

The Method to Science

(1696)

BOOK II, LESSONS I-IV

JOHN SERGEANT (1622-1707)

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Editor's Preface to the First Edition of Book II

This work is part of a larger effort for making John Sergeant's philosophical and theological texts available in full, electronically. In this edition of the text, my intent was to keep the body of the text (wording, numeration, references, etc.) very close to the original, perhaps, one might say, to a fault. This means that I have retained the author's original capitalization, italicization, spelling variations, typographical errors, Latin phrases, and archaisms. The brackets in the text ('[' and ']') are original, and frequently introduce technical terms or distinguish between mention vs. use of a word. The author's marginal notes (references to other portions of his books) have become footnotes; I have thus changed the original asterisks, daggers, double-daggers, etc. to superscripted numbers corresponding to notes. My own annotations are also in footnotes, clarifying lesser-known Latin phrases, archaisms, or references to historical figures.

Though I do not intend to endorse John Sergeant's philosophy or theology expressed below, my hope is that this edition becomes a resource that spurs on scholarship of lesser-known figures in the Early Modern period.

I imagine that I may have introduced errors of my own, despite my efforts to be rigorous. So, I welcome feedback and corrections where this text differs from the original extant copies. More details about this text's provenance, as well as my principles in editing methods, textual criticism, and other considerations I applied for the preparation of this text, are available either by request (jonathan.vajda@gmail.com) or on my website (jonathanvajda.com).

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The Method to Science

Book II. Of the Second Operation of Our Understanding, or Judgments

Lesson I. *Of the Nature of Judgments, or Propositions in Common; of their Parts; of the Ground of their Verification; and of the several Manners of Predicating.*

1. HAVING treated of *Notions*, and of their Clear *Distinction* and *Expression*, to that degree as may be sufficient for *Science*, it follows of course that we treat next of *Cognition*, or the putting together of *Notions*; and this not joyning them together on any fashion, by rote as it were, in our *Memory*, as a School-boy gets a Latin Sentence without book, the meaning of whose words he understands and revolves in his *Mind*, but regards not whether it be *True* or *no*; nor yet, the putting them together according to Grammatical Congruity, as is this Sentence, [*Virtue and Vice are both equally Laudable*] in which the *Words* do Cohere indeed according to Grammar Rules, but the *Sence* is False, and Incoherent: But (as the word [*Cognition*] imports) it must be the Connecting or Joyning them together, in order to *Knowledge*; that is, with an Application of our Knowing Power to see whether they ought to be thus put together or no; or, (which is the same) whether the Proposition be *True*.
2. Wherefore, since we cannot *know* any thing to *be so*, but what *is truly so*, it follows, that all Knowledge must be of some *Verity* or *Truth*; and this not of a Truth which is *materially such*, or repeated in our *Mind*, (for this amounts to no more but a Complex *Notion* or Apprehension) but to make up the *Notion of Knowledge*, we must *see* the *Notions* of which that Truth does *Formally* consist, to be *truly* and *indeed* Connected. As, when we say [*A Stone is Hard*] we must *see* that what's meant by [*Stone*] and by [*Hard*] are some way or other Connected in the *Thing*; or, otherwise (all *Truths* being taken from the things) we cannot be said to *Know* it to be *True*.
3. *Judging*, in proper speech is not meerly and precisely the *Seeing* or *Knowing* that the *Notions* are Connected, but the *Saying Interiourly* or *Assenting* heartily that they *are so*. Otherwise, since nothing can be *Known to be so*, but what *is so*, it would follow that there would be no *False Judgments*. Wherefore, *Judging* adds to the meer notion of *Knowledge*, that it is the subduing of all *Hesitation*, or the *Fixure* of our Intellective Faculty about the *Verity* or *Falsity* of any thing. Whence *Judging* is the *Effect* immediately and necessarily resulting from our *Knowledge* that the *Notions* are really Connected, when 'tis a *True Judgment*; or else from our only *Conceiting* them to be Connected, when the Judgment is *False*. Whence, this is a right consequence, I *see* or know the *Notions* cohere, therefore I judge the *Saying* or *Sentence* that signifies they are connected to be *True*; which is the Method that all Rational or Judicious men take: Whereas *Passionate* or *Ignorant* men, who are blindly addicted to their own *Sentiment*, take the *Contrary* way; and will have the *Notions* to *cohere*, and the Proposition to be *True*, because they had prejudg'd it so upon some other Motive than the *seeing* that the *Terms* themselves were indeed connected.

It will be objected, that *Knowledge* also *fixes* our Understanding; and, therefore, *Knowing* is *Judging*. I answer, That to *fix* the Understanding so as to acquiesce to what it sees, is to make

it *Judge*; but the Notion of *Knowing* is compleated in the bare *Seeing* the Terms Connected, and is terminated in regarding the Object or the Proposition that is Known: But *Judging* superadds to it, that it is moreover the yielding to reject all farther disquisition, and *adhering firmly* to that Knowledge; which (tho' the distinction between them be nice and delicate) is *another* Consideration superadded to meer *Knowing*, and sinks and rivets the Object more deeply and unremovably in the Soul. Lastly, the Intuitive *Knowledge* of Pure Spirits is True *Knowledge*; but it is not made by our way of *Judging*, in regard they neither Abstract, nor Compound or Divide Notions.

4. Hence is seen that to make *Judgments* of things out of True Knowledge, is the Greatest Natural Perfection our Soul is capable of. For, since nothing can be *Known* to be so but what *is so*, or *True*; all Judgments resulting from True Knowledge not onely fill our Mind with *Truths*, but are, moreoever, a Firm Adhesion to Truths and the Secure Possession of those incomparable Endowments, which are the Best Perfections of our Understanding, and make us like the **God of Truth**. Nor ends the Advantage we gain by Truth in meer *Speculation*; but, *Truth* excluding from its notion *all Possible Errour*, it makes it Impossible we should ever embrace any Errour while we thus Judge. Which, since *Omnis peccans ignorat*,¹ and that every Sinner (as the Proverb is) *has his blind side*; must therefore, if Truth be *Express* in our Understanding, and *kept awake* there, Preserve such a mind from Sin; and by making right and Lively Judgments of our Present and Future State, and of our several Duties here, most certainly bring us to Eternal Happiness hereafter.
5. That *Speech* that Connects Notions in order to Knowledge, or Expresses a Judgment, is call'd a *Proposition*; that is, such a Speech as proposes the Notions, and puts them into such a Frame or Posture of Connexion, as best serves for us to Judge whether they are *really* Connected or no. Whence it must consist of *three* parts, *viz.* that *which* is Affirm'd or Deny'd of another, which in an Artificial term we call *Predicated*, and that notion the *Predicate*. That of *which* 'tis Affirm'd or Deny'd, call'd the *Subject*: and that Notion which *signifies* their Connexion, call'd the *Copula*. The two first are also call'd the *Terms* or *Extremes* of a Proposition; whence all *Truth* is said to consist in the *Connexion of the Terms*; and, if the Terms be not found to *cohere*, the Proposition is justly held to be *False*.
6. Since Propositions may be both in the *Mind* and in *Words*, and the *Meanings* of the Words are the same with our *Notions*; it follows hence (so the words be not Equivocal) that *Mental* and *Verbal* Propositions are the same thing; so that it is, in reality, all one to treat them under either of these Considerations. Therefore, in regard we must use *Words* in our Discourses concerning Propositions, and many times Artificial ones, we shall treat of them indifferently as taken in *either* condition; and sometimes use the Word [*Judgments*] sometimes [*Propositions*] as it lights. Only let it be remember'd, that Judgments are onely in the Mind *Formally* and *Truly*: and in *Verbal* Propositions, only as in *Signs* of the *Mental* ones. Tho' even taking them as in our Understanding, they have, even *there*, their *Subject*, *Copula* and *Predicate*, as well as when they are Pronounced, or Writ in *Words*.

Corol. I. Hence is deduc't, that the rude Vulgar, nay, even Children who cannot Speak or Discourse, may have *Mental* Propositions, and Consequently what answers to *Subject*, *Copula* and *Predicate* in their Understandings; tho' they cannot Reflect or Distinguish them, and (as it were) dissect and Anatomize their own Thoughts and Inward Acts, as do *Men of Art*. For Example, when a Clown Knows or Judges that there is such a place as *London*, or a Child that what it sees *is Milk*; they have in their Minds the *True*, tho' *Rough*, draught of these two

¹ Latin: 'every sinner is ignorant'; i.e., everyone who sins is acting out of ignorance. This (or a similar variant) was commonplace, appearing in the works of Thomas Aquinas (e.g., *Commentary on the Epistle to the Colossians*) among others.

Propositions, [*London is Existent*] and [*this is Milk*] and, consequently, of what corresponded to the several parts of those Propositions, after a *Natural* manner; tho they cannot yet lick their rude Embryo Judgments into Form, or bring them to a perfect shape, by distinguishing in them these several parts.

Corol. II. Hence also, tho' we cannot know the precise time in which Children begin to judge, yet we may be assured it must be as soon as they have *Cognition* or Knowledge of Common and Familiar Objects, and of their Agreeableness to their own Nature. And, first of all, of that which is *next* to them and *most* Knowable, *Viz.* that *themselves exist*; as will be seen hereafter. The reason is, because *Judgments* are the Immediate *Effects* resulting out of *Knowledge*; and, therefore, as soon as they *know* any object is Agreeable or disagreeable to them, or that it *Exists*, they cannot but *Judge* so after their dull fashion.

6. ²To proceed. As the Metaphysical Verity (of which onely our Notions are capable) is taken from the *Things*, and Consists in *their being truly what they are*: so the *Formal Verity* of our Judgments must be also taken from the *Thing's being such as we Judge it to be*; Whence Truth is by some defin'd to the *Conformity of the understanding to the Thing*, wherefore, when we affirm the Thing to be *This* or *That*, or to be *such* or *such*, the true Meaning of that Affirmation is, that what corresponds to both those Notions of the Subject and Predicate is found or *exists* in the same *Thing* or *Being*; and, were not this so, it would be *False* to affirm that *one* of them *is* the *other*.
7. Wherefore the meaning of the word [*is*] which is the *Copula*, is this, that those Words are Fundamentally Connected in the *same Thing* and Identify'd with it Materially; however those Notions themselves be Formally Different, provided they be not Impossible;³ for then the Proposition must, for the reason now given, be necessarily *False*. As when we say [*a Stone is Hard*] the Truth of that Proposition consists in this, that the Nature of [*hard*] is found in that Thing or *Suppositum* call'd a *Stone*, and is in part Identify'd with it; however the Notions of *Stone* and *Hard* be Formally Distinct. Or, (which is the same) it is as much as to say, that that Thing which is *Stone* is the same thing that is *Hard*.
8. The Copula [*is*] has always the sense now given, except when we are to Speak of *Nothings* which (the adequate Object of our understanding being *Ens*) we are forc'd to apprehend as *Things*, even when at the same time we Judge them to be *otherwise*. As when we say [*Imaginary Species a Chimera*] and yet, even then, it expresses a kind of Identity of the *two Nothings*, and affirms them to be the *same Nonsense*, and that to put a *Space* or Quantity to be *no* Quantity: or to put a *Non-Ens* to be *Ens* is Contradictory and ridiculous. And, indeed, these kind of Propositions are in effect no more than to say, that *Non-Ens*, *Non est Ens*, or, What is not Capable of Being cannot be.
9. The Copula [*is*] is the most proper to give us a Clear Intellectual Light; and, by consequence to fix our Judgment. First, because the Notion of *is*, or Actual Being, is impossible to admit any Explication (and therefore 'tis self-known) as any one may evidently experience, if he goes about to *Expplain* it; for he will find that he must be forc'd to put *is*, or some word that imports Actual Being in its Explication; which makes the Explication to be none, but leaves it as obscure as it was before; nay, *more* Obscure than formerly by adding other Notions more Obscure than it self was. For example, Ask what it is to *be* or Exist, all that can be said of it is, that 'tis *Esse extra Causas*; where (*Esse* being the same with *Existere*) we vainly endeavour to explicate the *same thing* by *its self*, and to make it look like an Explication, we add *extra Causas*, which two Notions are *less* Clear than *Esse it self* was. 2dly, The Notion of

² The numbering is original. There are two different paragraphs labeled 'section 6.'

³ That is, not simultaneously possible; incompatible, or inconsistent.

[is] is most *Determinate* of its own nature, and so most *Fixt* of it's self; and, therefore, most proper to *fix* the Judgment. 3dly, Because all other Notions having some Potentiality and Indifferency in them, are (as it were) wavering between two or more Notions; call'd Differences. Whereas the Notion of [is] having none, is only Absolutely *Steady*, Immoveable or Undeterminable to any other Notion. Lastly, Because hence, in Literal, and not Figurative, Speeches, the word that expresses this Notion, can never be *Equivocal*, since 'tis impossible to distinguish it into this or that sence; all *Distinguishing* or *Differencing* Notions being evidently *more Formal*, Actual and Determinate than the Notion *to be Distinguisht*: which is in this case, Impossible.

10. To proceed: There being (as was said) a Real Relation between those Notions which are the Subject and Predicate, the later being really in the understanding as That *which is said* of the Former, and the Former that of *which 'tis said*; and Relation being necessarily compleated and actually such, by the Act of a *Comparing Power*; it follows, that every Judgment is a *Referring* or *Comparing* one of those Notions to the other, and (by means of the *Copula*) of *both* of them to the same Stock of *Being* on which they are engrafted, or the same *Ens*; where they are Entitatively Connected (or the same Materially) before they are *Seen* or *Judg'd* to be so by our understanding.
11. It is sufficient that the two Terms be *Materially* the same, or Identify'd with the same *Ens*, when the Subject is a *Concrete*; whether it be *Substantially* a Concrete, that is, consisting of the Nature and the Suppositum, as when we say *Petrus* or *Homo* is *Animal*. Or *Accidentally*; as when we say *Album est Dulce*. But in *Abstract* Notions, they must, *besides this*, be moreover the same *Essentially* or *Formally*; that is, they must not only be found in the same *Material Ens* or thing, but those very Notions themselves must have the same *Formality*, either in part, or in whole, in our Understanding. In Whole, as when we say *Petreitas est Petreitas*, *Quantitas est Divisibilitas*; In part, as, when we say, *Petreitas est Humanitas* or *Animalitas*; for then *Humanitas* and *Animalitas* are as *Essential* to *Petreitas*, and *Petreitas* as much *includes* and *is* the Subject of their Notions and of its own Differences besides, as *Petrus* *does* or *is* of the Notions of *Homo* or *Animal*.
12. An *Abstract* and a *Concrete* Term can never be Subject and Predicate in the same Proposition; tho' never so *Essential* to one another; For an *Abstract* Notion, out of the very Nature of its Abstraction, is formally a *Part*; and a *Concrete* Notion in respect to it a *Whole*; and a *Part*, tho' taken *materially*, it may *belong* to the same *Ens* which is a *Whole*, and be the same *Thing* with it; yet taken *formally*, it cannot; for then a *Whole* would be *Formally* a *Part*, and a *Part* *Formally* a *Whole*. Hence we cannot say *Petreitas est Petrus*, or *Petrus est Petreitas*, &c. Hence also this Proposition *Quantitas est Quanta* (and such like) is *False*; for *Quanta* being a *Concrete*, signifies the Subject which has *Quantity* in it; and it is *False* to say that *Quantity alone* is *Quantity* and its Subject *too*.
13. From what's said above we may gather, that there may be diverse manners of Predicating or referring one Notion to another, and they are reckon'd by *Porphyrius* to be *Five*, called by the Schools **Predicables**; that is, several *Manners* how one Notion may be predicated of another. Whose Pardon we must beg, if following the Dictates of Reason, which we Judge Evident, and not the Track beaten by others, we dissent from them, and assign *Six*. The *first* is, when the *whole* Notion is Predicated of the *whole*, as when we say [Quantity is Divisibility.] [*A*. Whole consists of all its parts; or, when we Predicate the *Definition* of the Notion *Defin'd*, as, [Man is a Rational Animal]; or, all the *Dividing Members* of the Notion *Divided*. And this Manner we call *Entirely Identical*; that is, the predicated of the same *Whole Notion* wholly of it self. In the rest of a *Part* only is Predicated of the *whole*; and then the Predicate is either *Essential* to the Subject, or *not*. If *Essential*, then it either predicates *that part* of his Nature

which (in the common acceptation of Mankind not reaching to inferiour Differences) is *immediately Superiour* to it, and is thought to denote the *whole* Essence of the thing, and then 'tis call'd a **Species**; as, *Petrus est Homo*. Or, but some *lesser* part of its Essence; as, *Petrus est Animal, Vivens* or *Substantia*, which are call'd the **Genus** or Generical Notion. And both these (as also the first) are said to be predicated in *Quid*, because they are Essential Predicates and answer *differently*, tho' *imperfectly* and but in part to the Question made by *Quid*. As ask, *Quid est Petrus*, we answer appositely, *Homo, Animal, Vivens, &c.* Or else the Predicate is that Compar't which *distinguishes* the *Genus* Essentially from others of the same Common kind, and constitutes it in an inferiour Class under the Common Notion; and is therefore Referr'd to what it thus constituted, as its Essential **Difference**; as, *Homo est Rationalis*. And, this supposes the Question made by *Quid*, or *what Thing*, and answers to a *further* Question, *What kind of Thing*. And therefore, 'tis said to be predicated not meerly in *quale*, for then it might have been a meer Quality, and not Essential; but in *Quale quid*, as both giving account of the *particular* Nature of the Thing, as also of its belonging to the *Essence* of it. If the Predicate be *not Essential*, then either one notion is Referr'd to another, and Predicated of it (not as any Part of its Essence, but yet) as more or less *Connected* with it, as an *Effect* or *Sign* of it; as, Capable of Admiring, or the being affected with Musick, Proportion, or Beauty, are Connected with *Rational* Nature or *Man*, and referr'd to him accordingly, that is Predicated of him as a **Property**. Thus *Combustive* or Rarefactive are *Connected* with Fire; *Opacous* with *Earth*; and referr'd to those Subjects, or predicated of them as **Properties**. Or, lastly, the Predicate is Compar'd or Referr'd to the Subject, as having *no* kind of (at least known) *Connexion* with the Essence, but meerly *casually* belonging to it; or, as Indifferent to the Essence whether it belong to it or no. As *Armed, Placed, Situated, &c.* belongs to *Man* or *Body*: and then 'tis said to be predicated as an *Accident*, that is, as affecting him only *Casually* and *Accidentally*.

Note 1. That in this last Predicable only the *Manner how* it is Predicated or Compar'd to the Subject is consider'd, and not the *Nature* of that which is Predicated; nor, whether it be a *substantial* Notion, or, whether it does belong to some one of the *other Nine* Accidents, so it be but *Casually* or *Accidentally* belonging to the Subject, or Referr'd to it; for *Wooden, Golden, and Earthen* are all Predicated as Accidents, or *Accidentally*, of *Cup* (for 'tis still *equally* a Cup, whether it be made of any of *those*, or of any *other* matter tho' Wood, Gold, and Earth be *substantial* Notions. Whence the word (*Accident*) does not here signifie what *Inheres* in the Substance, as it does in those *Predicamental Accidents* which are *Intrinsecal* ones; but that which belongs to a Subject *by Chance* or *Casuality*; so that the Notion of the Subject is preserved *entire*, whether it *has* it, or has it *not*.

Note 2. That since it was clearly the Intention of him who invented these Predicables, and of those who follow'd him and us'd them, to comprehend *all* the Different Manners how Notions could be Predicated of their Subjects; and, the being Predicated as a *whole* of the *whole*, is most evidently *one* Manner of Predicating, and *Distinct* from the Five they assign'd; it is manifest, that their Account of the Predicables was Defective, and our Supplying it Rational and Necessary. Add, that they omitted *that Predicable*, or Manner of Predicating, which, if it were not the *most Useful*, at least it was the *Chief* and *First* in Dignity, all the *First Principles* having (as will be shewn hereafter) this Manner of Predication, and consequently having Title to belong to this Predicable. Besides that, scarce any thing can be so Useful to Science as are those First Principles, and the *Definition's* being Predicated of the Thing *Defin'd*; These being the Propositions which give us chiefly all our *Certainty*, and all the *Ground*, to Scientifical Knowledge.

14. When the Notions of the two Terms are of an *Unequal* Extent, the Subject of the Proposition ought to be the *Inferiour* or *more Particular* Notion, and the Predicate that which is

the *superiour* or *more Common* one. For, since, when the *Notions* are not entirely the same, and the *Whole* Predicated of the *Whole*, they can belong to one another, but *in part*, and the Predicate is conceived (even as to its whole *Notion*) to be something belonging to the Subject to which 'tis Attributed, and as it were *receiv'd* in it; and, that this hinders not the Subject from having *many other Notions* belonging to it as well as *That*; hence, the Subject is conceiv'd to be a kind of a *Whole*, in respect of the Predicate, and the Predicate but a *Part*, in respect of *it*. Again, since (as was shewn formerly) all the *Superiour* and *Larger Notions* are but *Parts* of the Inferiour ones, the Lowest (*v. g. Peter*) comprizing in it self Actually *all* the Superiour ones (*v. g. Man, Animal, Vivens, Corpus, and Ens*) and adding, over and above, other *Notions* to them which *Particularize* or *Individuate* it: it follows, that when two notions are of an unequal size, the Superior, which is the *Partial* notion, ought to have the place of the *Predicate*; and the Inferior, which contains in it self both what corresponds to *it*, and also to other superior and *Partial Notions*, and therefore is a kind of *whole* in respect of them, ought to have the Place of the *Subject*; since a *Whole* cannot be properly said to belong to a *Part*, (or to be Receiv'd in it) but a *Part* in the *Whole*. And, Nature it self seems to abet the Reason now given; for it sounds naturally to say, *Peter is a Man*; but most absurdly and unnaturally to say, *A Man is Peter*. Nor matters it that the Superior Notion is a *Whole* in the way of *Abstraction*, and the inferior but a *Part* of it as *thus consider'd*; for the Copula [*is*] by which all Predication is made, does not necessarily express *what* or *how* the Notions are in their *Abstracted* state, where they are only Potential, and (as such) only found in the *Mind*, and made meerly by our manner of understanding; but what passes *Actually* in the *Thing* in which the Notions of the Predicate and Subject are to be the same *Ens* or *Actually Identify'd*. And, 'tis Evident, (as was now shewn) that in the *Thing*, whether it be *without* or *within* our Understanding, there goes *more* to make up the Nature or Notion of the *Inferior* than there does to make up that of the *Superior* Notion.

15. However, the Predicate has of it self a *Large* sense, taken *alone* and Abstractedly; yet, when attributed to the Subject, it is restrain'd by It to mean only such a proportional *part* of its Notion as befits the Subject to receive. Thus, when we say, *Petrus est Homo* or *Animal*, it cannot be meant that he is *Homo* or *Animal* at large or in common; (for, were it so, *Peter* might as well be a *Brute* as a *Man*) but *one Determinate Man* or *Animal*. And the same passes in the *Thing*, as it does in our *Understanding*. For, tho' *Albedo* taken alone may reach all the *whiteness* in the World, yet apply it to a Subject, by saying *Paries est Albus*, 'tis restrain'd to signifie only some part of *Albedo* in common, or as much of it as affects the Wall: Whence, thus consider'd, it means only *Haec Albedo*, or *Albedo Parietis*; that is, so much of Whiteness as is in the Wall, and no more.
16. Thus much of the *Nature* or *Essence* of *single* Propositions; their *Quantity* and *Quality* come next to be consider'd.⁴ As for the former, either the Predicate is referr'd to *more* Particulars, as they agree in *one* Common notion; as, *Every Man is an Animal*, and then 'tis call'd an *Universal* Proposition. Or to some *one* only; and this either Indeterminately; as, *some Man is wise*; and then 'tis call'd a *Particular* Proposition: or determinately; as, *Socrates was the son of Sophronisens*; and then 'tis called a *Singular* Proposition. These need no Reflexions on them, it suffices to *name* them (they being Artificial Words) and to explicate what we mean by them: Only we may note, that in regard the Subject is as it were the *Matter*, and Matter is properly determinable by *Quantity*, the words expressing the *Quantity* of the Proposition can only be apply'd to the Subject; as *Nature* also will inform us.

⁴ Here and in the following sections Sergeant explains categorical propositions and the traditional square of opposition.

17. The *Quality* of a Proposition, is either its being Affirmative or Negative, which can need no farther Remarks. Or lastly, its being Evident or Inevident: And Evidence is Two fold; *Self-evidence* and *Evidence by Deduction* or Proof; of both which hereafter.
- Note that the Negative particle [*non*] must affect the *Copula*, and not either of the *Terms*; otherwise it is no Proposition, or a Speech predicating one Notion of another; in regard such a Speech wants *one* of the *three* Notions; as, *Petrus est non-brutum*; or, *Non-homo est Bucephalus*: For, the Particle [*Non*] destroys the Positive Notions of *Brutum* and *Homo*, and puts no other in their stead.
18. If Propositions be *Compar'd to one-another*, they are either *Equivalent* in sence, or *Opposit*. Equivalents have no difficulty in them. Opposits are either *Contradictories* which affirm and deny the same *in all respects*; as, *Petrus hic & nunc currit*, *Petrus hic & nunc non currit*;⁵ or *Contraries*, which are the Extremes in any kind, having *middle* Notions between them; as *White* and *Black* are in Colours. Whence these Propositions, *All Men are wise*, *No Man is wise*, are said to be *Contraries*, because they are *Extremely distant*, and have *middle* Propositions between them, *viz.* *Some Man is wise*, *Some Man is not wise*; which Differ or are Oppos'd only according to their *Quality*; the one being *Affirmative*, the other *Negative*; for, the Quantity in both is the same; whence they are call'd *Particularly Opposit*. But, if one Proposition be an *Universal Affirmative*, and be oppos'd to a *Middle Proposition* that is *Negative*, as *Omnis homo est sapiens*, *Aliquis homo non est sapiens*;⁶ or, if it be an *Universal Negative*, and be oppos'd to a *Particular Affirmative*, as *Nullus homo est sapiens*, *Aliquis homo est sapiens*;⁷ then they are said to be *Subcontraries*, because the one of them opposes the other not *fully*, as do *Omnis homo est sapiens*, *Nullus homo est sapiens*;⁸ but *in part* only. *Singular* Propositions have no Opposition but that of *Contradiction*, which happens when one *affirms* what the other *denies* of the *same Subject in all respects*, as was said above.

Lesson II. Of *Self-Evident Propositions*, or **First Principles**.

1. SINCE, as was said, Judgments or Propositions may be *True* or *False*, and in laying the *Method to Science* we can have no occasion to Speak of *False* Judgments, but in order to the avoiding them, which is easily done, if we settle the Knowledge of the *True* ones; hence that which concerns us, is, to treat of *True* Judgments or *Truths*; and, in the first place, of Those Propositions or Judgments that are the *First Truths* which we call **First Principles**. Again, since all Propositions are either Evident or Inevident, and Inevident or *Obscure* ones cannot avail us in our quest of *Science*, it follows, that only *Evident* Propositions are to be treated of, or made use of by those who aim at Scientific Knowledge. Wherefore, since all Propositions or Judgments that are Evident must either be *Self-evident*, or *made evident*, which is done by way of *Proof*, and these Latter must depend on the Former for their Evidence, we are therefore to begin with the Former which are *Self-evident*.
2. All *First Principles*, as being the First Truths must be *Self-evident* Propositions. This is manifest from the very Terms. For, being the *First* they can have no other *before* them, out of which they may be *Deduc'd* or *made Evident*; or, into which their Evidence, if *lesser*, may be *Resolv'd*. Wherefore they must either not be Evident *at all*, which would destroy all Possibility of *any* Evidence, or they must be *Self-evident*.

⁵ Latin: 'Peter is running here and now;' 'Peter is not running here and now.'

⁶ Latin: 'Every man is wise;' 'some man is not wise.'

⁷ Latin: 'No man is wise;' 'some man is wise.'

⁸ Latin: 'Every man is wise;' 'No man is wise.'

3. Our Knowledges may either be consider'd according to the Order by which they are *Generated* in us *at first*, or according to the *Dependance* of one Truth on another, and the *Resolving* them finally into First and Self-evident Principles. The Former of these is the way that *Nature* takes to instill Useful Knowledges into us, when as yet we know nothing; the Later is the Method which Art makes use of to polish and promote those Rude and Short Knowledges had from Nature; then to *link* many of those Knowledges together; and lastly, to render them *Exact* and *Evident* by *Resolving* them into First or Self-evident Principles; to do which, we call to beget **Science**, or to frame a *Science* of them. The Former comes by *Experience* Unreflectingly; the Later is attain'd by Study and *Reflexion*. And 'tis of this *Later* sort of Knowledge, and its First Principles, we intend to treat in this and the next Lesson; reserving the Former Consideration of *how* and in *what manner* Knowledge is first Generated, till Lesson IV.
 4. The *Self-Evidence* belonging to First Principles consists in this, that the two Terms must be *Formally Identical*. For, since (as was shewn above) the Terms in every Ordinary and Inferior Proposition, nay, in every Conclusion that is *True*, must be *materially* the same, and so the Proposition it self *materially Identical*, it follows, that the Terms of the First Principles, which ought to be *more* evident than They, as being *Self-evident*, must be *Formally Identical*.
 5. The Terms of the First Principles must not only be Formally Identical *in sense*, or be the same Formal Notion; but it is, moreover, most convenient that they be such in the *Expression* also; that is, 'tis fit that the Subject and Predicate in those Propositions should be the *same Word* taken in the *same sense*. For, since First Principles must be the most Evident, and the most Clearly Expressive if Truth that can be imagin'd, and not liable to the least Mistake; and Words are subject to Equivocation, which is apt to breed Mistake, Obscurity and Error; hence, First Principles should not only be Formally Identical *in sense*; as when we say, *Homo est Animal Rationale*;⁹ but it is most Convenient they should be such in *Expression* too; as, *Homo est Homo*,¹⁰ *Idem est Idem sibi ipsi*,¹¹ *Quod est est*,¹² &c. For then, whatever Distinction (in case of Ambiguity) affects the Predicate, must also affect the Subject; and so the Proposition will not only remain still most *Formally*, but also most Evidently, in *every regard*, Identical.
- Note*, That tho' this be most Convenient, yet it may suffice that the Terms, when explicated are reducible to the same Formal Expression by the same Word; as when we say [*A Whole is Greater than a part*] For, a *Whole* being that which *consists of Parts*, and a thing *being* that of which it *consists*; hence, a Whole *is* All its Parts: that is, *is one part and more than one part*, whence, the Proportion is reducible to this, [*what's more than a part is more than a part*] which is not onely *most Formally*, but besides *most Evidently* Identical.
6. This Proposition [*Self-Existence is Self-existence*] is, *of it self*, most Supremely Self-Evident, For if the meaning of the word [*self*] which is Joyn'd with Existence be but understood, and that the Addition of this word to *Existence* be not meant to signify any the least *Composition* in it but the most simple and most Uncompounded Actuality that can be imagin'd; then the same Formality in every respect is predicated *Intirely* of the *same*, and so 'tis also *most perfectly* Self-evident. And 'tis *most Supremely* such, because it expresses the Existence of the **Deity**, which is Infinitely more Simple, and more necessarily *it self* than any Created Existence can be. Again, since every thing, the more *Potential* it is, is *more Confused*; that is, *less distinct* and *less Intelligible*; and, the *more Actual* it is, the *more Intelligible*; and the Divine Nature, which is meant

⁹ Latin: 'Man is a rational animal.'

¹⁰ Latin: 'A man is a man.'

¹¹ Latin: 'A thing is the same with itself.'

¹² Latin: 'Whatever is is.'

by *Self-Existence*, is a most infinitely *Pure Actuality*; it follows, that this proposition [*Self-Existence is Self-Existence*] is, *of its self*, the *most supremely Self-evident Proposition* that can be Imagin'd.

7. This Proposition [*what is is*] or [*Existence is Existence*] is the most Self-evident Proposition that can be imagin'd to be taken from *Created* things. For, since *Existence* is the most Evident Notion that can be found amongst all our Notions that can be had from Creatures, that Proposition must needs be the most Evident, (and consequently, amongst Self-evident ones, the *most Self-evident*) in which not only the Notion of the *Copula*, but of the *Subject* and *Predicate* too, is *Existence*. Again, since the Clearness of all Truths whatever depends on the Connexion of the Terms by the word [*is*] it follows, that unless the Nature or Notion of *Existence* be first immovably Fix'd or Establish'd, to be Coherent with its self, that is, unless this Proposition *What is is*, or *Existence is Existence*, be Self-evident, no Proposition whatever could be Absolutely Certain, Clear, or Coherent; and so, there would be no *possibility* of any Truth, Certainty, or Evidence in the World. Lastly, since both the *Essences* of things, and the *Existence* they have are in the Divine Understanding, and the *Essences* which are only *Capacities of Being*, belong to things as they are *Limited*, or *apt* to be *Created*, that is, belong to them according to the Notion of *Creatures*; which being only *Potential* as to *Being*, they can have no Claim thence to *actual* Being or Existence, but merely by the Free Gift of Him who is Essential Being; hence the Nature of the Existence of Creatures, and their *being such* is taken purely from **God's** side, and holds entirely of him. Whence it is *most actual*, and most *Like him*; that is, most defecated from all Alloy of Potentiality, most Pure, most Intelligibly Clear, and most Establish'd, above whatever else we can conceive in Creatures; and therefore, *It* alone is able to give Certainty, Clear Light, and Establishment to all other Truths.
8. Equivalent to the Former, or perfectly Identified with it, (abating the putting it in a diverse Logical Frame) is this Proposition, [*Existence is not Non-Existence*] or which is in effect the same, [*'Tis impossible the same thing should be and not be at once.*] For, if the Notion of *Existence* and *Non-Existence* could at once belong to the same Subject, then, since the Notion of *Existence*, as being most Simple and most Actual, can admit of no Distinction of being *in part* Existence, and *in part* Non-Existence; that is, of being in part such, in part not-such, as *Potential* Notions can; it would follow, that the *entire* and most simple Notion of *Existence* is *Non-Existence*; which is directly contradictory to this Principle now mentioned, and consequently, to the equivalent Proposition [*What is is*]; whence it would be unavoidably consequent, that all we could say must necessarily be *False*, because the *Notion* of Existence, by which only we can *affirm* or *say*, would involve a Contradiction in its own Bowels, as being Indifferent to *Being* and *not Being*, or rather as being *both* of them.

Note, That the same may be said, in some proportion, (that is, as to the Extent of their own *Notion*) of all Propositions that are equivalent to First Principles in any *particular* Subjects; as of *Homo est homo*,¹³ *Aequale est aequale sibi*,¹⁴ &c. to which are equivalent *Homo non est non homo*,¹⁵ *Aequale non est non aequale sibi*,¹⁶ &c. For, the same Inconveniences would follow in all Discourses upon those particular Subjects, as did in *all* Discourses *whatever*, by wronging the former Self-evident and Universal Propositions; that is, *all* that could be said of such Subjects would be Incoherent, Contradictory and *False*.

¹³ Latin: 'A man is a man.'

¹⁴ Latin: 'An equal is equal to itself.'

¹⁵ Latin: 'No man is not man.'

¹⁶ Latin: 'An equal is not unequal to itself.'

9. The next Self-evident Proposition is that of (*Ens is Ens.*) For, since the notion of *Ens* is most *nearly* ally'd to Existence, being wholly order'd to it, and a *Capacity* of it, it follows, that that Proposition which predicates *Ens* of *Ens*, is the next, in Self-Evidence, to those which predicate *Existence* of *Existence*.
10. Hence all propositions consisting of particular *Notions* that subsume under *Ens*, that is, such propositions which affirm that particular *Notion* or *Nature* to be *what it is*, are likewise Self-evident: For, since *Ens*, taken as Undistinguish'd, or in its whole Latitude, has the force of an *Universal*, and is equivalent to *all*; and an *Universal* engages *every* particular under it, of which it consists; so that if the terms expressing those particulars be not Self-coherent and Self-evident, it would follow, that neither would the terms of this proposition [*Ens is Ens*] be such: Hence all propositions consisting of *particular Notions*, that subsume directly under *Ens*, must be likewise Self-evident. Again, since the proposition (*Ens is Ens*) is for no other reason Self-evident, but because the *Notions* of the two terms are every way *formally Identical*; and this reason is found in those propositions, the notions of whose terms *subsume* under *Ens*; it follows, that *these* also must, for the same reason, be likewise Self-evident.

Corol. I. Hence *Homo est Homo, Quantitas est Quantitas, &c.* being Self-evident, are the *First Principles* to all Discourses treating about the Nature of *Man* or *Quantity*; that is, they are the *last* and most *Clear* propositions in that Matter or Subject, into which all that can be said of *Man* or *Quantity* is finally resolv'd; and, moreover, the *Test* of the Truth or Falshood of all that can be said of them. So that if any part of those Discourses do hap to violate those Principles, that is, if it deviates from those Natures, or does, by consequence, make *Man not to be Man*, or *Quantity not to be Quantity*, 'tis most evidently convicted of *Falsity*: As, on the other side, if those Discourses do proceed *Agreeably* to these Principles, it must most certainly and evidently be *True*.

Corol. II. It is not meant here, that these last-mentioned self-evident Propositions do follow the former by way of *Proof* or *Deduction*; but we are only enquiring what Propositions in the resolving of Truths into their Principles are most Self-evident; and therefore, *in priority of Nature*, presupposed to the other, and imply'd in them, as those without the Certainty and Evidence of which no Certainty or Evidence *at all* could be had of any of the *others* which are thus *ImPLY'd*, or *Contain'd* in the former, and engage their Verity (as it were) *a posteriori*. As if *Homo*, which is a particular *Ens*, be not that particular *Ens* or *Homo*; then, neither is *Ens Ens*, nor *Existencia Existencia*, because there is the same reason for the Former to be Self-evident as for these Later, tho' not altogether in the same *degree*.

Corol. III. From the Self-evidence and Truth of that Proposition *Self-existence is Self-existence*, and from the *Ground of Verity* in all Propositions whatever that are *True*, we may demonstrate the Existence of a **Deity**. For, since not only our Simple Notions or Apprehensions are taken from the Things, but also all Connexions of those Notions or Propositions are therefore *True*, because what's meant by the two Terms exists in the *same Thing*; so that neither this Proposition [*A Stone is hard*] could be True, unless what's meant by *Stone* and *Hard* were found in the same Entity; nor even could this Self-evident Proposition (*Homo est Homo*) be True, unless there were something, or *such* a thing as, by being Fix'd in its determinate Nature, or by being *the same with it self*, had thence a power to *verifie* it; it follows, that neither could this Self-evident Proposition [*Self-existence is Self-existence*] be True, unless there were some *most Actual Being*, which, by being most perfectly the same with it self, did *verifie* that Proposition. But such an Actual Being can only be the *Deity*, there is therefore a **Deity**.

It may be reply'd, That we can *compound* Notions, and joyn *Self* to *Existence*; which done, this Compound Notion, having such a nature in our Understanding, has, consequently, a determinate Nature or Actual Being in our *Mind only*, and thence a kind of Metaphysical

Unity or Verity *there*, which gives it to be predicated of it self; so that there is no necessity that such a Thing should be put to be *in re* to verifie it. 'Tis answer'd, That our Argument is not grounded *meerly* upon our having such a Notion; for we do not argue as *Cartesius*¹⁷ does, upon the *Notion* or *Idea* of such a Subject; but we grant, that we may Compound such a one, and yet remain *Uncertain* whether that Nature *be* or *not*; but our Argument proceeds *also*, and *chiefly*, upon our *Verifying* that Proposition, which is done *formally* by the *Copula*; and I affirm, that the Copula [*is*] could not *verifie* it, unless there were something *out of the Understanding* that oblig'd us to do so; which I explain thus: This Copula sometimes meerly puts together *Fictitious Notions*, or *Non-Entities*, which (all Truth being grounded on *Ens* or the *Thing*) have consequently direct *Opposition* to Being, and therefore *Falsity* in their very Natures, or rather No-natures; as, when we say [*Imaginary Space is a Chimaera*], for then, indeed, the Connexion is meerly in our *Understanding*, there being no *Thing*, nor any Terms, which have an *Entitative Notion* to be Connected or Verify'd: or rather indeed there was *no* Connexion *at all*; but, as the Terms were *Mock-things*, so they could only have a *Mock-Connexion*. In all other Cases, since the Copula [*is*] cannot signifie *nothing at all*, (for this would make it a meer *Sound* and no *Word*) it can only signifie the *Actual Existence* or *Co-existence* of what's meant by the Terms, in the *same Thing*; and this (as was ¹⁸ said) whether that Co-existence be only Material or Formal. And, should it be deny'd that the Copula [*is*] has this signification, we can never know any thing which we say, or can say, is *true*; because we can never *know*, nor *see*, that the Notions are Agreeable or *Conformable to the Thing*. Since then the notion of *Self-existence* is so far from having *Non-existence* in its Notion (as the others had *Non-ens*) that it is the most perfect in that kind that can be imagin'd; the 'foresaid Proposition could not be *true*, unless there were *actually* something that has, in that Supreme Manner, Metaphysical *Verity* and *Unity* in it self, to *verifie* it. In the same manner as [*Homo est homo*] could never have been True, had there not been Something which had such a Metaphysical Unity and Verity in it self, as grounded that Proposition. So that the Objecter must either find more significations and uses of the word [*is*] than we have assign'd (which is impossible) or alledge, that the Notion of Self-existence is *Chimerical*, or Destructive of Existence, as *Non-Ens* is of *Ens*, which is as absurd as the other; or, he must be *forced* to grant our Conclusion, and acknowledge our Argument to be a true Logical Demonstration.

I know it will run in the Objecter's Fancy, that we can connect Notions which our selves have coin'd; but he may easily correct these Misconceits, by reflecting, that this Proposition is *True*; and that Truth must not be grounded on our *Aiery Fancies*, but on the solid Nature of the *Thing* to which it is a *Conformity*. I know too he will fancy that the Copula [*is*] has an Office of *meerly Connecting* without any reference to the *Existence* of the Thing which is its proper signification; but he may see the Folly of such a Conceit, if he but consider that we cannot *with truth* conjoyn Notions in our *Minds* that are not Conjoyn'd beforehand in the *Thing*; and that when the Notions are of some *Positive Being*, or such as are not Chimerical and Contradictory, the Copula [*is*] must signifie *Exists*, and does but say *in our Mind* what *is in the thing*, if the Saying be *true*. Also, that that *Copula* cannot divest it self of *all sence* while it conjoyns such Terms; and he will do more than Miracle to invent any other for it but that of *Exists*.

¹⁷ René Descartes (1695-1650) argued mind and body were two different kinds of substance. He held the view that one's access to objects, such as a book or one's own body, is mediated and represented by *ideas*. An idea is a mode of a thinking substance (a way of thinking, or a quality of a mind). See also B. 1. L. 2. Note 2d and S. 24; and B. 2. L. 4. S. 1.

¹⁸ L. 1. S. 7, & 11.

It may yet be further Objected, that these Propositions (*Rosa est Rosa, Animal est Animal*¹⁹) and such-like, are still *True*, tho' their Subjects do not *actually Exist* when we thus Predicate of them; and that therefore it is not necessary the Copula (*est*) should always signifie *Existence*, even tho' the Notions of the Terms be *Positive Entities*. 'Tis answer'd, that either the Subjects (*Rosa*) and (*Animal*) mean the *Individuals* of those Natures; and then, if once they are perish'd, the Propositions are *False*; for *haec Rosa* is no longer *Rosa*, nor is *hoc Animal Animal*, when they are corrupted or turn'd into another thing. Or else these words mean the *Abstracted Notions* of *Rosa* and *Animal*; and then, since Abstracted Natures, or *Universals*, do (as such) no where exist but in *the Understanding*, they have their Actual Existence where they *ought* to have it; and the Copula [*est*] signifies they have their Existence *there*; and so the Proposition is *True*. And it is to be farther noted, that they could not have been even *there*, unless there had *actually been* diverse Individuals from which they might be Abstracted. But now, in our Case, it is quite otherwise; for *Self-existence* being the *simplest* Notion that can be conceiv'd, nay, *more Actual* than any Notion of *Existence* found in Creatures, it is Impossible there should be any *abstracted* notion of it; both because that Abstracted Notion would have *Potentiality* in it, which would destroy that Notion, and make it Chimerical and Self-Contradictory; as also, because (as Metaphysicks demonstrate) *Self-Existence* is Unlimited or Infinit in Existence, and so, can be but *One*. Wherefore the Copula (*est*) does not *meerly Conjoyn* such Positive Notions, but always signifies *Existence*, when the Notions it connects are not *Chimerical* or *Opposit* to Existence, as *Non-Ens* is to *Ens*; and consequently, if this Proposition [*Self-existence is Self-existence*] be *True*, there must *Actually be*, and this *out of our Understanding*, some Being that verifies it, which can be nothing but the **Deity**.

It may be ask'd, What is to be said of these Propositions, such a Thing is *Possible* or *Future*. 'Tis answer'd, the word [*Possible*] signifies *possible to be*, or *capable of Being*, which is the very notion of *Ens*; and so, it means that such a Possible thing is an *Ens*; and then it might be true, could we Frame such a Proposition of a thing *meerly possible*, which is Impossible; for, if the thing be only [*possible to be*] it *never was*; and so (all our Notions being taken from the *Thing*) we could have *no Notion* of it; and therefore the Proposition would be *none*, since we want that Notion that makes the *Subject*. The Proposition [such a thing is *Future*] is in rigor *False*, (for that which *is not at all*, can have nothing predicated of it) and it can only be *True*, as it signifies that there are *determinate Causes* laid to *produce* it: which is to say, *those Causes are*, and so the Copula [*est*] still signifies *Existence*.

11. To settle this main point, that *First Principles* must be such Propositions as are *most formally Identical*, in the manner declared above, many other Proofs may be alledged; as, that Contradictions are the *First of Falshoods*; therefore those Propositions that are directly *Opposit* to them must be the *First Truths* or *First Principles*: But only Propositions thus perfectly Identical are directly Opposit to Contradictions; Therefore *these only* are the First Truths or *First Principles*. To prove the *Minor*, we shall find by reflexion, that the two Contradictory propositions are comprizable into one which is equivalent to both; as to (*Peter here and now runs, Peter here and now runs not*) is equivalent (*what here and now runs, does not here and now run*). Whence is seen clearly, that only *such* Identical propositions are directly opposit to Contradictions; since Man's Wit cannot invent a proposition directly Opposit to (*what runs runs not*) but (*what runs runs*) which is perfectly Identical. Add, that all *Fault* consisting in this, that 'tis a *Privation* of the Opposit *Good*, Contradictions would not be at all *Faulty*, but that they violate the Truth of Identical propositions, (as has been now proved) since there are no *other* Truths which they directly and formally Oppose or destroy.

¹⁹ Latin: 'Red is red;' 'Animal is animal.' Recall that for Sergeant accidents are not *Ens*, but belong to or inhere in *Ens*.

12. Again, as will be seen hereafter, to *Conclude* is to shew the Terms of the Conclusion to be Connected, by their being Connected with a *Third* or *Middle* Term in the Premisses. But, how can we shew that *Middle* Term is *really connected* with those Two *other* Terms in the Premisses? By finding still another Middle Term to be connected with the Terms of the proposition to be proved. And, how far must this go on? Endlessly! or no? If Endlessly, it is impossible any thing should *ever* come to be prov'd; if not, then we must come to some proposition whose Terms are so Connected that *no* Middle Term can *come between* them; that is, such as *cannot* be Connected by means of Another; that is, which *cannot* be *prov'd* or *made evident*; that is, which are *self-connected* or *self-evident*; that is, which are *formally Identical*. To enforce this, we may observe that the *more Remote* the Terms of a proposition are from Formal Identity, the *less evident* they are, and the *more proof* they require; as also, that they grow still nearer to Evidence, according to the *degree* of their *Approaching* to be Formally the *same*. Wherefore, since all Approach of *Distant* things ends in their *Conjoyning* and Centering in the *same*; 'tis manifest that all Approach of Distant Notions ends in their being the *same in Notion*, or in a proposition Formally Identical, as in a First and Self-evident Principle.
13. Besides, all *Causality*, or the whole Course of Nature, is finally refunded into this Self-evident Principle, that *Things are such as they are*, that is, *are what they are*. For, since an Effect is a Participation of something that is in the Cause; and the Cause, as such, is that which imparts or communicates something it has to the Matter on which it works its Effect. Again, since the Effect *is such* as the Cause *is*, as to that which is imparted to it; and if the Cause be of *another* sort, the Effect still *varies* accordingly; there can be no doubt but that *Causality* is the Imprinting the *Existence* of that Essence or *Thing* which is the *Cause*, upon the *Matter*. Whence follows evidently, that the very Notion of *Natural Causality*, and the whole Efficacy of it, consists in the Causes *existing* (that is *being what it is*). Only *Motion* is added as a Common Requisite to apply that *Existing* Cause better or worse; which is refunded into a Nature Superiour to Body; as will be shewn ²⁰ hereafter.
14. Lastly, **God** himself has exprest his own Supreme Essence by this Identical Proposition *Ego Sum qui Sum*;²¹ that is, *I exist* (or *am*) *Existence*. Which is the same, in a manner, with (*Self existence is Self-Existence*) Which, therefore, is the *First Incrated Truth*; as 'tis the *First Created* one that (*what is is*) or *A thing is what it is*; which is therefore *True*, because **God** *is what He is*; or, because *Self-existence is Self-existence*. From which Divine and Sovereign Verity all our *Created* First Principles derive their *Truth*. For, were not *This* True, all our Identical Proposition and First Principles would all be *False*: in regard they have their Verity from the Natures of the *Things*, and of our *Understanding*; neither of which could have their Metaphysical Verity, nor, consequently, could they ground or be capable of any Truth at all, if *Self-Existence*, their Cause, were not *Self-Existence*, and thence Unlimited in Power, Wisdome and Goodness to Create and Conserve those Beings which are the Foundation of *all* the Truth we *have* or *can have*. The Reader is desired to referr this Section, to the Third Corollary, and to consider them well together, because they mutually give Light to one another. And, if we rightly consider it, as the Proposition (*Homo est Homo*) is onely the reducing the Metaphysical Verity of *Homo* into a *Formal Truth*; so (*Self Existence is self-Existence*) is the same in respect of the *Sovereign Metaphysical Verity* of the Divine Nature.
- Corol. IV.* Hence is seen that an Atheist can have no perfectly Certain Knowledge or Evidence of any thing; but that, by denying his Maker, he deservedly comes to lose the best Perfection of his own Nature. For, if a Sceptick should put him to prove that things have any Metaphysical

²⁰ B. 3. L. 7.

²¹ Latin: 'I am who I am.' This refers to the divine name 'YHWH' revealed to Moses at the burning bush (Exodus 3:14).

- Verity in them grounding our first Principles, and, consequently, all our Knowledge; and object, that for any thing he knows, Things are Chimerical, and so contriv'd as to beget in us *False* Judgments; he is utterly at a loss through his denying a *First Cause*: whose Unchangeable and Essential Truth and Goodness has *Establisht* their Natures to be Unalterably *what they are*: whence only any Certain and Evident Knowledge of them is possible to be attain'd.
15. *Definitions*, tho' very useful to Science, are *not* Self evident; nor are those Propositions that Predicate the Definition of the Notion Defin'd, *First Principles*. For, Self-evident Principles, by force of their very Terms, do oblige the Understanding to assent, which such Propositions do *not*. Again, *Art* is requisite to make such Definitions as are *Proper* and *Adjusted* to the Thing Defin'd; whereas *First Principles* must *antecede* all Art, and be known by the *Natural* Light of our Understanding. Besides, the *Possibility of being defin'd*, goes before the Definition; which *Possibility* the Thing has from its Metaphysical Verity, determining it to be *This* and *no other*. For, if the thing *were not* truly *what it is*, it could not be *explain'd* to be *what it is*; were it not *One*, that is, Undivided in its self and Divided from all others; it could not be compriz'd in *one* Definition; and, if it were not Determinately of *this* or *that* Nature, it's certain, Bounds and Limits could not be drawn, which is done by the Definition. Whence 'tis manifest, that that proposition which affirms, that a Thing *is what it is*, is the *First Principle* and *Ground* to all Definitions: and therefore *Definitions* themselves are not *First Principles*.
16. This is further evinc'd, because, *Words* being liable to Equivocalness, where there are *more* words (as there are in Definitions) there is *more* room for Equivocation; which Inconvenience appears no where more than in the known Definition of *Man*: For, there wants not many Witty, (or rather half-witted) Discourers, who *Distinguish*, that is makes *Ambiguous*, the Word [Rational] and do not stick to maintain that *Man is Rational*, or (*Concluding* being the Proper Act of Reason) can Conclude Evidently in *Lines* and *Numbers*, but not in *Logick*, *Physicks*, *Ethicks* or *Metaphysicks*, much less in *Theology*; and, by this means they cramp the Definition to less than half the sense the words contain. There are others too, who make Brutes *Rational* in *many* things (and they make *Men* to be Rational but in *some*) and so quite destroy the said Definition by Enlarging and Ampliating it, and making it Common and Indifferent to *Man* and *Beast*; and not apply'd to either of them *adequately*, but only in *some Degree* onely: And yet the same men, even tho' perfect Scepticks, would not dispute the Truth of this Proposition, *A Man is a Man*. Wherefore, since 'tis directly against the nature of First Principles to be *Disputable*, *Definitions* cannot be *First Principles*; and, consequently, only Propositions *most perfectly Identical* can be such.
17. There is another kind of Self-evidence call'd *Practical*, which is *Inferiour* to this we have hitherto spoken of, and Proper to the *Vulgar*. This is call'd *Self-evidence*, not because its Evidence is seen in the very Notion of the *Terms*, as was the *other*, but because it is bred or instill'd from the Things themselves *without Speculation* or Study, by a *Practical* converse with those things. Thus the *Vulgar* *know* evidently what is *Moist*, *Dry*, *Hard*, &c. as well as the best Philosophers, tho' they cannot *define* them as the others can. Nay, the best Philosophers (as will be seen hereafter) must learn from *their* Sayings how to make their Definitions of all such Natural Notions. Thus they know *Evidently* (tho' *Naturally*) the force of Witnessing Authority, when 'tis *Universal*, and of *Sensible* Matters of Fact: For example, They know there was such a one as Queen *Elizabeth*, or the Long Civil War in *England*, for, they know Men could not be deceiv'd themselves in knowing such things, and that they could not All universally conspire to deceive their Children in attesting such a Falshood; or, if they had had a mind to it, they know that the Cheat must needs have been discover'd by some among so many thousands.

Note, That this is call'd *Evidence*, because, tho' it be a *Rude* Knowledge, yet it is a *True* one; and 'tis the Work of Learned men to *Polish* by Art those *rough* Draughts of Evidence which the Vulgar have by a Natural way; as will be farther seen hereafter.

18. Those Speculations only being well grounded which are according to *Nature*, it will add a great confirmation to this new piece of Doctrine, that *First Principles are Identical Propositions* (and help withal to satisfie some superficial Readers, who perhaps may think such Speculations Aiery) to shew that the Nature-instructed Vulgar do abet this Doctrine, and make use of Propositions *exactly Identical*, when they would express themselves to stand finally to some Truth which they judge to be *most Evident*. For example, if you would force a Clown to *deny* a thing which he is *sure of*, or *knows* to be *True*; he will tell you soberly, and (if you press him much) angrily, that *Truth is Truth*, or that he is sure *A Spade is a Spade*, or that *he knows what he knows*; or, if it be in a point belonging to Justice, that *Right is Right*, and he brings these as Evidences from whence he can never be driven. Which signifies clearly, that such Truths as these are Judg'd by him *Self-evident*, and to be the Principles which naturally *determin* and *fix* him in an Immovable Adherence to the point, as the *Ultimate Ressort* and Reason of his Perswasion; that is, Nature teaches him to have recourse to these, as to his First Principles.
19. The *other* Test, by which to examin the Truth of this Discourse of ours about First Principles, is to desire the Objecter to settle some First Principles of his *own*, after *his* Fashion; which done, it will manifestly appear, that, if he takes any *other* way, either his First Principles will not be Self-evident *at all*, which yet First Principles must be; or, in case he pretends them such, he will not be able to tell you or explicate in what that *Self-evidence* of *theirs* consists; or else, he will produce such as he will tell you he will undertake to *prove* to be Evident, which (since what's *Prov'd* is *concluded*) will be the same as to offer to obtrude upon us *Conclusions* instead of *First Principles*. Or, lastly, they will be *meer Fancies* of his *own*, put together prettily, and exprest wittily and plausibly; which, when they are divested of their gay Dress, and their naked sence is laid open, will be either meer *voluntary Talk* or *plain Nonsense* in *cuerpo*.²² Into which Fault of Groundless and boldly and Magisterially pronounced (tho' wittily exprest) Assertions, and the Imposing them upon us for Principles, the Author of the *Leviathan*²³ does fall very frequently; and I could wish all his Followers would please to examin all his Principles by this Test, and they would quickly discover how strangely they fall short of *Self-Evidence*, that is, of the Nature of *First Principles*. Or, in case they judge I have stated ill the Nature of *First Principles*, I should take it for a Favour, if they would vouchsafe me an Answer to my several Reasons for my Doctrin, as to this point, in this Lesson and the next; and, in a full Discourse, settle *their own* First Principles, and shew me my Error; which, I am very confident, they will never think fit to *Attempt*.

Lesson III. *That First Principles are Identical Propositions prov'd by Instances. The Use that is to be made of them. Also of some other Propositions, either in whole or in part, Formally Identical; and of the Reducing of Inferiour Truths to Self-evident Propositions.*

²² Spanish idiom: Naked, without clothes; literally, 'in body.'

²³ Thomas Hobbes. See note on Book 1, Lesson 1, Corol. 4.

1. THAT the First Principles in Metaphysics are Identical Propositions, has already²⁴ been clear'd. It remains to shew they are such *in other* Sciences also. We will begin with *Physicks*. The First Principle that grounds that whole Science, according to some Modern Philosophers, is, [*Corpus est Quantum*],²⁵ in which tho' the Subject and Predicate do indeed differ Grammatically, the one of them being Substantively the other Adjectively express'd, yet if we rifle the Words to get out the Inward Sense, (as Philosophers ought) we shall find that, since all the Essential Differences they allow between a *Body* and a *Spirit*, is this only, that *That* is Divisible, *This* Indivisible, as also, that Quantity and Divisibility into Integral parts are (with them) the *same* Notion; it will appear Evidently,²⁶ that, according to them, this Proposition [*Body is Quantitative*] is perfectly equivalent to this [*What's Divisible is Divisible*] which is every way Identical. I say, *with them*, for they deny all Metaphysical Divisibility of *Body* into *Matter* and *Form*²⁷ by denying all Formal Mutation. The same Discourse holds, if they put for their First Principle [*Corpus est Extensum*]; for, in that Supposition, they hold that *Extension* is the Notion that Intrinsically constitutes *Body* or *Matter*, and differences it Essentially from *Spirit*. Whence the Proposition [*Corpus est Extensum*] is the same as [*Ens Extensum est Ens Extensum*, or *Corpus est Corpus*] which are most Formally Identical.
2. That the First Principle which grounds all Ratiocination in *Logick* is an Identical Proposition, will be shewn hereafter, Sect. 10. when we come to shew the *Use* of First Principles.
3. The First principle that grounds all *Ethicks*, or *Morality*, is, [*A Will is a Will*]. For, since all *Morality* (at least in its practice) consists in *Acting for an End*, and no man acts for an End but because it appears to him a Good, and therefore *an appearing Good* is the proper Object of that Active Power call'd the *Will*; and Powers are specified by their proper Objects, and have their Essences from them; it is as certain the Will cannot act when there *appears* to the Man *no Good*, and that it will act for what appears to him, taking him as thus Dispos'd, *hic & nunc* a Good, as it is that *A Will is a Will*.

Object. This takes away the *Freedom* of the Will, to tie it up to First Principles, or pretend that its Actions can be reduc'd to Rules of Science or Demonstration; for, this seems to hamper it, and lay a *Necessity* upon it, which destroys its *Free* Nature.

I answer, that the Will has a Nature of *its own*, which it can no more forgo than *Homo* can not be *Homo*. Whenever then there is but *one Appearing Good*, the Will is *not free* in that circumstance, because in such a Case its *Essence* is engag'd; and 'tis not in the power of the Will to chuse whether it will be *its self* or no. In all other Cases where its Essence *is not* engag'd the Will is *free*, provided there be on the Object's side Variety enough for Choice: Yet, in the former Case, those Acts of the Will, tho' not *free*, are *Voluntary*, because they are more according to what's Essential to it, or to its very Nature; and would, if the Will did not bear it self accordingly, make the *Will* to be *no Will*.

Corol. I. Hence is seen, that the only solid way to perfect our Souls in *Christian Morality* or *True Virtue*, is by Wise Judgments or Frequentation of Devout Thoughts and Actions, to gain a Lively and Hearty Conceit of the Transcendent Excellency of Heavenly Goods, and of the Vileness of all Temporary Goods in comparison, since 'tis the very Nature of our *Will* to pursue that with her Interior Acts which *appears lively* to be the Greater Good; that is, to be *hic & nunc*, a Good to him that wills.

²⁴ Less. 2. Sect. 6, 7, 8, 9.

²⁵ Latin: 'Body is how much' or 'body is amount.'

²⁶ Sic. 'Evidently.'

²⁷ See *Appendix*.

4. Lastly, to omit others, the First Principles in *Mathematicks* are Identical. For example; At our first entrance into *Euclid*, we are met with those Famous and Useful Principles: *Those things that are Equal to the same, are Equal to one another. If Equals be added to Equals, the Wholes are Equal. If Equals be taken away from Equals, the Remainders are Equal. Those which are twice as big as the same, are Equals. Those which are Halfs of the same are Equals.* All which are in effect but this Identical Proposition [*Aequale est aequale sibi*]; or else diverse Inferiour Identicals, subsuming under that Common one, as *Homo est homo* does under *Ens est ens*. For example, this Proposition [*If Equals be added to Equals, the Wholes are Equal*] is that common Identical Proposition thrice (as it were) Repeated; and is plainly as much as to say, the two supposed Equals are Equal to one another: the two Equals added are Equal to one another; and so the two Equal *Wholes*, made up of both those Equal *parts*, are Equal to one another. There are many other such Identical Propositions on which that great Mathematician builds as on his Principles; and among the rest [*A Whole is greater than a part of it self*] which I have shewn above to be, in sence. *Formally Identical*.
5. As for the *Use* that may be made of First Principles; First, they cannot be the *Conclusion*, for that is the thing *to be proved*, and First Principles are *above Proof*, as not being to be *made Evident*, because they are *Self-evident*. Nor can they be either of the *Premises*; for (as will be more clearly shewn hereafter) the Middle Term must be Connected with *one* of the Terms of the Conclusion in *one* of the Premises, and with the *other* Term in the *other*; which could not be, if the self same Notion were us'd twice in one of those Premises; for then the Syllogism must either be fram'd thus, [*Omnis Homo est Homo, Aliquod Animal est rationale, ergo aliquod Rationale est Homo*]²⁸; or thus, [*Nullus Homo est Irrationalis; sed aliquis Homo est Homo, ergo Aliquod irrationale non est Homo.*]²⁹ where we see (to omit other faults) that the Notion of *Homo* is taken thrice, whereas in a Legitimate Syllogism no Term ought to be taken more than twice; and, so the whole Discourse is Preternatural and Absurd.
6. Hence follows, that since the *Use* of First Principles cannot be the bringing down or *deducing* Truths, which are yet unknown, *from them*; therefore the Use of them must consist in the bringing up or *Reducing* Truths *to them*; which is done by Resolving less-clear Truths into *others* still Clearer, till we arise to those which are the Clearest of all, that is, to *Self-evident Principles*; to shew which by Instances, or lay open the way how this is done, is not proper for this place, but belongs to the next Book, where we shall treat of Rigorous Discourse or Demonstration.
7. To make this use of First Principles is no more, in effect, but to attend heedfully to the *Nature* of the *Thing*, and not to *deviate* from it. This is Evident; for, to *Deviate* in a Discourse about *Homo* or *Corpus*, from their Natures, is, by consequence, to make *Homo* not to be *Homo*, and *Corpus* not to be *Corpus*; which Propositions are Contradictory to *Homo est Homo* and *Corpus est Corpus*, which are the First Principles in those Discourses.
8. *Quaere*. It may be ask'd, if there be no more in the business but to attend to the Metaphysical Verity or Nature of the *Thing*, why we keep such a pother³⁰ about putting it into such nice, and dry, and seemingly Insignificant Identical Propositions, since we may attend to our Notion, or the Nature of the *Thing*, without framing Formal Propositions about it, or saying *It is what it is?* 'Tis answer'd, Because all our *Discourses* are made up of *Propositions*, without which we cannot *say* or *affirm* any thing; and therefore those Sayings into which we do finally resolve their Evidence and Truth, as into what's most true and evident, must be *Propositions*

²⁸ Latin: 'Every man is a man; some animal is rational; therefore, some rational (thing) is a man.'

²⁹ Latin: 'No man is irrational; but some man is a man; therefore, some irrational (thing) is not a man.'

³⁰ Archaic: 'commotion' or 'stirring.'

also. Besides, Self-evident Propositions, which advance the *Metaphysical* Verity of the thing into *Formal* Verity, do reflect and redouble (as it were) the Notion of it upon it self by expressing its *being what it is*; and thence gives an advantage to our bare Single Notion, by not only *having had* (as had the Single Notion) its *Metaphysical* Verity in it, but by *expressing* that *Metaphysical* Verity, so as to make it more fit to be discours'd of.

9. Tho' First Principles cannot be any Proposition in a Legitimate or Regular Syllogism, yet this hinders not but that those particular Identical Propositions which subsume under *Ens est Ens*,³¹ may in some sort and improperly be Deducible from that Common one. For, since a *Common Notion*, taken without restriction, is Equivalent to an *Universal*, and includes *All* that have that Notion, and *All* includes and signifies *Every* particular one, as a Whole does its parts; hence follows, that if *Ens* be *Ens*, then *Homo* is *Homo*, *Lapis* is *Lapis*; and the same may be said of every particular thing that is comprehended under that Universal.

Note, That this is not perform'd by virtue of those Terms orderly plac'd and connected, as 'tis done in a Syllogism; but by vertue of some Logical Maxims applying or referring the Common propositions to those particular Identical ones, as appears in the proof of this last Section.

Corol. II. Hence is seen how *Metaphysicks* give the Principles to all *Inferiour* Sciences that treat of *particular Subjects*; and how they establish both the Truth, Certainty and Evidence of those respective Principles.

10. The other main Use of First Principles is to Establish all our Ratiocination or Deduction of *New* Truths out of *others* formerly known: this is evident, because all Inference, Concluding or Proving is perform'd by Identifying the *two* terms of the proposition to be Concluded with a *Middle* term in the premisses; and if it be found that they are both of them the same *with it*, it is thence Inferred that they are the same *with one another*, and that the Conclusion is *true*. But, what if that Middle term be not the same with its *own self*, but *Divided within it self*? Why then it must certainly follow, that we could Inferred or prove Nothing: For if that Middle term were divided in it self, as *Hirco-cervus*,³² *Chimera*,³³ and all Non-Entities are, then *one* of the terms of the proposition to be prov'd might be Identify'd with it according to *one* of those Considerations, and the *other* term Identify'd with it according to the *other*; and so, it would not follow that the terms of the Propositions to be proved are at all *Identified* or Connected in the *Conclusion* by being both of them Identified with it in the *Premisses*; but rather it will follow, that they would be *Diversify'd* or Unconnected, because that Middle term had Diversity and not Identity in it self. Wherefore all the Force of Inference, nay, all possibility of Concluding or proving any thing is entirely grounded on this Self-evident proposition, *Idem est Idem sibi ipsi*, or, *a Thing is the same with it self*. Which shews how Useful First principles are, and how they are both the First Truths *in themselves*; and, besides, the Bottom-Ground to *all Others* which are not Evident in themselves, but need *Proof* to make them so; how Dry and Insignificant soever they may appear at first sight, or seem ridiculous to Superficial Talkers, or some Men of more Witt and Fancy than of Exact Speculation.

Corol. III. Hence is seen that the *Light of Reason* or the Light by which we draw New knowledges out of foregoing ones, is the Light that shines in this Self-evident proposition: *A thing is the same with it's self*.

Corol. IV. Hence also, if the Terms be Univocally understood, and do agree to the Middle Term in the Premisses, we may be as Infallibly Certain our Conclusion is True as we are that *The*

³¹ See B. 2. L. 2. Corol. 2.

³² A mythical goat-stag.

³³ A mythical chimera was a mixture of different animals such as a lion, goat, and snake.

same is the same with it self. Which will give a great Encouragement, to the Laborious Pursuers of True Science, and comfort the pains they take in Seeking after Truth.

Corol. V. Hence, lastly, if any Discourse be so fram'd as to *thwart* this First Principle or *clash* with it: 'tis Self-evidently Absur'd, False and Contradictory; as will be particularly seen when we come to treat of *Discourse* or *Ratiocination*.

11. There are other Propositions which are, either in the *whole* or *in part*, Formally Identical, tho' not *most* Formally: that is, such as have the same Formal Notion *in whole*, or *in part*; and therefore are, upon a slight reflexion, *Evident*, tho' not *self-evident* from the very Terms, as were First Principles. Of the first sort are those whose Predicates belong to the First Predicable, in which the whole Notion is predicated of the Whole. And these are either Definitions (of which we have spoken above) as when we say *Homo est Animal Rationale*; or the Members of such Divisions as are made by Contradictory Differences. For since there can be no *Middle* or Third between two Contradictory Notions, and therefore the Dividing parts, if Contradictory, do take up *all* the Parts of the *whole*, and consequently (abating the manner of Expression) are perfectly and Intirely the *Whole it self*; it follows, that such parts, taken Divisively, are predicated of the Notion Divided as the *Whole* of the *Whole*. For example, *Animal* is divided into *Rational* and *Irrational* (that is, *not-Rational*) and Number into *Even* and *Odd*, (that is, *not-even*). Whence in those Propositions, [Animal is either Rational or Irrational] and (Number is either Even or Odd) *all* the Parts or the *whole* is predicated of the Whole, and the Propositions are *Formally Identical* and Evident in the manner explicated in our former Note.

Note 2. That these are call'd *Formally Identical*, because they are Evident by their own Terms when they are once Explained; without needing any Formal Proof for the Learned to discern the Connexion of those Terms; onely there is requir'd some slight Reflexion on certain Common Maxims, known by the Light of Nature: such as is that a thing either *is* or *is not*, and that therefore there can be *no Middle* between them; and that *All* the Parts are the Whole. They are also Self-evident *Practically* (that is Evident without Study) to the Vulgar, because they cannot but know those maxims by their Mother-wit. In like manner as they know also the Substance of the *Definition* of those Notions they are conversant with, if plainly and fully exprest; tho they cannot compile or frame it Artificially: whence they will heartily *acknowledge* it to be *true* when 'tis thus propos'd to them, finding the *Notion* or *Sense* of it in their own Understanding.

12. Propositions whose Terms are Formal *in part* are those whose Predicates belong to the second, third and fourth Predicables; that is, such as are predicated as the *Genus Species* and *Difference*; for all these do *in part* belong essentially to the Thing or *Individuum*; as *Petrus est Animal, Homo, Rationalis*. They belong to it *Essentially*; because they are deduc'd by *Intrinsecal* Differences in the same Line:³⁴ *In part*, because the Thing or Individuum (*v. g. Peter*) comprehends both *them*, and *more* than them, *viz.* his *Individual Essence*.
13. Those Propositions whose Predicates belong to the Fifth Predicable (*viz. Properties*) are neither in Part nor in Whole Formally Identical, and therefore not Evident; tho' they are oftentimes easily reducible to Evidence. For, since such Predicates are not of the *same Line* as the Thing is, but in *another*, they cannot be at all Essential to it, or any direct part of its Formal Notion or Definition; and, so, not at all Evident from the Terms, but must be *made*

³⁴ The line here appears to refer to the branching diagram of subclass relations, called the Tree of Porphyry. The tree organizes categories from most generic to most specific. A line branches apart when subclasses on the same level can be distinguished from each other—called 'specific difference'; e.g., 'animal' has two subclasses, 'rational' and 'non-rational.' By methodology, what counts as a specific difference must be essential to the thing in question.

so by Proof. Yet, since all Deduction or Proof is made by *Connexion* of Notions, and those Notions (or what corresponds to them) must be *Connected* in the Thing e're they can be so in our Understanding; and *Properties* are more nearly ally'd to the Essence than *other Accidents*, as resulting necessarily from it, or being immediately Connected with it; hence they are, by consequence, most easily *Proveable* to belong truly to the Thing; and therefore very fit to be made use of in Demonstrations.

14. Of this sort are all Propositions whose Predicates are *Proper Causes* and *Effects*; and, more immediately, the *Powers* or Virtues by which they *Act* on others, or *Suffer* from others; as will be seen when we come to treat of Demonstration.
 15. Propositions whose Predicates belong to the *last* Predicable are utterly Inevident, and, as such, not easily Evidenceable. For, since (as was shewn ³⁵ above) such Predicates do belong to the Subject but *by chance*, or as their very name imports, *by Accident*; and *Chance* signifies a Cause which we do *not see* or *know*; it follows, that the Connexion of such Predicates with the Subject can never be *known* by Reason, or *prov'd* that they *must* belong to it, because we can never know *all* the Causes that concur'd to make them belong to it. Wherefore such Propositions are utterly *Inevident*, nor (as they are *Accidents* or Unconnected with the Essence) easily Evidenceable by way of Reason, that they *must* belong to them; however they may be known to belong actually to them *hic & nunc* by *Sense* or *Experience*. Such Predicates are mostly those of the six last Predicaments, and many Quantities, Qualities, and Relations.
 16. Notwithstanding, those Propositions which have such Accidental Predicates, were *all* the Causes by which they hap to belong to the Subject perfectly known, might be perfectly Evident and Demonstrable. For, as we can Demonstrate *one* Effect that needs but *one* Cause to put it, from that *single* Cause; so, did we know *all* the Causes that concur'd to any Effect which is brought about by *many* Causes, we could certainly *conclude* and *know* such an Effect would follow; in which case the Predicate would be no longer an *Accident*, but the *Proper Effect* of that Complex of Causes; nor would the Proposition it self be any longer merely *Accidental*.
- Corol. VI.* Hence there is nothing *Contingent* or *Accidental* to *God*, but all Events, tho' never so minute or so odd, are *Equally* Certain to him, as the most Immediate Effect of the most *Proper* and most *Necessary* Causes; because he lays and comprehends the *whole Series* of Causes that concur to bring about every *least* Effect.

³⁵ B. 2. S. 13.

Lesson IV. *Of the Generating of Knowledge in us, and of the Method how this is perform'd.*

Hitherto of *Knowledges* or *Judgments*, according to their *Dependence* on one another, and their being *Resolv'd Artificially* into First Principles. Our next task is, to consider them according to the Order they are *instill'd* into us *Naturally*.

1. The Soul, or the Understanding, is at first void of *all* kind of Knowledge, or *Rasa Tabula*.³⁶ For, since the Author of Nature does nothing in vain, nor acts needlessly, he puts no Effects immediately, or without Second Causes, when there *are* Causes laid by him to produce them; and, since we experience that Causes *are* laid by Him, apt to imprint Notions in us; and that the Nature of our Soul being evidently Comparative, we can *compare* those Notions, and can see how they *Agree* or *Disagree*, which is to *know*: Hence, in case the Soul had any Notions or Knowledges *infus'd* into her *otherwise* than by those Causes, it would frustrate and make void that Course of natural Agents which is apt to beget Knowledge in us, and make Nature contradict her self. Again, since we experience that we know no more than we have *Notions* of, and that we can *compare* those Notions, and can know *all* things we *have* Notions of and do thus rightly *Compare*; and, that *both* those effects do follow naturally from the Impressions of Objects, and from the nature of the Soul; it falls into the same Absurdity, to affirm, that those Causes do only *Excite*, and not *Beget* Knowledge in us. Lastly, the contrary Opinion supposes the Soul to be an *Ens* before the Body, or at least *distinct* from it; and then 'tis both Unconceivable and Inexplicable how they can ever come to be *United* so as to compound *one Ens*. For, this cannot be done *Quantitatively*, as is evident, nor by their *Acting* together, as the *Cartesians* hold; both because all *Action* presupposes the *Being* of a thing; whence they must *be one Ens* before they can *Act as one Ens*; as also, because the Line or predicament of *Action* is³⁷ distinct from that of *Ens*, and Extrinsic to it, and so cannot³⁸ Intrinsically constitute those Joynt-Acters *One Ens* or Thing. Nor can it be conceiv'd that the Body, if it be not *one Ens* with the Soul, can act with it otherwise than as its *Instrument*; and it would be most Absurd, to say that my Hand and Pen are *one thing* because they jointly concurr in their different ways, to the Action of Writing. Wherefore the Soul *has* no Antecedent Knowledge, but is a *Rasa Tabula*, capable to *receive* such Impressions as beget Knowledge in her.
2. The *First* Judgment in order of Nature the Soul has, is, that *its self* or the *Man exists*. For, since (as³⁹ was shewn) the First Notions the Soul has are of the *Man* himself, and of his *Existence*, and⁴⁰ all Judgments are made by Compounding or *Comparing* of Notions; it follows, that the most Obvious, most Easie, most Natural, and consequently the First Judgment, in priority of Nature, that a Man has when he is ripe to judge, is, that *Himself is*, or [*I am*].
3. The next Judgment is, that [*He is struck*] or affected by some Object without him; for, since the Course of Nature is *Motion*, and therefore Objects are continually *moving* where the Man is, and, so, do light and act on his *Senses*, that is, do work Experimental Knowledge in him that he is *acted upon* or *struck* by them, it follows, that he must, after he comes to frame Judgments, necessarily and frequently *know*, and, consequently, *Judge he is struck*. Nor can this be the first Judgment, both for the Reason lately given Sect. 2. as also because in this

³⁶ Latin: 'Blank slate.'

³⁷ Book 1. L. 2. S. 18.

³⁸ Book 1. L. 3. S. 1.

³⁹ Book 1. L. 2. S. 16.

⁴⁰ Book 2. L. 1. S. 10.

Proposition [*I am struck*] the Proposition [*I am*] is most Simple, and manifestly antecedes [*I am struck*]; the Notion of [*struck*] being clearly superadded to it.

4. The next Knowledge or next Judgment to the former, in order of Nature, is, [*I am struck thus*] or Affected after *such* a manner. For, the Notion of [*I am struck*] is more Simple, and so, antecedes [*I am struck thus*] which superadds to it: Whence this proposition is prov'd by the same reason that was brought for the third Section.
5. These Judgments had, we are furnish'd by Nature with Means of Knowing in some measure the *Distinct* Natures of *all* things that affect us. For, since we get all our Notions or the Natures of things into us by Impressions from Objects; and by *such* Impressions, or by their affecting us *thus* or *thus*, their *Different* Natures; that is, Knowledge how those things *Differ* from one another; and Differences *do constitute* the Nature of the thing by Distinguishing it from all others; 'tis manifest that from the Judgment or Knowledge that we are struck *thus* and *thus* by *these* and *these* Objects, we are furnish'd with means of Knowing, in some measure, the *Distinct* Natures of all things that affect us, and of our *own* Bodies in the first place. And our *Soul* having the power of *Comparing* them to themselves, and to *Other* Natures that are also in her, we hence become capable of framing Innumerable *Judgments* concerning them, or *Knowledges* of them.
6. These Knowledges of all things that affect our Senses being gain'd, to a fair degree, by the Different Impressions of Objects, are made more Express, and Improv'd very much by *Study* and *Reflexion*. For, since Study and Reflexion are not the *Inventing* New or Counterfeit Notions or Natures of our own coining, but the *Receiving* frequently, and minding heedfully the true and solid Notions of the things which Nature had imprinted there before; it follows, that, as in Corporeal Sight, by our Regarding the Object frequently, wistly and attentively, we come to observe more and more in it; so, by often Reflecting on and Revolving Intellectual Objects, or the Natures of things *in us*, the Eye of our Mind must needs *look deeper* into them, make *new* Discoveries of diverse Considerations in them which escap'd a *single* Cursory view, and gain *more* exact and *more* penetrative Knowledge of them.
7. By *Methods* of Discoursing or Ratiocination made evident by Maxims of *Art*, this Improvement of Knowledge (were not *vita brevis*⁴¹) might come to be in a manner *Infini*t. For, all this is perform'd by Evident Connexion of Terms, both in *some* propositions which are Truths, and the deducing others by necessary consequence from *them*, and so forwards. Since then there is no *stint* assignable of the Connexion of Truths, and (as will be shewn hereafter) there are Rules or Maxims of *Art* to teach us *how* to connect Terms Aptly and Evidently; it follows, that there can be *no Bounds* of the Improvement of Knowledge.
8. From what's said above, 'tis manifest that this proposition [*Ego cogito*] cannot be the *first-known* Truth whence all our Science is *Generated*;⁴² for, since this proposition (*Ego cogito*) if put entirely or explicitly as it ought, is (*Ego sum cogitans*) and in the order of Nature the proposition (*Ego sum*) is antecedent to (*Ego sum cogitans*) and more simple than it; so that if *it* be not suppos'd to be known, the *other* cannot possibly be known; 'tis most Evident that (*Cogito*) or (*Ego cogito*) or, which is the same (*Ego sum cogitans*) cannot be the first-known Proposition or First Truth that can be laid in the Method of *Generating Science*.
9. The proposition (*Ego sum cogitans*) is *less* clear and evident than many other propositions that have for their predicate Notions directly imprinted on our Senses such as are; I am *Heated*,

⁴¹ Latin: 'brief life;' if life were not short.

⁴² In view here is René Descartes' famous argument, "I think, therefore I am" (*Cogito, ergo sum*). The Cogito is given both in his *Discourses on the Method*, part four (1637), and the *Meditations on First Philosophy*, second meditation (1641). He argued that this proposition cannot be doubted, and that it provides a suitable foundation up on which all science may be built.

Hurt, Extended, Moving, &c. For, since all our first-known notions (the Soul being *Rasa Tabula*) come by Impressions of Objects on our Senses, those propositions are *most Clear* whose predicates are the Immediate Effects of those Impressions, and, joyn'd with *Ego sum* (which is the first Judgment) do compound those propositions. But such are the predicates abovesaid, and not the predicate (*Cogitans*). Therefore the proposition (*Ego sum Cogitans*) is less clear than are the propositions which have those directly imprinted Notions for their Predicates. That the other predicates are notions *more known* than is *Cogitans*, I prove thus. The notion of *Cogitans* is *Spiritual*, and therefore could not be imprinted in the Soul by a *Direct* stroke of the Object on the Senses, as are the Others, but must be known by *Reflexion*; but what is known by Reflexion is less easily and less early known, that is *less Evident* to us, taking us as not yet imbued with *other* Knowledges, than that which is known by *Experience* or *Directly*; therefore the notion of (*Cogitans*) is less known than are those other predicates; and consequently this proposition (*Ego sum Cogitans*) is less Clear than the propositions (*Ego sum Extensus, vulneratus, movens, &c.* Again, were the predicate (*Cogitans*) known experimentally, or by Impressions on the Sense, which it is not at all but as it is joyn'd with the Imagination (the most Fallacious Faculty we have) co-operating with the Understanding; nay, were it an Affection of the *Man*, and its Notion directly imprinted in him, and, so, as easily and early known as any of the rest; yet the proposition (*Ego sum Cogitans*) could not be the First or Second in the Order of *Knowable*: for, since (as was shewn) [*I am struck or Affected*] antecedes [*I am affected thus*] or have *such* an affection in me, and *Cogitans* is not barely to be Affected by Objects, but to have *such* a manner of Affection; hence the proposition (*I am affected by Objects*) is more Simple, and therefore, in priority of Nature, precedes (*I am affected thus*) or (*I am Thinking*) and is more Clear than *it*.

11. ⁴³Hence the proposition (*Ego cogito*) is also *less Certain* than multitudes of *other* propositions, whose predicates are experimentally known by Direct Impressions on the Senses. For Certainty follows Evidence as its *Proper Cause*, as Judging does Knowing. Wherefore, if that proposition be *less Evident*, it is also *less Certain*.
12. If it be alledg'd, that it is Certain by way of *Evident Proof* that this proposition (*Ego cogito*) is the most absolutely firm Ground we can relye on to generate and principiate all our other Knowledges, because tho' we would voluntarily divest our selves of all other Knowledges, and call them into doubt; that is, were all the rest *Uncertain*, and my self *Insecure* whether I think *True* or *False* in holding them; yet it is Unquestionably Certain, and Impossible to be doubted of, but that, whether I think *right* or *wrong*, still I *think*; whence follows, that the proposition (*Ego cogito*) seems to be a firm *basis* to ground all the rest upon. I answer, that the whole Discourse seems to me to be a Paralogism, and a kind of *Fallacy of non causa pro causa*;⁴⁴ for, the Question is not whether it be not more Certain that I *think* than that I think *wrong* or *right*; for, 'tis granted that this proposition [*I think*] is more Simple, and therefore antecedes, and is presuppos'd to the propositions [*I think right* or *wrong*, or *thus* and *thus*] and, consequently, it is more Evident and more Certain than *These* are. But the true point is, whether I am more Certain that I *think at all*, than that I am Certain that *I am*; since if it be not presuppos'd that *I am*, 'tis most Certain that it is Impossible that I should be Certain that *I am thinking*, or any thing like it. The Objecter then slides over the Certainty of this proposition (*I think*) as compar'd with the proposition (*I am*) and other Judgments experimentally known; and compares it with other propositions subsequent to (*I think*). Wherefore he first *supposes* it to be most Certain, that is, more Certain than *they* are, and

⁴³ Original numbering. There is no section labeled 'section 10'.

⁴⁴ An informal fallacy alternatively called 'false cause;' Latin: 'non-cause for cause.'

- prefers it *before* all others, without Comparing it with *those others*; which is to suppose it so *gratis*, and (which is yet more strange) he grounds all Knowledge whatever upon it.
13. 'Tis yet a worse Error, that whereas *Ens* or Being is the *Basis* of all other Notions, so that if no *Thing* be, *They* cannot be; the Alledger, by arguing thus [*Cogito ergo sum*] does by a strange *Hysteron proteron*,⁴⁵ put an *Operation* to be *Antecedent* to *Being* it self; and that [*to be Thinking*] is a more Simple, Clear, and Distinct Notion than [*to be*]. And then, from an *Operation* found out or suppos'd, he concludes the very Notion of *Being* it self to *be* in the *Thing*. Nay, which is yet more odd, he supposes the Notion of Knowledge of Himself, imported by the Word (*Ego*) and supposes that *Ens* (*or Ego*) to *be*, as is signified by the *Copula* (*Sum*); nay more, he supposes that *Ens*, or (*himself*) not onely to *be*, but moreover to *be such*, viz. *Operating* or *Thinking*, which most evidently speak or imply *Existence*; and when he has done all this, he *Infers* thence, (contrary to our 3d. & 4th. *Sect.*) the *simple being* of that which he had not onely *put to be* and *be known*; but, which he had over and above put to *be* (or *be known*) to *be such*: that is to *be Operating* or *Thinking*.
14. Hence, this Method of Generating Science is Unnatural, Preposterous and Self-contradictory. 'Tis *Unnatural*, first because the way Nature takes to Beget Knowledge in us is not by divesting our selves of all other Knowledges to find out what's most Certain: but, she at first instils Knowledge into us by a Natural way of *Imprinting* Notions in our Mind, and our *Comparing* them; and thence letting us *See* whether they Agree or Disagree: 2^{ly}, because it strains Nature to fancy our selves Ignorant of many Clear Truths which the goodness of the same Nature forces us to assent to as Evident. And, 3^{ly}, because [*I am*] is according to the Order of Nature Antecedent to [*I am Thinking*]. 'Tis *Preposterous*, because it argues from Compound Judgments which are *less known*, to infer whats *more Simple*, and, so, *more known*. And lastly, tis *Self contradictory*, because it supposes that to *bee* or to *be known*; which, as yet according to that doctrine *is not*, or *is not known*: but is to be *Concluded*, that is, *made known*; as is shewn Section 13th.
15. *Hypothetical Philosophy*, which is grounded on Suppositions; and *beggs* that such and such things may be yielded and then it will explicate all Nature, is built on *meer Fancy*, and is unworthy the name of *Philosophy*. For, since it belongs to a Philosopher to Resolve all Truths into their Principles, and all Natural Effects into their Proper Causes; and, finally, (if need be) into their *first Principles* or *First Causes*: and a Hypothetical Philosopher can never perform this Duty which is most Essential to a Philosopher; in regard the *First Grounds* he layes are barely *begg'd* or *Supposed*; that is neither *self-Evident* nor *made Evident* by way of Proof: Hence, Hypothetical Philosophy is utterly unworthy the name of Philosophy; since all its Assertions and Conclusions, if driven home, are resolved finally into *Precarious Suppositions*. Again, since all Speculation is Aiery and Fantastical that is not grounded on the Things as they are found in *Nature*, and such Discourers do not finally build their Discourses on the Natures of the Things as they *find* them to be, but on their being such as they *suppose* them or *would have* them to be; it follows, that the whole Scheme of their Doctrine and all the speculations they advance, how Ingenious so ever they may appear, are far from Solid, and, in reality Groundless, Aiery and Fantastical.
16. Hence follows, that who ever *supposes* any Principle or Proposition that influences his Explication of Nature, or of Natural Effects which are apt to be produced by Natural Causes, and demonstrated by them: whether that Principle be that Matter is divided into such or such parts, or that it is moved in *such* a manner; That it continues its motion without a Natural Motive Cause continually acting on it, notwithstanding that it still meets with

⁴⁵ Greek: 'later earlier;' i.e., what is last is put out of order by being ahead.

Rubbs from other parts of Matter which it breaks asunder; That there are such Figures of it's Parts; or *such* Qualities affecting the Subject and giving it a Virtue of Operating *thus* or *thus*; That there are multitudes of little Entities, brought in to serve a present turn when the Discourser is at a plunge; or Atomes, pursuing and over taking their fellows, and clinging together conveniently for his purpose: without giving a reason *why* and *how* they must do so, (as is the manner of the *Epicureans*) or, what ever other useful Expedient he supposes to carry on the Clockwork of his Scheme; such a man is *no true Philosopher*.

17. Likewise, who ever layes for his Ground what neither is nor can be: viz. Vacuum, Imaginary Space, Subsistent Dimensions, Infinit Expansion of Continu'd Quantity. Infinit Number of Atomes and suchlike, can be no true Philosopher; since they (as do the former) Resolve things finally into their own Unprov'd and Ridiculous Suppositions: and would have us accept their *Groundless Fancies* for *First Principles*; when as many times the contrary to these is clearly demonstrable.
18. Whoever proceeds meerly upon *Experiments* and *Induction*, and cannot assign *Proper Causes* for the Effects or Matters of Fact they *see* done; how ever their Inquisitiveness into Nature may merit Commendation, and oblige Artificers and Practical men by many useful Observations; and, in some measure, help Speculative Men also, who do make use of Principles, to find out more easily the Proper Causes of many Effects: from which Industrious Researches into Nature, such men may deserve the name of *Virtuosi*, or Curious and Ingenious persons; yet since (as will be shewn hereafter) they cannot, by that Method *alone*, without making use of *Principles*, refund *Effects* into their *Proper Causes*, nor give the *true reason* of the Effects they Experience; nor Deduce so much as *one* Scientifical Conclusion; they cannot, in true speech, be call'd *Men of Science* or *Philosophers*.
19. Those of the Vulgar who have good Mother-witts, and addict themselves to think *much* and *attentively* of some certain Natural Objects, may, by *Practical Self-evidence*, well improv'd, arrive to such a true Knowledge of the *Causes* of things, as may rank them in the *next* Class of Knowers to *Scientifical* Men, or true Philosophers. For, such Men, by an Innate or Casual Addiction of their Thoughts to some particular sorts of Natures; and by industrious and frequent consideration of them, joyn'd with a natural Sagacity to penetrate them, and natural Logick to discourse them in their thoughts; are furnish'd with all the Materials (as it were) that are requisite to *Science*: Nor, while they attend to the Natures of the Things, can they want First Principles by which to guide their thoughts; so that, they onely want *Maxims of Art* to put their Thoughts into the posture of Science, to make them more firm, distinct and express, and to improve them by drawing new Consequences from them: Wherefore such Acute Men (some of which are found in every Country and every Age,) by having their Knowledge grounded on *solid Nature*, may far exceed *Hypothetical* Philosophers, or any of the others before-mentioned, in *True Knowledge*; and, so, come nearer the being true Philosophers than any of them; nay, than Great Artists and Reputed Scholars; though they caper in the Ayr never so nimbly and quaintly with School-Terms, Distinctions, and Witty and Congruous Explications of their own Schemes; if they do not *begin with*, and *build upon*, Good Honest *Solid Nature*.