CHAPTER III

OF TERMS AND THEIR DENOTATION

Section 1. In treating of Deductive Logic it is usual to recognise three divisions of the subject: first, the doctrine of Terms, words, or other signs used as subjects or predicates; secondly, the doctrine of Propositions, analysed into terms related; and, thirdly, the doctrine of the Syllogism in which propositions appear as the grounds of a conclusion.

The terms employed are either letters of the alphabet, or the words of common language, or the technicalities of science; and since the words of common language are most in use, it is necessary to give some account of common language as subserving the purposes of Logic. It has been urged that we cannot think or reason at all without words, or some substitute for them, such as the signs of algebra; but this is an exaggeration. Minds greatly differ, and some think by the aid of definite and comprehensive picturings, especially in dealing with problems concerning objects in space, as in playing chess blindfold, inventing a machine, planning a tour on an imagined map. Most people draw many simple inferences by means of perceptions, or of mental imagery. On the other hand, some men think a good deal without any continuum of words and without any imagery, or with none that seems relevant to the purpose. Still the more elaborate sort of thinking, the grouping and concatenation of inferences, which we call reasoning, cannot be carried far without language or some equivalent system of signs. It is not merely that we need language to express our reasonings and communicate them to others: in solitary thought we often depend on words—'talk to ourselves,' in fact; though the words or sentences that then pass through our minds are not always fully formed or articulated. In Logic, moreover, we have carefully to examine the grounds (at least the proximate grounds) of our conclusions; and plainly this cannot be done unless the conclusions in question are explicitly stated and recorded.

Conceptualists say that Logic deals not with the process of thinking (which belongs to Psychology) but with its results; not

with conceiving but with concepts; not with judging but with judgments. Is the concept self-consistent or adequate? Logic asks; is the judgment capable of proof? Now, it is only by recording our thoughts in language that it becomes possible to distinguish between the process and the result of thought. Without language, the act and the product of thinking would be identical and equally evanescent. But by carrying on the process in language and remembering or otherwise recording it, we obtain a result which may be examined according to the principles of Logic.

Section 2. As Logic, then, must give some account of language, it seems desirable to explain how its treatment of language differs from that of Grammar and from that of Rhetoric.

Grammar is the study of the words of some language, their classification and derivation, and of the rules of combining them, according to the usage at any time recognised and followed by those who are considered correct writers or speakers. Composition may be faultless in its grammar, though dull and absurd.

Rhetoric is the study of language with a view to obtaining some special effect in the communication of ideas or feelings, such as picturesqueness in description, vivacity in narration, lucidity in exposition, vehemence in persuasion, or literary charm. Some of these ends are often gained in spite of faulty syntax or faulty logic; but since the few whom bad grammar saddens or incoherent arguments divert are not carried away, as they else might be, by an unsophisticated orator, Grammar and Logic are necessary to the perfection of Rhetoric. Not that Rhetoric is in bondage to those other sciences; for foreign idioms and such figures as the ellipsis, the anacoluthon, the oxymoron, the hyperbole, and violent inversions have their place in the magnificent style; but authors unacquainted with Grammar and Logic are not likely to place such figures well and wisely. Indeed, common idioms, though both grammatically and rhetorically justifiable, both correct and effective, often seem illogical. 'To fall asleep,' for example, is a perfect English phrase; yet if we examine severally the words it consists of, it may seem strange that their combination should mean anything at all.

But Logic only studies language so far as necessary in order to

state, understand, and check the evidence and reasonings that are usually embodied in language. And as long as meanings are clear, good Logic is compatible with false concords and inelegance of style.

Section 3. Terms are either Simple or Composite: that is to say, they may consist either of a single word, as 'Chaucer,' 'civilisation'; or of more than one, as 'the father of English poetry,' or 'modern civilised nations.' Logicians classify words according to their uses in forming propositions; or, rather, they classify the uses of words as terms, not the words themselves; for the same word may fall into different classes of terms according to the way in which it is used. (*Cf*. Mr. Alfred Sidgwick's *Distinction and the Criticism of Beliefs*, chap. xiv.)

Thus words are classified as Categorematic or Syncategorematic. A word is Categorematic if used singly as a term without the support of other words: it is Syncategorematic when joined with other words in order to constitute the subject or predicate of a proposition. If we say *Venus is a planet whose orbit is inside the Earth's*, the subject, 'Venus,' is a word used categorematically as a simple term; the predicate is a composite term whose constituent words (whether substantive, relative, verb, or preposition) are used syncategorematically.

Prepositions, conjunctions, articles, adverbs, relative pronouns, in their ordinary use, can only enter into terms along with other words having a substantive, adjectival or participial force; but when they are themselves the things spoken of and are used substantively (*suppositio materialis*), they are categorematic. In the proposition, '*Of*' *was used more indefinitely three hundred years ago than it is now*, 'of' is categorematic. On the other hand, all substantives may be used categorematically; and the same self-sufficiency is usually recognised in adjectives and participles. Some, however, hold that the categorematic use of adjectives and participles is due to an ellipsis which the logician should fill up; that instead of *Gold is heavy*, he should say *Gold is a heavy metal*; instead of *The sun is shining*, *The sun is a body shining*. But in these cases the words 'metal' and 'body' are unmistakable tautology, since 'metal' is implied in gold and 'body' in sun. But, as we have seen, any of these kinds of word, substantive, adjective, or

participle, may occur syncategorematically in connection with others to form a composite term.

Section 4. Most terms (the exceptions and doubtful cases will be discussed hereafter) have two functions, a denotative and a connotative. A term's denotative function is, to be the name or sign of something or some multitude of things, which are said to be called or denoted by the term. Its connotative function is, to suggest certain qualities and characteristics of the things denoted, so that it cannot be used literally as the name of any other things; which qualities and characteristics are said to be implied or connoted by the term. Thus 'sheep' is the name of certain animals, and its connotation prevents its being used of any others. That which a term directly indicates, then, is its *Denotation*; that sense or customary use of it which limits the Denotation is its *Connotation* (ch. iv.). Hamilton and others use 'Extension' in the sense of Denotation, and 'Intension' or 'Comprehension' in the sense of Connotation. Now, terms may be classified, first according to what they stand for or denote; that is, according to their *Denotation*. In this respect, the use of a term is said to be either Concrete or Abstract.

A term is Concrete when it denotes a 'thing'; that is, any person, object, fact, event, feeling or imagination, considered as capable of having (or consisting of) qualities and a determinate existence. Thus 'cricket ball' denotes any object having a certain size, weight, shape, colour, *etc*. (which are its qualities), and being at any given time in some place and related to other objects—in the bowler's hands, on the grass, in a shop window. Any 'feeling of heat' has a certain intensity, is pleasurable or painful, occurs at a certain time, and affects some part or the whole of some animal. An imagination, indeed (say, of a fairy), cannot be said in the same sense to have locality; but it depends on the thinking of some man who has locality, and is definitely related to his other thoughts and feelings.

A term is Abstract, on the other hand, when it denotes a quality (or qualities), considered by itself and without determinate existence in time, place, or relation to other things. 'Size,' 'shape,' 'weight,' 'colour,' 'intensity,' 'pleasurableness,' are terms used to denote such qualities, and are then abstract in their denotation.

'Weight' is not something with a determinate existence at a given time; it exists not merely in some particular place, but wherever there is a heavy thing; and, as to relation, at the same moment it combines in iron with solidity and in mercury with liquidity. In fact, a quality is a point of agreement in a multitude of different things; all heavy things agree in weight, all round things in roundness, all red things in redness; and an abstract term denotes such a point (or points) of agreement among the things denoted by concrete terms. Abstract terms result from the analysis of concrete things into their qualities; and conversely a concrete term may be viewed as denoting the synthesis of qualities into an individual thing. When several things agree in more than one quality, there may be an abstract term denoting the union of qualities in which they agree, and omitting their peculiarities; as 'human nature' denotes the common qualities of men, 'civilisation' the common conditions of civilised peoples.

Every general name, if used as a concrete term, has, or may have, a corresponding abstract term. Sometimes the concrete term is modified to form the abstract, as 'greedy—greediness'; sometimes a word is adapted from another language, as 'man—humanity'; sometimes a composite term is used, as 'mercury—the nature of mercury,' *etc*. The same concrete may have several abstract correlatives, as 'man—manhood, humanity, human nature'; 'heavy—weight, gravity, ponderosity'; but in such cases the abstract terms are not used quite synonymously; that is, they imply different ways of considering the concrete.

Whether a word is used as a concrete or abstract term is in most instances plain from the word itself, the use of most words being pretty regular one way or the other; but sometimes we must judge by the context. 'Weight' may be used in the abstract for 'gravity,' or in the concrete for a measure; but in the latter sense it is syncategorematic (in the singular), needing at least the article 'a (or the) weight.' 'Government' may mean 'supreme political authority,' and is then abstract; or, the men who happen to be ministers, and is then concrete; but in this case, too, the article is usually prefixed. 'The life' of any man may mean his vitality (abstract), as in "Thus following life in creatures we dissect"; or, the series of events through which he passes (concrete), as in 'the life of Nelson as narrated by Southey.'

It has been made a question whether the denotation of an abstract term may itself be the subject of qualities. Apparently 'weight' may be greater or less, 'government' good or bad, 'vitality' intense or dull. But if every subject is modified by a quality, a quality is also modified by making it the subject of another; and, if so, it seems then to become a new quality. The compound terms 'great weight,' 'bad government,' 'dull vitality,' have not the same denotation as the simple terms 'weight, 'government,' 'vitality': they imply, and may be said to connote, more special concrete experience, such as the effort felt in lifting a trunk, disgust at the conduct of officials, sluggish movements of an animal when irritated. It is to such concrete experiences that we have always to refer in order fully to realise the meaning of abstract terms, and therefore, of course, to understand any qualification of them.

Section 5. Concrete terms may be subdivided according to the number of things they denote and the way in which they denote them. A term may denote one thing or many: if one, it is called Singular; if many, it may do so distributively, and then it is General; or, as taken all together, and then it is Collective: one, then; any one of many; many in one.

Among Singular Terms, each denoting a single thing, the most obvious are Proper Names, such as Gibraltar or George Washington, which are merely marks of individual things or persons, and may form no part of the common language of a country. They are thus distinguished from other Singular Terms, which consist of common words so combined as to restrict their denotation to some individual, such as, 'the strongest man on earth.'

Proper Terms are often said to be arbitrary signs, because their use does not depend upon any reason that may be given for them. Gibraltar had a meaning among the Moors when originally conferred; but no one now knows what it was, unless he happens to have learned it; yet the name serves its purpose as well as if it were "Rooke's Nest." Every Newton or Newport year by year grows old, but to alter the name would cause only confusion. If such names were given by mere caprice it would make no difference; and they could not be more cumbrous, ugly, or absurd than many of those that are given 'for reasons.'

The remaining kinds of Singular Terms are drawn from the common resources of the language. Thus the pronouns 'he,' 'she,' 'it,' are singular terms, whose present denotation is determined by the occasion and context of discourse: so with demonstrative phrases—'the man,' 'that horse.' Descriptive names may be more complex, as 'the wisest man of Gotham,' which is limited to some individual by the superlative suffix; or 'the German Emperor,' which is limited by the definite article—the general term 'German Emperor' being thereby restricted either to the reigning monarch or to the one we happen to be discussing. Instead of the definite, the indefinite article may be used to make general terms singular, as 'a German Emperor was crowned at Versailles' (*individua vaga*).

Abstract Terms are ostensively singular: 'whiteness' (*e.g.*) is one quality. But their full meaning is general: 'whiteness' stands for all white things, so far as white. Abstract terms, in fact, are only formally singular.

General Terms are words, or combinations of words, used to denote any one of many things that resemble one another in certain respects. 'George III.' is a Singular Term denoting one man; but 'King' is a General Term denoting him and all other men of the same rank; whilst the compound 'crowned head' is still more general, denoting kings and also emperors. It is the nature of a general term, then, to be used in the same sense of whatever it denotes; and its most characteristic form is the Class-name, whether of objects, such as 'king,' 'sheep,' 'ghost'; or of events, such as 'accession,' 'purchase,' 'manifestation.' Things and events are known by their qualities and relations; and every such aspect, being a point of resemblance to some other things, becomes a ground of generalisation, and therefore a ground for the need and use of general terms. Hence general terms are far the most important sort of terms in Logic, since in them general propositions are expressed and, moreover (with rare exceptions), all predicates are general. For, besides these typical class-names, attributive words are general terms, such as 'royal,' 'ruling,' 'woolly,' 'bleating,' 'impalpable,' 'vanishing.'

Infinitives may also be used as general terms, as '*To err is human*'; but for logical purposes they may have to be translated into equivalent substantive forms, as *Foolish actions are*

characteristic of mankind. Abstract terms, too, are (as I observed) equivalent to general terms; 'folly' is abstract for 'foolish actions.' '*Honesty is the best policy*' means *people who are honest may hope to find their account in being so*; that is, in the effects of their honest actions, provided they are wise in other ways, and no misfortunes attend them. The abstract form is often much the more succinct and forcible, but for logical treatment it needs to be interpreted in the general form.

By antonomasia proper names may become general terms, as if we say '*A Johnson*' *would not have written such a book*—*i.e*., any man of his genius for elaborate eloquence.

A Collective Term denotes a multitude of similar things considered as forming one whole, as 'regiment,' 'flock,' 'nation': not distributively, that is, not the similar things severally; to denote them we must say 'soldiers of the regiment,' 'sheep of the flock,' and so on. If in a multitude of things there is no resemblance, except the fact of being considered as parts of one whole, as 'the world,' or 'the town of Nottingham' (meaning its streets and houses, open spaces, people, and civic organisation), the term denoting them as a whole is Singular; but 'the world' or 'town of Nottingham,' meaning the inhabitants only, is Collective.

In their strictly collective use, all such expressions are equivalent to singular terms; but many of them may also be used as general terms, as when we speak of 'so many regiments of the line,' or discuss the 'plurality of worlds'; and in this general use they denote any of a multitude of things of the same kind—regiments, or habitable worlds.

Names of substances, such as 'gold,' 'air,' 'water,' may be employed as singular, collective, or general terms; though, perhaps, as singular terms only figuratively, as when we say *Gold is king*. If we say with Thales, '*Water is the source of all things*,' 'water' seems to be used collectively. But substantive names are frequently used as general terms. For example, *Gold is heavy* means 'in comparison with other things,' such as water. And, plainly, it does not mean that the aggregate of gold is heavier than the aggregate of water, but only that its specific gravity is greater; that is, bulk for bulk, any piece of gold is heavier than water.

Finally, any class-name may be used collectively if we wish to assert something of the things denoted by it, not distributively but altogether, as that *Sheep are more numerous than wolves*.