A

COMPENDIUM OF LOGIC:

TRANSLATED AND ABRIDGED FROM ALDRICH,

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THE WHOLE ILLUSTRATED WITH
COPIOUS NOTES, EXAMPLES, AND EXPLANATIONS,
A SERIES OF QUESTIONS FOR SELF-EXAMINATION,
A DICTIONARY OF TECHNICAL TERMS,
AND NUMEROUS EXERCISES.

BY THOMAS JACKSON, B.A.,

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MDCCCXXXVI.

"I HAVE since found abundant reason to praise God for giving me this honest art. By this, when men have hedged me in by what they call demonstrations, I have been many times able to dash them to pieces; in spite of all its covers, to touch the very point where the fallacy lay; and it flew open in a moment."—JOHN WESLEY.

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PREFACE.

NOTWITHSTANDING the odium which has been cast upon that system of Logic which Aristotle first arranged, by men no less distinguished for their brilliant attainments than their natural genius, its use and importance are generally acknowledged. In fact, its most powerful and uncompromising opponents reason, however unwillingly, upon the principles which it inculcates. The objections urged against the syllogism, so much and so unjustly censured, are, as Archbishop Whately has acutely observed, equally applicable to all kinds of reasoning whatever; and there is more assumption necessary in induction, considered as a method of argument, than in the syllogism itself.

To attempt an elaborate and philosophical defence of the scholastic Logic, within the brief limits of a preface, and that of an unassuming, elementary treatise, would be absurd. And, perhaps, those for whose use and improvement especially it has been compiled, will be content with the recorded judgment of a man, to whose opinions they are accustomed to pay more than ordinary deference. Mr. Wesley, in his admirable Address to the Clergy, observes, with regard to the study of Logic, "May we not say, that the knowledge of one, (whether art or science,) although now quite unfashionable, is even necessary next, and in order, to the knowledge of Scripture itself? I mean logic. For what is this, if rightly understood, but the art of good sense? of apprehending things clearly, judging truly, and reasoning conclusively? What is it, viewed in another light, but the art of learning and teaching? whether by convincing or persuading. What is there, then, in the whole compass of

science, to be desired in comparison of it?" To say that the venerable Founder of Methodism here alludes to the Aristotelian system, is almost superfluous; as the brief "Compendium" which forms the basis of the present work, was translated by him, into his own sterling English, from the cramp and inelegant Latin of Dean Aldrich, who was a zealous Aristotelian. In another place, Mr. Wesley remarks, that he instructed some of his Preachers in "Pearson on the Creed," and Aldrich's "Logic."

It is, indeed, no wonder, that Mr. Wesley felt the necessity of an acquaintance with the principles and rules of logic. In proportion as a subject is solemn and important, so is it incumbent upon those who teach it, to reason with force and correctness. They must not content themselves with arriving at true conclusions and assertions from mere accident, but from certain and scientific knowledge; they ought to understand the grammar of truth. Hence, the Christian

Minister, above all others, should be a sound logician, because to him are entrusted the most sacred of all verities.

Yet how few Ministers, comparatively, are accurate logicians! Many carelessly leave the important subjects committed to their charge, to the chance of being believed or rejected by the sceptical heart, unsupported by a single argument, unenforced by the shadow of a proof. Others conceal the meagre and pitiful proportions of their information under a pompous garb of declamation, which can only excite the smile of the wise, the tear of the good, the sarcastic grin of the unbeliever. Very different, however, is the character of many modern sceptics; not a few of whom are distinguished by their acquaintance with every kind of argument. They are adepts in enveloping fallacy in the most seductive dress of reason, skilled

"To make the worse appear the better reason,
To perplex and dash maturest counsels."

Such, probably, were some of the views of Mr. Wesley, in translating and abridging the excellent manual of Dean Aldrich, which is still used as the text-book upon Logic at the University of Oxford. It is to be regretted, that, instead of abridging that work, he did not amplify and illustrate it, from his vast stores of knowledge and experience in controversy. The genius of his active mind, however, was not adapted to amplification. The numberless enterprises for the good of mankind in which he was engaged, left him no time to sit and ponder in studious leisure; and they imparted a habit of succinctness to his mind. In none of his works does he ever indulge in redundant explanation. In some, he is even too concise; and with the natural feeling of a great intellect, he presumes too much upon the capacities of his readers. His "Compendium of Logic" is not without the fault in question; presenting rather a brief outline of information, to assist the memory

of one who has considerably advanced in the art, than the characteristics of an elementary treatise.

It has therefore been thought that the re-publication of this tract, with copious notes, exercises for practice, and a series of questions for self-examination, would be neither useless nor unacceptable to those for whom the original treatise was designed. The writer has endeavoured to render his illustrations as theological as possible, according to the views of the eminent man by whom the work was first published for popular use. He has freely consulted the most approved works upon the subject, published since Mr. Wesley's death, particularly those of Hill, Huyshe, and the incomparable volume of Dr. Whately, the present Archbishop of Dublin. As he does not claim any originality in his compilation, he trusts that he will not be accused of immodesty and ambitious pretension.

Should the reader be disappointed at not

finding any of the graces of language in the following pages, nor any of those splendid eccentricities of style at present so much admired, he is requested to remember, that the object of the writer is simplicity, in order that he may render his subject as easy and intelligible as possible.

London,
December, 1835.

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A

COMPENDIUM OF LOGIC.

BOOK I.

CHAPTER I.

OF SIMPLE TERMS.

SECTION I.

THE operations of the mind are three, 1. Simple apprehension; 2. Judgment; 3. Discourse or reasoning.*

It would be better to say, that the operations of the mind *concerned in argument* are three; for that there are *in all* only three, is an assertion by no means incontrovertible.

* Logic, which by synecdoche (or the figure which takes a part for a whole) is denominated Dialectics, has been called the art of reasoning; or, *an instrumental art, directing the mind into the knowledge of all intellectual things.* For this reason it ought to be the first of all disciplines, as being necessary to the acquirement of the rest; hence it is called by Aristotle the ὄργανον or *instrument* of philosophy, and of the other sciences.

1. Simple apprehension is, the bare conceiving a thing in the mind.

This is, in a certain degree, analogous to the perception of the senses. It is either *incomplex*, or *complex*. Incomplex apprehension is of one object, or of several, without any order or reference; as, "a king," "a throne." Complex apprehension is of several objects with such order or reference; as, "a king upon a throne."

2. Judgment is the mind's determining in itself, that the things it conceives agree or disagree.

Or, that one thing *belongs* or does *not belong* to the other. Judgment is either *affirmative*, or *negative*. Affirmative judgment, also called *Composition*, is that which expresses the agreement of the two objects compared. Negative judgment, or *division*, expresses their mutual disagreement.

3. Discourse is the progress of the mind from one judgment to another.

The word "discourse," as signifying reasoning, is obsolete; though the expression, "discursive faculty," is retained by some writers.

But our apprehension is apt to be indistinct, our judgment false, our discourse inconclusive. To prevent this, wise men prescribed several rules, which were at length collected into one body, and termed *Logic*, or the art of reasoning.

Of some objects of apprehension our notions are unavoidably indistinct, as of the Supreme Being and his attributes; of other objects, only accidentally, as a Ceylonese man's notion of ice.

Judgment is misled by *sense* (as when a man conceives that the sun rises out of the sea);—by *authority* and *example;* and by the *passions.*

N. B. It has often been doubted whether Logic is an art or a science: It is both; a science, when considered merely as a theory to be known; an art, when viewed as relating to practice and use.

SECTION II.

But we cannot express to another what passes in our own mind any otherwise than by words: It is therefore by teaching us the proper use of words, that logic assists the mind, 1. To apprehend distinctly: 2. To judge truly: 3. To discourse conclusively.

It should be confessed, that it teaches the two former only accidentally; if it taught them invariably and necessarily, mankind could never err.

A word is defined to be an arbitrary vicarious sign of a thing, or of an idea, used by common consent. Sounds, therefore, which are suggested by nature, as groans and shrieks, are not words.

A word that expresses simple apprehension is called a simple word; one that

expresses judgment, a complex or compounded word;* one that expresses discourse, a decomplex or twice compounded one.

Since, from the definition of judgment, the word expressive of it must consist of some *combination* of simple words, the term *complex* word has arisen.

For every argument is resolvable into three propositions, or sentences; and every proposition contains three words, in sense, if not in number, 1. The subject, or that of which something else is said: 2. The predicate, or that which is said: And, 3. The copulative, which stands between the subject and predicate, which are therefore called the terms of the proposition.

Any combination of grammatical words, which represents only one idea, however compound, is logically only one word; as, "the-single-consideration-of-the-progress-of-a-finite-spirit-towards-perfection."

The following is the example of a proposition:

subject copula predicate
"The righteous man—is—blessed in his end."
term. term.

* St. Paul says, (Acts xxiv. 21,) "Except it be for this one voice," (in the Latin *vox*, which also signifies a word,) "that I cried," &c. To what kind of logical words did the apostle, in all probability, refer?

Sometimes the copula is grammatically combined with the predicate; as, "kings reign;" which may be logically resolved, "kings—are—reigning persons."

The apparent or grammatical subject is not always the logical subject in a proposition: In deciding which is, we must consider the general scope of the argument. The subject ought logically to be the first word in every proposition, and the predicate the last; but this is not always the case; for it frequently increases the force of the assertion to put the predicate first; as, "Blessed are the poor in spirit." It may be remarked, that an infinitive is never the predicate, unless there be another infinitive as the subject; thus, "I hope to succeed," is logically expressed, "To succeed —is—what I hope." The word "it" frequently serves as the representative of the subject when that is put last; as,

predicate. subject.
"It is to be hoped—that we shall succeed"

SECTION III.

THE first part of logic treats of simple terms, that is, such words as may, by themselves, be the subject or predicate of a proposition.

These are also called *Categorematic* words:

Such are all nouns substantive in the nominative case, and verbs in the infinitive mood. *Syncategorematic* words are such as can only be part of a subject or a predicate; as, adjectives, participles, and adverbs. *Mixed* words may be formed by the combination of the two other species; as, "I walk." Here, "*walk*" is a mixed word, and is resolved, "*am—a walking person.*" It may be properly observed in this place, that there is but one verb in logic, which is the copula, the substantive verb "to be" in the present tense.

The *logical noun* is equivalent to a simple term or categorem; it is defined "a significant word inexpressive of relation or time."

Of these, namely, simple terms, or logical nouns, there are several divisions; as,—

1. A singular word, which expresses one thing only; as, "Socrates:" A common, which expresses many and each of them; as, "a man."

Common nouns are sometimes used as singular; as, "He is gone to *the river;*" meaning some particular stream. "The *noble lord* who spoke last;" where the word "noble lord" is limited to one individual. Singular nouns are often made common, by extending their signification to several individuals; as, "the village *Hampdens,*" "some mute, inglorious *Milton.*"

2. An infinite word, to which the particle "not" is prefixed; as, "not-a-man," which

may imply any thing besides: A finite, to which that particle is not prefixed.

The modern English terms which express this division, are *Definite* and *Indefinite*.

3. A positive word, which expresses a thing as present: A privative, which expresses its absence from a subject capable of it: A negative, which expresses its absence from a subject not capable of it. So, "seeing," spoken of a man, is a positive word; "blind," spoken of a man, is a privative, but spoken of a stone, a negative, word.

These and the following divisions denote not so much distinct kinds or classes of nouns, as different uses or applications to which words are subject.

4. An univocal word, whose one signification equally agrees to several things; as, "a man:" An equivocal, whose different significations agree equally; as, "a foot:" An analogous, whose one signification agrees unequally; as, "knowledge applied to God and man."

The example of an equivocal word is erroneous: *Foot* is an analogous word; as, "the *foot* of a table," "the *foot* of a horse;" where the supporter of a table is so called from its bearing an analogy to the supporter of a horse. So "foot," is analogously applied to the measure of twelve inches,

because about the length of a human foot. Mr. Wesley, no doubt, while translating from Aldrich, observed *pes* given as an example of the analogous words, and inadvertently placed it with the equivocal. It may be observed, that puns and similar expressions imply the use of equivocal words. "Sting," of an animal, of conscience, of an epigram, is an instance of an analogous word.

5. An absolute word, which expresses a thing considered as by itself; as, "justice:" A connotative, which expresses the same thing as joined to another; as, "just."

An absolute word, expressing a thing as separate from its subject, is also called an abstract; as, "justice:" And a connotative, expressing it as joined to a subject, a concrete word; as, "just."

Abstraction is the mental drawing off, or sepation, of certain qualities or circumstances belonging to a subject, or class of subjects, and, while we withhold our notice from the rest, attending exclusively to them alone. Generalization, though it implies abstraction, is different from it. It is defined, "the act of comprehending under a common name several objects agreeing in some point which we abstract from each of them, and which that common name serves to indicate."

Those connotative words which imply each other are termed relatives; as, "a father," and, "a son."

But to understand a relative noun we must have a notion of its correlative. "Husband and wife," "large and little," are relatives. Some correlatives have the same name; as, "brother," "cousin."

6. Consistent words, which may at the same time be affirmed of the same thing; as, "cold," and, "dry:" Opposite, which cannot; as, "black," and, "white."

The opposition of simple terms is fourfold: 1. Relative, between relative terms, as, "a father," and, "a son:" 2. Contrary, between contrary terms, that is, absolute words, which expel one another from a subject capable of either; as, "black," and, "white:" 3. Privative, between a privative and a positive word; as, "seeing," and, "blind:" 4. Contradictory, between a positive and a negative word; as, "a man," and, "not-a-man." This is the greatest of all oppositions, as admitting of no medium; neither a medium of participation, such as is gray, between black and white; nor a medium of abnegation, such as is a stone, between seeing and blind. Relative opposition, on the other hand, is the least of all: For relative terms are not opposites, unless they are considered with respect to the same thing.

7. A word of the first intention is one used in its common popular signification. The second intention of a word is its exact and definite sense, limited as may be required, when it is used for any particular science and art. Thus the Greek word ἀπόστολος in its primary intention is a messenger; in its second, an apostle.

Of these divisions of logical nouns, three are most necessary to be observed; namely, the common, univocal, and noun of the second intention, because the union of these three forms what is termed a predicable.

SECTION IV.

An univocal word is otherwise called a predicable, or a word capable of being predicated, that is, spoken in the same sense of several things.

There are five sorts of predicable words: 1. A genus, which is predicated of several things as the common part of their essence; as, an "animal:" 2. A difference, which is predicated of several things as the distinguishing part of their essence; as, "rational:" 3. A species, which is predicated of several things as their whole essence; as, "a man:" 4. A property, which is predicated of several things as necessarily joined to their essence;

as, "risible:" * 5. An accident, which is predicated of several things as accidentally joined to their essence; as, "tall," "short."

Before, however, we can certainly arrive at this information, it is necessary to premise, that a singular noun is also termed in Logic *indivisible*: But nevertheless whatever can be called one is not necessarily singular; for many things that possess common qualities, may, as far as the resemblance goes, be termed one in *sense*, though not one in *number*. Every thing that actually exists is undoubtedly singular; but these objects are so numerous, that it would be burdensome to appropriate a separate and singular name to each. Suppose, for instance, we were in the

* Is this a property? Whately acutely remarks, "Logical writers have also added a fourth kind of property; viz., that which is peculiar to a species, and belongs to every individual of it, but *not at every time*. But this is in fact a contradiction; since whatever does not *always* belong to a species, does not belong to it *universally*. It is through the ambiguity of words that they have fallen into this confusion of thought; e. g., the example commonly given is, *homini canescere*, 'to become grey,' being, they say, (though it is not) peculiar to man, and belonging to *every* individual, though not *always*, but only in old age, &c. Now, if by *canescere* be meant the *very state* of becoming grey, this manifestly does not belong to every man: If, again, it be meant to signify the *liability* to become gray hereafter, this does not belong *always* to man. And the same in other instances. Indeed, the very Proprium fixed on by Aldrich, 'risibility,' is nearly parallel to the above. Man is *always* '*capable of laughing;*' but he is not '*capable of laughing always.*'"—WHATELY'S *Logic*, Book ii., cap. 5, § 4.

midst of a large assembly, and wanted to assert the fact that many persons were present, it would be an endless task to repeat, John Doe, Richard Roe, and all the singular names of the rest, even supposing we knew them. To remedy this and similar difficulties, the operation termed "abstraction" is used; which is defined to be "that faculty of the mind by which, in the contemplation of many singulars or individuals, it neglects all those points in which the singulars differ from each other, regarding those only in which they agree." Thus an abstract idea would be formed, which, from its nature, is universal; and we should say, thousands of *men* were present.

The following is an instance of the process of abstraction. Here are the individuals, John, Richard, and James. I remove from my mind the notions of their sitting or standing, or being born in London or not, &c., and I arrive at the common nature, in which they all agree, that is *man*. I separate from man his capability of laughter, his reasoning powers, his capability of religion and contemplation of the Deity, and I come to the general notion of *animal*. Thus I proceed until I arrive at the most inclusive or highest genera, *matter* and *substance*.

Let us take other examples. By abstracting from Barrow, Howe, Baxter, Stillingfleet, and Paley, all the various circumstances in which they differ from each other,—such, for instance, as their conformity or nonconformity, &c. &c., I arrive at the general notion expressed by the common noun *theologian*. From the blue sky, a

blue coat, blue in the rainbow, and a blue flower, I derive the abstract idea of blue.

Now this universal nature is capable of being affirmatively predicated or said of all the individuals from which it has been derived; hence it acquires another name, *Predicable*.

A Predicable, as has already been implied, is defined to be, "a common univocal noun of the second intention;" common, because applicable to many individuals; univocal, because the representative of only one idea; of the second intention, because a word thus applied is not used in a vague and colloquial, but a limited and definite, sense

A Predicable, then, as being a word that can be affirmed of several things, must express either their whole essence, or a part of their essence, or something joined to their essence. Their whole essence is called the *species*. There are two parts of their essence; either the material part, which is termed the *genus*, or the formal and distinguishing part, which is called *differentia*, or, in common discourse, the characteristic part. That which is joined to the essence is either *necessarily* joined, (that is, to the whole species, or, in other words, universally to every individual of it,) which is denominated a *property*: Or else it is accidentally, contingently joined, (that is, to some individuals only of the species,) which is an accident. Thus it is evident, from what has been said, that the genus and difference put together make up the species: For instance, "rational" and "animal" constitute "man"

Genus is predicated, or spoken, of many things

differing in species; that is, it is predicated of those different species which it includes under its more extensive signification; as, "animal," is predicated of men, beasts, birds, fishes, and insects.

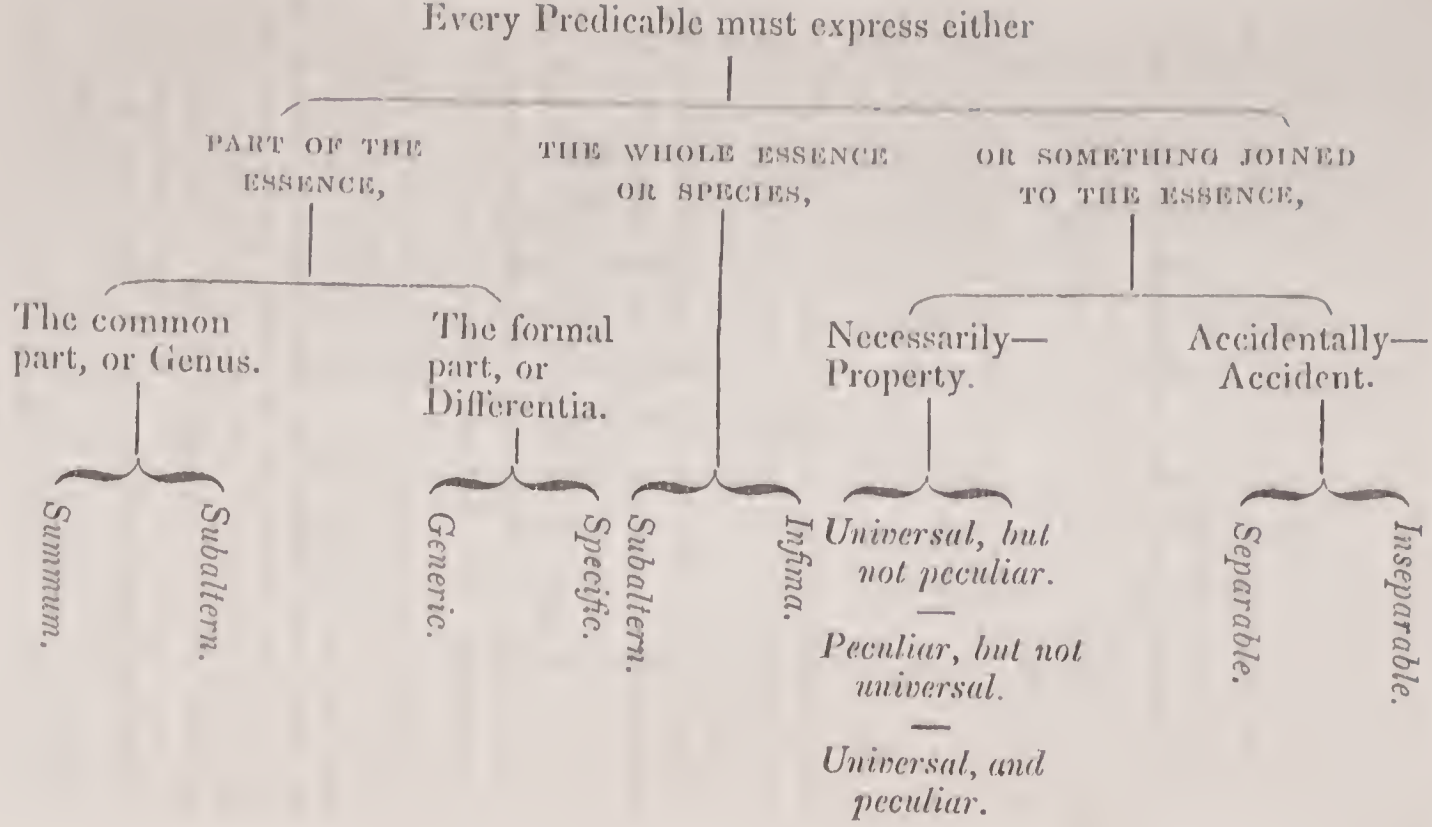
Species is predicated of things differing from each other in number.

Difference, property, and accident, are predicated of things differing as well in number as in species; because they have a relation either to a genus or a species.

Genus is called a *logical* whole, because it is that term which has the most extensive signification; for it may be affirmatively predicated of all its contained species. Species is a *metaphysical* whole, because the abstract notion denominated a species is a complex or aggregate idea; and is therefore dissolvible into its component parts.*

Genus and species are commonly said to be predicated in *quid* (τί), that is, to answer to the question "What?" as, "What is Cæsar?" Answer, "A man;" "What is a man?" Answer, "An animal:" Difference, in *quale quid*, ποῖόν τι: Property and accident, in *quale*, ποῖον.

* "But when logicians speak of species as a 'whole,' this is, properly, in reference to the genus and the difference; each of which denotes a part of that species which we constitute by joining those two together. But then it should be remembered, that a species is not a *predicable*, in respect of its genus and difference, (since it cannot be predicated of them,) but only in respect of the individuals or lower species of which it can be predicated."—WHATELY, ii. cap. 5, § 4.


Every Predicable must express either
PART OF THE ESSENCE,
THE WHOLE ESSENCE OR SPECIES,
OR SOMETHING JOINED TO THE ESSENCE,
The common part, or Genus.
The formal part, or Differentia.
Necessarily— Property.
Accidentally— Accident.
Summum.
Subaltern.
Generic.
Specific.
Subaltern.
Infima.
Universal, but not peculiar.
Peculiar, but not universal.
Universal, and peculiar.
Separable.
Inseparable.

The following are examples of the Predicables :—

Species,	Man.	Proposition.	Triangle.
Genus,	Animal.	Sentence.	Plane Figure.
Difference,	Reason, or, perhaps, Capacity of Religion.	Declarative.	Having three sides.
Property,	Use of Speech.	True or false.	Having three angles.
Accidents,	Englishman.	Long.	Equilateral.
	Red-coated.	Well-expressed.	Isosceles.
	Short.	Written in Greek,	Right-angled.
	Elegant.	&c	

SECTION V.

A GENUS is either the highest or a subaltern : A species is either a subaltern or the lowest. The highest genus is that which

is never a species; the lowest species, that which is never a genus. A subaltern genus, or species, is a genus when predicated of a lower species; as, "Every man is an animal:" but it is a species, when subjected to a higher genus; as, "Every animal is a substance."

*Summum genus** cannot be the subject of any cognate † genus. It is the highest and most extensive term that can be imagined. *Infima*, or *lowest species*, on the contrary, may be the subject of any cognate genus. It is the first common nature that results from any abstraction. All the

* The general heads, or *summa genera*, to some of which we may refer every term, are called predicaments, or categories. Archytas first taught the doctrine of them; and it was adopted by Aristotle from him. They are ten in number: 1. Substance; either *material* or *immaterial*. 2. Quantity; either *continuous*, as, lines, solids, or time; or *discrete*, as number, &c. 3. Quality; either *innate;* as, the natural faculties: Or *acquired*, as learning: Or *sensible*, as, form, sounds, colour. 4. Relation; including the two *correlatives* and the *principle* of the relation. 5. Action. 6. Passion; including the transition from one place to another, or from one state to another. 7. Place. 8. Time, past, present, future. 9. Posture, whether *quiescent* or *active*. 10. Habit or covering; *proper*, as, dress to man, skin to beasts; or *figurative*, as leaves to trees. The following are the Greek terms given to the categories by Aristotle, οὐσία, πόσον, ποῖον, πρὸς τι, ποῦ, πότε, κεῖσθαι, ἔχειν, ποιεῖν, πάσχειν. The categories are of especial importance to theologians, as furnishing innumerable topics of argument and illustration.

† By the term *cognate* genera are meant, those which are drawn by repeated abstraction from the same individuals: thus, *corporeal*, *animate*, *sensitive*, &c., are said to be cognate to *man*, and *inanimate*, *insensitive*, &c., to *stones*.

intermediate notions, and the words which express them, are denominated *subaltern*. Each is higher than some, and lower than others; each may be used as a predicate comprehending some terms less abstract, and as the subject included in some more abstract cognate terms; each is a genus in relation to some lower species, and a species in relation to some higher genus.

The following table represents these subdivisions:

Summum, or the highest genus, can never become a species.

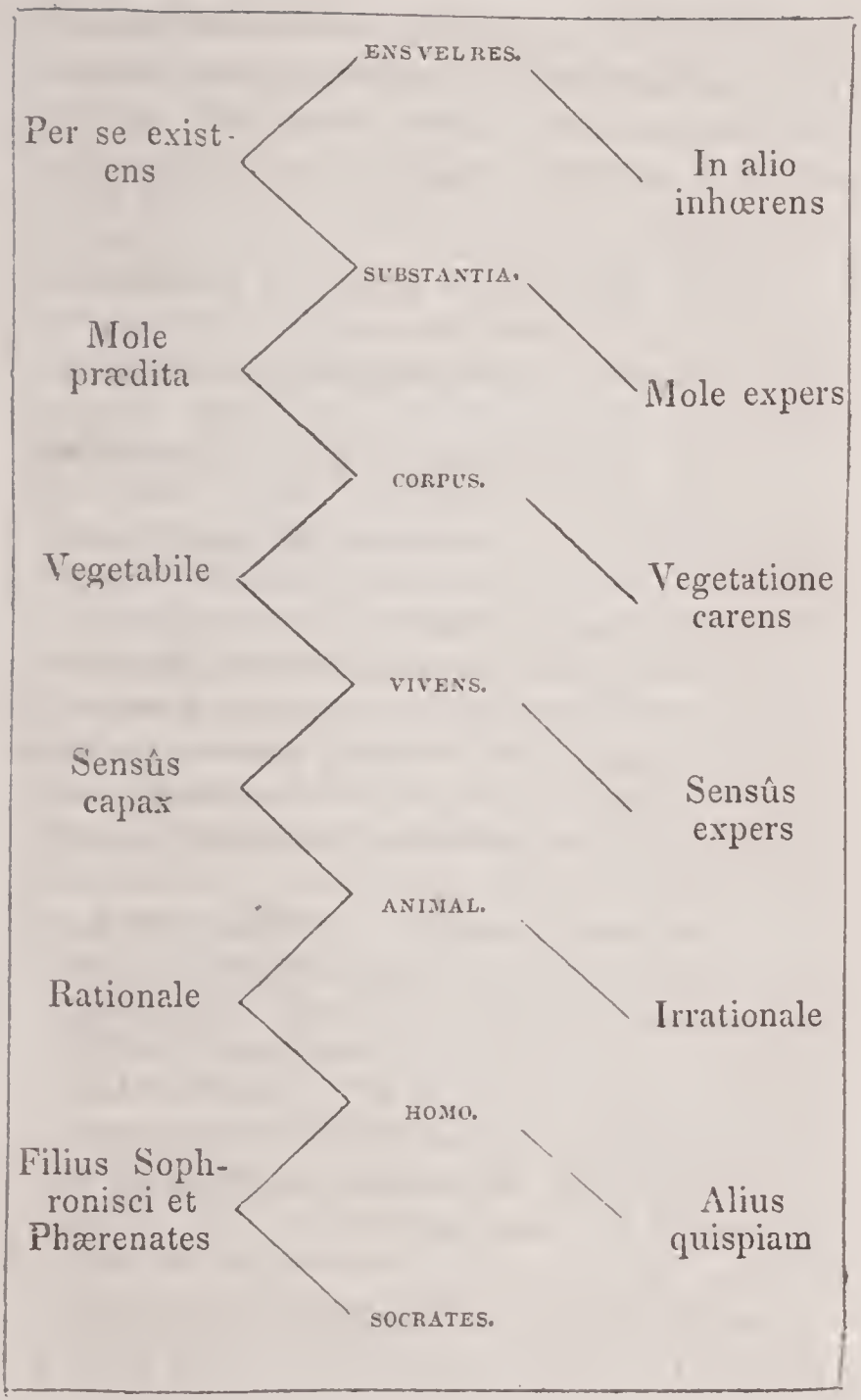
Infima, or the lowest species, can never become a genus.

Subaltern genus may be a subaltern species.

Subaltern species may be a subaltern genus.

There is, however, no *actual* difference between subaltern genus and subaltern species; the distinction is only relative. Thus the general name "predicable," and each of the classes of predicables, (namely, genus, species, &c.,) are *relative*; that is, we cannot say what predicable any term is, or whether it is any at all, unless it be specified of what it is to be predicated: For instance, the term "red" would be considered a *genus*, in relation to the terms "pink," "scarlet," &c.; it might be regarded as the *differentia*, in relation to "red rose;"—as the property of "blood,"—as an accident of "a house," &c.

What has been said on this subject may be appropriately illustrated by a scale, called the Porphyrian tree, because Porphyry adopted it for a different purpose.


ENS VEL RES.
Per se existens
In alio inhœrens
SUBSTANTIA.
Mole prædita
Mole expers
CORPUS.
Vegetabile
Vegetatione carens
VIVENS.
Sensûs capax
Sensûs expers
ANIMAL.
Rationale
Irrationale
HOMO.
Filius Sophronisci et Phærenates
Alius quispiam
SOCRATES.

Wherefore, a difference is either generical, which, added to the genus, constitutes a subaltern species; as, "sensible:" Or specific, which constitutes the lowest species; as, "rational."

Generic difference is so called, because that species which it constitutes may be considered as a subaltern genus; and, consequently, the generic difference can be affirmatively predicated of every species which is comprehended under it: Hence, it is predicated of things which differ from each other in species; for instance, *sensitive* is a generic difference to man, and it may be predicated of all animals as well as of man.

It is often difficult to distinguish the difference and the specific property; in cases where any doubt arises, we must carefully remember, that a property is only joined to an essence and results from it; whereas difference is the very constituting part of the essence.

A property, likewise, is either generical, which is necessarily joined to the essence of an highest or subaltern genus; as, "movable:" Or specific, which is joined to that of any lowest species; as, "risible."

The distinction of property, as generic or specific, is of the same nature with that of difference.

But a property is vulgarly said to be fourfold: 1. Such as belongs to one species

only, but not to every individual of it; as, "to be a grammarian:" 2. Such as belongs to every individual of a species, but not of that species only; as, "to have two feet:" 3. Such as belongs to one species and every individual, but not always; as, "to turn gray-haired:" 4. Such as belongs to every individual of one species only, and that always; as, "risibility." It is such a property as this which constitutes the fourth predicable.

It has already been hinted, (see the note from Archbishop Whately at page 11,) that the first and third of these classes cannot properly be termed properties, though usually denominated so by logicians. It is necessary to property, that it be universal, that is, applicable to all the individuals of a species; and it must belong to that species *necessarily*. This, however, cannot be said of the instance adduced by Aldrich, and copied into the text; for we have sufficient proof that some men are *not* grammarians. The third class, for the same reason, cannot be called a property;—a mere *act* is not a property.

5. Accident is also divided into two kinds; namely, *separable* and *inseparable*. Separable accident is so called, because it may be separated from the individual; as, "walking," "riding,"—that is, he may sit down, or recline. Inseparable accident is so called, because it is not separable from the individual; as, "to have been born in London." It might be quite accidental that a man should or

should not be born in a particular place; but when he has been so born, it is an accident inseparable from him for ever. Thus every past event is an inseparable accident; dress, posture, residence, &c., are separable.

SECTION VI.

To divide a common word is, to enumerate its several significations. So he is said to divide the word "animal," who says, "It signifies either a man or a brute." Division is therefore a distinct enumeration of several things signified under one common name.

This is analogous to the division of a whole into its parts; yet the two kinds of division, physical and logical, are totally distinct in their nature, and must not be confounded. The physical * division of a tree, for instance, consists of its distribution into *root, trunk, branches, leaves,* and *fruit,* of a book into *leaves, cover, back;* but the logical division of tree is into *fruit-tree, timber-tree,* &c. The criterion of logical division is this, that the whole divided can be predicated of each of its dividing parts. Thus "book" might be logically divided into *folios, quartos, octavos, &c.,*

* Singular nouns can only be divided physically; as, "James" can only be divided into his component parts, body, legs, arms, &c.

as it might be predicated of all folios, &c., that they were books.

But there is also another species of division, which is termed *metaphysical*. This is the analysis of the more simple ideas which form the component parts of a complex idea. Thus "repentance" has been divided into *conviction*, *contrition*, *confession*, and *forsaking of sin*. This process may be distinguished from logical division in the same way as physical division.

The rules of division are three :—

1. Let the members of the division severally contain less (be of a narrower signification) than the word divided.

Thus, if the word *hound* were divided into *greyhound*, *dog*, *bloodhound*, &c., this rule would be broken ; for the word *dog* would be more extensive than the whole divided, or *hound*.

2. Let them (that is, the members of the division) conjointly contain neither more nor less than the divided.

Therefore, we must be careful to ascertain that the *summum genus* may be predicated of every term placed under it, and of nothing else.

3. Let them (that is, the members of the division) be opposite, that is, not contained in each other.

Thus, if you were to divide *book* into *poetical*, *historical*, *folio*, *quarto*, *French*, *Latin*, &c., the

members of your division would not be opposed, but contained under each other; a *folio* might be a *French book*, &c. You must be careful, therefore, to keep in mind the *principle of division* with which you set out; as, whether you begin dividing books according to their *matter*, their *language*, or their *size*, &c.

SECTION VII.

DEFINITION follows division: It is a sentence explaining the word defined.

Literally, definition signifies "the laying down the boundary of any thing;" but in logic it is used to signify "a sentence explanatory of a term, so as to separate that term from any other, and thus limit or bound its signification." Definition has two objects in view, viz., either the conveying to the mind of the reader or hearer the precise idea which the defined term is intended to represent, or else the correction of any indistinct notion, which may have been wrongly assigned to it. The first object presupposes that the hearer does not at all understand the meaning of the word; the second, that it conveys an idea to his mind different from that which was intended.

Definition is either nominal, which tells the derivation of the word; or real, which explains the nature of the thing.

Nominal definition would be more properly defined, "that which tells the *signification* of the word." The definition in the text would imply that all nominal definitions were necessarily etymological. Such, however, is not the case, nor is it supposed that Aldrich thought so; for Wallis (from whose work his is almost entirely abridged) expressly asserts the contrary. Nominal definitions are such as are usually found in dictionaries. They are generally used when the word to be defined does not convey any idea whatever to the mind of the hearer, and when in consequence he does not understand the meaning of the term. "Emblem," defined as the sign of anything,—"decalogue," as the ten commandments,—"essence," as universal nature,—are instances of nominal definition. In many cases the *nominal* and *real* essence of any thing exactly coincide, viz., the idea conveyed by the word is exactly the same as the nature of the thing. Thus a triangle is "that which has three angles," which is both a nominal and real definition.

Again: A real definition is either accidental, which assigns the properties or accidents of the defined; or essential, which assigns those parts that constitute the essence of it.

In common conversation, accidental definition is termed *description*. It is more frequently used, perhaps, than any of the others, because we are often ignorant of the component or natural parts

of a thing, and still more so of the metaphysical parts. Thus we might define *tree*, "that which shoots out leafy branches;" *dog*, "an animal most faithful to man." Individuals, and the *summum genus*, can only be defined at all accidentally.

Lastly: An essential definition is either logical, which assigns the genus and difference; or physical, which assigns the really distinct parts of its essence; for the genus and difference are only distinguished by the understanding.

Physical definition is that which assigns the natural and constituent parts of each individual comprehended under the common name. These parts admit of real separation. Thus a *house* might be physically defined a "building composed of chimneys, roofs, ceiling, walls," &c.; a *horse*, "a being consisting of head, body, legs, and tail."

Metaphysical or logical definition is that which lays down the imaginary and metaphysical parts, which complete the abstract notion represented by the word. This, therefore, gives the genus and the difference. Logical definitions are the most perfect. *Belief*, defined to be assent produced by apparent credibility,—*Plant*, an organized being destitute of sensation,—*Proposition*, a declaratory sentence,—are instances of logical definition.

DEFINITION is
Nominal
Real { Accidental
Essential { Physical
Metaphysical

For example: *Homo* is defined nominally, *qui ex humo;* accidentally, an unfeathered, two-legged animal; logically, a rational animal; physically, a being consisting of an organized body, and a reasonable soul.

The rules of definition are three: 1. Let the definition be adequate to the defined.

That is, exactly equal; neither too extensive nor too limited. Thus, if "tree" were to be defined "a plant having leaves," such a definition would be too extensive; for many plants have leaves, which are not trees: In this case the definition explains a whole, when the term defined is but a part. On the other hand, if *religious person* was defined to be "one who holds the peculiar doctrines of Calvin," the definition would be too narrow, for there are many religious persons who reject those doctrines.

2. Let it be clearer and plainer than the defined.

Dr. Johnson's celebrated definition of "network" seems to offend against this rule; though it may be said in its defence, that words expressing simple ideas are of themselves and intrinsically

more intelligible, than those expressive of compound ideas.

3. Let it be contained in a fit number of proper (not figurative) words.

For from metaphorical words indistinctness and ambiguity arise; too great brevity and conciseness are apt to produce obscurity; and prolixity, on the other hand, causes confusion.

The following definitions err against this rule:

"Judgment is that operation, by which the mind, seated on a tribunal, passes sentence upon the agreement or disagreement of any two objects."

"A chariot is a vehicle."

"Astrology is that curious science, so much in vogue during the middle ages, which instructs mankind in the supposed influence which the stars possess over human circumstances and actions, and by which they rule and direct the world."

CHAPTER II.

OF PROPOSITIONS.

SECTION I.

THE second part of Logic treats of propositions, which is judgment expressed in words.

A regular proposition is an affirmative or negative sentence.*

It must be of this character, as far as regards the words; which is its essence.

Signifying either true or false.

That is, as to the sense, it must declare either a fact or not a fact: This is its property.

Not ambiguous; for then it would be sentences.

* "The sentence which expresses judgment is called 'a proposition;' now the agreement or disagreement of any two objects (the decision of which belongs to judgment) cannot be expressed in words, except by *affirmation*, or *negation*; namely, by some assertion; consequently, it is necessary, in order to *constitute* a proposition, that it must be a sentence which affirms or denies; therefore, its *affirming*, or *denying*, distinguishes it from any other kind of sentence, and is its difference."—HUYSHE'S *Logic*, p. 47.

That is, more than one sentence, and would admit of more constructions than one. That which is ambiguous has more than one meaning, and that which has more than one meaning must be in reality several propositions. Ambiguity arises from a dubious construction of sentence or equivocal sense of language, particularly in the use of negative and exceptive particles.*

Nor maimed; for then it would have no signification.

The ungrammatical expressions of illiterate people are logically unintelligible; because in them there is not a subject, copula, and predicate, expressed or obviously implied. It must be recollected, however, that some sentences, such as proverbs, which *appear* maimed, are not really so. They are incomplete in form, but not in sense. Of these, "A word to the wise," is an instance.

It (a proposition) is either categorical, which pronounces a thing absolutely; as, "Plato is happy:" Or hypothetical, which pronounces conditionally; as, "If he is wise, then he is happy."

A proposition is thus divided according to its substance; that is, its being a sentence.

The categorical proposition is divided again into two kinds, pure and modal. The pure cate-

* For instance, the particle "only;" as, "We *only* went by that road." "Brahmins eat *only* vegetables." "He *only* goes to show his skill." Here *only* is used in three different senses.

gorical proposition asserts simply, that the subject does or does not agree with the predicate; as, "Vice destroys health." The modal expresses the mode or manner in which the subject is contained in the predicate; as, "Vice *probably* destroys health." "It is not possible that an unholy man can enter heaven." If the proposition is qualified by words expressing necessity, possibility, impossibility, improbability, probability, &c., it is *modal.*

Hypothetical propositions are either *conditional;* as, "The man who disturbs the peace of a religious society will, if he do not heartily repent, have much to answer for at the last day:" Or disjunctive; as, "This result is the effect either of truth, which produces consistency without the writer's thought or care, or of a contexture of forgeries confirming and falling in with one another by a species of fortuity, of which I know no example." *Horæ Paulinæ,* viii., § 4.

Again: A proposition is either affirmative or negative; and is either true or false: This is called the quality of it.

Propositions are affirmative or negative by their *essential* quality, or property; and true or false by their *accidental* quality, or the quality of the matter.

Lastly: It (a proposition) is either universal; as, "All men are animals:" Or particular; as, "Some men are learned." This is called the quantity of it.

The quantity of a proposition is "the extent" to which the subject is contained in the predicate. Propositions are also divided according to their quantity into *singular* and *indefinite*. A singular proposition is one whose subject is either a proper name, or a common name with a singular sign; as, "Wesley was a man of unbounded energy. This man deserves the thanks of the community." These are reckoned as universals, because when we speak of an individual we mean the whole of him. Though singulars may, as Whately observes, be considered particulars, when some qualifying word is inserted, which indicates that you are not speaking of the whole of the subject; as, "Cæsar was not *wholly* a tyrant." Indefinite propositions are those which, with common terms for their subject, are not distinguished by any sign, to denote their universality or particularity. These must be decided according to their obvious sense; as, "Men are grammarians:" "Men die;" that is, *Some* men are grammarians: *All* men die.

Strictly speaking, therefore, there are but two kinds of propositions, considered in relation to their quantity; that is, universal and particular.

Observe: Propositions are divided

According to their Substance into

Categorical.	*Hypothetical.*
Pure.	Conditional.
Modal.	Disjunctive.

According to their QUALITY into

Accidental.	*Essential.*
True.	Affirmative.
False.	Negative.

According to their QUANTITY into

Universal
Particular.
Singular.
Indefinite.

SECTION II.

A is put for an universal affirmative proposition; E, for an universal negative; I, for a particular affirmative; O, for a particular negative.

In an universal affirmative the subject only is distributed: (That is, taken in its full sense:) In a particular negative, only the predicate: In a particular affirmative, neither term is distributed: In an universal negative, both.

Accidentally, the predicate of an affirmative is distributed, that is, taken in its widest sense; but

not necessarily. This accidental distribution takes place in the case of logical definitions; as, "Every man is a rational animal. Every rational animal is a man." But it must be remembered, that, in logic, we only regard the form of the expression, and not the subject-matter

The following are prepositions in A E I O:—

A

All mankind have sinned.
Christ tasted death for every man.
All mankind may be saved.
The meek shall inherit the earth.
Every religious man is also a true patriot.

E

No wicked man is happy.
The Duke has not returned.
Afflictions cannot be pleasing to human nature.

I

There have been men improperly appointed.
Books are profitable companions.
Some animals are graminivorous.

O

Some actions are necessarily displeasing to God.
Many animals are not graminivorous.
There are creatures which are not responsible.

The matter of a proposition (that is, the manner wherein the terms cohere) is either,

1. Necessary, when they essentially agree; or, 2. Impossible, when they essentially differ; or, 3. Contingent, when they agree or differ accidentally.

The truth or falsehood of a proposition depends upon the matter; hence,

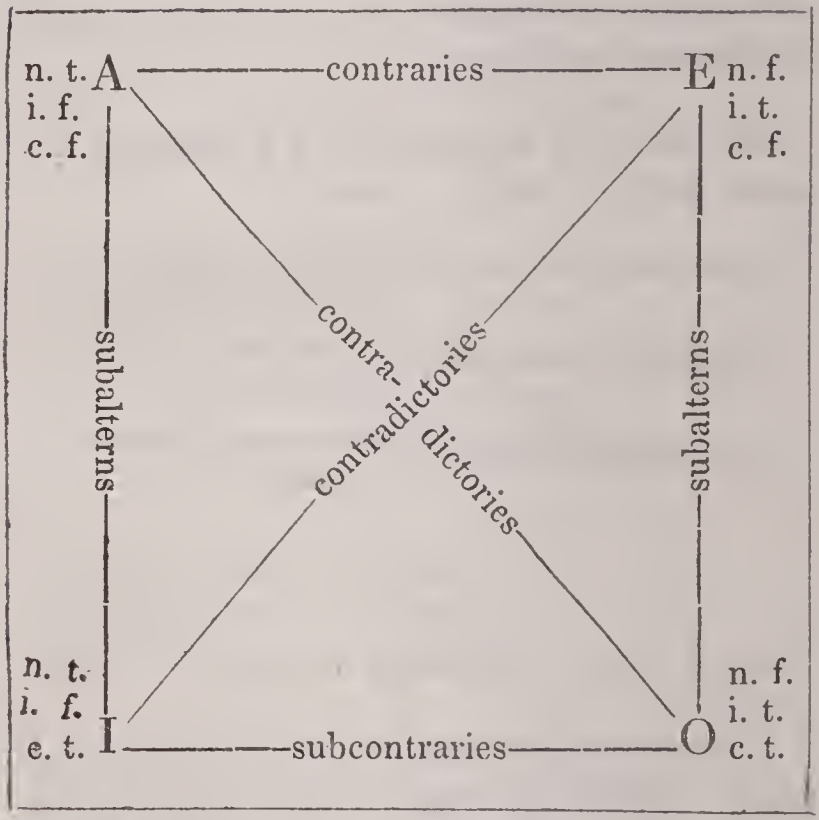
In necessary matter	{	Affirmatives,—true. Negatives,—false.
In impossible matter	{	Affirmatives,—false. Negatives,—true.
In contingent matter	{	Universals,—false. Particulars,—true.

SECTION III.

THOSE propositions are said to be opposed, which, having the same subjects and predicates, differ in quantity or quality, or both.

Opposition of propositions consists in the difference between any two categorical propositions which are composed of the same terms, but vary from each other in *quantity* only, (namely, when one is universal, and the other particular,) or in essential *quality* only, (when one is affirmative, and the other negative,) or in both *quantity* and *quality*.

The whole doctrine of opposition is contained in this scheme :—



Here A E I O, are four propositions marked according to their quantity and quality, which are, *t f*, true or false, as the matter of the proposition is *n i c*, necessary, impossible, or contingent. Hence, it is easy, 1. To enumerate the species of opposition, which are contradictory, contrary, subcontrary, and subaltern. 2. To define each. For example : Contradictory opposition is

that which is between two categorical propositions, differing both in quantity and quality, &c. 3. To lay down the rules of opposites as follow:—

(1.) Contradictory propositions are never both true, or both false; but always one true, the other false.

As, "All men are responsible; *some* men are *not* responsible." Here the propositions differ, both in quantity and quality, which is the greatest possible opposition.

But observe: Four things are required to make a contradiction; namely, to speak of the same thing, (i.) In the same sense: (ii.) In the same respect: (iii.) With regard to the same third thing: And, (iv.) At the same time. If any of these conditions be wanting, "is," and, "is not," may agree. For instance: (i.) "An opinion is and is not faith. It is a dead faith; it is not a living faith." (ii.) "Zoilus is and is not red-haired. He is, with respect to his head; he is not, with respect to his beard." (iii.) "Socrates is and is not long-haired. He is, in comparison of Scipio; he is not, in comparison of Xenophon." (iv.) "Solomon is and is not a good man. He is, in his youth; he is not, in his middle age."

(2.) Contrary propositions are never both true: But in the contingent matter they are both false.

As, "All men possess animal life; no man possesses animal life." "All men are black; no man is black." In the former case, one or the other proposition must be false. In the latter, of which the matter is contingent, both are false.

(3.) Subcontraries are never both false: But in the contingent matter they are both true.

As, "Some men have been martyred; some men have not been martyred." Here, the matter being contingent, both are true. "Some men are animals; some men are not animals." Here, one is true.

(4.) Subalterns are sometimes both true, sometimes both false; sometimes one true, the other false.

As, "All human laws are imperfect; some human laws are imperfect," &c. &c.

SECTION IV.

A PROPOSITION is said to be converted when its terms are transposed. This is done either, 1. Simply, when neither the quantity nor quality; or, 2. Accidentally, when the quantity is changed.

No conversion is useful in Logic, unless it be *illative;* that is, when the truth of the converse follows from the truth of the original proposition; as, "Earths are not metals; therefore, metals are not earths."

Every term distributed in the converted proposition must have been also distributed in the original one; for if this be not the case, a term will be used partially in the one proposition, and universally in the other; as, "All men are animals; all animals are men." Here a term (animals) is distributed in the converse, which was not in the first proposition: It is evidently false; for all animals are not *men;* some, for instance, are horses, cows, &c. Observe,

An universal negative, or a particular affirmative, may be simply converted, and the inference will hold. An universal affirmative must be converted accidentally, or the inference will not hold.

So A is converted accidentally, or by limitation, to I.

E is converted { Simply to E. / Accidentally, or by limitation, to O.

I is converted simply to I.

The following are examples of the conversion of true propositions in E.

Nothing morally wrong is politically right.
Nothing politically right is morally wrong.

No evil enterprise will be finally successful.

Nothing that is finally successful is an evil enterprise.

No infidel is a true lover of God.
No true lover of God is an infidel.

In A to I.

All mankind are subject to death.
Some beings subject to death are men.

All real piety promotes cheerfulness.

Something that promote cheerfulness is real piety.

All cows are graminivorous.
Some graminivorous animals are cows.

In I to I.

Some offences against the divine law are exempt from human cognizance.

Some practices exempt from human cognizance are offences against the divine law.

O can neither be converted *simply* nor *accidentally;* for since only one term is distributed, a term would necessarily be distributed after conversion, which was not so before. There is, however, a kind of conversion, called that of *negation* or *contraposition,* which consists in the transposition of the extremes, and the combination of the particle "not" with both of them; as, "Every duty is accompanied with a certain propriety; whatever is *not* accompanied with a certain propriety is *not* a duty." A may be converted in this manner; but it is most useful in the conversion of O. The

simple way of stating the proposition in O thus converted will be, to throw away the two "nots" that have been added to the proposition, and to unite the third, that it originally contained, with the predicate. The proposition will thus be reduced to I, or a particular affirmative; as, "Some professors of religion *are-not* Christians," is equivalent to, "Some professors of religion *are* NOT-Christians;" of which the simple converse is, "Some not-Christians are professors of religion;" that is, "Some persons who are not Christians," &c. This mode of conversion, though in form uncouth and useless, is, in fact, very frequently employed in argument.

CHAPTER III.

OF SYLLOGISMS.

SECTION I.

THE third part of Logic treats of syllogism, which is a discourse expressed in propositions.

Reasoning or discourse, having been defined to be the progress of the mind from one judgment to another, (an illustration, however, rather than a definition, of the word,) every decomplex word which expresses reasoning must consist of two parts; namely, that by means of which any thing else is proved, and which is termed the *antecedent* or *premises;* and that which is proved, called the *inference, conclusion, deduction,* or *collection.* The two former words, however, are generally used.

The difference between *inference* and *proof* is this:—In the former, I have the premises, and draw, or infer, the conclusion from them; in the latter, I have the conclusion, and prove it by bringing forward certain premises.

In order to form a syllogism, there must be a necessary connexion between the premises. If any one were to say, "William the Fourth is king of England;" "I stood in Venice on the Bridge

of Sighs;" nothing could be inferred, because these two propositions do not in the least depend one upon the other.

Consequence, logically considered, is the dependence of the consequent upon its antecedent, or the mode in which that dependence is shown. In the latter of these two senses it is here employed. There are two kinds of consequence, the *material* and the *formal.*

Material consequence denotes that the consequent is inferred from the antecedent merely from the general sense, meaning, or *matter* of the argument; as, "Some pleasures are allowable; therefore they are innocent."

Formal consequence denotes that the consequent is inferred from the antecedent, from the form of the expression. It gives the actual process of the mind in *forming*, or arriving at, the conclusion; as, "All innocent things are allowable; Some pleasures are innocent; Some pleasures are allowable." Logic takes cognizance of the formal consequence only, because the formal depends solely on the disposition of the terms, and their arrangement; and therefore can never be wrong; while, on the other hand, the material consequence, which looks to the *signification of the terms*, may frequently be liable to mistake.

Those who object to the formal consequence as tautological and unnecessary, and therefore laugh at the syllogism, should remember, that their derision may be applied with equal force to Grammar. They might just as well assert, that Grammar teaches nothing but absurdity, because

it instructs us in filling up the ellipses, which all writers and speakers use.

A syllogism is commonly defined, a sentence in which something being premised, something else necessarily follows from it.

It might be added,—*besides, and on account of, those things which are premised, or granted.* The truth of these premises being once allowed, the conclusion will follow, however the terms be changed. Thus, suppose we say,—

All *men* are *animals,*
John is *a man,*
John is an animal.

We may change the term *men* into any symbol,—say, A ; and *animals* into B ; and *John* into C :—yet the syllogism still holds good, and may be thus stated,

All A is B,
All C is A,
All C is B.

The inference must inevitably take place.

There are several kinds of syllogism ; but the simple categorical will be here treated of.

A categorical syllogism consists of three categorical propositions ; the two former of which are termed, the antecedent ; the third, the consequent ; which before it is proved is called a problem, or question, afterwards, a conclusion.

For instance :

The problem or question is, "Are our actions in our own power?"

The antecedent or premises are, "We are not praised and blamed for things not in our own power; while we are praised and blamed for our actions."

Conclusion, (which is illative, and expressed by some corresponding particle, such as, *therefore*, &c.,) "Our actions are in our own power."

Now, we syllogize, in order to prove, whether the two terms, or extremes of the problem or question, agree or do not agree with each other, or whether one is or is not the result of the other. This, however, can only be done by the following mode :—

We must make use of some third term, in order to find whether the subject and predicate of a question agree; and that, because of the following rules, on which the whole force of syllogism is founded :—

Terms are said to agree with each other, when one may be said of the other affirmatively; as, "Human nature is worthy of respect." Here the terms, *Human nature*, and, *A thing worthy of respect*, agree. So, on the other hand, the terms of the following proposition disagree :—"God has not any pleasure in the death of the wicked;" that is, there is a mutual disagreement between the Deity and any being who could be imagined delighting in the punishment of his creatures, however they might deserve it.

1. Those terms which agree with one and the same third agree with one another.

As, "All *men*, however elevated their state of grace, are liable to become 'castaways.'"

"I am a *man*; therefore," &c. Here *man* is the middle term; and because the extremes agree with it, they agree with each other.

2. Those terms, one of which agrees, the other disagrees, with one and the same third, differ from one another.

As, "No *man* is naturally righteous;
I am a *man*;
Therefore, I am not naturally righteous."

3. Those which do not agree with one and the same third do not agree with one another.

As, the terms *man*, and *plants*. There is no third term which will agree with both those; therefore you cannot prove their agreement; that is, you cannot say, "Men are plants."

This canon, however, properly belongs to the first.

A fourth canon is adduced by most Logicians, namely,—Those terms, of which there is not any idea comprised in the *one*, which is not also comprised in the *other*, do not differ from each other. This canon may be termed an appendage to the second.

SECTION II.

From these general principles the particular rules of syllogism are thus reduced:—

1. In every syllogism there are three, and only three, terms; two in the conclusion; and these can neither be proved to agree nor to differ, without one, and only one, third term.

The conclusion to be proved, or the question, necessarily contains two terms; and the process of proof requires their comparison, with one additional term, and no more. Thus the following sentence, where there are more than three terms, is not a syllogism:—

> Themistocles governed the world,
> His wife governed Themistocles,
> Her child governed his wife,
> Therefore, her child governed the world.

So the ancient law of an eastern nation, (the Circassians, I think,) on the exaction of blood for blood, was a kind of false syllogism with more than three terms. This people argued:—"This man has killed my brother; this man's father has begotten him; now, had not he begotten a son, my brother would not have been killed; therefore, execute the father."

On the other hand, however, we must not condemn an argument, when the terms are reducible to three, though, apparently, they may be more.

But each of the three terms should, for the sake of convenience and perspicuity, have a distinguishing and appropriate name. Hence,

The predicate of the question is styled the major term; the subject, the minor; the third term, the medium or middle term. For the predicate is commonly more comprehensive than the medium, as the medium is than the minor.

Therefore, the third term was called middle, as being mediate between the two others.

2. In every syllogism there are three, and only three propositions; two premises, in which the medium is compared with the two other terms severally; the major proposition, in which it is compared with the major term; the minor proposition, in which it is compared with the minor term; and the conclusion, in which both those terms stand together.*

The major premiss is sometimes called the *proposition*, and the minor the *assumption*. As,

* The middle term must not enter the conclusion; for then we should be proving *idem per idem*. The following is an instance of an apparent syllogism of this kind:—

Some really honourable men are Christians:
All persons that deserve our esteem are Christians:
Therefore, Christians are really honourable men.

Major premiss or Proposition.	All men are mortal.
Minor premiss or Assumption.	I am a man.
Conclusion.	I am mortal.

Here the major term is *mortal.*
minor *I*
middle *man.*

In the most perfect form of syllogistic reasoning, the major premiss is usually a general principle, which every one will allow; the minor is, on the other hand, *an assumption*, that is, it is assumed, with a particular reference to a certain conclusion. Almost all controversy arises from a difference of opinion about *minor premises*; men will generally grant to an opponent his general principle; but they will not allow that this is a case in point; that is, they do not concede *the minor.*

3. An equivocal medium proves nothing. For this is not one and the same third.

The following is an instance:—

A furious bull is a dangerous animal:
Luther was attacked by a furious bull (from Rome):
Luther was attacked by a dangerous animal.

4. An undistributed medium is equivocal.

For instance: If the middle term be not taken

in its widest sense in one or other of the premises, then the terms of the conclusion will be compared with it, when employed only partially. Consequently, nothing can be proved; as,

White is a colour,
Black is a colour,
Black is white;

where "a colour" is not distributed.

Therefore, 5. The medium must be distributed in one of the premises.

6. The process from a term not distributed in the premiss to the same distributed in the conclusion, is irregular.

That is, in other words, an universal assertion concerning a term cannot be admitted in the conclusion, from a premiss where that term has been only partially understood. The following syllogism, therefore, is erroneous :—

All countries surrounded by the sea are insular :

Some barren lands are countries surrounded by the sea :

All barren lands are insular.

Here there is an *illicit process* of the *minor :* For it should be observed, that the error in these apparent syllogisms is called an illicit process; by which is meant, the employing a term universally in the conclusion which was only partially employed in the premiss.

7. Negative premises prove nothing; for

in this case a third is brought, from which both the terms differ.

As,

No wicked man shall enter the kingdom of heaven:

No one that leads a holy life is wicked:—

From these premises we cannot infer any conclusion. Whether the extremes agree or disagree, is totally uncertain.

8. If either of the premises is negative, so is also the conclusion.

By the last rule it was determined, that if one premiss be negative, the other must necessarily be affirmative; that is, if one extreme disagrees with the middle, the other must agree with it; but if one extreme agree, and the other disagree, with the middle, then, by a former canon, they disagree with each other. This disagreement constitutes a negative conclusion; as,

Nothing opposed to the will of God is politically expedient:

The worship of images is opposed to the divine will:

Therefore, the worship of images is not politically expedient.

9. And if the conclusion be negative, so is also one of the premises.

If the conclusion be negative, then the extremes must disagree; then one must have differed from

the middle; which would require a negative premiss; as,

No true philosopher indulges anger or caprice:
Socrates was a true philosopher:
Therefore, Socrates did not indulge anger or caprice.

10. Particular premises prove nothing.

For there will be in every syllogism with two particular premises, an illicit process of the major; as,

Some logicians are not men of strong minds;
Some Englishmen are men of strong minds;
Some Englishmen are not logicians.

11. If either of the premises be particular, so is also the conclusion.

If the conclusion be universal, there is an illicit process of the minor term; as,

Upright men are worthy of respect,
Some men of mean attainments are upright,
Therefore, all men of mean attainments are worthy of respect.

12. A particular conclusion may be drawn from an universal premiss; for what may be predicated of an universal may be predicated also of all the particulars contained under it.

These rules may be considerably reduced; and from them we may derive the following plain and inartificial order for the examination of a syllogism: 1. Count the propositions and terms. 2. See that the middle is once distributed. 3. Observe whether there are any illicit processes. And, 4. Look to the rules about negatives.

But arguments generally are not expressed in a syllogistic form: When, therefore, you meet with one which appears *formally* illogical, as well as *materially* so, reject all the needless verbiage with which weak and unsound writers frequently bolster up their sophistry, and reduce the argument to a simple syllogism. Whether the writer has formed good premises, must be left to the investigation of individuals, in connexion with the sciences proper to the particular subject discussed; and Logic will teach you how far his conclusion is valid.

SECTION III.

It remains to inquire, how many ways three categorical propositions can be joined together, so as to compose a regular syllogism. In which inquiry, two things are to be considered:—

1. The mood, or the variation of the propositions according to their quantity and quality.

A mood is rather the determination of a proposition according to its quantity and quality; e. g.,

No man is infallible,
The pope is a man,
The pope is not infallible.

This syllogism is in the *mood* E A E.

2. The figure, or the manner of comparing the medium with the terms of the conclusion.

There are sixty-four moods: For the major of a syllogism may be either A, E, I, or O. To each of these a fourfold minor may be annexed, whence arise sixteen pairs of premises; and to each of these sixteen, a fourfold conclusion may be subjoined, thus :—

AAA. AAE. AAI. AAO:	AEA. AEE. AEI. AEO:
AIA. AIE. AII. AIO:	AOA. AOE. AOI. AOO:
EAA. EAE. EAI EAO:	EEA. EEE. EEI. EEO:
EIA. EIE. EII. EIO:	EOA. EOE. EOI. EOO:
IAA. IAE. IAI. IAO:	IEA. IEE. IEI. IEO:
IIA. IIE. III. IIO:	IOA. IOE. IOI. IOO:
OAA. OAE. OAI. OAO:	OEA. OEE. OEI. OEO:
OIA. OIE. OII. OIO:	OOA. OOE. OOI. OOO.

But sixteen of these are excluded by the seventh rule, because their premises are negative; namely, EEA, EEE, EEI, EEO: EOA, EOE, EOI, EOO: OEA, OEE, OEI, OEO: OOA, OOE, OOI, OOO: Twelve, by the tenth rule, because their premises are particular; namely, IIA, IIE, III, IIO: IOA, IOE, IOI, IOO: OIA, OIE, OII, OIO: Twelve, by the eighth rule, because one of the premises is negative, and not the conclusion: AEA, AEI, AOA, AOI: EAA, EAI: EIA,

EII: IEA, IEI: OAA, OAI: Eight, by the eleventh rule, because one of the premises is particular, and not the conclusion: AIA: AIE: AOE: EIE: IAA: IAE: IEE: OAE: Lastly: Four, by the ninth rule, because the conclusion is negative, but neither of the premises: AAE: AAO: AIO: IAO.

Therefore, fifty-two moods are excluded, many of which offend against several rules. There remain twelve, which only are useful in syllogism: AAA, AAI: AEE, AEO: AII: AOO: EAE, EAO: EIO: IAI: IEO: OAO.

SECTION IV.

The figures of syllogism are four: For the medium is either subjected to the major, and predicated of the minor, term, which is the first figure; or predicated of both, which is the second; or subjected to both, which is the third; or predicated of the major, and subjected to the minor, which is the fourth; as appears in the following scheme, wherein A is the major term, B the medium, C the minor:—

Fig. 1.	Fig. 2.	Fig. 3.	Fig. 4.
B. A.	A. B.	B. A.	A. B.
C. B.	C. B.	B. C.	B. C.
C. A.	C. A.	C. A.	C. A.

It must be remembered, that the major premiss should be placed first in the syllogism, and the minor second; for if this order be not observed, the *formal* rules will not hold good; thus,

Man is an animal,
All animals are mortal,
Man is mortal.

The premises of this syllogism, to render it logically correct, must be transposed.

Wherefore, of the twelve remaining moods, each figure excludes six; namely,

1. Because of the undistributed medium, the first two, IAI : OAO; the second, four, AAA : AAI : AII : IAI; the fourth, two, AII : AOO.

2. Because of the irregular process of the major term, the first figure excludes four moods, AEE, AEO, AOO, IEO; the second, two, IEO, OAO; the third, four, AEE, AEO, AOO, IEO; the fourth, two, IEO, OAO.

3. Because of the irregular process of the minor term, the third, two, AAA, EAE; the fourth, two, AAA, EAE.

There remain twenty-four conclusive moods, six in each figure :—

The First Figure.

b A r Every wicked man is miserable :
b A Every tyrant is a wicked man :
Therefore,
r A Every tyrant is miserable.

c E No discontented man is a happy man:
l A Every wicked man is discontented :
Therefore,
rEnt No wicked man is a happy man.

d A All the faithful are dear to God :
r I Some that are afflicted are faithful :
Therefore,
I Some that are afflicted are dear to God.

f E No virtue is an evil :
r I Some difficult things are virtues :
Therefore,
O Some difficult things are not evils.

A Every wicked man is miserable :
A All tyrants are wicked men :
Therefore,
I Some tyrants are miserable.

E No discontented man is a happy man :
A Every wicked man is discontented :
Therefore,
O Some wicked men are not happy men.

The Second Figure.

c E s No happy man is discontented :
A Every wicked man is discontented :
Therefore,
r E No wicked man is a happy man.

c A m Every wicked man is discontented :
E s No happy man is discontented :
Therefore,
t r E s No happy man is a wicked man.

f E s No evil is a virtue :
t I Some difficult things are virtues :
Therefore,
n O Some difficult things are not evils.

b A r Every good man is afflicted :
O k Some rich men are not afflicted :
Therefore,
O Some rich men are not good men.

E No happy man is discontented :
A Every wicked man is discontented :
Therefore,
O Some wicked men are not happy men.

A Every wicked man is discontented :
E No happy men are discontented :
Therefore,
O Some happy men are not wicked men.

The Third Figure.

d A r All the faithful are dear to God:
A p All the faithful are afflicted:
Therefore,
t I Some that are afflicted are dear to God.

d I s Some faithful are afflicted:
A m All the faithful are dear to God:
Therefore,
I s Some that are dear to God are afflicted.

d A t All the faithful are dear to God:
I s Some of the faithful are afflicted:
Therefore,
I Some that are afflicted are dear to God.

f E l No virtue is an evil:
A p All virtues are difficult:
Therefore,
t O n Some difficult things are not evils.

b O k Some Christians are not true believers:
A r All Christians profess faith:
Therefore,
d O Some who profess faith are not true believers.

f E r No virtue is an evil:
I s Some virtues are difficult:
Therefore,
O n Some difficult things are not evils.

The Fourth Figure.

br A m Every tyrant is a wicked man :
A n Every wicked man is miserable :
Therefore,
t I p Some that are miserable are tyrants.

c A m Every wicked man is discontented :
E n No discontented man is a happy man :
Therefore,
E s No happy man is a wicked man.

d I m Some afflicted are faithful :
A r All the faithful are dear to God :
Therefore,
I s Some that are beloved of God are afflicted.

f E s No evil is a virtue :
A p All virtues are difficult :
Therefore,
O Some difficult things are not evils.

fr E s No evil is a virtue :
I s Some virtues are difficult :
Therefore,
O n Some difficult things are not evils.

A Every wicked man is discontented :
E No discontented man is a happy man :
Therefore,
O Some happy men are not wicked men.

The five moods, in which a particular is inferred where an universal might, have no par-

ticular name, and are not considered to be of any practical use. *

* The following Latin verses may serve as a *memoria technica*, and assist the mind in remembering the various forms of correct argument, and the rules of reduction that follow:—

Barbara, Celarent, Darii, Ferioque, prioris:
Cesare, Camestres, Festino, Baroko, secundæ:
Tertia, Darapti, Disamis, Datisi, Felapton,
Bokardo, Ferison, habet: Quarta insuper addit
Bramantip, Camenes,, Dimaris, Fesapo, Fresison:
Quinque Subalterni, totidem generalibus orti,
Nomen habent nullum, nec, si bene colligis, usum.

The word *Fakoro* is sometimes used instead of *Baroko*, in the second figure; and *Dokamo*, instead of *Bokardo*, in the third.

The proper quantity and quality for each proposition in each mood is as follows.

First Figure must have
Universal Major,—Else the middle not distributed.
Affirmative Minor,—Else illicit process of the major, from which you may infer
Any Conclusion.

Second Figure must have
Universal Major,—Else illicit process of the major.
Any Minor, (but one premiss must be negative,)
Negative conclusion,—Because of a negative premiss.

Third Figure must have
Any Major,
Affirmative Minor,—Else illicit process of major.
Particular Conclusion,—Else illicit process of minor.

Fourth Figure must not have
O for a Major,—Else illicit process of major.
O for a Minor,—Else middle undistributed.
A for a Conclusion,—Else illicit process of minor.

This may be remembered by the *memoria technica* "Un-aff-an;—Un-an-neg;—An-aff-part;—not O, not O, not A."

SECTION V.

The four first of these moods need nothing to make the force of the inference evident, but what is expressed in the premises; whereas all the rest do. These, therefore, are styled perfect, those imperfect, moods.

The first figure is the most conclusive and satisfactory; because the celebrated axiom of Aristotle, called by the schoolmen "the *dictum de omni et nullo*," which is the test of all sound argument, may be directly applied to it. The *dictum* is thus explained by Aldrich:—"*Quod prædicatur universaliter de alio, (id est, de termino distributo,) sive affirmativè, sive negativè, prædicatur similiter de omnibus sub eo contentis;*" namely,—"That which is predicated universally of something else, (that is, of a term distributed,) whether affirmatively, or negatively, may be similarly predicated of every thing contained under it."

It will be a useful lesson for the logical inquirer to trace the *principles* of the four figures.

An imperfect mood is said to be reduced, when it is changed into a perfect one; in order to show evidently, either that the conclusion is so, which is termed ostensive reduction; or, that it cannot be otherwise, which is called reduction *ad impossibile*.

Now, when we change a syllogism in one figure to an equivalent syllogism in another figure, which is reduction, we may not introduce any new term or proposition; but we must content ourselves with the two premises which are granted to us. But these premises may be *illatively* converted, in order to demonstrate the absolute necessity of the inference more clearly. We say, *illatively* converted, or transposed, because the truth of any proposition necessarily implies that of its illative converse. The inference is most clearly stated in the first figure; therefore we reduce the other figures to the first.

Ostensive reduction is the direct mode of proof; that is, we deduce from the premises originally given either the same conclusion or one equivalent to it,—one which may be made the same by illative conversion; as,

All thieves deserve condign punishment:
All thieves are wicked men:
Therefore, some wicked men deserve condign punishment.

This is a syllogism in *Darapti*. This is converted into *Darii*, by accidental conversion, or conversion by limitation, as it is sometimes called; as,

All thieves deserve condign punishment:
Some wicked men are thieves:
Therefore, some wicked men deserve condign punishment.

Take another instance in *Camestres*:—

All real religion is a religion of the heart:

The religion of a hypocrite is not a religion of the heart :

Therefore, the religion of a hypocrite is not real religion.

If you simply convert the minor premiss, and then transpose them both, the syllogism will be reduced to *Celarent* :—

No religion of the heart is the religion of a hypocrite :

All real religion is a religion of the heart :

Therefore, the religion of the heart is not the religion of a hypocrite.

Or, by illative conversion, "The religion of the hypocrite is not a religion of the heart."

Reductio ad impossibile is that by which we prove, (in the first figure,) not directly that the original conclusion is true, but that it cannot be false ; that is, we admit the falsity of a conclusion, and then show, by tracing such a concession to its inevitable consequences, how absurd and impossible it is. Let us take an example in *Baroko* :—

b A The contented are wealthy :
r O k Some men are not wealthy :
O Some men are not contented.

In the place of the minor, to which is attached the symbol k, which will be presently explained, substitute the contradictory of the conclusion ; the new premises will then be in *Barbara* :—

The contented are wealthy,
All men are contented,
All men are wealthy.

But the original premises are granted to be true, therefore their contradictory is false; the new conclusion is a contradictory of the original minor, therefore it is false. But it was correctly inferred in *Barbara;* therefore, one of the premises is false: This cannot be the major; for that, by hypothesis, was true; therefore, it must be the minor: But this new minor is the contradictory of the original conclusion, therefore, if it be false, it is contradictory, that is, the original conclusion is true. Q. E. D.

Some have supposed, that because this mode of reduction is usually applied to *Bokardo* and *Baroko* only, therefore it is not equally applicable to the other moods. This, however, is not the case; any mood may be reduced by reduction *ad impossibile,* as well as by ostensive reduction.

The method of reducing is taught by the names of the moods, in which the vowels are the propositions marked with their quantity and quality: The initial consonants, b, c, d, f, show to what mood in the first figure the reduction is to be made; s, p, show that the proposition which the preceding vowel stands for, is to be converted either simply or *per accidens;* m, that the premises are to be transposed; [m—*mutatio,* or change;] k, that the reduction is to be *ad impossibile;* that is, that for the premiss to whose sign it

adheres, the contradictory of the conclusion is to be placed, which being done, you will have, in the first figure, a conclusion, either the same with that premiss, or one convertible into it, or its contradictory. Thus :—

1. c E s No happy man is discontented :
A r Every wicked man is discontented :
Therefore,
E No wicked man is a happy man.

Reduce this to

c E No discontented man is a happy man :
l A Every wicked man is discontented :
Therefore,
r E nt No wicked man is a happy man.

2. d I s Some good men are Papists :
A m Every good man is saved :
Therefore,
I Some that are saved are Papists.

Reduce this to

d A Every good man is saved :
r I Some Papists are good men :
Therefore,
I Some Papists are saved.

3. b A r Every good man is afflicted :
O k Some rich men are not afflicted :
Therefore,
O Some rich men are not good men.

Reduce this to

b A r Every good man is afflicted .
b A r Every rich man is a good man—
A

The manifest falsehood of which proves as manifestly the truth of its contradictory.

SECTION VI.

From what has been said, it is evident, that there can be no more moods than these twenty-four. They are therefore mistaken, who, having transposed the premises, or converted the conclusion, of a syllogism, imagine that they have found out a new mood or figure: To convince them of which, you need only refer to the definition of a mood, a figure, of a major, a minor, a middle term, and of a major and minor proposition.

Observe, an universal affirmative conclusion can be deduced only from two universal affirmative premises, that is, *Barbara* in the first figure.

Universal negatives may be proved by the first figure in *Celarent;* by the second in *Cesare* and *Camestres;* in the fourth by *Camenes.*

Particular affirmatives may be proved by the first figure in *Darii,* and *Barbara;* by the third, in *Darapti, Disamis,* and *Datisi;* by the fourth in *Bramantip* and *Dimaris.*

Particular negatives may be proved by the first figure in *Ferio;* by the second in *Festino, Baroko:* by the third, in *Felapton, Bokardo,* and *Ferison;* by the fourth, in *Fesapo and Fresison;* and by the subalternates of universal negatives; thus *Camestres* will prove *Camestros.*

But there are some sorts of arguments which, though not strictly regular, yet need not be wholly rejected. Such are,

1. An Enthymeme, one premiss of which is wanting; whether the major or minor, the conclusion shows; as, "He is a good man: Therefore, he is happy."

Enthymemes are abridged forms of argument, commonly used to avoid the redundance which a strictly syllogistic course of argumentation would involve. In these, the major premiss is most frequently suppressed, because it generally consists of an universal principle which every one will grant; as in the following instance, from Hooker: "The Father by the Son did create and doth guide all; wherefore Christ hath supreme dominion over the whole universal world." Here the major premiss is suppressed.

Sometimes, however, the minor is suppressed, when it is obvious and apparent; or when particular prominence is to be given to the major; as, "Whatever induces a habit of a close and regular reasoning ought to be studied by every theologian; Logic, therefore, should be so studied."

The first figure admits of enthymeme more readily than any other.

Sometimes the whole argument lies in one sentence; as, "Being mortal, do not bear immortal hatred."

This is called an enthymematic sentence.

2. An induction, in which what is granted of several particulars is then affirmed universally; as, "This, and this, and that loadstone attracts iron: Therefore, every loadstone does." It is therefore a sort of enthymeme; a syllogism in *Barbara*, whose minor is understood.

In forming our notion of induction, we must be careful to distinguish between that which merely signifies the process of investigation and of collecting facts, and the deducing an inference from those facts. It is in the latter sense that it is used in the present instance. It would be impossible in an elementary treatise like the present, to enter into a defence of the syllogism, as including induction; a fact frequently denied. We must content ourselves with generally stating, according to Archbishop Whately, "that in the process of reasoning by which we deduce, by our observation of certain known cases, an inference with respect to unknown ones, we are employing a syllogism in *Barbara* with the *major** premiss

* Not the *minor*, as is stated by Aldrich and in the text; the instance he gives will sufficiently prove this: "This,

suppressed;" that being always substantially the same, as it asserts, that "what belongs to the individual or individuals we have examined, belongs to the whole class under which they come." For example, from an examination of the history of several tyrannies, and finding that each of them was of short duration, we conclude, that "the same is likely to be the case with all tyrannies;" the suppressed major premiss being easily supplied by the hearer; namely, "that what belongs to the tyrannies in question is likely to belong to all." "Induction, therefore," Whately proceeds, "so far forth as it is an *argument*, may of course be stated syllogistically; but so far forth as it is a *process of inquiry* with a view to obtain the premises of that argument, it is, of course, out of the province of Logic." "The latter," it is added, "is the original and strict sense of the word."

3. An example, wherein what is granted of a known instance is presumed of an unknown that resembles it; as, "Sylla and Marius tore the commonwealth: Therefore, so will Cæsar and Pompey." Here also the *minor* * is understood: Therefore, the conclusion is only presumed, not proved.

and that, and the other magnet attract iron; therefore, so do all." If this were, as he asserts, an enthymeme whose *minor* is suppressed, the only premiss which we could supply to fill it up, would be, "All magnets are this, that, and the other;" which is manifestly false. On this subject Dr. Whately has several valuable observations.

* It should be the major.

Example differs from induction in two respects; with regard to the *premises*, for while induction requires several singular instances to be enumerated, example requires only one; and with regard to the conclusion, which is universal in induction, either strictly or morally; but only singular and probable, with certain limitations, in example. Example is called by Aristotle *oratorical induction;* and it is frequently a source of error and fallacy. The probability of its truth is of course increased by the accumulation of singular facts, because then it approaches to induction.

4. A sorites, in whose antecedent every preceding term is subjected to the following, till you come from the subject of the conclusion to the predicate of it; as, "Every man is an animal; every animal is a living creature; every living creature is a substance: Therefore, every man is a substance." In a sorites, as many syllogisms are understood, as there are intermediate propositions.

The term "sorites" is derived from the Greek word *σώρος, a heap.* It will admit of only one negative premiss, which must be the last, and of only one particular premiss, which must be the first.*

* To these may be added the prosyllogism; which is a proposition introduced to confirm the truth of some premiss, and is therefore appended to it; as, "All religion *(if, indeed, it be real and sincere)* will render a man happy."

CHAPTER IV.

OF HYPOTHETICAL SYLLOGISMS.

SECTION I.

That is a hypothetical syllogism, in which one or more of the propositions are hypothetical. The most common (of which alone we now speak) is that whose major proposition is hypothetical.

A hypothetical proposition is either conditional; as, "If he is wise, he is happy;" or disjunctive; as, "Either it is day or night."

In a conditional proposition, the condition itself is called the antecedent; the assertion, the consequent; the connexion between them, the consequence.

The rules of conditional propositions are three:—

1. If the antecedent be granted, so is the consequent.

2. If the consequent be taken away, so is the antecedent.

3. Nothing can be inferred either from the taking away the antecedent, or granting the consequent.

There are therefore only two terms of conditional syllogism:—

The constructive; as,

If CD, then KΔ: But CD: Therefore KΔ.

And the destructive; as,

If CD, then KΔ: But not KΔ: Therefore not CD.

SECTION II.

Every conditional syllogism is either equivalent to a categorical, or wholly to be rejected. For in every conclusive conditional, there is a categorical implied, in which the same argument would prove the same conclusion.

For in all hypothetical syllogisms, the major proposition consisting of two categoricals, the minor is either one of these, or the contradictory to it, in order to infer either the other, or its contradictory. In either case, an enthymeme will be proposed,

whose force lies in the conditional proposition, and which is not conclusive, unless from that proposition there can be drawn a completory, that is, the premiss which is wanting in an enthymeme, to complete the syllogism.

Now, as an enthymeme is only one premiss with the conclusion of a syllogism, it has three, and only three, terms. Suppose two of them are D and Δ, and C the third term. The other premiss, whose terms are D and Δ, is wanting. Hence it follows, that according to the various disposition of the terms, there are four forms of enthymeme; each of which will admit of a twofold completory, as in this scheme:—

THE ENTHYMEME. THE COMPLETORY. D. Δ. Δ. D.

CD.	therefore CΔ.	The Major	in Figure I.	in Figure II.
DC.			in Figure III.	in Figure IV.
CD.	therefore ΔC.	The Minor	in Figure IV.	in Figure II.
DC.			in Figure III.	in Figure I.

H 2

Wherefore, as there are twenty-four possible moods of categorical syllogism, and fourteen unexceptionable ones; and as each figure may be applied twice, to complete an enthymeme; there will be forty-eight possible ways of completing it, twenty-eight unexceptionable. And as many ways as an enthymeme may be completed, so many, and no more, a man may argue with a syllogism, whose major is conditional.

SECTION III.

The directions given for conditional propositions, serve equally for disjunctive. For any disjunctive is easily turned into a conditional. For instance, if it runs thus:—

It is either day or night.
But it is day: Therefore it is not night.
But it is night: Therefore it is not day.
It is not day: Therefore it is night.
It is not night: Therefore it is day.

Instead of this, it is easy to say,

If it is day, then it is not night.
If it is night, then it is not day.

If it is not day, then it is night.
If it is not night, then it is day.

SECTION IV.

THERE remains only a kind of redundant hypothetical syllogism, called a dilemma, which proposes two, or more, things to your choice, by accepting either of which you lose the cause. Such is that of Bias: "If you marry a beautiful woman, she will be κοινὴ; if an ugly one, ποινή. Therefore, marry none."

A dilemma is of no force, unless, 1. One or the other part must be accepted. 2. Either one or the other prove the point. And, 3. It cannot be retorted. If Bias had observed these things, he would have been less pleased with his own; for it fails in every particular. For, 1. A wife may neither be beautiful nor ugly. Therefore, neither part of the dilemma need be accepted. 2. Neither is every beautiful woman common, nor every ugly one, a plague. Therefore, neither part of it proves the point. 3. It may be retorted thus: "If I marry the one, at least she will not

be common; if the other, she will not be a plague."

A dilemma is only a kind of negative induction, in which the major proposition is conditional; as, "If at all, then thus, or thus, or thus." To turn this into a categorical syllogism, is so easy, it needs no direction.

A

COMPENDIUM OF LOGIC.

BOOK II.

CHAPTER I.

OF SYLLOGISM, AS TO ITS MATTER.

SECTION I.

Hitherto we have spoken of syllogism, as to its form. It remains to speak of it as to its matter; that is, the certainty and evidence of the propositions, whereof it is composed.

That is a certain proposition, against which nothing occurs, or nothing of weight, as, "Man is risible:" That an evident one, which extorts the assent, as soon as it is understood, as, "The whole is greater than

its part:" That a doubtful one, in which we know not how to determine, as, "The stars influence men."

If any thing occurs, whereby the mind inclines to either side, that which was doubtful before becomes probable. Such an assent is termed opinion.

Opinion, therefore, respects a barely probable proposition, and implies no certainty at all. Yet there are several degrees, whereby it approaches towards certainty; and the highest degree of probability is not far distant from it.

SECTION II.

CERTAINTY is twofold: 1. That of the object, the thing to be perceived; and, 2. That of the subject, the understanding which perceives it. And both have their degrees. That is more certain, in the former sense, to which there is the least objection; that, in the latter sense, to which the least objection appears. Evidence, also, is either of the object, or of the subject. And both of these have their

degrees; according as that which is perceived is more or less self-evident; or appears to be one or the other.

We might enumerate many degrees of evidence. But it may suffice to observe, it is either, 1. That of a self-evident axiom: Or, 2. That of a conclusion regularly deduced therefrom. This, logicians term science; which accordingly they define, "an assent to a certain and evident conclusion, regularly deduced from certain and evident premises." The certainty and evidence here supposed, is that, both of the object, and of the subject. For, by the former, science is distinguished from error; by the latter, from opinion. Without the evidence of the subject, there can be no science; and this without the other, is but an imaginary evidence.

SECTION III.

We need not prove, that there is such a thing as certainty; seeing all reasonable men allow it. We freely assent to what is affirmed by a wise and good man; and more

freely, if he confirms it by reason. Some things we are taught by nature itself; and some by Divine revelation. And of all these we have sufficient certainty, although in various degrees.

To assent to testimony, is the same as to believe; and such an assent is termed faith. Divine faith depends on the testimony of God: Human faith, on the testimony of man. What nature dictates, we may be said to perceive; what reason teaches us, to know.

God can neither deceive, nor be deceived; men are often deceived, and often deceive. Reason and nature are not often deceived, and seldom deceive their followers. Nothing, therefore, is more firm than divine faith; nothing less so, than human. In what we perceive or know, there is often no fear, always some danger, of being deceived. Hence, there is the highest rest for the mind in divine faith; the lowest of all in human. In what we know or perceive, there are various degrees of rest, according to the various evidence, certainty, or probability.

If, therefore, we were to make a sort of scale of assent, it might consist of the following steps:—1. Human faith, an as-

sent to a doubtful proposition: 2. Opinion, to a probable: 3. What we may term sentiment, an assent to a certain proposition: 4. Science, to a certain and evident conclusion: 5. Intelligence, to a self-evident axiom: 6. Divine faith, to a Divine revelation.

SECTION IV.

To each of these there belong certain principles, which are peculiarly proper to produce it. The principles of divine faith are those, and those only, which are contained in the Scriptures: Of intelligence, those which are properly termed axioms: Of science, the conclusions regularly deduced from them.

An axiom is a proposition which needs not, and cannot, be proved. Such the following seem to be:—

From natural Divinity:—1. God cannot deceive, or be deceived. Whence flow these certain and evident conclusions: 2. Absolute faith is due to the testimony of God: 3. Revelation never contradicts either sense or reason. It may, indeed,

transcend both. But it cannot possibly contradict either, rightly employed about its proper object.

From mathematics :—The whole is greater than each of its parts; equal to them all. But mathematicians frequently lay down, as such, what are not axioms, properly speaking.

From metaphysics :—It is impossible for the same thing at the same time to be, and not to be. Some affirm this to be the only axiom in the world; a point not worth the disputing.

From logic :—Terms which agree in one and the same third, agree with one another.

SECTION V.

Many believe, that there are no axioms to be found in the other arts and sciences. But such principles at least are found therein, as produce sentiment, if not science. Such are these : — Nothing (naturally) springs from nothing. Nothing is the cause of itself. What you would not have another do to you, you ought not to do to another.

The principles that serve to produce opinion, are usually styled "maxims." They commonly hold, but not always. To this class those properly belong which are, as it were, in the middle way, between doubtful and certain.

The uncertainty of human faith arises hence: In order to produce a firm assent of this kind, a competent witness must know what he says, and say what he knows, and both be apparent to him that believes it. But this is rarely the case. Wherefore, we have always reason to suspect what we have no other proof of than human testimony, even when there appears no more reason to doubt thereof, than of a mathematical demonstration.

SECTION VI.

According to these five degrees of assent, syllogism might have been divided, with regard to its matter, into infallible, scientifical, certain, probable, and doubtful. But as the two first of these produce science, and any assent short of this is, loosely

speaking, termed "opinion;" it is usually divided only into two sorts: 1. That which produces science; and this is styled scientifical, otherwise demonstrative, and often demonstration: 2. That which produces opinion, (any assent short of science,) and is termed dialectical; that is, arguing probably.

There are two species of demonstration. The first demonstrates, that a thing is; proving, either directly, that it is so; (and this is called "direct demonstration;") or that if it be not, some absurdity will necessarily follow. This is usually called, *demonstratio ab absurdo*. We may properly term it "oblique."

We demonstrate directly, either, 1. By proving a thing from its effect; as, "The sun is black: Therefore it is eclipsed." Or, 2. By proving it from its remote cause; as, "The moon is diametrically opposite to the sun: Therefore it is eclipsed." But if we prove this from the earth's being interposed between them, this is

The second sort of demonstration, which demonstrates why a thing is, by assigning its proximate and immediate cause.

But there may be a proximate, which

is not the prime cause, that is self-evident and indemonstrable, whose evidence is therefore preferred before all other, as needing no light but from itself.

There are then four degrees of demonstration: The oblique demonstration is good; but the direct is preferable to it. Demonstration by the proximate cause is better still; but the prime cause, best of all.

CHAPTER II.

OF FALLACIES.

THERE is yet another species, or shadow rather, of syllogism, which is called a fallacy. It is, an argument intended to deceive. Such is,

1. The fallacy of equivocation, arising either from an equivocal word, or from the ambiguous structure of the sentence; as, "All that believe shall be saved. The devils believe. Therefore the devils shall be saved." This offends against the very first rule of syllogism. For it has four terms.

2. The fallacy of composition, where what is granted of several things separately, is inferred of them conjointly; as, "Two and three are even and odd. Five is two and three. Therefore five is even and odd."

3. The fallacy of division, when what is granted of things taken conjointly is inferred of them taken separately; as, "The planets are seven. The sun and moon are

planets. Therefore the sun and moon are seven." In both these syllogisms there are four terms.

4. The fallacy of the accident, when some accidental circumstance is confounded with what is essential; as, "What destroys men, ought to be prohibited. Wine destroys men. Therefore wine ought to be prohibited." The major proposition must mean, "What necessarily destroys men:" Otherwise it is not true. The minor, "Wine accidentally destroys men." Therefore, here, also, there are four terms.

5. The fallacy of arguing from a particular to a general; as, "He that is white as to his teeth, is white. A blackamoor is white as to his teeth. Therefore a blackamoor is white." Here is a palpable breach of the sixth rule of syllogism.

6. The fallacy *ignorationis elenchi*. An *elenchus* is a syllogism that confutes the opponent. Therefore he falls into this fallacy, who thinks he confutes his opponent without observing the rules of contradiction.

7. The fallacy of begging the question, that is, taking for granted the very thing which ought to be proved. This is done,

1. When we attempt to prove a thing by itself; or, 2. By a synonymous word; or, 3. By something equally unknown; or, 4. By something more unknown; or, 5. By arguing in a circle, as in the famous argument of the Papists, who prove the Scriptures from the authority of the Church, and the Church from the authority of the Scriptures.

8. The fallacy of several questions; as, "Are honey and gall sweet?" It is solved, by answering to each branch distinctly.

Many more fallacies than these might be reckoned up. For there are as many fallacies, as there are ways of breaking any of the rules of syllogism without being observed. But one who is thoroughly acquainted with those rules, will easily detect them all.

CHAPTER III.

OF METHOD.

SECTION I.

METHOD is such a disposition of the parts of any art or science, that the whole may be more easily learned.

It is two-fold, 1. Method of invention, which finds out the rules of an art or science; 2. Method of teaching, which delivers them. The former proceeds from sensible and particular things, intelligible and universal; the latter from intelligible and universal things, to sensible and particular.

Method of teaching is either perfect or imperfect. The former is either, 1. Universal, by which a whole art or science, or, 2. Particular, by which a part of it only, is taught. Both are either, 1. Synthetical, which is used in sciences, and, beginning with the subject of a science, treats of its

principles and affections, and then of its several species, till, from the highest genus, it descends to the lowest species: Or, 2. Analytical, which is of use in arts; and, beginning with the end or design of an art, next explains the subject of it, and, lastly, the means conducive to that end.

The general rules of method are these:—

In delivering an art or science, 1. Let nothing be wanting or redundant: 2. Let all the parts be consistent with each other: 3. Let nothing be treated of, which is not homogeneous to the end of the art, or the subject of the science: 4. Let the parts be connected by easy transitions: 5. Let that precede, without which the things that follow cannot be understood; but which itself can be understood without them.

The particular rules are these: 1. The unity of a science depends on the unity of its subject; the unity of an art, on the unity of its end: 2. Let the more general parts precede the less general.

The imperfect method is arbitrary and popular; being no other than the method of prudence or common sense.

SECTION II.

MATHEMATICIANS, in all their writings, follow this method: 1. They fix the meaning of their words, defining their terms, each in their place, and make it an invariable rule, never afterwards to use any term, but in the sense to which it is limited by that definition: 2. They lay down the axioms which there will be occasion to use in the course of their work: 3. They add their *postulata*, which also they demand to be granted, as being evident of themselves: 4. They then demonstrate their propositions, in order, and as far as may be, affirmatively; contenting themselves with this rule, That whatsoever they have to prove, they take care to prove it from some of the truths which have been granted or proved before.

If the same method cannot be strictly observed in other sciences, yet doubtless it may be imitated. And the nearer any method approaches to this, the more perfect and useful it is.

APPENDIX.

ON THE MANNER OF USING LOGIC.

EXTRACTED FROM BISHOP SANDERSON.

SECTION I.

OF TREATING ON A SIMPLE THEME.

We may use the rules of Logic, in treating either on a simple theme, or a problem of proposition.

In treating logically on a simple term, we are to explain both the name and the thing. And,

I. The name, by, 1. Pointing out the ambiguity of the term, (if there be any,) recounting its various meanings, and fixing on that particular meaning in which we at present take it: 2. Showing its various appellations both in our own and in other tongues: 3. Observing whence it is de-

rived, with the more remarkable words of the same derivation. Not that all this is necessary to be done at all times, and on every theme: But there is need of judgment and choice, that those particulars only may be noted which conduce to the explication of the thing.

II. The thing is explained, both by assigning its attributes, and distributing or dividing it into its parts. The attributes are either essential or non-essential. By essential we understand, not only those which properly constitute its essence, the genus and difference, but also the properties of substances, the subjects and objects of accidents, with the efficient and final causes of both.

The genus should be assigned in the first place, and that the nearest which can be found, though premising, if occasion be, those which are more remote. The difference comes next; the want of which is supplied, and the nature more fully explained, by properties. And here may be added, the efficient, principal, impulsive, and instrumental causes, with the remote or proximate ends. Here also, in treating on an accident, may be subjoined its proper sub-

ject and adequate object: But these, more or less, as need shall require; which are to be closed with a complete essential definition of the thing.

III. The theme is next to be distributed into its several species or parts, just to name which is generally sufficient. From distribution we proceed to the non-essential attributes, whether effects, cognates, or opposites.

IV. Such effects as are trivial, or commonly known, may either be just mentioned or passed over in silence. Those which are more noble, and less commonly known, may by ranged under proper heads. This is also the place for citing examples.

Cognate words are those which are compared with the theme, as agreeing with it: Opposite, as differing from it. A theme is explained by comparing it with its cognates, when things are mentioned, which are, in some respects, the same, or like it; and it is shown wherein that sameness or likeness lies, and also wherein the unlikeness or difference between them.

We, in the last place, compare the theme with its opposites; for even opposites cast light upon each other. There are four spe-

cies of these; but the contradictory is usually too vague and indefinite to be of any service: And the relative opposite has been mentioned before, among the essential attributes. Therefore, the privative and contrary opposites only have place here, and very properly close the treatise.

To give an instance of this. Suppose the simple theme to be treated of be ENVY.

I. I am to consider the name: And here I observe,

1. It may mean either actively or passively: As, "He is full of envy:" that is, he envies others. "A rich man is much exposed to envy;" that is, to be envied by others. We here take it in the former sense.

2. This is in Latin termed *invidia*, a word which has been borrowed by many modern languages. The Romans also termed it *livor*.

3. The word *invidia* is supposed to be derived from two Latin words, that imply the looking much upon another, which the envious are apt to do; the word *livor* from the livid complexion which usually attends an envious temper.

There are two words of the same derivation, which are frequently confounded with

each other; namely, "invidious" and "envious;" and yet the signification of the one is widely different from that of the other. An envious man is one who is under the power of envy: An invidious office, one that is apt to raise envy or dislike.

II. In explaining the thing, I observe, first, the essential attributes: As,

The genus: To premise the more remote; it is a passion, a sort of grief: But the nearest genus is, a vicious grief.

I next observe, the difference, taken

1. From the subject, which are almost all mankind; but chiefly those who are ignorant of God, and consequently unable to govern themselves.

2. From the object, which is twofold; of the thing, or of the person. The thing envied may be good of any kind; apparent or real, useful or pleasant; of mind, body, or fortune. The person envied may be any other man, superior, equal, or inferior; only not at an immense distance, either of time, of place, or of condition. For few envy them that have been long dead, them that live in China or Japan; or those who are above or beneath them beyond all degrees of comparison.

3. From the efficient cause. The principal internal cause in him that envies is pride and inordinate self-love. The impulsive external cause may be various, either in him that is envied, if he be an enemy, a rival, a vain boaster; or in some third person, as contempt, flattery, whispering; any of which may stir up envy.

We may therefore define envy, either more briefly, a vicious grief at the good of another; or more fully, an evil sadness of mind, whereby a man, from inordinate self-love, is troubled at the good which he sees another enjoy, or foresees he will enjoy, as he imagines it will lessen or obscure his own excellency.

III. There are three species of envy, each worse than the preceding: the first, when a man is pained at another's enjoying some good (in kind or degree) which he cannot himself attain: The second, when a man is pained at another's having what he himself has, but wants to have alone: Both these are exemplified in Cæsar, who would bear no superior; and in Pompey, who would bear no equal. The third is, when a man cannot or will not enjoy his own good, lest another should enjoy it with him. It is

well known how many in the learned world, are infected with this evil disease.

IV. The effects of envy are three: 1. It torments the mind continually, and spreads inquietude through the whole life. 2. It wastes even the bodily strength, and drinks up the spirits: A most just evil, which is at once a sin and a punishment, and not less a scourge than it is a vice. 3. It incites a man to all manner of wickedness; detraction, calumny, strife, murder.

Its most remarkable cognates are, 1. Hatred, which agrees with envy in its subject; for he who envies another cannot but hate him; and in its efficient, internal cause, which in both is pride and blind self-love. 2. Rejoicing in evil: This also agrees with envy both in its subject, (for he that grieves at another's happiness, cannot but rejoice in his misery,) and in its efficient cause.

And yet hatred differs from envy, 1. In the thing hated or envied. For good only is envied; but either good or evil may be hated. 2. In the person. For we envy men only, not God; and not ourselves, but others: But we may hate both other men and ourselves; both other creatures, and God himself.

Rejoicing in evil differs likewise from envy, 1. In the genus: For the genus of the latter is sorrow; of the former, joy. 2. In the object, which, in the one, is evil, in the other, good.

The grand opposite to envy is benevolence, a tender good-will to all men, which constrains us to wish well to all, and seriously to rejoice in all the good that befalls them.

SECTION II.

OF TREATING ON A PROBLEM.

A PROBLEM is, a proposition to be proved. It is sometimes fully proposed, whether positively, as, "Logic is an art," which is called a "thesis;" or, interrogatively, as, "Is Logic an art?" Sometimes imperfectly, when the subject only is mentioned, the predicate being left in question, as, "Of the genus of Logic."

In a regular treatise on a problem there are three parts; the stating the question, proving the truth, and answering objections. To which may be premised, the introduc-

tion, concerning the importance of the question, and the occasion of its being first disputed; and the conclusion, containing a recapitulation of the whole, with the corollaries arising therefrom.

I. In the introduction may be shown, that the point in debate is not of little or no moment, but either apparently of the highest concern, or if not so important in itself, yet absolutely necessary to be understood, in order to understand or explain those which are confessedly of the highest moment. Next should be pointed out the occasion of the doubt, and the origin of the error; what gave the first rise to this dispute; and how the mistake began and increased. But this must be done nakedly and simply, in a logical, not rhetorical, manner.

II. After a short preface, the problem is not immediately to be proved, (unless where the terms are quite clear, and the point little controverted,) but first the terms of the question are to be explained, both the subject and the predicate. The various senses of these should be observed, and the definitions given, particularly of the predicate. We then proceed to explain the true state of

the controversy, by showing what is granted on each side, and what disputed. For in every controversy, there is something wherein both parties agree, and something wherein they differ. In reciting the points wherein we and our opponents agree, we may add, if need be, a short explanation or proof of them; and then show wherein the proper difference, the very point of controversy, lies. If this be accurately shown, the business is in a manner done; for it is scarce credible, how much light this throws both on the proof of the truth, and the answering objections.

III. In proving the truth, if it be a plain, simple problem, it may suffice briefly to propose our judgment in a single affirmative or negative thesis, and to confirm it by a few well-chosen arguments. But if it be more complex, it will be expedient to comprise our defence of it in several propositions; beginning with those wherein we remove the opinions of others, and then going on to establish our own; after every proposition placing the arguments by which it is confirmed. But it does not suffice, barely to mention these; they are also to be strongly pressed and defended, and the

evasions and cavils of all adversaries to be examined and overturned.

IV. Next follows the answering of objections. These may either be subjoined to the several opinions of our opponents, and so answered severally; or all placed together, after we have proved the point in question, and so answered altogether.

In order to do this effectually, we should observe, first, "Is not the conclusion advanced against me wide of the mark?" Frequently the objection may be allowed, and it does not overturn any conclusion, which we have advanced. Nay, sometimes it may be retorted, as proving just the contrary of what it was intended for.

If the conclusion do really contradict any of ours, we are, secondly, to examine the form of the argument, according to the general and particular rules of syllogism; and to point out that rule against which it offends.

If the form be unexceptionable, it remains, thirdly, to consider the matter of the objection from the premises. And it will generally be found, that either one of the premises is false, (or, at least, not sufficiently proved,) or that there is a latent

ambiguity in the subject, the predicate, or the medium. In this case, we are to fix upon that term and show the ambiguity of it.

V. We may close the whole by repeating the sum of what has been proved; unless when some useful observations or corollaries, either directly, or by easy consequence, follow from the conclusions before established. These we are not to prove again, but briefly and nakedly to set them down, as naturally deducible from those propositions which have been proved before.

The sermon on the Means of Grace, in the first volume of Mr. Wesley's Sermons, is a treatise of this kind.

The sermon on Enthusiasm, in the third volume, is another example of a simple theme.

LOGICAL QUESTIONS,

FOR SELF-EXAMINATION.

PART I.

BOOK I.—CHAPTER I.

OF SIMPLE TERMS.

SECTION I.

1. How many operations of the mind are there?
2. Name them.
3. What do you mean by Simple Apprehension?
4. Of how many kinds is it?
5. Is there any analogy between ocular perception and mental Apprehension?
6. What is Simple, incomplex Apprehension? What, complex Apprehension?
7. Apply the two kinds of Apprehension to the following words, and say which kind you use in understanding them. "The King of England;" "The animal called man;" "Human nature;" "Kings reign, and princes decree justice;" "Great Britain is surrounded by water;" "A hand;" "A book;" "A hand touching a book."

8. Which kind of Apprehension is prior in the order of time?

9. What is Judgment?

10. How many kinds of Judgment are there?

11. Which is called composition?

12. Which, division?

13. Give instances of both affirmative and negative Judgment.

14. What is the difference between Judgment and Complex Simple Apprehension?

15. Are the following Judgments affirmative or negative?—

"Not to advance in religion is to go back."

"No unrighteous man shall enter heaven."

"The word *ἀδόκιμος*, which we render *reprobate*, might as well have been rendered *disapproved*."—*Whitby*.

"In some things it is more hard to attempt than to achieve."—*Bacon*.

16. How is Judgment formed in the mind?

17. What is Discourse?

18. Is it generally distinguished now by this name? State some others.

19. Give instances of Reasoning.

20. What are the errors incidental to each operation of the mind?

21. In what ways are our notions indistinct?

22. By what means is our Judgment misled?

23. Is Logic, correctly considered, an art or a science?

SECTION II.

24. How do we express our thoughts?

25. What is the definition of Logic?

26. What end has Logic in view?

27. What means does it adopt for the attainment of that end?

28. What is the definition of a word?

29. Explain this definition.

30. Why are not inarticulate sounds, words?

31. How does Logic instruct the mind to operate rightly?

32. Into how many kinds are words divided, and why?

33. What are those words called which merely express Simple Apprehension?

34. What, those which express Judgment?

35. What, those which express Reasoning?

36. How many complex words are there in a decomplex?

37. Into how many propositions may every argument be resolved?

38. Every proposition,—into how many words?

39. In number or in sense?

40. What is the subject, what the predicate, and what the copula?

41. Is the subject always the first word, and the predicate the last, in a proposition?

42. What is a term, and why so called?

43. Point out the propositions among the following sentences, and state the subject, copula, and predicate of those which are such :—

"By a multiplicity of words, the sentiment is not set off and accommodated, but, like David in Saul's armour, it is encumbered and oppressed." —*Campbell's Rhetoric.*

"To reprobate is, as it were, a putting the fatal rope about a man's neck, and tying his hands behind him: And whatever follows, whether exhortations or prayers, is but in order to a preparation for turning the ladder."—*Calvinist's Cabinet Unlocked.*

"It is impossible to think without materials." —*Johnson.*

"What an object is the universe to the creature, if there be a creature who can comprehend its system!"—*Butler.*

"A principal device in the fabrication of the mock-eloquent style is to multiply epithets,—dry epithets, laid on the outside, and into which none of the vitality of the sentiment is found to circulate."—*Foster.*

"It is to be hoped that we shall succeed

"There's nought but care on every hand."

"Sweet it is to gaze upon ——."

"Seek, and ye shall find."

"Said I, that my limbs were old?"

"I say, B——, will you?"

"This, I say."

"Fare you well"

"I said, 'My friends, where are they?'"

"When, from a state of prosperity, we are reduced to low circumstances ——"

"*Est modus in rebus.*"

"It must be so."

"As leaves fall in wintry weather."

"If the heart of a man is oppressed with care."

SECTION III.

44. Of what sort of words does the first part of Logic treat?

45. What words may be the subject and predicate of a proposition?

46. What words may not?

47. Give instances.

48. Define the logical noun?

49. What is the difference between a simple term, a logical noun, a subject, and a predicate?

50. Give names to the following words:— "Lastly." "In vain." "This man." "He speaks, and listening to his voice." "Happy."

51. Are common nouns ever used as singular? Give instances.

52. Under what head of nouns do you class their oblique cases?

53. What is an infinite word?

54. What is a finite?

55. By what names are they commonly called? Give instances.

56. Define positive, privative, and negative words.

57. Quote some instances of each kind.

58. What are univocal, equivocal, and analogous words?

59. Are "bull," "foot," "ounce," "club," "mail," "page," "ear," "nail," each equivocal? Which are analogous?

60. Is the word *college*, used to signify both a building and the society inhabiting it, equivocal or analogous?

61. Adduce some more instances.

62. What is an absolute word? What, a connotative?

63. What is the difference between generalization and abstraction?

64. What are relative nouns?

65. How are we able to form an idea of them?

66. What is a correlative?

67. What are consistent words?

68. How many kinds of opposition are there? Name them.

69. How are *black* and *white*, *seeing* and *blind*, opposed?

70. Which is the greatest of all opposition?

71. Define nouns of the first and second intention.

72. Is the word *Perfection*, as applied to a doctrine of the Wesleyan Methodists, employed in the former or latter sense?

73. Which of these divisions of nouns are most useful? Why?

74. Give instances of the use of the division of nouns into *First* and *Second Intention*?

SECTION IV.

75. Define a predicable?

76. How many kinds of predicables are there?

77. What is a genus? What, a species? What, a property?

78. Can a genus ever be considered as a species?

79. Trace the process of abstraction?

80. What is an accident? Adduce instances.

81. How do you form the general notion *Theologian? Sailor?*

82. Does abstraction lead from singulars to universals, or the contrary?

83. Is the abstract nature the same in all individuals, or different in each?

84. Why must a predicable be of the second intention?

85. Does the abstract nature really exist?

86. Why then was it supposed to do so?

87. What is *essence?*

88. Prove that there can only be five kinds of predicables.

89. What is difference? What else may it be called?

90. What is the exact difference between property and accident?

91. Give instances.

92. Who first taught the doctrine of the categories?

93. What else may they be called?

94. How many categories are there?

95. Name them.

96. How many kinds of substance are there Name them.

97. What is the Aristotelian name for substance?

98. Give instances of continuous and discrete quantity.

99. How many kinds of time are there?

100. What is the Aristotelian name for the category of time?

101. What is the category of κεῖσθαι?

102. What do you mean by the *summum genus?*

103. If I say of horses, that they are quadrupeds, what predicable is "quadruped?"

104. If I say of some quadrupeds that they are cats, what predicable is "cats?"

105. Is genus predicated of things differing in number or in species?

106. What do you mean by a metaphysical whole?

107. What are cognate genera? Give instances.

108. Form a Porphyrian tree.

109. What is the use of this scale?

110. How many kinds of difference are there?

111. How many kinds of property* are there?
112. Is the division of property into four kinds a good division?
113. State your reasons for this assertion.
114. How many kinds are valid?
115. How does *summum genus* differ from *infima species?*
116. How do those things of which specific difference is predicated differ from each other?
117. How many kinds of accident are there?
118. Prove your answer.
119. Give instances of each kind.
120. What kind of accident is a passed event?

SECTION V.

121. How do you divide a common word?
122. Give instances.
123. Define Division.
124. To what is logical division analogous?
125. How many kinds of division are there?
126. What is physical division?
127. Are singular nouns in any way divisible?
128. How would you physically divide *book?*
129. What is metaphysical division?
130. What are the three rules for logical division?

* In the Christian character, is the doing good works the difference or the property?

131. What is the criterion of good logical division?

132. What do you mean by the members of the division being opposite?

SECTION VI.

133. What is Definition?

134. Is the word *definition* here used in the first or the second intention?

135. What are the two objects of definition?

136. What is the first division of definition?

137. What is the difference between *nominal* and *real* definition?

138. Is every nominal definition necessarily etymological?

139. Do nominal and real definitions ever coincide?

140. Quote exam[illegible]f this.

141. How many kinds of real definition are there?

142. What is an accidental definition?

143. What is an essential definition?

144. Is essential definition again divided?

145. What are the rules for good definition?

146. Analyse the following definitions, and assign their proper names:—

"Quick wits commonly be apt to take, unapt to keep; also for manners and life, they commonly be, in desire, new-fangled; in purpose,

unconstant; light to promise any thing, ready to forget every thing, both benefit and injury; and thereby neither fast to friend, nor fearful to foe: Inquisitive of every trifle; not secret in the greatest affairs; bold with any person; busy in every matter; soothing such as be present, nipping any that is absent: Of nature also, always flattering their betters, envying their equals, despising their inferiors; and, by quickness of wit, very quick and ready to like none so well as themselves."—*Roger Ascham.*

"Socinians are a sect so called from Faustus Socinus, who died in Poland, in 1604."

"Embalming is the art of preserving dead bodies from putrefaction."

"Knowledge is assent produced by self-evidence or demonstration."

"Ink is a mixture of copperas, gall, and gum."

CHAPTER II.

OF PROPOSITIONS.

SECTION I.

147. Of what does the second part of Logic treat?

148. Has a proposition any other name?

149. What is the essence of a proposition?

150. What, the property?

151. What mental operation does it signify?

152. Why may it not be ambiguous?

153. In the use of what particles does most of the ambiguity of propositions arise?

154. Adduce instances.

155. What is the logical definition of a proposition?

156. Which is the genus and which the difference in that definition?

157. Why may not a proposition be maimed?

158. Are the following sentences propositions or not? If they are, point out their quantity, quality, &c.; distinguish the subject, copula, and predicate; state whether they are categorical and hypothetical, and reduce them to the categorical form.

"And when he thought thereon, he wept."

"The most eminent and successful Preachers of the Gospel, in different communities, a Brainerd, a Baxter, and a Schwartz, have been the most conspicuous for a simple dependence upon spiritual aid."—*Robert Hall.*

"The word of God alone can make wise unto salvation."

"All that glitters is not gold."

"There must be a spiritual resurrection of the soul before there can be a comfortable resurrection of the body."—*Pearson.*

"Baxter was not wholly a Calvinist."

"How manifold are thy works!"

"In all controversies, when men dispute together, the one affirming, the other denying, both parties must needs have the same idea in their minds of what they dispute about."—*Cudworth.*

"He was either a hero or a villain."

"With singular justice was that man condemned to die."

"A man 's a man for a' that."—*Burns.*

"Never come within the circle of ambition, nor ever bring yourself into comparison with those masters of the earth, who have already engrossed the attention of half mankind before you."—*Adam Smith.*

"Now do not these exhortations plainly intimate, that Christians may receive the grace of

God in vain; that they may render the labours of the Ministers of the Gospel vain, by not holding fast the word of life; that Satan may devour them, if they be not sober, vigilant, and steadfast in the faith; and that their assurance of not falling depends upon their diligence in the performance of their duty?"—*Whitby.*

"It is not uncommon to hear a verbose speaker, or writer, mentioned as having 'a very fine command of language,' when perhaps it might be said, with more correctness, that 'his language has a command of him.'"—*Whately.*

"Avoid uncommon and, as they are vulgarly called, hard words."—*Ibid.*

"Brahmins live on vegetables only."

"How injurious is sin to the best interests of mankind!"

"Where is the dust that hath not been alive?"

"To them whom he acknowledges to be 'temples of the living God,' by virtue of 'his Spirit dwelling in them,' Saint Paul directs this exhortation, 'not to receive the grace of God IN VAIN.'"—*Whitby.*

"I hope to win the race."

"How much of heaven is naturally connected with an office, whose sole purpose is to lead men thither."—*Robert Hall.*

"Words, therefore, as well as things, claim the care of an author."—*Johnson.*

"All dare to write, who can, or cannot read."—*Horace.*

"A right choice of words is the foundation of eloquence."—*Cæsar.*

"He that reads and grows no wiser seldom suspects his own deficiency; but complains of hard words and obscure sentences, and asks why books are written which cannot be understood."—*Johnson.*

"'T is the Divinity that stirs within us;
'T is Heaven itself that points out an hereafter,
And intimates eternity to man."—*Addison.*

"There is one easy and almost sure way to avoid being misled by this self-partiality, and to get acquainted with our real character: To have regard to the suspicious part of it, and keep a steady eye over ourselves in that respect."—*Butler.*

"To argue from a hypothesis against facts, is contrary to the rules of true philosophy."—*Reid.*

"The moment we permit ourselves to think lightly of the Christian ministry, our right arm is withered; nothing but imbecility and relaxation remains."—*Robert Hall.*

"I thought it good and necessary, in the first place, to make a strong and sound head or bank to rule and guide the course of the waters; by setting down this position or firmament, namely, 'That all knowledge is to be limited by religion, and to be referred to use and action.'"—*Bacon.*

159. What is the quantity of a proposition?

160. Into how many kinds are hypothetical propositions divided?

161. How are propositions divided according to their quality?

162. How, according to their quantity?

163. How, according to their substance?

164. What do you mean by the word "hypothetical?"

165. What is a categorical proposition?

166. What is a modal?

167. Adduce instances of a conditional hypothetical.

168. Of a disjunctive hypothetical.

169. What is a negative proposition?

170. Is every proposition negative, in which the particle "not" is found?

171. Adduce an example.

172. What do you mean by an affirmative proposition?

173. What is an indefinite proposition?

174. Why so called?

175. What signs are prefixed to propositions to denote their quantity?

176. What is meant by the distribution of a term?

177. Why is a singular proposition reckoned universal?

178. How are indefinite propositions employed in syllogism?

179. As far as regards syllogism, of how many kinds is the quantity of proposition?

180. How do you decide the quantity of indefinites?

SECTION II.

181. Of what is A the sign in Logic? E? I? O?

182. What term is distributed in an universal affirmative?

183. What is an universal negative? Particular negative?

184. Is the predicate of an universal affirmative *ever* distributed?

185. Adduce propositions in A, E, I, and O.

186. What is the *matter* of a proposition?

187. What is necessary matter?

188. What, impossible? Contingent?

189. Adduce instances of each.

190. In what matter is an indefinite proposition considered universal? In what, particular?

191. Is I, in necessary matter, true or false? O? E?

SECTION III.

192. When are propositions said to be opposed?

193. How many kinds of opposition are there?

194. Define the several kinds of opposition.

195. What are the requisites necessary for a contradiction?

196. Which is the greatest possible opposition?

197. If an universal be true, what is the particular contained under it?

198. In what matter are contrary propositions both false?

199. Are subcontraries ever both false?

200. Give instances of subalternate opposition.

SECTION IV.

201. What do you mean by conversion, in Logic?

202. How many kinds of conversion are there?

203. What is simple conversion?

204. What is conversion *per accidens*, or accidental?

205. If the proposition be true or false, will the simple converse be true or false?

206. Why may not a term be distributed in the converse, which was not distributed in the original proposition?

207. What propositions are simply convertible?

208. What, accidentally?

209. What is meant by *conversion by limitation?*

210. How is O converted?

211. What do you mean by *conversion by negation?*

212. Give instances.

213. Prove that I may be converted simply.

214. Can A be converted simply?

215. What is illative conversion?

216. Convert the following propositions:—

"There are Iscariot voices among the ten thousand 'Hail, Masters' which fill our ears."—*Mason (of New-York).*

"Infidel is now a term of reproach."—*Ibid.*

"To halt between two opinions marks the feebleness of present indecision, and will only conduct to future ruin."—*Ibid.*

"No species of wrong is expedient."

CHAPTER III.

OF SYLLOGISMS.

SECTION I.

217. Of what does the third part of Logic treat?

218. What is a syllogism?

219. Of what operation of the mind is an argument the sign?

220. What is that which is proved called?

221. What, that by which it is proved?

222. What is the conclusion called before it is proved?

223. What is *consequence*, logically considered?

224. How may kinds of consequence are there?

225. What is *material* consequence? What, *formal?*

226. How may objections against the formal consequence be answered?

227. How is a syllogism commonly defined?

228. What may be properly added to this definition?

229. What is the difference between an argument and a syllogism?

230. Suppose you change the terms of a syllogism, but retain their order, will the syllogism stand good?

231. Has Logic any thing to do with the proof of the premises?

232. By what means do we compare two terms together?

233. When are terms said to agree with each other?

234. Do those terms which do not agree with one and the same third, agree with each other?

235. What fourth canon is sometimes added by logicians to these?

SECTION II.

236. How many terms must there be in every syllogism?

237. Why can there not be more?

238. Is the following a syllogism?—"He who calls you a goose calls you an animal; he who calls you an animal speaks the truth; therefore he who calls you a goose speaks the truth."

239. How many terms are there in this argument?

240. What are the three terms of a syllogism called for the sake of perspicuity?

241. How is the major term known? How, the minor? the middle?

242. Upon what premiss is it that men generally differ?

243. What is an equivocal medium?

244. What, an undistributed medium?

245. What do you mean by an illicit process?

246. Give instances.

247. Do negative premises prove any thing? Why?

248. In looking for an ambiguity in the middle term, are we to regard the sense or the sound?

249. "Binding is ornamental; a man is bound when placed in the stocks; therefore the punishment of the stocks is ornamental." Show the fallacies contained in this syllogism.

250. What is the *error* of an undistributed middle term?

251. Adduce examples.

252. How many terms, in point of fact, are there contained in the following argument?—"Methodists are Christians; Quakers are Christians; therefore, Quakers are Methodists."

253. Show that a syllogism, in which the middle term is distributed only *once*, is valid.

254. Why is the mode of inferring by an illicit process faulty?

255. If one premiss be negative, what will the conclusion be? Why?

256. What error is involved in a syllogism which contains two particular premises?

257. Adduce examples.

258. If one premiss be particular, what must be the quantity of the conclusion?

259. If, in this case, the conclusion were made universal, what error would ensue?

260. If both the premises are universal, does it follow necessarily that the conclusion must also be universal?

SECTION III.

261. What is a mood?

262. What is a figure?

263. How many moods are there?

264. Is every mood correct? Why?

265. How many moods have two negative premises?

266. How many have two particular premises?

267. How many have a negative premiss and a positive conclusion?

268. How many have an universal conclusion with a particular premiss?

269. How many have a negative conclusion without a negative premiss?

270. How many moods, then, are available in syllogism?

271. Which are they?

272. Can I E O ever be used in syllogism?

273. How many rules are infringed by the mood O O A?

SECTION IV.

274. How many figures are there?

275. How is the middle term placed in each figure?

276. How many moods are excluded by each figure?

277. Give the schemes of all the figures, taking A as the major term, B as the minor, C as the middle.

278. Repeat the *memoria technica.*

279. Assign the proper quantity and quality to each proposition, and give the reason for each.

SECTION V.

280. EXPLAIN the *dictum de omni et nullo.*

281. When is an imperfect mood said to be reduced?

282. What is ostensive reduction?

283. What is *reductio ad impossibile?*

284. What is meant by illative conversion?

285. Why do we reduce all figures to the first?

286. Give an example of some mood in the first figure, and show that Aristotle's dictum will immediately apply to it.

287. Can the moods in the first figure be rendered more manifestly conclusive than they are?

288. Does the dictum of Aristotle immediately apply to all the moods in the other figures?

289. On what does this depend?

290. Define reduction.

291. What is its use?

292. May all the moods be reduced ostensively?

293. May all be reduced by reduction *ad impossibile?*

294. Have the different letters, which compose the names of the moods, a reference to their reduction?

295. To what do the three vowels in those names relate?

296. What does the letter *m* signify?

297. For what are the letters *s* and *p* used?

298. What does the letter *k* imply?

299. Do these letters apply to their preceding vowels, or to those that follow them?

SECTION VI.

300. How many useful moods are there? Prove this.

301. By how many moods may an universal affirmative conclusion be drawn?

302. What moods admit of an universal negative?

303. How many, of a particular affirmative?

304. How many, of a particular negative?

305. What conclusions may be drawn in the first figure?

306. What, in the second, and why?

307. What, in the third and fourth, and why?

308. Why cannot an universal affirmative conclusion be drawn in the fourth figure?

309. What must be the quality of one premiss in the second figure, and why?

310. What must be the quantity of the major premiss in the first figure, and why?

311. Is it restricted as to quality?

312. What must the minor premiss be in the third figure, and why?

313. What may the major premiss be in this figure?

314. In this figure, is the conclusion restricted as to quantity? Why?

315. What proposition is excluded from being a major premiss in the fourth figure, and why?

316. What proposition is excluded in this minor premiss, and why?

317. If an universal affirmative conclusion be drawn, what must be the quantity and quality of the premises from which it is inferred?

318. If a particular negative premiss be used in any mood, what must be the quantity of the other premiss, and also of the conclusion?

319. Which is the worst figure of all?

320. What is an enthymeme?

321. Is the enthymeme much used as a mode of expressing argument in common discourse?

322. Which premiss is usually suppressed in an enthymeme?

323. State the cause of this.

324. What is induction?

325. What is example?

326. Is induction strictly syllogistic reasoning?

327. What is the difference between example and induction?

328. What do you mean by a prosyllogism? Adduce some examples.

329. Why, in arguing, do we frequently suppress the conclusion?

330. Explain the sorites.

331. From what Greek word is it derived?

332. Is the sorites strictly syllogistic?

CHAPTER IV.

OF HYPOTHETICAL SYLLOGISMS.

SECTIONS I, II, III, IV.

333. What is a hypothetical syllogism?

334. Into how many kinds is it divided?

335. What are the rules of hypothetical syllogisms?

336. Is a conditional syllogism equivalent to a categorical? Why?

337. What rules must be observed with regard to disjunctive syllogisms?

338. Can disjunctives ever be turned into conditionals?

339. Adduce some examples.

340. What is a dilemma?

341. How may a dilemma be sometimes retorted?

342. What is necessary to constitute a good dilemma?

343. What other logical name may be given to it?

PART II.

CONTAINING TRUE AND FALSE SYLLOGISMS IN ALL THE FIGURES.

1.

All men are animals;
I am a man;
I am an animal.

2.

Kings are mortal;
Men are mortal;
Kings are men.

3.

Dogs are not reasoning animals;
Reasoning animals are men;
Men are not dogs.

4.

Some birds cannot fly;
I am not a bird;
I cannot fly.

5.

All the members form a society ;
I am a member ;
I form a society.

6.

Not all is gold that glitters ;
Sovereigns glitter ;
Sovereigns are not gold.

7.

The King of England is a sovereign ;
I have a sovereign ;
I have the King of England.

8.

All logicians are rational animals ;
All logicians are men ;
Some men are rational animals.

9.

A musician keeps time ;
A clock keeps time ;
A clock is a musician.

10.

Homer wrote in Greek ;
Æschylus was not Homer ;
Æschylus did not write in Greek.

11.

All Greek writers are men ;
Cicero was not a Greek writer ;
Cicero was not a man.

12.

All persons that think, exist ;
I exist ;
I think.

13.

A letter goes by the post ;
A newspaper goes by the post ;
A newspaper is a letter.

14.

Nothing is better than a virtuous life ;
Bread-and-cheese is better than nothing ;
Bread-and-cheese is better than a virtuous life.

15.

No real Christians are covetous ;
A miser is covetous ;
A miser is not a real Christian.

16.

That which is pursued for its own sake only is the ultimate end ;

Happiness, and only happiness, is pursued for its own sake only ;

Happiness is the ultimate end.

17.

All innocent things are allowable;
Some pleasures are not innocent;
Some pleasures are not allowable.

18.

Some wise men have become mad;
He is not a wise man;
He will not become mad.

19.

All monarchs are worthy of respect;
All monarchs are not wise men;
Some persons not wise are worthy of respect.

20.

Ivory is hard;
Ivory is elastic;
Some hard substances are elastic.

21.

Some writers are ingenious;
Some writers are clever;
Some clever writers are ingenious.

22.

Virgil was seduced into faults by imitation;
Virgil was a great poet;
Some persons that are deceived into faults by imitation are great poets.

23.

All men are responsible;
All responsible agents will be rewarded or punished;
All men will be rewarded or punished.

24.

No soldier is a sailor;
A marine is a soldier;
A marine is not a sailor.

25.

All Englishmen are lovers of liberty;
No Dane is an Englishman;
No Dane is a lover of liberty.

26.

All important subjects deserve consideration;
Some trifles deserve consideration;
Some trifles are important subjects.

27.

Every dog barks;
Some spaniels are dogs;
Some spaniels bark.

28.

All men are fond of liberty;
Some persons fond of liberty are Englishmen;
Some Englishmen are men.

29.

No liar is worthy of credit;
Some persons worthy of credit are not believed;
Some liars are believed.

30.

Some men are coxcombs;
All coxcombs are fools;
All fools are men.

31.

None but whites are civilized;
All civilized people use clothing;
All whites use clothing.

32.

Some men are logicians;
All sophists are men;
Some sophists are logicians.

33.

Some of the basest of men do not discover to the world their true character;

All who do not discover to the world their true character are hypocrites;

Some hypocrites are the basest of men.

34.

Hector slew Patroclus;
Achilles slew Hector;
Achilles slew Patroclus.

35.

All islands are surrounded by water;
England is an island;
England is surrounded by water.

36.

No good logicians resort to sophistical arguments;
All who are acquainted with the science of reasoning accurately are good logicians;
None who resort to sophistical arguments are good logicians.

37.

All spirits are inflammable;
A ghost is a spirit;
A ghost is inflammable.

38.

Some men are not sophists;
Some men are good logicians;
Some good logicians are not sophists.

39.

Every virtuous act is worthy of commendation;
Profane swearing is not a virtuous act,
Profane swearing is not worthy of commendation.

40.

All felons are thieves ;
All felons are amenable to the law ;
All who are amenable to the law are thieves.

41.

All thieves are felons ;
All felons are amenable to the law ;
All who are amenable to the law are thieves.

42.

Every true patriot is a friend to religion ;
Some great statesmen are not friends to religion ;
Some great statesmen are not true patriots.

43.

He-who-is-not-a-friend-to-religion is not a true patriot ;
Some great statesmen are not-friends-to-religion ;
Some great statesmen are not true patriots.

44.

No Mahometans are Christians ;
Some Mahometans are men of good understanding ;
Some men of good understanding are not Christians.

45.

Some musicians are mad ;
All musicians are men ;
Some men are mad.

46.

Nothing which is difficult of attainment is within the reach of the idle ;
All useful knowledge is difficult of attainment ;
Useful knowledge is not within the reach of the idle.

47.

Charity covereth a multitude of sins ;
A multitude of sins is a load of evil ;
Charity covereth a load of evil.

48.

Anger is a species of insanity ;
You are angry ;
You are insane.

49.

All papists believe the pope to be infallible ;
The pope is a man ;
All papists believe a certain man to be infallible.

50.

He that spareth the rod hateth his child ;
An affectionate parent does not hate his child ;
An affectionate parent does not spare the rod.

51.

No man can serve two masters;
A dog is not a man;
A dog can serve two masters.

52.

He who disobeys his parents is an undutiful son;
An undutiful son is deserving of punishment;
All those deserving of punishment disobey their parents.

53.

A brute is not an immortal being;
All immortal beings are incorporeal;
No incorporeal beings are brutes.

54.

All meteors are vapours;
Some vapours are luminous;
Some luminous bodies are meteors.

55.

Those who work hard deserve reward;
Those who work on the treadmill work hard;
Those who work on the treadmill deserve reward.

56.

All minerals are produced under ground;
Some things produced under ground are potatoes;
Potatoes are minerals.

57.

John is younger than William;
William is younger than Thomas;
John is younger than Thomas.

58.

All men are bound to act according to the strictest rules of virtue;
No brutes are men;
No brutes are bound to act according to the strictest rules of virtue.

59.

No man that wastes his time will ever be successful in study;
All persons who waste their time have no one to blame but themselves;
All persons unsuccessful in study have no one to blame but themselves.

60.

No logicians are sophists;
Some sophists are men;
Some men are not logicians.

61.

Some learned men are much addicted to prejudice;
None who are much addicted to prejudice are men of powerful minds;
Some men of powerful minds are not learned.

62.

All useful arts are worth learning;
Nothing that is worth learning is of no value;
That which is of no value is not a useful art.

63.

Some good acts are not duly rewarded;
All good acts deserve to be rewarded;
Some acts which deserve to be rewarded are not duly rewarded.

64.

Caloric is either a substance or a quality;
It is not a substance; therefore,
It is a quality.

65.

Nothing which is opposed to the divine will is expedient;
Every act of injustice is opposed to the divine will;
No act of injustice is expedient.

66.

Every thing that is immaterial is also immortal;
The human soul is immaterial;
Therefore, it is immortal.

67.

No vicious man is happy;
The habitual drunkard is a vicious man;
The habitual drunkard is not happy.

68.

Every thing that obstructs the free course of justice deserves the reprobation of the virtuous;

There are modes of enforcing the strict letter of the law which obstruct the free course of justice;

Therefore,

There are modes of enforcing the strict letter of the law which deserve the reprobation of the virtuous.

69.

No brute possesses virtue;

Some bad husbands are brutes;

Some bad husbands do not possess virtue.

70.

Many men have common sense;

Some men have uncommon sense;

Some who have uncommon sense have also common sense.

71.

To kill a man is sin;

To hang a murderer is to kill a man;

To hang a murderer is sin.

72.

Whatever is self-sufficient is possessed of the chief Good;

The confident man is self-sufficient;

The confident man is possessed of the chief Good.

73.

Some pretenders to religion are deceitful;
No virtuous persons are deceitful;
Some virtuous persons are not pretenders to religion.

74.

All boys ought to be educated;
Some persons not industrious ought to be educated;
Some persons not industrious are boys.

75.

No unrighteous man shall enter the kingdom of heaven;
Every man who dies impenitent is unrighteous;
No men who die impenitent will enter the kingdom of heaven.

76.

All diamonds consist of carbon;
All carbon is combustible;
Some combustible substances are diamonds.

77.

Christians alone are truly charitable;
The man of Ross was a Christian;
The man of Ross was truly charitable.

PART III.

ARGUMENTS FOR EXAMINATION;

INCLUDING THE FALLACIES.

"If expiatory sacrifices were divinely appointed before the Mosaic law, they must have been expiatory, not of ceremonial sin, (which could not then exist,) but of moral sin: If so, the Levitical sacrifices must have had no less efficacy; and, in that case, the atonements under the Mosaic law would have 'made the comers thereunto perfect as pertaining to the conscience;' but this was not the case; therefore, —.—*Davison on Prophecy.*

"Thus to be called is to be blessed, and therefore to be honoured with the signs of such a calling, must needs be, in part, a blessing also; for of good things even the signs are good."—*Hooker.*

"The Father by the Son did create and doth guide all; wherefore Christ hath supreme dominion over the whole universal world."—*Ibid.*

Some persons, although men of the greatest learning, have committed errors; all persons,

who are men of sense, are not so liable to err as those who are foolish; some who are not so liable to err as those who are foolish have, nevertheless, committed great errors.

"With some, God was not well-pleased; for they were overthrown in the wilderness."

"No one can possibly be happy without virtue, but there is no virtue without action; therefore, these otiose and inactive deities of yours (alluding to the Epicurean notion of the gods) are not happy."—*Cicero.*

The sun was made at the creation to rule the day, and the moon and stars to rule the night; therefore, the pope is superior to kings and emperors.

"He that is of God heareth my words: ye, therefore, hear them not, because ye are not of God."

"God shall judge the world, and therefore shall raise the world."—*Pearson.*

No trifling business will enrich those who are engaged in it; a mining speculation is no trifling business; therefore, a mining speculation will enrich those who are engaged in it.

"'Well, there are Ministers enough, without you.' *Ministers enough, and churches enough!* for what? to reclaim all the sinners within the four seas? If there were, they would all be reclaimed. But they are not reclaimed. Therefore, it is evident that there are not churches enough."—*Wesley's Farther Appeal.*

"It is an acknowledged fact, that monarchs pay the sad debt of nature; and the rest of mankind are not exempt from death; from which we may rationally infer, that kings, notwithstanding all the pomp and circumstance that surround them, are but men."

The total subversion of idolatry is much to be desired; for every one wishes that the worship of imaginary deities may be destroyed and overthrown.

"There is scarcely a point in the evidence of Christianity which has not been conceded by some one of its defenders; from which we may infer, that the system of religion in question is not true."

"All brutes are four-footed animals; a man that ill-uses his wife is a brute; therefore, he is a four-footed animal."

Homer was a blind man; many persons read Homer with ease; therefore they are expert at reading a blind man.

"All the members form a society; this man is a member; therefore this man forms a society."

"The Wesleyan Magazine does not represent the views of the Wesleyans, for I am a Wesleyan; and it does not represent my views."

Christians alone are truly charitable. The man of Ross was a Christian, we may therefore assert, that the man of Ross was truly charitable.

A negro is a man; therefore, he who murders a negro murders a man.

None but Ministers are allowed to perform certain duties; this man is a Minister; therefore, he is allowed to perform those duties.

"An ordinary Judge must be of the quality which in a supreme Judge is not necessary; because the person of the one is charged with that which the other's authority dischargeth, without employing personally himself therein."—*Hooker.*

"If the prophecies of the Old Testament had been written without knowledge of the events of the time of Christ, they could not correspond with them exactly; and if they had been forged by Christians, they would not be preserved and acknowledged by the Jews: They are preserved and acknowleged by the Jews, and they correspond exactly with the events of the time of Christ; therefore, they were neither written without knowledge of those events, nor forged by Christians."—*Whately.*

To the verb "*to will,*" in Saxon, there is no imperative mood; from which we may infer that our ancestors believed in the freedom of the human mind and its volitions.

"We confess that we find it extremely difficult to distinguish between the Wesleyan doctrine of a *distinct* and *indubitable* internal witness, which tells the believer of his certain acceptance, and the Calvinistic doctrine of the perfect assurance of salvation. For if a man has once received from the Spirit a positive and irrevocable assurance that he is a child of God, one hardly sees how he can stop short of the conclusion that his

calling and election is already made sure, and that his name is indelibly written in the book of life."—*British Critic, July,* 1834.

"If God, by an act of annihilation, put an end to the being and the torments of the damned, it can only be when justice has received full reparation. But justice cannot receive full reparation, but by an immortality of punishment. The lost will, therefore, everlastingly exist."—*Langston's Essay, &c.*

"Now, controversy being almost always the offspring or the parent of party, it is not wonderful that a love of disputation should almost always either give occasion to, or exasperate, party spirit."—*Whately's Bampton Lectures.*

"That there are subjects connected with religion, which it is unprofitable, or worse than unprofitable, to discuss, no one would venture to deny; and it is no less undeniable, that among these are to be reckoned such as are neither laid open to us by revelation, nor are comprehensible by our reason; but men are, in general, far less ready practically to conform to this maxim, than to admit its truths."—*Ibid.*

An unintentional insult should be immediately forgiven; an act which demands immediate forgiveness is sometimes a good act; therefore, some good act is an unintentional insult.

No man of sound sense can despise the study of the classics; some modern pretenders to literature do, however, despise the study of the

classics; therefore, some modern pretenders to literature are not men of sound sense.

Some compositions of an imitative nature, calculated by sublimity of idea and beauty of diction to expand and to delight the mind, and to excite every noble passion, are not written in verse; all such compositions, however, are justly called poems; therefore, some works justly called poems are not written in verse.

It is not easy to comprehend what could have induced an impostor to forge two such epistles as the second and third attributed to St. John. They could not have been forged during that Apostle's life; for the imposture would have been immediately detected: And if they had been forged after his death, it is not very probable that the impostor would have made his pretended author promise at the end of each Epistle that he would shortly pay a visit to those to whom the epistles were addressed.

"The baptism of John, was it from heaven or of men?" "If we shall say, From heaven, he will say, Why then believed ye him not? But if we say, Of men, all the people will stone us; for they be persuaded that John was a Prophet." (Luke xx. 4, 6.)

If baptism could be justly refused to the children of Christian parents, circumcision should on the same principle have been refused to the offspring of Jewish parents. But the express command of God proves that such refusal among the Jews would have been sinful. How then can it

be thought less criminal to withhold from the children of Christians their initiatory rite, and thus to rob them of an invaluable privilege which is clearly their due?

"Sin cannot go unpunished; and, therefore, a forgiveness which implies its impunity is impossible."—*Mason.*

"Therefore Plato would have the palace of princes joined unto temples; because that government and religion, prayer and justice, the whole word and the sword, should never be severed."—*Bishop Reynolds.*

Those things which cannot be enumerated do not exist; innate ideas cannot be enumerated; therefore, innate ideas do not exist.

The cook is always about the fire; the fire is the highest of all elements; therefore, of all sciences the cook's occupation is the highest.

"The publication of a libel is criminal: But the act of putting a libel into the post is an act of publication: (For the moment a man passes a libel from his hand his control of it is gone:) That act, therefore, cannot but be pronounced criminal."—*Lord Ellenborough.*

"The gods are happy beings; all happy beings are virtuous; all virtuous beings are endowed with reason: All beings endowed with reason bear the human form; therefore, the gods bear the human form."—*Cicero* (*arguing as an Epicurean*).

Shame is not a virtue; for it bears the character of a passion rather than of a habit.

Vicious habits must not be classed among involuntary infirmities, because they do not excite compassion, but rather reprehension.

So great is the importance of the habit of close and regular reasoning, that the study of mathematics must be essential to a complete course of education.

No vice is to be admitted as a species of relaxation suited to a Christian; every species of relaxation suited to a Christian, consists of a cessation from ordinary occupations; therefore, some cessation from ordinary occupation is not vice.

No tale-bearer is worthy of confidence; all tale-bearers are great talkers; therefore, no great talkers are worthy of confidence.

No rich men are exempt from death; nor are they free from error; therefore, none who are free from error are exempt from death.

"So that nonsense lies at the bottom of all; and is interwoven throughout their whole atheistical system; and we ought to take notice of the invincible power and force of truth, prevailing irresistibly against all endeavours to oppress it; and how desperate the cause of atheism is, when that very atomical hypothesis of theirs, which they would erect and build up for a strong castle to garrison themselves in, proves a most effectual engine against themselves for the battering of all their atheistical structure down about their ears."
—*Cudworth.*

Neither reason nor analogy would lead us to think in particular, that the interposition of Christ, in the manner in which he did interpose, would be of that efficacy for the recovery of the world, which the Scripture teaches us it was: But neither would reason nor analogy lead us to think, that other particular means would be of the efficacy, which experience shows they are in numberless instances. And, therefore, as the case before us does not admit of experience; so that neither reason nor analogy can show, how or in what particular way, the interposition of Christ, as revealed in Scripture, is of that efficacy which it is there represented to be; this is no kind nor degree of presumption against its being really of efficacy.

RECAPITULATORY TABLE

OF

TECHNICAL TERMS.

CHIEFLY ABRIDGED FROM MR. WESLEY'S TEXT, IN THE BODY OF THE WORK.

Absolute Conditions—are those which are suitable to the premises absolutely and in themselves. Those are said to be *relative conditions* which are suitable to the premises in reference to the conclusion.

Abstraction—From *abstraho*, "to draw off," is the mental separation of certain qualities and circumstances belonging to a subject, or class of subjects, and, while we withhold our notice from the rest, attending exclusively to them, p. 8.

Accent, Fallacy of—is that which arises from false pronunciation; as when, in speaking, words written with the same, or not very different, letters, are promiscuously confounded.

Accident, Fallacy of—when some accidental circumstance is confounded with what is essential, p. 89.

Accidental Definition—That which assigns the properties or accidents of the defined. It is opposed to essential definition; and, in common conversation, is termed "a description," p. 26.

Analogous words—are those whose one signification agrees unequally, p. 7.

Analysis—is the resolution of effects into their first causes, to obtain perfect knowledge of them.

Antecedent—The conditional part of a conditional hypothetical syllogism, p. 72.

Amphibolia, or *Amphibologia*—is a fallacy in which the doubt arises, not so much from an uncertain use of singular words, as from the different kinds of construction of which the sentence is capable. Of this fallacy most ancient oracles form apt examples.

Apprehension, Simple—The bare conceiving of a thing in the mind, p. 2.

A priori—An expression in argument to denote that the propositions are derived from definitions, or from other propositions previously known.

A posteriori—An expression used to denote that the propositions are drawn from experience.

Argument—The third operation of the mind expressed in words. It is called a *syllogism* when laid down in the technical form.

Belief—Assent upon testimony, p. 82.

Canon—In logic, a proposition containing the reason of the consequence in a dialectical syllogism.

Categorematic words—called "Simple Terms" in their relation to a proposition, are such as may by themselves be its subject or predicate, p. 5.

Categorical Proposition.—That which directly and

Enthymeme—An imperfect sort of argument, one premise of which is wanting, p. 68.

Equivocal Term—One whose different significations agree equally, p. 7.

Equivocation, Fallacy of—p. 88.

Essential Definition—p. 24.

Extreme—Another word used to express the terms of a proposition. In relation to a syllogism, the middle or third term is never thus denominated.

Fallacy—An argument intended to deceive, p. 88.

Figure—The disposition of the third term in reference to the extremes; or the manner of comparing the medium with the terms of the conclusion, p. 54.

Genus—That which is predicated of several things as the common part of their essence, p. 10.

Hypothetical Syllogism—That which has one or more of its propositions hypothetical, p. 72.

Illative Conversion—is when the truth of the converse is necessarily inferred from that of the proposition in its original form, p. 39.

Indirect Reduction—is when the opponent is compelled to confess some absurd or impossible thing.

Imperfect Syllogism—is one that has some defect either in the number of the premises, in their disposition, or in the inference from them.

Ostensive Demonstration—is that in which the conclusion is evidently and directly inferred from former and more known causes.

Paradox—A proposition which is true, though contrary to common and vulgar opinion.

Per Accidens—applied to predication, is when, of two accidents existing in a common subject, the one is predicated of the other, as *this white* of *this sweet*.

Per Accidens—Conversion is so called, when the quality of the proposition remaining the same, its quantity only is changed, p. 38,

Physical Definition—That which assigns the really distinct parts of its essence, p. 26.

Predicate—is that which is actually said of something else in the same sense, p. 16.

Predicable—is that capable of being said of something else, p. 10.

Premises—Propositions are so called by which some conclusion is proved.

Problem—Another name for the question to be proved: in other words, that which is to be the conclusion when it is proved, p. 45.

Property—That which is predicated of several things, as necessarily joined to their essence, p. 10.

Proposition—An affirmative or negative sentence; signifying true or false; not ambiguous; nor maimed and incomplete, p. 29.

Prove—See *Infer*.

Proximate—That which is nearer.

Pure Categorical—said of a proposition, when it pronounces a thing absolutely and without any condition, p. 30.

Quality of a Proposition—Its being either affirmative or negative, p. 31.

Quantity of a Proposition—is its being either universal or particular, p. 31.

Question—That which is to be the conclusion of a syllogism, when it has been proved.

Real Definition—That which explains the nature of the thing, p. 24.

Reduction, Ostensive.—See *Ostensive Demonstration.*

Reduction per impossibile—is when, from granted premises, we prove the conclusions to be therefore true, because their contradictories are apparently false.

Separable Accident—p. 21.

Singular Word—That which expresses one thing only, p. 6.

Sorites—From σωρὸς, a "heap:" A kind of argument in whose antecedent every preceding term is subjected to the following, till you come from the subject of the conclusion to the predicate of it, p. 71.

Species—A predicable which is said of several things, of their whole essence, p. 10.

SubalternSpecies and Genus—mean the same thing under a different relation; the former, when

subjected to a higher genus, and then it becomes a species; the latter, when predicated of a lower species, and then it becomes a genus, p. 17.

Subcontrary Opposition—p. 37.

Subject of a Proposition—That term of which something else is said.

Summum Genus—That which can never be a species, p. 16.

Syllogism—The operation of ratiocination, or reasoning, expressed fully and technically in propositions, according to the logical form, p. 42.

Syncategorematic Words—Such as cannot, of themselves, be the subject or predicate of a proposition, p. 5.

Temporal Syllogism—A kind of conditional, in which some limitation in regard to time is found.

Term—From *terminus*: The boundary or extreme of a proposition, that is, subject or predicate.

Universal Proposition—One which declares something else of all the subject, and has a particle of universality expressed or understood, p. 31.

Univocal Word—whose one signification equally agrees to several things, p. 7.

THE END.

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