up certain Sums of Money in Roules, or in Purbes; and thus pay and receive 'em, without the Trouble of telling or enumerating the Contents.

IN this Sense of Term, we shall find little else but Terms in Language: Among Names, little beside proper Names, which indeed are out of the ordinary Cale of Language, as serving occasionally to denote an hundred different Subjects. Yet even they sometimes become Terms; as, when any particular Ideas become constantly attached to one or another Word. As the all the others suppress thé, and modify or supercede some famous circumstance thereto; they commence Terms of course; such, for instance, is the Word to mole its; which, as it carries a farther meaning than the bare Act of applying a Fluid to a dry Body; and denotes, e.g. the Modus of its Effect, and the Alteration produced by it, viz. the softening, lubricating, &c. is a good Term. So, to strike, as it not only implies a cutting the body of a thing, but is said to be effected by the successive Contraction and Dilatation of certain Muscles, &c. has every thing that is essential to a Term. In the same Sense, a Staff is a Term as much as a Lever; and a Pen, as an Axi in retortico.

This MAY look like stretching a Point, especially to those who are used to consider Terms as Things, I know not how, quaint, and mysterious; and make a Term and a hard Word the same thing. But there is no Remedy: Comparableness is the only Characteristic that will be found to hold good of 'em all; and if there be no such thing in the proper Speech and distinguishing Properties in most of 'em, as we shall have occasion hereafter to shew there are, yet these, when properly understood, may become the Foundation of a just Philosophical Definition. They may perhaps be introduced, to good purpose, into a popular one; as they afford a more useful and adequate Knowledge of the Subject so far as they do obtain.

THUS much relates to what we may call Terms of Knowledge, which are one degree more simple than the Terms of an Art, or Science; and were, for that Reason, pitch'd upon to exhibit the common Nature, and Origin of both. These latter are out of the former, by the Superaddition of some new Character, or Condition. They were before Members of the Common Wealth of Knowledge; but are now incorporated into some certain Province, or City thereof; where they belong to the Subject, or the Province previously to that: that is, some new Ideas and Circumstances are now taken into the Combination, which before did not belong to it.—A Term of Art, then, "is a Word that has a Meaning beyond its general, or scientific one; and this Meaning restrain'd to one Art." Or, it is "a Word used to designate a certain combination of Ideas, under some peculiar Relation; retained arbitrarily in some Art, and either not used in any other Art, or for a different Combination, or with other Relations and Circumstances."

To make the way a little clearer to the Philosophy of a Term of Art, it is to be observed, that from the primary or literal Sense of Words, we frequently, by Abstraction, form a secondary, general, or philo.

philosophical one, expressing only the Quality most predominant in the former, exclusive of the particular Circumstances of the Concrete. Thus the Word spirit, literally and primarily signifying Breath, we then frame a more abstract Sense of Words, and the Word for any thin, tubil Matter whatever.—Now, Terms of Art are not immediately formed from the literal Sense of Words, but from the general, or philosophical, Acceptations of Words; which are their proper Basis, or the Ground upon which they are erected. The general abstract Sense of some Word already established, being found to agree to something which we have occasion to give a Name to; we take the Word in that Sense, and supercede the other Incidents and Circumstances which the present Occasions furnish, thereto: which being different according to the different Matter and Subject, we will specify the meaning of the Term in this, or that Art. So that the Word which, to raise it to a philosophical or universal Meaning, was generalis'd; to form a Technical one is again particularis'd, or appropriated, and invented with new Accidents. Which falls in with the Difference above laid down between Art and Science.

THUS, the same Word spirit, which literally signifies Breath, and philosophically any tubil Substantia, is technically brought to denote diverse other things; as, in Anatomy, a thin animal Juice secreted in the Brain, and detached through the Nerves for the Ues of Sensation and muscular Motion: in Chymistry, the Exhalations of Bodies; in Theology, the third Person of the Trinity: in Metaphyicks, any incorporeal Agent, or Intelligence, &c. In which, we see, how fine tubil Substantia; but this modified a great diversity of ways: each of which is susceptible, by further Superadditions of infinite more. And hence Legions of sorts of Spirits, both in the human Body, the Chymists Laboratories, the Hierarchy, &c.

THE Notion of a Term will receive some farther Light from that of a DEFINITION; which is, as it were, the Analys of that. And when we say, a Definition we undo, what was done in the Term; that is, we resolve the complex Ideas into simple ones, or restore the Ideas from their new and artificial State, to their primitive and original State. An Definition, then, may be defined, "an Enumeration of the several simple Ideas contained under a Term, in the Relation wherein they stand to one another."—We have already shewn, that Terms are Words which have peculiar and determinate Meanings, resulting from a certain Combination of Ideas; in which view, a Term may be said to be, "a Word that is capable of Definition," i.e. of having its Sense explained and determined by an Enumeration of its Properties, and Relations: by which it is distinguish'd from other Words merely generalizing, of which the general and indiscriminate, and may be used with equal propriety in a thousand Cases. We can explain a Term. A Word is inexplicable: all we can do towards this, amounts not to Definition, but only to Substitution.

THUS the Idea attached, for instance, to the Word Force, is absolutely incommunicable by means of any Language; we can only try whether the Party have it not already, under another Name; to which end we may tell him to move, or Energy, or Vigor; if he have Ideas for any of these, he'll take it in that of Force, by its Relation thereto; if he have not, we must proceed to try him more, and tell him 'tis Power, or Vis.
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Vis, or Effecta, or Potentia, &c. or 'tis idle, or idle, &c. If none of these will do, it remains to try, whether he may not have it, without any Name to it; and say, 'That thereby one thing, coming in contact with another, more, produces the thing,' &c. If any of these means he learns what Force is, he will not form any new Idea; he only learns a new Name; and finds that what he calls by one Name, others call by another; or that what he had never taken the pains to distinguish by any Name, some others have. To get the Idea, he must have recourse to Sensation, not to Language; it being a physical Em, and only to be attain'd that way.

But the simple Idea called Force, being given; and coming to be afterwards modified or circumstantiated by various Ideas added thereto, and thus form'd into Terms, in this, or that Art; 'tis here in the Power of Language, alone, to excite 'em; by revolting such compound Idea into its ingredient ones, which being recomposed or put together again in the manner affixed by the Definition, gives the full adequate Import thereof.—Thus the Idea of Force being variously modified, and combined with other Ideas of Centre, Attraction, Repulsion, Will, Machine, &c. in the Words, Central Force, Centrifugal Force, Necessity or Mutual Force, Mechanics or Mechanick Principles of, &c. by Definition, arrive at the Meaning thereof; by having those Circumstances specified, or superadded to the Idea of Force.—In this case, there is no coming at the Idea by Sensation; in regard 'tis a Creature of our own, and does not exist any where without us, to make an Object of Sense.

Hence appears all the diversity of Definitions; Technical ones, containing only to Terms, or to Central Force; Scientific or Philosophical, to Qualities, as Forceable; and Nominal or Sucusumus, belonging to simple Ideas, as Force.

'Tis the various Assemblage of simple Ideas denoted by common Words, that makes all the Variety of Terms, as 'tis of Simples in an Apothecary's Shop, that makes the Variety of his Medicines.—The Analogy goes farther; and it may be said Terms, like Medicines, only differ from each other as their ingredient Ideas, and the Relations thereof do differ.—If there be not all rehearsed in the Definition, the Term or Meaning thereof is not determined, or distinguished from other, which may have all except one that or two omitted. Consequently, such one or two are the Characteristicks of that Term; which may be explain'd in some sort, by only enumerating those Characteristicks, and couching all the rest under that other Term. This amounts to little more than the Substitution abovemention'd; and yet to this is reducible all that the Schoolmen teach of Genus, Species, and Difference.

For simple Words, which we have observed are, in their own Nature, inexplicable; there are divers others that become accidentally so: And such are all the Data, or preliminary Principles of any Art, with respect to those who confine themselves to the Bounds of that Art. Thus, if it be demanded of an Apothecary, to define one of his Simples, e.g. Mercury: he must needs be at a stand, unless he be likewise vers'd in Mineralogy; by reason it is putting him to explain a Datum which his Art does not explain, but affirms; the Explanation thereof lying in another Province. For the Data or Principles of any Art, are only explain'd from another, e.g. those of Chemistry, Pharmacy, &c. from Physics; Physics, from Physiology and Mechanics; Mechanics from Geometry, &c. So that to explain Mercury, would be to him, in some measure, to explain a simple Idea. But ask him to define Calomel, and he is prepared for you; and will readily enumerate the several Ingredients, and the manner of preparing it: which is the proper pharmaceutical Definition of Calomel.

Here it may be observed, that the Words used in the Definition of a Term, do not only explain it, but also may have themselves to be defined, if we would have the Definition complete. The Term has usually divers tubalatern ones; all which are resolvable into it, and make part and parcel of the Knowledge held forth by it. Thus, if Calomel be defined, "A medicinal Pouder precipitated from a Solution of crude Mercury in Aqua fortis, by adding thereto a Lixivium of Sea Salt; and then purified by repeated Ablutions in a Filter," &c. The Idea, Pouder, Precipitated, Solution, Mercury, Aqua fortis, Ablution, Filter, &c. remain to be explain'd, to furnish the compleat Notion of Calomel. But as this would be endless, and would defeat the Intention of a Definition; the Practicist obtains, to suppoze all other Terms known, except that particular one under Definition. By this means, we avoid the Embarras of bringing down every Word to its Principles, or simple Ideas; and acquit our selves by bringing it to the next complex ones: Since the bringing an unknown Term to several known ones, is a kind of indirect Definition.

Still here is one of those Words, which have again to be defined; for if the Definition of a Term, in Art, or Craft; which are to be suppose furnish'd with the necessary Data, or preliminary Notices. But to make a Scientific Definition, we must go still lower; and bring down the Words, if not to their simple Ideas, yet to general or common ones. For it is to be observ'd, there are great numbers of complex Ideas current among most People, which therefore may be consider'd as Data, and used as simple ones, for more convenience sake. All technical Terms, or Words, which are here thrown by; and instead of giving five or six hard Words for one, the general Effect, and Meanings thereof are to be made use of. Thus, Calomel may be define'd a 'white Pouder, which falls down from Quick-filler disolved in Spirit of Salt-perete, upon calling Salt therein; and is afterwards wash'd, again and again, by paffing fair Water thro' it," &c. Where, several of the Words be complex; yet most People, in the ordinary Course of Life, have framed the complex Ideas belonging to 'em: so that they may be consider'd as simple ones.—Yet the Definition can scarce be said to be complete, even here; The general or philosophical Sense of Words, we have consider'd, is in the grammatical one; and consequently the Definition ought in strictness to extend thither: The Solution, to be adequate, should go as far as the Knot; the Analysis as the Synthetics.

The Reader already begins to feel this Preface grow tiresome; and yet half the Buenos is still behind. When so large a Work was to follow, he perhaps imagines he should have been excused a long Preface; and yet, it is absolutely necessary, may the Author say; who, after the toil of a Work, could not be over-found of the supernumerary Fatigue. But, the Expediency of the Cafe, which say'd and determin'd the one, may suffice to satisfy the other. Several Matters were purposely waved in the Course of the Book, to be treat'd of in the Preface, which appear'd the proper Place for such Things as have a regard to the whole Work. What has been hitherto inferred on, as well as what remains, prepare sufficiently every Article in the Book; and so, we have, for a little term. to bring this Part into great Obscurity. I consider a Preface, as a kind of Vehicle, wherewithal to convey the Reader commodiously through the Wickets into the Book. The Preface is a kind of Comment on the Title, the Book a Paraphrase on it: Or, if you had rather, the Book is the Title executed, the Preface the Title explain'd.

Having, therefore, dispatched the leading Words Art, Science, Term, and Definition, we proceed to consider the Definitions, or the Different Parts of the Book, which publish their Thoughts under this or that Form: and the Notion of the Character and Laws thereof. There is something arbitrary, and artificial in all Writings: They are a kind of Draughts or Pictures, where the Aspect, Attitude, and Light, which the Ob---
The Preface

Plains or Prospects of artfully arranged, and exhibited, not to the Eye, but to the Mind; and there is a kind of analogous Perspective which obtains in em, wherein we have something not much unlike Points of Sight, and of Diffusion. A kind of Particular View or Design in drawing out his Ideas; either, indeed, to represent something, or to distort and ridicule it, or to amplify, or to economize, or to confound, or to prove, &c. whence arise divers kinds of Pieces, under the Names of Histories, Diversions, Transfers, Effays, Inquiries, Examinations, Paraphrases, Courses, Memoirs, Burlesques, &c. In all which, tho' the Matter or Subject may be the same, the Conduct or artificial Part is very different; as much as a Still-Life from a History, or a Grotesque, or a Nudity, or a Caricatur, or a Scene-work, or a Miniature, or a Profile, &c. Each of these kinds of Pieces or Characters, having its own Law, to form a Judgment of the Thing represented, from the Pictures made of them, 'tis necessary we be able to unravel them. When our Art is artificial in em, resolve 'em into their former State, and extricate what has been added to 'em in the Representation: That is, we should know the manner thereof; whether, e.g. they be mere Nature, thro' this or that Medium, in a fore, or a side-View, within or without, to be seen from above or below, or Nature rais'd and improv'd, for the better, or the worse.——The Necessity amounts to the same as the WHEN, or Path in which that Piece or the Thing is made. For the forme, or Form, is known, e.g. whether it be plain, convexe, convex, cylindric, or conick, &c. we can make no Judgment of the Magnitude, Figure, &c. of the Objects.

'Tis beyond my Purpose to enter into the Nature of the several Methods of Composition abovementioned; I shall only now, on the other hand, that the first Writers in each, mark'd and chalk'd out the Measurers for all that came after them. The several Manners of compounding amount to so many Arts, which, we have already shown, are things in great measure depending on the Good hand of the Inventors.

Were we to inquire who first led up the way of Dictionaries, of late so much frequented; some little Grammarians, would, probably, be found at the head thereof: And from his particular Views, Designs, &c. if known, one might probably deduce, not only the general Form, but even the particular Circumstances of the modern Productions under that Name. The Relation, however, extends both ways; and if we can't deduce the Nature of a Dictionary from the Condition of the Author; we may the Conditions of the Author from the Nature of a Dictionary. There is an Art in making a Dictionary, as there is an Art in making a Landscape. There was an Art in the Composition of a Dictionary before there was any Art in improving or advance Knowledge, but to teach, or convey it; and that he was hence led to unity the Complexions or Bundles of Ideas his Predecessors had made, and reduce 'em to their natural purity; which is all that is essential to a Dictionarist. Probably this was in the early Days of the Phenician or Egyptian Sages, when Words were more complex and obscure than now; and mystic Symbols and Hieroglyphics obtained; so that an Explanation of their Marks or Words, might amount to a Revelation of their whole inner Philosophy. The Composition of a Dictionary of Language, we must put, or a Dictionarist or head of Dictionaries. Indeed this seems the more probable; for that a grammatical Dictionar can only have place, where a Language was already very copious, and many Synonyma's got into it; or where the People of one Language were delirous to learn that of another: which we have no reason to think could be very early, till much Commerce and Communication had made it necessary.

Of a Language, when it is once made, when they are naturally disjoined to follow it; even tho' it be not the most convenient: Numbers will enlarge, and widen, or even make it stricter and fuller; but 'tis odd they don't alter its Course. To deviate from it, is only for the Ignorant and Irregular; Persons who don't well know it, or are too licentious to keep it. And hence the Alterations and Improvements made in the several Arts, are chiefly owing to People of those Characters. There is scarce a more powerful Principle in Nature than that of Imitation, which not only leads us to do what we see others do, but as they do it. 'Tis true there are Exceptions from this General; but we are so dependent, Persons in good Measure exempted from the Influence of this Principle; and 'tis happy there are; witnesses such as Paracelsus, Hobbes, Leibnitz, &c. In effect, If an Art were first broached by an honest Genius, it is afterwards cultivated, on his Principles, to advantage; otherwife not: and it may wait long for the anomalous Hand of some Reformer, to set it to rights. Some of our Arts have met with such Hands, others still want 'em.

Were we, now, to give an absolute and constant Definition of a Dictionarist we should say, "It is a "knowledge of the Nature and Composition of Language." Whence, according to the different kinds of Words and Definitions above laid down, i.e. according to the different Matter, and the different View wherein such Matter is considered, will arise different sorts of Dictionaries: Grammatical, as the common Dictionary of Languages, which for one Word substitute another of equal import, but more obvious sense: Philosophical, which give the general Force or Effect of the Words, or what is common to 'em in all the Occasions where they occur: and Technical, which give the particular Sense attached to 'em in some one or more Arts.

Thus it is, in no truth, this is a little chimerical; and to forget what has been already done, is an irreparable, Tho' we have Dictionaries under all these Titles; it would perhaps be hard to find any comparable to this Purification, which is not so much taken from what really is, as what might, or should be. Dictionaries are far from considering their Subject so closely, or confining themselves to so narrow, the direct, a Channel: They must have more room; and think themselves privileged by the general Quality of Lexicographers, to use all kinds of Definitions promiscuously. 'Tis no wonder they should not keep to Views which they had not, and which could only be arrived at after much pains and labour. While the Notions of Terms and Art, remain'd yet in the Rubbish they were left by the Schoolmen; those of Definition and Dictionary must needs be vague and arbitrary enough; and the Dictionarists and Expositors, profited by an Embarrass it was their Bufnes to have removed. They have not only built on it, but impro'd it, by a continual varying and confounding of Views, imperfect Enumerations, &c.

To this not to be ignomin'd, the Mickarchs, and Inconveniences that have arose from this single Head: the great Unaccountably it has introduc't into Language, and the Obstinacy it has been to the Improvement thereof. 'Tis certain it has, in great measure, defeated the Intention of Speech, and turn'd Knowledge which that was to be the Medium of, into Jargon and Controversy. All the Confusion of Babel is brought upon us hereby, and People of the same Country, say the same Profession, no longer understand one another.——The Effect is, that our Knowledge is grown into little other, than that of Peoples Misunderstandings or Misapprehensions of one another, which is only the kind of Knowledge that groweth, and which we may take as a sort of universal and ordinary spreading of such things, must overthrow, and flame every thing else. If all Men meant precisely the same thing by the same Name; there would be no room for their differing, upon any Point, either in Philosophy or any thing else: There is no more possibility of seeing the Relations of Things to each other, differently; than of altering their Nature, and overturning the System. Relations of Ideas are as immutable as the Creator's Work. So Error, in effect, is in no true Production; nor is there any direct way of coming at it. We could not go about for it, and find some Law of Nature, so to put it in our Power. So that Error is in one sense Truth, it takes place only 'tis not the Truth it is taken for.
The Weakness of our Reason, which we complain so much of, is in great measure idle; for the Fault is foreign, and lies wholly in the Composition of Language; which would not only puzzle us, but the very Angels in Heav'n, if... there is little hope that it remains even altering the new Language, formed as it is, from what we now perceive. — But something of this will come under Consideration hereafter, in the mean time we venture to pronounce, that "The Reforma-
tion of Science, amounts to little more than the Reformation of Language.

There are two Manners of Writing: in the one, which we may call Scientific, we proceed from Ideas, to Words, to Things; that is, first lay down the Thing, then the Name it is called by. — This is the way of Discovery, or Invention, for that thing before being thought of. In this way, we go from Knowledge to Knowledge; from simple and common Ideas, to complex ones.

The other, Didactic, is the manner by which we go from Words, and Sounds, to Ideas, and Things; that is, begin with the Term, end with the Explanation. — This is the historical Way, or the way of Teaching and Narration; of revolving the extraordinary Knowledge of one Person, into the ordinary of another; of distributing artificial Complications, into their Simple Ideas: and thus razing and levelling again what Art had erected.

The Dictionary comes under the latter Kind. It supposes the Advances and Discoveries made, and comes to explain or relate 'em. The Dictionary, like a Historian, comes after the Affair; and gives a Description of what past'd. The several Terms, are so many Subjects, supposing to be known to him; and which he imparts to others, by a Detail of the Particulars thereof. — Indeed, the Analogy between a Dictionary and a History, is closer than People at first sight may imagine.

The Dictionary relates what has past'd with regard to each of our Ideas, in the Coalitions, or Combinations that have been made thereof: His Business is to deliver the Progrees made in the several Parts of Knowledge under his Consideration, by an orderly Retrospect and Deduction of the Terms, from their present complex, to their original simple State. The Dictionary, it may be, is the proper History of shuch Art: The Dictionary of a Language, the History of that Language. The one relates that which has past in Art, or in Language and such Things. The other, hand in hand, relates so. The one, that such a Word is used as synonymous to such and such others. The Dictionary is not supposing to have any hand in the Things he relates; he is no more concerned to make the Improvements, or etableish the Significations, than the Historian to achieve the Transformations he relates.

The difference between what we commonly call the History of an Art, and a Dictionary thereof, is only circumstantial; arising from the different Views of the two Authors: The one chiefly regards the Time and Order when each Step, each Advance, was first made, i.e. how it flowed with respect to such and such Arts, or Periods of Time; and might more properly be called the Chronology of the Art: the other regarding chiefly the Object or Invention of the Art, relates its present Constitution, and how it proceeds to attain the End proposed. You may add, that the former primarily considers what is past, or already advanced; the other also relates the Inventors who tells, e.g. the Author of Corinthian, the Author of Moors, Shore, took its Shell, added Strings to it, and made it into a Lyre: the other, how a Lyre is, or may be made.

And if you will likewise add this, that the History intermixes divers foreign, and accidental Circumstances with the Dictionary; which the Dictionary abstracts and lets aside, and so reduces it nearer to Science: you will have the full and adequate Difference between 'em. Thus the making of the first Lyre is related with some Circumstances which have no place in the proper Structure of the Instrument, and are therefore to be omitted in the Dictionary, which only takes what belongs to the Science of the Art, or Arts, in general, nor what belongs to some one of 'em.

The whole, in effect, amounts to this, that the first time of doing a thing, is related by the Historian with the several Particulars which in any Art, the occasionally only and remotely, affected it: whereas the Dictionary, coming afterward, keeps more closely and severely to the Point, and relates nothing but what is effectual, and thorough. Thus, as now, preceding the Place, the Lady Prostitute, or Phonography, or Knights, or Social, or Colour, or Trade, or Titular, or State, or Constitution, or... is a thing that is, in fact, as mere little Historical, if one relates the Series of a Campaign, another the Bombardment of a Town, and a third the Wounding and Death of a general Officer; the two latter Subjects be only Parts of the former, yet the first will be said to have composed a Piece of History, the second a Piece of Fortification, and the third a Piece of Chari-

TO lay no more, the Dictionary of an Art lends in much the same Relation to the History, as the History of a People, does to the Lives of all the considerate and active Persons therein. Their difference is only as to the Point of Sight: the eye being suppos'd to lie near in the one Case, as to see the Parts distinctly, and in the other far off, as to take in the Whole completely: whence the one gives you all the Incidents; the other only the greater. In effect, the one is all concerned to one point of view, most favourable to the Whole, and the great Parts; the other to many; the Eye being shifted for each Part, to furnish an adequate Reproduction thereof. In the one Case, it is suppos'd within the Work; so as only to see those next it, which necessarily hide the rest; in the other, 'tis without, and can only take cognizance of those which lie outwards: So that the one chiefl discover what things stand within; the other how they stand with regard to the adjacent ones.

It should be told the Reader any longer in this painful way of Dilution, wherein we are obliged to dig for every step we take. It would doubtless seem a more agreeable, as well as more reputable Employment, to be raising things on high; than thus engaged in finking, and working under ground: A Cattle in the Air is an Object of Pleasure to every body, while it laft's; and withal is easily rais'd, and at small Expenses. Your Mines and Subterranean Matters are more drudgery, and Pioneers work; difficult to carry on, dubious of Success, and yet when once done. Being therefore arrived near the Surface, we take this Opportunity to quit the Courie, and emerge to open Air.

The latter is of the Constitution of the Art; it may prove dangerous and impolitic to speak any thing about the present one. From the Design of a Dictionary in general, to the actual Performance of any particular one, the Language must be much altered.

A Man would make fine work
work, that should examine the several Dictionaries extant, by the Standard here laid down: None of them could abide such a Trial; even that here offered must go to wrack, like the reef.—It may be remembered, that the Thing executed is allowed to come short of the Idea conceived: The former is only a Copy of the latter, and is never capable of being anticipated by the Art, for that is a separate thing;—Lecturing, being of the Nature of an Art, deviates of course from what pure Reason would prescribe: and all the Productions come to degenerate still farther, by the Accidents that attend their bringing forth. The Tools, the Materials, and forty things come into the Account: the former prove out of order; the latter obliquo, and untractable, or perhaps not easy to be had. In effect, the Author's Situation, his want of Leisure or Perseverance, his Disease of Mind and Fancies, may his very Perfections and all, confine against it.

Therefore, as prudent as I am, too fervid Attachment to the Rules and Methods of an Art, in many Cases proves inconsiderate and impertinent. We know that the Rules of an Art are posterior to the Art it self; and were taken from it or adjusted to it, after the thing it self was done. An Author, therefore, is still in some measure left to his own Conduct, and may consider himself as invested with a sort of discretionary Power, whereby he can dispense with some of 'em, and go by others of his own suggesting, where he apprehends it for the general advantage of the Work. The Rules of Art are never to reach'd by the Rules, but by Genius; by reasons of the limited or extended nature of the Subject, contented with the Consequences of the Means, and allowing that Laws should be made de novo for every new Cafe, or Condition of things. While a Peron considers himself as following at second hand, the Measures pointed out or preferred by others; he will not go on with that Spirit and Alacrity, as when he follows his own Bent. He should therefore consider himself in the Place of the first Inventor, or as his Representative, or Successor; and therefore qualified to enact with the same Authority for the present occasion, as he did for another.

WHEN a Law is not founded on mere Reason, as the Bough the Law cannot be enjoin'd on others. It may well obtain with respect to the Peron that first establish'd it, as being agreeable to his personal Reason, a, e, accommodated to his particular Combination of Genius, Situation, and other Circumstances; but can't extend to those in whom this Combination is different. Accordingly, few Laws of Arts are universal. Small matter by what Laws and Precept's a People is guided, provided they be received as Instru.ments to help to build a Ship, or to Vessel it, if the do but make a prosp'rous Voyage.

WITH this View, in the present Work, we have taken all the Advantages the nature of the Thing would afford us; and have frequently made our selves Delineants against strict Rule, for our Reader's good.—A Dictionary, by our own Confession, is to be a History; and yet we have not kept fo close to that Form, as to abandon the Benefit of all others. In the bufinf's of Mathematicks, the regular Course is for the late, or enumerating the several Matters belonging thereto, without investigating or demonstrating their truth: Demonstrations, strictly speaking, have nothing to do in a Dictionary, no more than Antiquities. Infrumemens, Angles, Numbers, &c. in a Dictionary, were an Indicriffion as great, as for an Historian to produce Certificates, and Copies of Privy Registars, of the Births, Burials, Marriages, &c. of the several Person's whose Actions he relates. And yet, on some extraordinary Occasions, we have not forborne to give Demonstrations; where, for instance, there was anything very interesting, or important in 'em: A Practice which Historians themselves frequently use. For instance, a Calendar, which shows at a glance the happenings in a Year, is a work in the Unity of the Narration, and accordingly gives their Work the Denomination of Man's History.

BUT we are far from the Views of some Dictionaries, who think it incumbent on 'em to demonstrate every thing that is capable thereof. This is directly to forget their Quality; to corrupt the Integrity of the Work, to prop, to bring it into being licentious, and impertinent at the same time, and displease with the Rules to their own credit. How dear, e, must a competent Demonstration of most of Euclid's Propositions be here purchased? Either the Reader must be at the Pain, of picking it piecemeal out of twentie several parts of the Book, where the Alphabet has happen'd to call it out; or the Author must relinquish the Advantages of a Dictionary, and deliver things together, that properly belong to so many several places; or there must be a Repetition of the same thing a dozen times over. And for what? why, to make the Dictionary do the Business of an Euclid's Elements; which it is the utmost in the World for you. Might you with equal propriety make an ozier Baskett supply the Office of a Pleasure-Boat; or a Sword-pannel that of a Portmantau, as Paralaxes is laid to have done.

WHEN a thing has been once regularly demonstrated, it may be assumed, or taken for granted; every body perhaps may be concerned in the Truth of it, but not to see the Truth of it. To make it a Principle to take nothing upon utter truth, would be as troublesome in the Sciences, as in Life; and we must remain for ever, both wearied, and ignorant. Not only Suppositions, but even Errors, frequently lead us to Knowledge otherwise inaccurrable. Mathematicians themselves, who of all others keep most to Demonstration, yet find themselves under a frequent Necessity of admitting and making use of things as true, which they do not feel to be so; and thus are sway'd, like other People, by Authority. A Peron who makes use of the Equality of the Square of the Hypotenuse, to the Squares of the two Sides; upon the Credit of Pythagoras, or Euclid's having demonstrated it; does little more than what they themselves do on many Occasions, who assume and make use of Propositions they have no other evidence of, but the knowledge or remembrance of their having been demonstrated.

THE Cafe is no more the fame with experimenting, which stands on the like footing as demonstrating. They are both necessary in their kind; the latter, as it leads on our Knowledge, the former as it follows, and figures the Rear: But their ufe is to be restrained to their Purposes, and may be dispens'd withal in Cases where neither of these are concerned. A Peron who would discover any Point in Phisicks, or brach and sthilb any Point in Mathemaricks, must ufe 'em: But the Occasion is in great measure private, and personal: and does not extend to the Publick in the fame degree as the Knowledge of the Doctrines themselves. That is, the particular means by which a thing was finit come as, or is shown to be true, do not interest us so immediately as the Knowledge of the thing it self, which might have arose from various other means, and in other manners: A Man may know a thing in the way of Présumption, of Opinion, of Surmise, of Authority, and forty other ways; which, tho much inferior and less excellent than the way of Demonstration, and Certainty; yet we are glad of 'em on many occasions, and ufe 'em to good purpose. Every degree of Knowledge is valuable. It would be an unreasonable, as well as an incommodious Sillence in us, to say, that all Light is dark, and all Cafe and Haze, and all diffuseness of things by Twilight, or even Moon-light, or the still more diubious Light of, perhaps, a Ruth or a Glow-worm.

PTTHAGORAS, in all probability, was not ignorant of the Equality of the Square of the Hypotenuse, &c. before he demonstrated it; else, what should have led him to look for the Demonstration? And the like may be said of many of Mr. Boyle's Experiments. Plato even observes, that "the very putting a Quez" to a thing, is a sign of some Knowledge of the thing demanded; since without this we should not know that what is "returned is an Answer."
LESS might have sufficed, to shew why in the Course of this Work we have usually omitted the Appen-
datus of Demonstrations, and Experiments; and given the Doctrines pure and unaccommodated by any thing not ef-
flecting upon the principles and conclusions they led to. For the Theory of Light, and Colours, what would
they be, but like the Scaffolding before a fine Building, which break and interrupt the Sight, and hide from us the
beauties of the Work? Such Scaffolding, 'tis true, would be of use to the Connoisseurs; who might have a mind to
examine the Work, to measure the Proportions of the several Parts, and inquire whether every Stone were justly
laid. But to the generality it would rather be an Incumbrance, much to the disadvantage of the Work.

Yet, in the Cate of Experiments, as of Demonstrations, we have reeded a little from strict Method, in favour of
shorter and more concise Demonstrations, for the beauty of 'em. For the rest, Reader, if his Curiosity serve
him, is told where to have 'em at first hand.

In the Cate of Definitions, too, we do not keep inviolably to what has been above laid down; but refer to
our selves the discretionary Right above specified. We make use occasionally of all forms of Definitions, as
they belt us, Design, the conveying of Knowledge. In effect, we have usually a Regard to the degree of
necessity, importance, &c. of the Term; the more Arbitrary, and indefinite and to ac-
commodate the Explanation thereto. 'Tis a Rule with us, to say, Commonly, or usual, or chiefly common to;
and this for several things so as that even the Learned may be the better for 'em; and the more abstract and dif-
cult, so as even the Ignorant may enter into 'em. Accordingly, in popular Terms we endeavour to give
a technical Definition, i.e. to wave the general and obvious Meaning, which is stuffed to be known;
and enter further into the nature of the Thing, not known: As in defining of Milk, &c. But in the more
remote Terms, the popular and nominal Definition is also given, as being known to be here wanted.

The literal and technical Definitions of a Term, are tame and imperfect without each other; the first gives
its Use and Effect, as part of general or abstracted Science; the second, as applied to some particular Subject.

The literal Notion, e.g. of Relation, is that of "conformity, dependence, or comparison of one thing to
another." Thus much is common to Relation, both in Grammar, Logick, Geometry, &c. i.e. it expresses
this, as a defining notion of Substance, Quality, &c. The technical Notion of Relation in
Grammar, is "the dependence of Words in Construction." This makes the grammatical Notion of Relation,
i.e. it limits or ties down the general abstract Idea of Relation, to the particular Subject of Grammar, Words.
Again, the technical Notion of Relation, with regard to Arithmetick, Geometry, &c. is "the conformity, or
dependence between two or more Lines or Numbers," i.e. the Mathematicians adopting the Word into their
Arts refrain its literal or general Meaning, to some particular Purposes of their own, i.e. to Quantities.

To O.H. and others of the faculties of the mind a Science; as general and particular Reason; and again, as abstract, and concrete. And hence, from the fewest technical Definitions of particular Meanings, one might of themselves run back to the general, or literal Meaning, by abstracting; but not contrai-
wise, from the general or abstract to the particular ones; in regard those other are arbitrary, and depend on
the good pleasure of the Artificer who first introduc'd them.

ACCORDING to this notion, a Term should be first given in its literal, or grammatical Meaning; espe-
cially when the name is a Term in several Arts; as this helps to fill up the Series, and throw the orderly Deriva-
tion of the Word, a primi naturalibus, from the first simplex Ideas that gave rise to it, to its left, and utmost
Composition. This is like giving the Root of the Family; which is certainly necessary to its Genealogy. —Yet
we have not always kept to this Method. In some Words, there is a deal of the literal import of the Word
omitted. An instance of this is the term Word, Free, or Freedom: A Man who has a Notion of
Freedom in its common or literal Sense, will easily put on to it, the word Free, Free City, Free Port,
Freedom of Speech, of Behaviour, &c. So that in this Case, a literal Definition might almost alone suffice; the
Word having suff'd very little at the hands of Artificers. In other Words, the literal or primary import of the
Word, is almost lost in the Term: for instance, in the Term Power, in Arithmetick; which will scarce bear
any tolerable Definition at all. Literally, the Word implies a Relation of Superiority or Ascendency over
something, which in respect hereof is conceived as weak, &c. According to the analogie of Language, therefore,
the arithmetical Power should have somewhat of this relation of superiority over the other, for the Root it self is also a Power: So that the Definition of Power must take in two opposite Relations, viz. Power and
Subjection.

Perhaps to go in the strict regular manner, and take up things from their Source; one should begin
with giving their Etymologies, but by great demonstrations Words undergo, and the great length they are run
from their original Meanings, in being borrowed from one Language to another, would frequently make this
not only a tedious, but an useless Labour: so that here, too, we have used a discretionary Power, and only
meddled with Etymologies where they appear'd of any significance.

To explain a Term as a Term, we usuall[y explain the Circumstances wherewith it is attended in the Art
to which it belongs, in their artifical Names. This is agreeable to the manner of Artificers, who writing of their
respective Arts, use Terms as common Words, and uis this that constitutes a technical Explanation; not the giving the general Effec or Force, in such Words as may equally agree to all
other Arts. And yet in some Cases we defer from this Rule, particularly in divers of the lower Cate of
Manual Arts, and the Structure of some Machines: Thus, e.g. in Turnery, we make no difficulty, for instance,
instead of Cloutk, to say a round piece of Wood, &c. The reason is, that where the sevendate subordinate Terms of a
thing are expressed by a single word, we may suppose 'em understood; where but the Term defined is if felt so low, that we do not go lower to define the Name, where the word is the chief, as more scien-
tifical, to substitute some more obvious Name, or the general Meaning of the Word for the more special and
thus prefer the general or popular, to the technical Definition.

For it is to be observed, that the Dictionary has its Limits; it only carries Matters so low; to a certain
point of Simplicity, where we find, every Term should be first given, so that People may take 'em up, and carry 'em further as they please. We bring 'em into their Sphere, and so leave 'em. So much Knowledge, e.g. a Term, a number of complex Ideas, as we
may presume 'em usually to have got in the common Occurrences of Life, we are willing to suppress, as a Possess-
ing: where these end, our Dictionary is to begin, which is to take in the rest.

If at any time we explain a complex Idea, which it may be supposed most People have form'd of 'tis because
we should take it in all the simple Ideas that go to constitute it: as in the Cafe of Milk, Blood, or the
like; where People are contented to have two or three of these more obvious Properties and Phenomena,
and flur over the rest. Thus in Milk, Whiteness and Fluidity are almost alone considered understood, and the,
in the common Opinion, constitute Milk: so that whatever these two Attributes, comes in for the de-
nomination Milke. The Texture and component Parts of this Milk, the manner of that Fluid's being so secreted, collected, &c. with the peculiar Properties, and Virtues resulting from all this are left behind.
So in the Cafe of Wine, the Principal property, i.e. to make the Drunk, &c. is the Clerical, i.e. a Term in a sense,
whence the Cafe and Serm, with the component Principles of thefe, viz. the Oil, Phlegm, &c. their Form, Properties, &c.
The PREFACE

whence arise the Crafts, Colour, Heat, Specific Gravity, &c. of Blood; Writers don’t ordinarily trouble them-

selves.

IF, by the Artifice abovementioned, we get free of a vast load of plebeian Words, which must have

greatly incubder’d us; the Grammar and Analogy of Language diffusenges us from a still greater number of

all kinds. The various States of the same Word, consider’d as it comes under different Parts of Speech, and

accordingly affumes different Terminations, increases the Lift of Terms immensly: as, in Dark, Dark-
ness (Projet, Project, Projicille, Projectile, &c. which may either be consider’d as one and the same

word Writ under different Habitues; in regard there is a common Substantivum of them all: or, as to make

a difference Terminus, some for the first formed Name, some for the second, and an undetermined Habit

tude we make use of occasionally; and either consider the Words this way or that, as seems most advan-

tageous to our purpose. In some Cafes, where the Alteration is merely grammatical, we content our

selves to explain ’em in one flate, e.g. Shearing; and supposse the Reader able, by Grammar to form the refl.

It is, as Shorn, &c. In others, where several particular Ideas are arbitrarily superadded to the Word in one Part

of Speech, which do not belong to it in another, we there explain it in all: as, Precipitate, Precipitant,

Precipitation.

THIS gives an occasion to mention a strange kind of Licenc frequenty practis’d in our Language. Tho

there be ordinarily a great deal of difference between the several States or Modifications of the same Word, e.g.

Reflecting, Reflexion, Reflectible, &c. the fame as between the Action and Quality, the Power and the Exerçite

of it in this or that Cafe, the Cause and the Effçct; yet Authors make no difficulty of using ’em promiscuously:

which would make downright Nonense, were the Readers to keep to the strict import of the Words. But

the Truth is, we are not so critical about the Matter; if the Moderns in our reach we jump at it, and

are glad to take it; without waiting to see whether it would reach us in its present Direction, or whether it

might not rather fall short, or fly by us. What Conclusion should we make, even in our best and clearest

Writers, were we not refer’d to understand ’em but according to the strict Rules of Grammar, and not indule

’em the petty liberty of using quid pro quo, one part of Speech for another? In a thousand Cafes, the same

idea is introduced by opposite Terms: Thus, we say, such a Medicine is good for, or against the Worms,

Plague, &c.

IT may be urged, that as Custom has authoriz’d this lattitudinal Pratifice, it is become of grammatical

Authority; and that as the Licenc is known, it can’t deceive us; since the Readers are led on such occasions to

relax the Bands of Grammar, and annul the difference between the Parts of Speech, in order to admit one

a substitute for another.—But I am afraid this expedient scarce indemnizes us from the Abuse. Besides the

excessive error of casually using loosely what is so admirably always and properly disposed in Authors. When

and supposse the first import of an Author’s Words, and make him speak Senfe in his own definte. This I

take to be none of the least occasions of Controversy and Difpute owing to Language, and which we may

which we almost despair of seeing rectified, unless in a new one.

1 SHALL not here enter upon the Merits and Defects of the English Tongue, consider’d as a Language:

A great deal has been said on that Head by others, for which the Reader may turn to the proper Article in the

Dictionary for the Information. This Place we reserve, not for other Peoples Notions, but our own; and what

we have to add, will be chiefly as it stands with regard to Art, and more particularly to a Dictionary of Arts.

1 BELIEVE none will question but we met with Difficulties enough in the Course of this Work. The

very Bulk and Dimensions of it confes as much, and the Variety and Uncertainty of its Matter still more.

But there were in some fort natural Difficulties, and ought to be consider’d as necessarily appendant to the very

Effçce of the Defign; and therefore did not arise to as much as those that raise from it at second hands, or were

superadd’d to it, as it were, by Accident. And was the present state within our reach we jump at it, and

always sufficient to have baffled the beet Scheme, and broke thro’ the beet Mesures that could be form’d.

We have already represent’d Language as something very important; and as having a near and necessary

interest in Knowledge. Names, we here add, are solemn things, as they are Representatives of Ideas themselves,

and us’d on most occasions in their stead; and Terms, or Combinations of Ideas, are still more so; as much

as the several Levers and Engines, are of farther and more important Substantives than the mere mechanic Powers.

But who would imagine this Langage as consider’d, if we make of ’em; and with how little Fear, or Différence, Words are

treated among us? Every body think themselves privileg’d to alter, or set aside the old, and introduce new ones at

pleasure. England is open to all Nations, at least in this respect; and our Traders in this Commodity, import their Wares from every Country in all Securitv. The mercantile Humour seems to have possest every Part of us, so that we are not only unwilling to be without the natural Produce of our Neighbours Countries, but we even envy ’em their Fashions, their Follies, and their Words. Scarce a petrin English word would

but makes his Innovations: But when a Dictionary comes out, ’tis like an England India Flee, and you are sure of

a huge Cargo. The Effect is, that our Language is, and will continue in a perpetual flux; and no body

knows whether he is matter of it or no. The utmost he can say, is, that he had it for such a Day, exclusive

of what has happen’d since.

A MAN never knows when he is at the end of the Terms, e.g. in Architecture. When he has got two

or three Names, for some one Member, and thinks himself overstock’d, ’tis odds he has not half. ’Tis not

enough he knows what it is named in the English: but he must likewise learn what the French, Italians, Latin

and Greeks, likewise call it, or frequently find himself at a fland. Thus it is in the Cafe of Filies, Lijs, Lif-
tels, Reglets, Plathands, Bandellets, Tenias, and Baguettes; of Chaplets, Affergals, Battone, and Tares; of Gulas,

Guncles, Doucines, Cimat, Cymatziums, Oges, and Talons; Oumis, Orules, Echimis, Squarer-rounds, Bonhils, &c.

between which, there is no known, allowed differences; but they are either used indiscriminately, or disinguish’d

and the next act caught by this Process, and the next perhaps none at all. So that if we come

strictly to Dictionaries, we should have a different one for every Author.

But the Mischief does not end here: for as the ancient Arts are in many respects different from the mod-

ern; the use of their Terms necessarily involves us in a new Confusion, and makes the fame Word stand in

an ancient Author for one thing, and in a modern for another. Thus it is in Paragrafta, Orthografta, Arte, &c. in

effect, there is alteration continually making in the Language of Architecture, that there ought, in Pro-

per, to be a Dictionary of Arts, as very different from what it is.

THE Truth is, a fourth part of the Words in some of our popular Dictionaries, stand on no better Author-

ity, than the finge Practice of some one fanciful Author; who having an intertemporal Defere to fether his

Learning or Breeding, has met with Dictionary-Writers fond enough to take his Fripperies off his hands, and

expose ’em to the Publck for legitimate Goods. By such means, these Exotics have obtain’d a kind of Curren-

cy; so that a Dictionary would be thought defective without ’em. To omit even our present奠定, &c. of

1 have been obliged to improve a little, how much more fraught our Will; and thus perhaps have

contributed
contributed to the still farther establishment of a number of Words, which we had much rather have been proscried, or banished the Land.

Upon the whole, reasoning could be more defensible than an Index expurgatorius, to clear the Language of our Wits, Wits and Elocutio; all the modern French and Italian Terms in the several Arts, where we have Latin and Greek ones; and even all the Latin and Greek ones, where we have English or Saxen ones, which could cause every Person may be supposed to have read, but not have been properly directed by the English Word book, and would strain the Language between 'em, and they usually retain more of the Original Prefer to any others, because they keep the true Syrian and proper Value of the Language, which is so much explanted from other Languages.—Such a Reform would reduce our Dictiona-
ries to more reasonable Dimensions; and diminish the Arts from the difficulty now to be farrornated in attaining 'em.

But, there is another Spring of Words no less prolific than that before spoken of, and which has pro\nduced a Swash of furbish, mithapath Words, which no Nation but our own would ever have own'd; I mean the 16th and 17th centuries, making English Words, by a sort of analogy, from the Latin and Greek ones. This Faculty, tribe of Lexicographers have carried to a strange excess. How must a Man flaire, to see what de-\nfensible Stuff some late Writers of that Class have complimented us with! Words of their own manufacture, scarce fit to do any thing with, except cure Agues! Wounds such as Scrupulous, Stoiculus, Stoetereus, Scipio, Pogacritius, Scipio, Scipio, Scipio, Magon, Gracelius, Finghmetal, Extus, and many thousand more, at the Reader's service, to be met with in a Dictionary which few People are without. One would almost wisht with the Mold softened that such Grotesques were cast in, for fear of new Impressions. We are already over-
run with this Author's Starcrows; but what shall we be when, having thus anglic'd all the Greek and Latin Words, he proceeds to do the fame with the Dutch, Irish, Welsh, &c. Indeed, I am the less angry with him, for whom he has carried the Aeffe so far, as must not only have people from being flex'd, but bring the Practice into Contempt. Such Monsters can't possibly live long, if they have ecpa'd the Midwife, who ought to have brought 'em ere they came to light, yet if ever they flir abroad they must infallibly be knock'd
o' the head.

How oddly will our Practice in this respect look, when confronted with that of our Neighbours! One of the most learned Men and greatest Critics of the last Age, Mr. Monnoy, in his immense Lexicon, for only endeavouring to introduce the fijgure word Præceptor, has been much censur'd in it, notwithstanding he is the Word of that import was confoundingly warring in the French; and both the Sound and Analogy of the new Word were better.

To return. The different dote of different Arts is very remarkable. Some of 'em are refined to a degree of fable that destroys 'em; as Mathematics, and Logics: others have had no refinement or polishing at all, and from being such that they have been purifying; in others, their facility and nicety is such as to never have any hea'ty Appetite to feed on. What meagre fare, for instance, are the School Rules, and Doctrines of Medici, Extremes? &c. They do indeed furnish us with Relations, and true Relations too; but those too remote from all Purposes of Life, that they are in great measure insignificant.

'Tis certain all our Knowledge and Arts ultimately refer to the great End of Preservation. The Faculties of the Mind, like those of the Body, were not given us for the mere Exercise, or Gratification of 'em; but in subordination to further Purposes. Our Knowledge is all of the Nature of Revelation; and the divine Being reveals nothing to us for the mere vague fake of our knowing it, but that it may minister to his Ends, the being and well-being of his Creatures. Our Perceptions and Notices are all Infruments in his hands, which he has appointed to do his work, and bring about the wonderful and adorable Ends of the Creation. They are second Caesars; and at least Occasions of what we do; and no double are under the Direction of him for the good, for the well-being of his Creatures. The Faculties of the Mind, like those of the Body, were not given us for the mere Exercise, or Gratification of 'em; but in subordination to further Purposes. Our Knowledge is all of the Nature of Revelation; and the divine Being reveals nothing to us for the mere vague fake of our knowing it, but that it may minister to his Ends, the being and well-being of his Creatures. Our Perceptions and Notices are all Infruments in his hands, which he has appointed to do his work, and bring about the wonderful and adorable Ends of the Creation. They are second Caesars; and at least Occasions of what we do; and no double are under the Direction of him for the good, for the well-being of his Creatures.

Thoy extend to abundance of things, yet they all centre and terminate at last in our Preservation; and accordingly, as they are farther from, or nearer to this Point, they are found fainter or stronger; very near they are palpable and cogent; as they recede, they continually abate of their clearness, and evidence; and when arrived at a certain distance, divesture to nothing, and are lost. At a great height from this Centre, the Nexus or Centre of things, we are left in this world, which becomes intellible; so that we lose our hold, and wander on.

Thy faculties here faulter; the Objects they meet with are inadequate to 'em; the Air grows too high for Reflection. But, where we leave off, there possibly some superior Order of Beings may take it up.—We have, indeed, a kind of Commodi in the Affair of Learning, which seem to be got far out of the Orb; so that one would wonder how they came there, or what brings 'em as far as they do here. Such are, mere Antiquities, Etymologists, Microclogi, Alchemists, Physiognomists, and other Searchers into

But there, for all their seeming distance and irregularity, do all respect the fame central Point, and move by the same Law with others; and even answer very good Purposes to the whole.

In effect, the several Arts have been cultivated to more or less purpose, as our Preservation is more or less immediately interested in 'em; and by this Key one might almost venture to judge which Arts are capable of being carried still further, and which not. Our Knowledge of very great and very little things, is so imperfect, that there is but little Relation between us and them; so that we are but little interested in the Knowledge of them. Those things we have necessarily and immediately to do with, are made to our reach; for the rest, no matter, to the Creator's chief Purposes, what they are.

And yet our Leisir and Curiosity have found means of making even more cognizable than other-
wis, and more useful; we can, in some measure, alter the established Relation between our Faculties and their Objects, and make use of one Law of Nature, to undo or supercede another. Thus we can magnify a little Sound or little Body, or a little Distance, &c. or we can diminish large ones, and thus make things in some measure adequate Objects, that naturally are not so.

But there is no great advantage in this: We only, by these means, come at a better apprehension of things, but the advantage seemed to put out of our way for no other reason but because they did not concern us; left we should be engaged to mistake, and run after things that had no relation to us, to the neglect of skills which have. Thus, Anatomy is really found of much less use than it first fought one would imagine; is being employed in taking things aludder and considering their Parts, which Nature chiefly intended to be considered and dealt with together. There is know not what secret Law, whereby the Effect of a thing is, and is made known, whether it is as you think it is, by taking something from it, or enlarge it by adding to it; its Effect is altered, in a manner beyond what we can well account for from the bare Consideration of Magnitude.
ABUNDANCE of the useful Notices, we find, were kept back, and left to be accidentally turned up in course of time: such as the Knowledge of Glasses, and their Effects. 'Twas no very important matter whether there had been a Print of it, or not, the Article itself, the thing at itself, was palpable, and needfully discovered long ago. Men lived tolerably well without knowing how many Feet a Louse had, or how many Years a Cannon Ball would be in travelling to the Sun. The Refrangibility of the Rays of Light in passing different Mediums, which is the great Foundation of all our optic Glasses; seems only a pecuniary Property or Effect arising from another Power, or property of Attraction between the Light and the Medium; which it feebly produces from some other. And there seems nothing absurd in imagination, an effusion of the diffusing and refrangible Principle which the did intend: So that the great modern Invention of Glasses, might be an accidental Derivation, from some of Nature's Redundancies. In effect, the only things left to Study and Art, may be these very Redundancies; the other Matters, to which primarily concern us, being learnt in a more immediate manner.

NO body will take this for a Reflection on Art: 'Tis only a Panegyric on Nature: an Illustration of her Goodness in contriving that things most necessary and useful, should be most obvious, to as to be unnoticed. Our very use of Glasses, if it be not altogether turned in the Course of Experiment and Disquisition, may we admire her Wisdom still farther in this, that she 'twas as if it were go out of her way, and annex a sort of Pleasure, beyond her own Purposes, to the Knowledge even of things not immediately useful; in order to engage us to Industrious Activity. This flies that the has no ends to be servy that very Activity; and perhaps is the bell Demonstration in the World of the Necessity we are under to pursue Knowledge; and may raise a Suffection, that this very Purify may possibly contribute to our Preference to run some farther manner yet not attended to.

'TIS no wonder the School Philosophy should be carried such a length; considering the narrowness of its Subject, and the great number of hands to cultivate it for so long a time. Its chief Employment is in assigning, and enumerating the Characters and Differences of our Perceptions, or internal Objects, taken as they are excited in us in the natural Course of things; by which it is distinguished from the Modern, which is to explain the Phenomena of the Image, to the first Observer: the Differences which would otherwise have appeared.---The Philosophers of the former kind are contented to take Nature as the comes home to 'em; and apply their Reasonings thereby without more ado: Tho' of the latter, go out in quest of it, to have more Matter to reason upon. The former are more contemplative, the latter more active; the former, in fine, reason, abstract, and discourse more; the latter observe, try, and relate more.

HENCE we discover why the Old is much more perfect in its kind than the New. The former has little to do but compare, order, methodize, &c. what is ready at hand; the latter has likewise to find; after which all the labour of the other still remains. The former takes Nature in all her Simplicity; the latter adds Art to her, and thus brings Nature into consideration in all her diversity: the former chiefly confers natural Bodies in their integral State; the latter divides, and analyses 'em: So that the former finds most of the principal Relations, the latter many more curious, and amusing ones. Hence, the former halves to its Perfection, and the latter to itself. And for that its Matter is limited: the latter can hardly ever, at its finest, make experiments are endless. To lay no more, to have Philosophy in its perfection, you have to order, Predication, and Delineation of the Old; and the Matter, the Copia of the New.

THE modern is yet wild and uncertain: 'Tis not arrived at the Maturity of Method; the Mine is but just open'd, and the Adventurers are yet only solicitous about the Matter to see what it affords. Circumstances do not yet come into their use, nor, at this juncture, does the introduction of Metaphysics to them, ever reducing it to regularity. True, the Rules and Methods of the ancients, are in some measure applicable to the new, and will go a good way towards the ordering and attaining of it; but the preface Philosophers seem yet so warm and fangue for such a Barnes if, which must be left to the succeeding Age to think about. Add, that the farther they go on dig Materials, shall the more difficult will the ranging of 'em be; as much as there is but one true and just Order to lay them in; and the more of 'em, the more intricate that Order, and the harder it is to find; and may at last be possible as if the never will faze half the Experiments and Observations already made, laid up or used in a System of Physics.

But when that is done, a deal will still remain, ev'e have the chief use of it. For physical Knowledge, strictly consider'd, is only a Step, a Means of arriving at a higher and farther kind. Histories, Observations, and Experiments of the Kinds, Orders, Strata, &c. for instance of Foolish, are very useful and laudable attempts, as they tend to lay in a Stock of sensible Phenomena, for the Mind to work upon, digg'd, and drawn near together; but they are not on the first. A certain number of our Beliefs, and the shallow and Shortsighted men to forget this farther View, and look only to the Things themselves. The bare Acquaintance of new Ideas is no real advantage, unless they be such as have some relation to our selves, and are in some sense adequate, and adapted to the Circumstances of our Waits, and Occasions, or capable of being made so. Knowledge, in the first State, is like Food in the Stomach, which may please and satisfy us, but is of no use to the Body till further prepared. It must be brought nearer us, and made more our own, more homogeneous to our selves, ere it feeds us. The modern Philosophy is not to properly a Philosophy, as the Arts or Opening of one. Its Matter has yet only undergone the first Conception: we are yet only conversant about physical New Relations, Learnt by Senation; whereas to bring it to the Perfection required, it must have undergone the farther Operations of Imagination, and Reason. Mere Physics, as such, do not make a Philosophy; those Physics must first be carried up to Metaphysics and Ethics, ere we can safely stop. So far as it is Physics, it is foreign to the Mind, and its Occasions; before it affects us in our Reasoning how our Reasoning, it is not the modern Philosophy at all. While Physics, it remains under the Direction of the Author of Nature; and proceeds wholly by his Laws, and to execute his Purposes; ere it come under our Direction, and become subservient to our Will, it must have had aside what was active, and necessary in it, and become passive to our Reason, i.e. it must have been transferred from the Dominion of the Almighty's Will, or Reason, and brought under ours; if that do not imply a Contradiction.

The sensible Phenomena, we have already flown, are the Foundation of Philosophy: but your Edifice will neither make any Figure, nor afford any Convenience, till you have carried it one or two Stories higher. 'Tis but, as it were, the Cellaring, or Ground-work; which one would think were no very comfortable place to live and spend all one's time in. 'Tis one extreme, to take our Lodging as some of the modern Virtuosos are contented to do, under ground; and another to reside altogether in Garrets, as the Schoolemen may be said to have done. THE School Philosophy, however, is of some farther use, as Matter of History: We learn by it how People have thought, what Views have obtain'd, and in what various Manners the same thing has been conceived; which, tho' it be Knowledge as it were once removed, yet is not entirely useless. The History of human
human Thoughts is not doubt the most valuable of all others; it being this alone that can make the Basis of a just Logic, as Phytology of a just Physics. We must know wherein People have fall'n, or fallen short, or been wrong, wherein the Authors have made a mistake, or been unable to form a just Opinion, so as to be able to form a just Opinion ourselves. The only Opinion that has obviate, may be consider'd as so many Phenomena of the human Mind, which must be consider'd and inquir'd into to find its Nature.—This alone were enough to have engaged us not to omit that part of Learning, in the present Work: tho' there were not wanting other circumstantial Reasons which had all their share; as, the necessity hereof to the understanding not only of the antient Writers, but even of the modern ones, who often combine, or think, upon the antient Notions. To which it may be added, that many of their own Discoveries, which now lie blended and buried among those of the Antients. One is at a loss to think what could induce the great Philosopher of our Age, Mr. Locke, to omit the Article Assiduation, in the Sense he has done. No doubt it was originally as pertinent as any other; but the Stamp and Impression it had already taken from the Antients, made it less fit to receive a new one. It could at best but take it imperfectly; and the result was, a promiscuous Image, wherein we neither see the one nor the other, distinctly. 'Tis scarce in the Power of Imagination, totally to devast a Sound of its received Meaning, and consider it as indifferent to all things; any more than to annihilate the Characters on a piece of Paper, and consider it as a mere Blank. Accordingly, tho the great Author abovementioned explain'd over and over, in the several Terms, the Sense he fixed to his Assiduation; yet Experience verifies how much he was overheard; the chief Objections against his whole System being drawn from a Misapprehension of this very Word, which keeps half the Philosophers in Europe still at a distance, afraid to admit a most excellent Doctrine, merely because it is of a different Term from that which some of these, who differ to define it further, may turn to the Articles Attraction, Newtonian Philosophy, Gravitation at all.

WHAT has been spoke of the School Philosophy, reminds us of Astrology; the Terms whereof have not been omitted in this Work. Were it only that it has once obviate, is still extant in Books, and has given occasion to abundance of Terms and Phrases, adopted into other Arts; it would have a Title to be remembered. The History of Mens Follies, says the immortal Fornelle, makes no small part of Learning; and unhappily for the Rest of the Universe, the Vehicle of their Follies and Maxwell's, and the Authors who define to reject all Astrology as frivolous, don't know it. Every Art and Science has its Vanities, and Follies; even Philosophy, and Theology: and every one its good Sense, even Astrology. The heavenly Bodies have their Influences: The Foundation, therefore, of Astrology is good: but those Influences are not directed by the Rules commonly laid down, nor produce the Effects attributed to 'em: so that the Superstructure is fallacious. Astrology, therefore, ought not to be the Vehicle for the vehicle of unshaken Truth. And this is a Kind of Opinion that would include, at least, the whole of the general Nature, and Subject of the Work: You must now allow me to defend a little more to particular, and personal Matters: and thus end my Preface, where I might have had Precedents enough for beginning it.

I WILL at least deal honestly with my Reader, and not be caught faulty in point of Morality, whatever I may be in any thing else. What has been said hitherto, has been on the advantageous side of my Work; and I should not have acquiesced with my self, should I not likewise mention what may be allied to the contrary Part.

The curious Reader, then, may expect, he will here meet with Omnifions, and there with Runducensions: here the Method and Economic are not kept to; there an Article is imperfectly treated; here, a Paffage from some other Language is not sufficiently naturalized; there a Sentiment of some other Author is not sufficiently digested: There, in fine, the Author was asleep, and here the Printer.

The same Application may be made to all those things not peculiar to this Work, but to extend to all the Kind; that most of 'em are things not foreign and accidental to it, but arise of natural fitly, from the very Nature and form of a Dictionary; and that many of 'em, are not peculiar even to a Dictionary, but agree to all extensive Undertakings, and are appendant to the very best Part of the Deline, its Universality: but instead of extenuating, I had rather be guilty of inflating, and aggravating 'em.

FOR Errors, they cannot be very few, considering the Hands thro' which most Parts of our Knowledge have past, and from which we are obliged to take our Accounts. What one Author, upon the most particular Subject, will you produce, that has not his share of 'em? and what Author could possibly avoid them? but we cannot possibly correct. The Errors in all the Authors he has done to wish. Sediger, in his Excitations against Cardan, has shown some twenty thousand, in one small Work; and no body imagines he has pick'd it perfectly clean. Yet Cardan is not an ill Author. Bayle's Dictionary has been called the Errata of Murriet; yet is not Bayle himself without his Errors, which are, without any doubt, found in the present Work, in comparison of others of the like kind. Many thousands we have corrected, both in the Text and the Notes; and other Writings we have collected from, by means of the Light which other Parts of Knowledge afforded; But after so large a Harveft, no doubt there remains a tolerable Glanning. We flatter our selves, however, that what we have overlook'd, the Reader will frequently be enabled to correct, by the Means here afforded; and that there will be few Errors found in the Book, but corrected. Indeed a Reformation would be, in many cases, a better method without 'em. After you have picked what you think fit of this kind, and laid it by; 'tis to the one or more who comes, will restore half of 'em to their places; and tax your Temperie, and want of Tarte: and the Reader must go near to replace the other half.

As to Irregularities, and breaches of Method, I will not claim Impunity on the Score of being the first that introduced any certain Rules, or Method into this way of writing at all: But there will be at least this Satisfaction attending my Cafe, that I cannot be indicted for the Breach of any Laws but my own.——Nor
maut it be forgot, that I pretend to have carried the *Dictionary-Way* to a pitch hitherto little thought of: So that if I have fallen short of the Mark on one side; it may be some Arouetism that I have gone beyond it in another. I am sensible, however, there is no Point I have been more delinquent in that this is my fault of Wood; and that I am at every turn forgetting my own View. The References, and necessary Connections between the Parts, which should flow their Relation, and help the Imagination to put *em together, are but too frequently drop, and the Reader left without his Chase.

The Principle of utility and Curiosity must be a deal of that kind, considering the Time to great a Load of Fruit had to hang and ripen. Much of it was gathered ere it could possibly be of any use; so that *tis no wonder it now and then taketh of the Wood. But setting aside this; if a Man may not be allowed to say a good number of indifferent things, in the Compass of five hundred Sheets, I know not who would be an Author.

1. ANON., as to there being a little in it, new, and of my own growth; I must here change my Style; and from Confinement, turn to Vindicatation.—The Work, is, what it is to be, a *Collection*; not the Produce of a single Brain, for that would go but a little way; but of many single Confinements. If any Person will undertake to write a *Dictionary*, even of some one particular Art, from his own Fund, alone; a Man may safely undertake to prove it good for nothing. I do not pretend to entertain any Guilt at this rate, with just what my own scanty Barns afford: The whole Country is rankled to make *em the fuller Banquet. Call me what you will, and I stand by I am stuck over with other Peopled Feathers; with all my Heart; but it would be altogether as just to compare me to the *Rey*, the Symbol of Industry, that of Pride. For tho I pick up my Matters in a thousand Places; *tis not to look gay my self; but to furnish you with Honey. I have rilled a thousand Flowers; prickly ones of *em, to load your Hive. No body that fell in my way, has been spared; Antient nor Modern, Foreign nor Domestic, Christian, nor Jew, nor Heathen: Philosophers, Divines, Mathematicians, Critics, Cautious, Grammarians, Physicians, Antiquaries, Mechanics, all are served alike. The Book is not mine; *tis every body's; the mixed fillet of a faineer Olio. The Prince of modern Authors, is pillaged to furnish you. Question then can any body else expect? If ever you wrote any thing your self; *tis possible there is something in it of yours; but if you will at least allow something in it good.

No one of our Predecessors can blame us for the use we have made of them; since it is their own Practice. It is a kind of Privilege attached to the Office of Lexicographer, if not by any formal Grant, yet by Common Tradition. We have all already assumed the *Rey* for our Device; and who ever brought an Action of *Trespass* against a Dictionary, without Runcowt? If any body blames us, 'twill ten to one be some of those very Drones, who are fullained by our means.

*Tis idle to pretend any thing of Property in things of this Nature. To offer a thing to the Publick, and yet pretend a Right reserved therein to one's self, if it be not aboad, yet it is forlaid. The Words we speak; say, the Breath we emit, are not more vasive and common than our Thoughts, when divulged in print, and may as well be thought of as People to use the Light that shines in their Eyes, because it comes from your Candle: Even it is in a dark Corner, and shall not be amoned, and dazzled by it; if we may not be the better for good things, let us not be the worse for the ill and indifferent ones mixt with *em.

We see the same Thought, which was first started in one Author under a world of Crudity, borrow'd by another become farther improv'd and ripen'd; and at length transmitted to a third, yield Fruit in abundance. All Plants will not thrive in all Soils that will produce *em; some languish in their Mother-Beds; whence the Gardner is under a frequent necessity ofベスト, Painting, Engraving, &c.

To do justice to a *Collection*, I mean a general and promiscuous one; it has its Advantages. Where numbers of things are thrown precariously together, we sometimes disover Relations among *em, we should never have thought of looking for: As, the Painter's and Sculptor's Fancy, is frequently led on to the boldest and most masterly Dsigns, by something they spy in the fortuitous Sketches of Chance, or Nature:infomuch that a celebrated Author makes no scruple to lay this down as the first Origin and Occaion of all the Arts. 'Tis certain that a little here and a little there is the great Rebutf of Accident, Occaion, and cial Experiments: *Tis but necessary to those who are negligent and only come in play after the Game is flirted. *Twas, in all probability, the hand of Chance that first threw Sulphur, Charcoal, and Salt-petre together; and what surprizing Effects have not arrose from it; what Handle has it given to Art and Contrivance, to direct and apply this fortuitous Production?

*Tis indeed surprizing to consider, what slender Experiments and Observations many of the capital Doctrines have deboce from the *Rey* of Philosophy, *Hammer* on his Anvil, struck out the Principles of Music; which would have been utterly unknown and disregarded, had not the Inventions of *Pliny*, *Gias, of the Dipping Needle*, of *PLobhorus, of Teleagis, of Tatista, of Animus*, &c. supposed to have arrose in the like manner; as the Reader may find under their proper Articles: And how many more we know not, by reason the great Obicurity of their first Rite, ere they attain'd a degree of Usefulness and Perfection sufficient to be taken notice of, has buried the particular Circumstances thereof. If we will hear the antient Philo- *mians*, and *Egyptians*, amongst whom most of the Arts are supposed to arrose; they all came from cical Observa- *tions*; Geometry from the Infoundations of the Nile; the Flight of the Crane, gave occasion to the Invention of the Rudder; the Isis taught to administer a Clyfter, &c. In Effect, a new Observation in some Peoples Minds prepared for it, is like a Spark in a heap of Gun-powder, which may blow a whole Mine.

What Advantages may not Philosophy derive from such a Collection, or Farrago of Arts; when *tis considered, that every Circumstance, every Article of an Art, ought to be look'd upon as a Datum, a Phenomenon, or Exception. And that the least of *em may possibly be the Foundation of a new Syslem—

To consider only the Tanning, or Carrying of Leather; what is the whole Process, but a Series of Physical Effects, arising from new applications of Body to Body? And how many Lectures will the Philosopher have from Painting, Gardening, Agriculture, &c. touching Painting, Engraving, Drawing, Exposition, Experiences, Walls, &c. which might never have come in his way, but by such a chance? When a thing is once startted, it may be applied infinitely to many other bodies where it will stop.

THROUGHOUT the Whole, we have had a particular regard, both in the Choice of the several Heads, and in dwelling or amplifying upon *em, to the extent of our Views, dilating our Knowledge, opening new Tracks, new Scents, new Vistas. We have endeavoured not only to furnish the Mind; but to enlarge it, and make it in some measure co-extend with the Dimensions of all Minds, in all Ages and Places, and under all Situations and Circumstances: as Language, in some measure, makes our Senses do. With which view, we have given our Sentiments, Notices, Manners, Customs, &c. of most Peoples, that have any thing new, unusual, and hardy in *em.

Such a Variety of Views, Principles, and Manners of thinking, is a fare Remedy against being too vio- 

* Leon Mayra Alberti, della Stanna.

Is kind
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 opposites, by way of Counter-balance. Thus we find nothing more perverse and unfalterable 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 them 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 out being spoild by any; and becoming Creatures rather of Homer or Aristophanis's making, than Gods; and receiving our Tattles, Views, Relishes, at second hand, rather than from Nature her self. This, however, is only to be understood with regard to that Fine Mixture of the Fine Arts, than the general Appliars to all; since each is hereby brought to general and just Principles; 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, forming a found 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 Men's Ideas; that is an Innuisment which may prove for the worse, if it carry any ill Quality with it: Richards is not the chief thing simd at; it's only a Circumstance, or Matter of a secondary Consideration: Sounds/feet is the frit. There are many Manures which the Husbandman darts not use, by reason they would corrupt the Land, the same time it enriched them; and lay the Foundation of a Dilease, which would in the End impoverish, and make it spend itself in unprofitable Weeds. A little pure Logic, or Theology, or Chymistry, in some Peoples Heads, what Michiefe have they not produced?—But it must be owned, Mem's Heads are not filled: 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 Significance, is their extending and enlarging the Mind, and making it more capacious and susceptible.—But neither is this the head Aim but is chiefly of use, as it contributes to the increasing our Sensibility, to the marking our Passions more and more, and givin us better to the Argumentative. It is the End of all the Things that occurs 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 subjunctive to the same End; for incommensurate, much of the School Philosoph, which by excercising and exciting the Mind, has a kind of collateral tendency to sharpen its Faculties; and needs only be read, not retaine in to produce its Effect. Even this does not oblige us to the ful and adequate, and giving us a Clearness 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 fole Consideration of having it sharp, but to be the fitter for use. Briefly, then, our Faculties being only to 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, both by the Understanding and Knowledge, are more entirely to our Influence and Direction; and thus make us conserve, and move more in concert with the rest of his Works, to accomplish the great End of all things. In which our Happines and Perfection confin; the Perfection of a single Nature, arising in proportion as it contributes to that of the T O P N.

ERRATA.

In the Article Angle, Page 97, Column 1, Line ult. for Centre 1, read Centre 2.

I Article Ammonia, l. 10. Infert Fig. 64.

Article Amylisis of a Logarithmic Curve, Infert Fig. 77.

Center of Inclusion B, & DEBH.

Centripetal Force, l. 2. for Fig. 26 t. Fig. 25.

Centripety, Corol. VI. for divided into two M.D. r. be interfered and D, and for e. 0.

Chord, p. 211. col. l. 25. for Fig. 7 r. Fig. 6.

Circel, p. 231. col. 1. 27. for Dr. D, & Dr. F, and infert Fig. 7.

Circumduction, for Fig. 23 =, for Fig. 24.

Commotion, l. 1. after Earth infra 5, and for Fig. 24 t. Fig. 14.

Compasses, for Gnomon Compasses & Gnomonic Compasses.

Composition of Motion, l. 1. for as e. e. r. for as e. e.

Concoctic, l. 7. for E. E. E. F.


Concentr. l. 15. for cast t. touches.

Conicoplasia, p. 144. for Sum of r. of Sun's, and p. 145. l. 3. and for, P. the Elevation of the Pole P. r. PZ the Complement of the Elevation, &c.


Cycloid, l. 4. for Tab. Analyt. & Tab. Geomery.

Declinat, l. 1. for Centre C, & Centre F.

Deflection, l. 1. for Fig. 9 t. Fig. 15.

Diagonal, l. 7. for B. E. E.

Horizontal Dia, l. 9. for Meridian Line B. r. Meridian Line H B.

Hypothenusa, for A, G, D, & L.2. for A Col H. r. A CH.

Lati. E. F. 3. for A. C. C.

Polar Mad, l. 40. for E. E. E. F.

Line of Perp., for Fig. 10 t. Fig. 11.

Division in Lines, Infert Tab. Geometry, Fig. 17.

Eccentric, for Fig. 11 t. Fig. 17.

Elevation of the Sun, for Glover Position, r. given in Position.

Flying, l. 50. for Temperal Motion &f Vertical Motions.

Geometrica Latitu, l. 1. for T g. j.

Latus Transversum, for and for GLRO v. DLRO.

Logihe Spiral, for Fig. 11 r. Fig. 22.

Article Construct Mirror, Law II. after F Infert Fig. 54.

Paraenic Motion of Impetus, for Fig. 15 t. Fig. 14, and deel.

T. — Paraenic Solicitation of Gravity, deel Fig. 15.

Paralax of Longitude, for Fig. 18 t. Fig. 19.

Paralax of Motion, for Fig. 20 t. Fig. 21.

Parallelism, l. 17. for Fig. 19 t. Fig. 41, and l. 9. for CH. CD.

Parabol. Line, for Fig. 19 t. Fig. 41.

Perpetualness of a Triangle, l. 14. for sine s, and are the Appearance, r. sines a, and e are the Appearances.

Induced Planes, Law IX. after A Conform Fig. 8, and in the Corol, of the same Law Infert Fig. 60, and in Law XIII. for BAK. Fig. 9.

Projectis, Law III. after a Parabola deel in a Medium inst, and for Fig. 19.


Pyramid, l. 70. for DF r. DE.

Sinal Quadrans, l. 19. Infert Fig. 18.

Bisectarity of the Ellipsis, l. 2. for Circle. r. Curve.

Rational, l. 20. for Fig. 41, t. Fig. 61.

Retification of a Parabola, for Congruent Axes & Congruent Se-

micircles, and after Hyperbolic Space, add C.Q.M.

Reification of the Cycloid, l. 1. Infert Fig. 37.

Reduction of a Figure, l. 11. for Fig. 65. Fig. 65.

Refraction, l. 5. for B. E.

Retrospection of the Sun, l. 2. for A. N. A.M.

Rhomb, Article 1. Infert Fig. 19.

Seven, Art. IV. for to be applied in, r. to be applied in D.

Scrapes, after a Motion, after another Paramee like that of the Axil, infert Tab. Micellifery, Fig. 2.

Sector, l. 4. for Circle B. r. Circle C.

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Sine, p. 81. col. l. 6. for the Arc B F G. r. the Arc B F C.

Size-Complement, l. 2. for A. E. r. A.

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Star, l. 12. for Fig. 19 t. Fig. 11.

for the Arc C D B, & the Star Defiguring an Arc equal to C D H.

Triangle, p. 141. col. l. 41. for AC, r. BC.

N.B. The Figures relating to each Art are placed from the Name of the respective Art, in the Body of the Book; and are refer'd to under that Title as, Tab. Architecture Tab. Geo-

mery, &c.—To each Figure is also annex'd the Word for whose Exemplification it forces: 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.