

The first case arises:

- (a) in indirect reference of words
- (b) if a part of the sentence is only an indefinite indicator instead of a proper name.

In the second case, the subsidiary clause may have to be taken twice over, viz., once in its customary reference, and the other time in indirect reference; or the sense of a part of the subordinate clause may likewise be a component of another thought, which, taken together with the thought directly expressed by the subordinate clause, makes up the sense of the whole sentence.

It follows with sufficient probability from the foregoing that the cases where a subordinate clause is not replaceable by another of the same value cannot be brought in disproof of our view that a truth value is the referent of a sentence having a thought as its sense.

Let us return to our starting point!

If we found " $a = a$ " and " $a = b$ " to have different cognitive values, the explanation is that for the purpose of knowledge, the sense of the sentence, viz., the thought expressed by it, is no less relevant than its referent, i.e., its truth value. If now $a = b$, then indeed the referent of " b " is the same as that of " a ," and hence the truth value of " $a = b$ " is the same as that of " $a = a$." In spite of this, the sense of " b " may differ from that of " a ," and thereby the sense expressed in " $a = b$ " differs from that of " $a = a$." In that case the two sentences do not have the same cognitive value. If we understand by "judgment" the advance from the thought to its truth value, as in the above paper, we can also say that the judgments are different.

OF NAMES

John Stuart Mill

I. Names Are Names of Things, Not of Our Ideas

"A name," says Hobbes, "is a word taken at pleasure to serve for a mark which may raise in our mind a thought like to some thought we had before, and which, being pronounced to others, may be to them a sign of what thought the speaker had before in his mind." This simple definition of a name as a word (or set of words) serving the double purpose of a mark to recall to ourselves the likeness of a former thought and a sign to make it known to others appears unexceptionable. Names, indeed, do much more than this, but whatever else they do grows out of and is the result of this, as will appear in its proper place. . . .

III. General and Singular Names

All names are names of something, real or imaginary, but all things have not names appropriated to them individually. For some individual objects we require and, consequently, have separate distinguishing names; there is a name for every

person and for every remarkable place. Other objects of which we have not occasion to speak so frequently we do not designate by names of their own; but when the necessity arises for naming them, we do so by putting together several words, each of which, by itself, might be and is used for an indefinite number of other objects, as when I say, "this stone": "this" and "stone" being, each of them, names that may be used of many other objects besides the particular one meant, though the only object of which they can both be used at the given moment, consistently with their signification, may be the one of which I wish to speak.

Were this the sole purpose for which names that are common to more things than one could be employed, if they only served, by mutually limiting each other, to afford a designation for such individual objects as have no names of their own, they could only be ranked among contrivances for economising the use of language. But it is evident that this is not their sole function. It is by their means that we are enabled to assert *general* propositions, to affirm or deny any predicate of an indefinite number of things at once. The distinction, therefore, between *general* names and *individual* or *singular* names is fundamental, and may be considered as the first grand division of names.

A general name is, familiarly defined, a name which is capable of being truly affirmed, in the same sense, of each of an indefinite number of things. An individual or singular name is a name which is only capable of being truly affirmed, in the same sense, of one thing.

Thus, *man* is capable of being truly affirmed of John, George, Mary, and other persons without assignable limit, and it is affirmed of all of them in the same sense, for the word "man" expresses certain qualities, and when we predicate it of those persons, we assert that they all possess those qualities. But *John* is only capable of being truly affirmed of one single person, at least in the same sense. For, though there are many persons who bear that name, it is not conferred upon them to indicate any qualities or any thing which belongs to them in common, and cannot be said to be affirmed of them in any *sense* at all, consequently not in the same sense. "The king who succeeded William the Conqueror" is also an individual name. For that there cannot be more than one person of whom it can be truly affirmed is implied in the meaning of the words. Even "*the king*," when the occasion or the context defines the individual of whom it is to be understood, may justly be regarded as an individual name. . . .

It is necessary to distinguish *general* from *collective* names. A general name is one which can be predicated of *each* individual of a multitude; a collective name cannot be predicated of each separately, but only of all taken together. "The seventy-sixth regiment of foot in the British army," which is a collective name, is not a general but an individual name, for though it can be predicated of a multitude of individual soldiers taken jointly, it cannot be predicated of them severally. We may say, "Jones is a soldier, and Thompson is a soldier, and Smith is a soldier," but we cannot say, "Jones is the seventy-sixth regiment, and Thompson is the seventy-sixth regiment, and Smith is the seventy-sixth regiment." We can only say, "Jones, and Thompson, and Smith, and Brown, and so forth (enumerating all the soldiers) are the seventy-sixth regiment."

"The seventy-sixth regiment" is a collective name, but not a general one; "a regiment" is both a collective and a general name—general with respect to all individual regiments of each of which separately it can be affirmed, collective with respect to the individual soldiers of whom any regiment is composed.

IV. Concrete and Abstract

The second general division of names is into *concrete* and *abstract*. A concrete name is a name which stands for a thing; an abstract name is a name which stands for an attribute of a thing. Thus *John*, *the sea*, *this table* are names of things. *White*, also, is a name of a thing, or rather of things. Whiteness, again, is the name of a quality or attribute of those things. *Man* is a name of many things; *humanity* is a name of an attribute of those things. *Old* is a name of things; *old age* is a name of one of their attributes. . . . By *abstract*, then, I shall always, in logic proper, mean the opposite of *concrete*; by an abstract name, the name of an attribute; by a concrete name, the name of an object.

Do abstract names belong to the class of general or to that of singular names? Some of them are certainly general. I mean those which are names not of one single and definite attribute but of a class of attributes. Such is the word *color*, which is a name common to whiteness, redness, etc. Such is even the word *whiteness*, in respect of the different shades of whiteness, to which it is applied in common; the word *magnitude*, in respect of the various degrees of magnitude and the various dimensions of space; the word *weight*, in respect of the various degrees of weight. Such also is the word *attribute* itself, the common name of all particular attribute. But when only one attribute, neither variable in degree nor in kind, is designated by the name—as visibleness, tangibleness, equality, squareness, milk-whiteness—then the name can hardly be considered general; for though it denotes an attribute of many different objects, the attribute itself is always conceived as one, not many. To avoid needless logomachies, the best course would probably be to consider these names as neither general nor individual, and to place them in a class apart.

It may be objected to our definition of an abstract name that not only the names which we have called abstract, but adjectives which we have placed in the concrete class, are names of attributes; that *white*, for example, is as much the name of the color as *whiteness* is. But (as before remarked) a word ought to be considered as the name of that which we intend to be understood by it when we put it to its principal use, that is, when we employ it in predication. When we say "snow is white," "milk is white," "linen is white," we do not mean it to be understood that snow or linen or milk is a color. We mean that they are things having the color. The reverse is the case with the word *whiteness*; what we affirm to *be* whiteness is not snow but the color of snow. Whiteness, therefore, is the name of the color exclusively, white is a name of all things whatever having the color, a name, not of the quality whiteness, but of every white object. It is true, this name was given to all those various objects on account of the quality, and we may therefore say, without impropriety, that the quality forms part of

its signification; but a name can only be said to stand for, or to be a name of, the things of which it can be predicated. We shall presently see that all names which can be said to have any signification, all names by applying which to an individual we give any information respecting that individual, may be said to *imply* an attribute of some sort, but they are not names of the attribute; it has its own proper abstract name.

V. Connotative and Non-Connotative

This leads to the consideration of a third great division of names, into *connotative* and *non-connotative*, the latter sometimes, but improperly, called *absolute*. This is one of the most important distinctions which we shall have occasion to point out and one of those which go deepest into the nature of language.

A non-connotative term is one which signifies a subject only, or an attribute only. A connotative term is one which denotes a subject and implies an attribute. By a subject is here meant anything which possesses attributes. Thus *John*, or *London*, or *England* are names which signify a subject only. *Whiteness*, *length*, *virtue*, signify an attribute only. None of these names, therefore, are connotative. But *white*, *long*, *virtuous*, are connotative. The word *white* denotes all white things, as snow, paper, the foam of the sea, etc., and implies, or in the language of the schoolmen, *connotes*, the attribute *whiteness*. The word *white* is not predicated of the attribute, but of the subjects, snow, etc.; but when we predicate it of them, we convey the meaning that the attribute whiteness belongs to them. The same may be said of the other words above cited. *Virtuous*, for example, is the name of a class which includes Socrates, Howard, the Man of Ross, and an undefinable number of other individuals, past, present, and to come. These individuals, collectively and severally, can alone be said with propriety to be denoted by the word; of them alone can it properly be said to be a name. But it is a name applied to all of them in consequence of an attribute which they are supposed to possess in common, the attribute which has received the name of virtue. It is applied to all beings that are considered to possess this attribute, and to none which are not so considered.

All concrete general names are connotative. The word *man*, for example, denotes Peter, Jane, John, and an indefinite number of other individuals of whom, taken as a class, it is the name. But it is applied to them because they possess, and to signify that they possess, certain attributes. These seem to be corporeity, animal life, rationality, and a certain external form which, for distinction, we call the human. Every existing thing which possessed all these attributes would be called a man; and anything which possessed none of them, or only one, or two, or even three of them without the fourth, would not be so called. For example, if in the interior of Africa there were to be discovered a race of animals possessing reason equal to that of human beings but with the form of an elephant, they would not be called men. Swift's Houyhnhnms would not be so called. Or if such newly discovered beings possessed the form of man

without any vestige of reason, it is probable that some other name than that of man would be found for them. How it happens that there can be any doubt about the matter will appear hereafter. The word *man*, therefore, signifies all these attributes and all subjects which possess these attributes. But it can be predicated only of the subjects. What we call men are the subjects, the individual Stiles and Nokes, not the qualities by which their humanity is constituted. The name, therefore, is said to signify the subjects *directly*, the attributes *indirectly*; it *denotes* the subjects, and implies, or involves, or indicates, or, as we shall say henceforth, *connotes*, the attributes. It is a connotative name.

Connotative names have hence been also called *denominative*, because the subject which they denote is denominated by, or receives a name from, the attribute which they connote. Snow and other objects receive the name white because they possess the attribute which is called whiteness; Peter, James, and others receive the name man because they possess the attributes which are considered to constitute humanity. The attribute, or attributes, may, therefore, be said to denominate those objects or to give them a common name.

It has been seen that all concrete general names are connotative. Even abstract names, though the names only of attributes, may, in some instances, be justly considered as connotative, for attributes themselves may have attributes ascribed to them, and a word which denotes attributes may connote an attribute of those attributes. Of this description, for example, is such a word as *fault*, equivalent to *bad* or *hurtful quality*. This word is a name common to many attributes and connotes hurtfulness, an attribute of those various attributes. When, for example, we say that slowness in a horse is a fault, we do not mean that the slow movement, the actual change of place of the slow horse, is a bad thing, but that the property or peculiarity of the horse, from which it derives that name, the quality of being a slow mover, is an undesirable peculiarity.

In regard to those concrete names which are not general but individual, a distinction must be made.

Proper names are not connotative; they denote the individuals who are called by them, but they do not indicate or imply any attributes as belonging to those individuals. When we name a child by the name Paul or a dog by the name Caesar, these names are simply marks used to enable those individuals to be made subjects of discourse. It may be said, indeed, that we must have had some reason for giving them those names rather than any others, and this is true, but the name, once given, is independent of the reason. A man may have been named John because that was the name of his father; a town may have been named Dart-mouth because it is situated at the mouth of the Dart. But it is no part of the signification of the word John that the father of the person so called bore the same name, nor even of the word Dart-mouth to be situated at the mouth of the Dart. If sand should choke up the mouth of the river or an earthquake change its course and remove it to a distance from the town, the name of the town would not necessarily be changed. That fact, therefore, can form no part of the signification of the word; for otherwise, when the fact confessedly ceased to be true, no one would any longer think of applying the name. Proper

names are attached to the objects themselves and are not dependent on the continuance of any attribute of the object.

But there is another kind of names, which, although they are individual names—that is, predicable only of one object—are really connotative. For, though we may give to an individual a name utterly unmeaning, unmeaningful which we call a proper name—a word which answers the purpose of showing what thing it is we are talking about, but not of telling anything about it; yet a name peculiar to an individual is not necessarily of this description. It may be significant of some attribute or some union of attributes which, being possessed by no object but one, determines the name exclusively to that individual. “The sun” is a name of this description; “God,” when used by a monotheist, is another. These, however, are scarcely examples of what we are now attempting to illustrate, being, in strictness of language, general, not individual names, for, however they may be *in fact* predicable only of one object, there is nothing in the meaning of the words themselves which implies this; and, accordingly, when we are imagining and not affirming, we may speak of many suns; and the majority of mankind have believed, and still believe, that there are many gods. But it is easy to produce words which are real instances of connotative individual names. It may be part of the meaning of the connotative name itself, that there can exist but one individual possessing the attribute which it connotes, as, for instance, “the *only* son of John Stiles”; “the *first* emperor of Rome.” Or the attribute connoted may be a connection with some determinate event, and the connection may be of such a kind as only one individual could have, or may, at least, be such as only one individual actually had, and this may be implied in the form of the expression. “The father of Socrates” is an example of the one kind (since Socrates could not have had two fathers), “the author of the Iliad,” “the murderer of Henri Quatre,” of the second. For, though it is conceivable that more persons than one might have participated in the authorship of the Iliad or in the murder of Henri Quatre, the employment of the article *the* implies that, in fact, this was not the case. What is here done by the word *the* is done in other cases by the context; thus, “Caesar’s army” is an individual name if it appears from the context that the army meant is that which Caesar commanded in a particular battle. The still more general expressions, “the Roman army,” or “the Christian army,” may be individualized in a similar manner. Another case of frequent occurrence has already been noticed; it is the following: The name, being a many-worded one, may consist, in the first place, of a *general* name, capable therefore, in itself, of being affirmed of more things than one, but which is, in the second place, so limited by other words joined with it that the entire expression can only be predicated of one object, consistently with the meaning of the general term. This is exemplified in such an instance as the following: “the present prime minister of England.” “Prime Minister of England” is a general name; the attributes which it connotes may be possessed by an indefinite number of persons, in succession, however, not simultaneously, since the meaning of the name itself imports (among other things) that there can be only one such person at a time. This being the case, and the application

of the name being afterward limited, by the article and the word *present*, to such individuals as possess the attributes at one indivisible point of time, it becomes applicable only to one individual. And, as this appears from the meaning of the name without any extrinsic proof, it is strictly an individual name.

From the preceding observations it will easily be collected that whenever the names given to objects convey any information—that is, whenever they have properly any meaning—the meaning resides not in what they *denote* but in what they *connote*. The only names of objects which connote nothing are *proper* names, and these have, strictly speaking, no signification.

As a proper name is said to be the name of the one individual which it is predicated of, so (as well from the importance of adhering to analogy as for the other reasons formerly assigned) a connotative name ought to be considered a name of all the various individuals which it is predicable of, or, in other words, *denotes*, and not of what it connotes. But by learning what things it is a name of, we do not learn the meaning of the name; for to the same thing we may, with equal propriety, apply many names, not equivalent in meaning. Thus I call a certain man by the name Sophroniscus; I call him by another name, the father of Socrates. Both these are names of the same individual, but their meaning is altogether different. They are applied to that individual for two different purposes: the one merely to distinguish him from other persons who are spoken of; the other to indicate a fact relating to him, the fact that Socrates was his son. I further apply to him these other expressions: a man, a Greek, an Athenian, a sculptor, an old man, an honest man, a brave man. All these are, or may be, names of Sophroniscus, not, indeed, of him alone, but of him and each of an indefinite number of other human beings. Each of these names is applied to Sophroniscus for a different reason, and by each whoever understands its meaning is apprised of a distinct fact or number of facts concerning him, but those who knew nothing about the names except that they were applicable to Sophroniscus would be altogether ignorant of their meaning. It is even possible that I might know every single individual of whom a given name could be with truth affirmed and yet could not be said to know the meaning of the name. A child knows who are its brothers and sisters long before it has any definite conception of the nature of the facts which are involved in the signification of those words. . . . Since, however, the introduction of a new technical language as the vehicle of speculations on subjects belonging to the domain of daily discussion is extremely difficult to effect and would not be free from inconvenience even if effected, the problem for the philosopher, and one of the most difficult which he has to resolve, is, in retaining the existing phraseology, how best to alleviate its imperfections. This can only be accomplished by giving to every general concrete name which there is frequent occasion to predicate a definite and fixed connotation in order that it may be known what attributes, when we call an object by that name, we really mean to predicate of the object. And the question of most nicety is how to give this fixed connotation to a name with the least possible change in the objects which the name is habitually

employed to denote, with the least possible disarrangement, either by adding or subtraction, of the group of objects which, in however, imperfect a manner, it serves to circumscribe and hold together, and with the least vitiation of the truth of any propositions which are commonly received as true.

This desirable purpose of giving a fixed connotation where it is wanting is the end aimed at whenever any one attempts to give a definition of a general name already in use, every definition of a connotative name being an attempt either merely to declare, or to declare and analyze, the connotation of the name. And the fact that no questions which have arisen in the moral sciences have been subjects of keener controversy than the definitions of almost all the leading expressions is a proof how great an extent the evil to which we have adverted has attained.

ON DENOTING

Bertrand Russell

By a "denoting phrase" I mean a phrase such as any one of the following: a man, some man, any man, every man, all men, the present King of England, the present King of France, the centre of mass of the Solar System at the first instant of the twentieth century, the revolution of the earth round the sun, the revolution of the sun round the earth. Thus a phrase is denoting solely in virtue of its *form*. We may distinguish three cases: (1) A phrase may be denoting, and yet not denote anything; e.g., "the present King of France." (2) A phrase may denote one definite object; e.g., "the present King of England" denotes a certain man. (3) A phrase may denote ambiguously; e.g., "a man" denotes not many men, but an ambiguous man. The interpretation of such phrases is a matter of considerable difficulty; indeed, it is very hard to frame any theory not susceptible of formal refutation. All the difficulties with which I am acquainted are met, so far as I can discover, by the theory which I am about to explain.

The subject of denoting is of very great importance, not only in logic and mathematics, but also in theory of knowledge. For example, we know that the centre of mass of the Solar System at a definite instant is some definite point, and we can affirm a number of propositions about it; but we have no immediate *acquaintance* with this point, which is only known to us by description. The distinction between *acquaintance* and *knowledge about* is the distinction between the things we have presentations of, and the things we only reach by means of denoting phrases. It often happens that we know that a certain phrase denotes unambiguously, although we have no acquaintance with what it denotes; this occurs in the above case of the centre of mass. In perception we have acquaintance with the objects of perception, and in thought we have acquaintance with objects of a more abstract logical character; but we do not