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Reference and Meaning

Introduction

The words of English, indeed the words of any language which people speak, have meaning. This is a mundane fact. Every day there are countless interactions between people which rely on it – on the fact that when people interrelate with one another by producing and hearing sounds, they are using words which have meanings. But however mundane this fact, it is very far from obvious how to account for it. How can sounds achieve so much? What account should we give of words having meaning? In reading the extracts in this first chapter, from three classic sources – Locke, Mill, and Frege – we shall see that this question has been approached in some very different ways in the last three centuries.

Let us think now about how one might start on the question. Two thoughts that one might have, when wondering how to account for the facts about words having meaning, are, first, that words *stand for* things; and second, that words are used to *communicate*.

If words stand for things, then presumably they often stand for real things. So the first thought connects language with reality. There is surely something right in the idea that words make connections with reality. Yet a simple idea of words as standing for things seems actually to be well suited only to the words that are proper names. 'Guy' stands for Guy (that person); 'Fido' stands for Fido (that dog); 'Rome' stands for Rome (that city); and so on. When it comes to words like 'run' or 'dog' or 'green', a simple idea of 'standing for' does not appear to work quite so straightforwardly. And when it comes to other words, such as 'particularly' or 'and' or 'by', the idea that words stand for things may strike us as plain wrong. At the end of the present chapter, we shall try to

pinpoint a difference in the way in which 'Guy' or 'Fido' or 'Rome' make connections with things in reality and the way in which 'run' or 'dog' or 'green' do. In later chapters, we shall come to understand better why one should want to say different things about different sorts of words: in accounting for words' meaningfulness, the best approach is to think about words in relation to one another – to think of words as combining one with another to make up meaningful sentences. This was the approach of Frege, and we get a glimpse of it in the reading from him here. But it was not the approach of Locke or Mill. As we shall see, Locke, for his part, did not accept that it is the role of words to stand for real things. And Mill, although he has plenty to say about the different behaviours of different sorts of words, did not envisage the kind of systematic theory of words' combination that Frege introduced.

The second thought – that words are used to communicate – is surely correct. When you use words, you get your thoughts across to others, and when others use words, they get their thoughts across to you. On its own, however, the idea of communication may not appear to take us very far with questions about words and their meanings. The reason is that it seems as if words can be used to communicate *because* they have meaning. And then it can seem as though we need to have something to say about what words mean in order to think about how they are used in communication. Well, not everyone agrees with this. But we shall wait until Chapter 2 to think about approaches in which questions about what speakers do or intend are treated as more fundamental than questions about what words do.

Whether or not linguistic meaning might be explained in terms of communication, an account of words having meaning cannot lose sight of human beings as thinkers who can convey their thoughts to one another. In the course of this book, we shall see that one of the most difficult tasks for philosophy of language is to bring the fact that people use words and sentences to convey their thoughts to one another into the right relation with the fact that words and sentences make connections with reality. In the present chapter, in reading Locke, we shall discover some of the difficulties there are in finding appropriate connections between words and real things when words are treated as if they got their meanings in the minds of individual thinkers. In reading Mill and Frege, we shall discover that even when it comes to proper names, which can seem to be words of which a very simple account might be given, there are questions about their role in communication.

Questions about meaning and communication in general recur in this chapter, then. But by the end, we shall come to focus on the particular case of proper names, and the question of how they should be treated. Proper names, as we saw above, very plausibly do stand for things. But is that all there is to be said about them?

Introduction to Locke

John Locke (1632–1704) is the first of the three philosophers often collectively known as the British empiricists (the others are Berkeley and Hume). Empiricism is a doctrine that holds that experience is the source of all our knowledge. Locke's *Essay Concerning Human Understanding* presents views on traditional topics, such as the nature of the self, the world, God, and the grounds of our knowledge of them. But Locke comes to these topics only in the fourth and last book of the *Essay*, having set out his empiricist stall. The *Essay*'s first book argues against the doctrine of innate principles and ideas, the second deals with ideas, and the third, from which the extracts below are taken, with words.

Locke ends Book II by saying that 'it is impossible to speak clearly and distinctly of our knowledge... without considering, first, the nature, use and signification of language' (II, Ch. 23, §19). A recurrent theme of Book III, and the principal claim in these extracts (which comprise less than one twentieth of the whole Book), is that words signify ideas. Under the heading of 'ideas', Locke subsumed every kind of content of the mind, from concrete impressions got in sense perception through to abstract intellectual concepts. He explains, in the *Essay*'s Introduction, that he will use the word 'idea' with great frequency, it being the word best suited to stand for 'whatsoever is the object of understanding when a man thinks' (I, Ch. 1, §8). Ideas, in Locke's parlance, are 'in the mind', where this includes both what is consciously present and what resides in memory. As you read Locke, you might consider whether you can find in your own mind the 'ideas' in terms of which Locke explains the meanings of the words you use.

John Locke, 'Of Words' (extracts from Book III of *An Essay Concerning Human Understanding*)

Ch. 1 Of Words or Language in General

1. *Man fitted to form articulate sounds.* God, having designed man for a sociable creature, made him not only with an inclination, and under a necessity to have fellowship with those of his own kind, but furnished him also with language, which was to be the great instrument and common tie of society. Man, therefore, had by nature his organs so fashioned, as to be fit to frame articulate sounds, which we

call words. But this was not enough to produce language; for parrots, and several other birds, will be taught to make articulate sounds distinct enough, which yet by no means are capable of language.

2. *To use these sounds as signs of ideas.* Besides articulate sounds, therefore, it was further necessary that he should be able to use these sounds as signs of internal conceptions; and to make them stand as marks for the ideas within his own mind, whereby they might be made known to others, and the thoughts of men's minds be conveyed from one to another.

3. *To make them general signs.* But neither was this sufficient to make words so useful as they ought to be. It is not enough for the perfection of language, that sounds can be made signs of ideas, unless those signs can be so made use of as to comprehend several particular things: for the multiplication of words would have perplexed their use, had every particular thing need of a distinct name to be signified by. To remedy this inconvenience, language had yet a further improvement in the use of general terms, whereby one word was made to mark a multitude of particular existences: which advantageous use of sounds was obtained only by the difference of the ideas they were made signs of: those names becoming general, which are made to stand for general ideas, and those remaining particular, where the ideas they are used for are particular.

a→ 4. *To make them signify the absence of positive ideas.* Besides these names which stand for ideas, there be other words which men make use of, not to signify any idea, but the want or absence of some ideas, simple or complex, or all ideas together; such as are nihil in Latin, and in English, ignorance and barrenness. All which negative or privative words cannot be said properly to belong to, or signify no ideas: for then they would be perfectly insignificant sounds; but they relate to positive ideas, and signify their absence. [...]

Ch. 2 Of the Signification of Words

2. *Words, in their immediate signification, are the sensible signs of his ideas who uses them.* The use men have of these marks being either to record their own thoughts, for the assistance of their own memory or, as it were, to bring out their ideas, and lay them before the view of others: words, in their primary or immediate signification, stand for nothing but the ideas in the mind of him that uses them, how imperfectly soever or carelessly those ideas are collected from the things

b→ which they are supposed to represent. When a man speaks to another, it is that he may be understood: and the end of speech is, that those sounds, as marks, may make known his ideas to the hearer. That then which words are the marks of are the ideas of the speaker: nor can any one apply them as marks, immediately, to anything else but the ideas that he himself hath: for this would be to make them signs of his own conceptions, and yet apply them to other ideas; which would be to make them signs and not signs of his ideas at the same time, and so in effect to have no signification at all. Words being voluntary signs, they cannot be voluntary signs imposed by him on things he knows not. That would be to make them signs of nothing, sounds without signification. A man cannot make his words the signs either of qualities in things, or of conceptions in the mind of another, whereof he has none in his own. Till he has some ideas of his own, he cannot suppose them to correspond with the conceptions of another man; nor can he use any signs for them: for thus they would be the signs of he knows not what, which is in truth to be the signs of nothing. But when he represents to himself other men's ideas by some of his own, if he consent to give them the same names that other men do, it is still to his own ideas; to ideas that he has, and not to ideas that he has not. [...]

4. *Words are often secretly referred first to the ideas supposed to be in other men's minds.* But though words, as they are used by men, can properly and immediately signify nothing but the ideas that are in the
c→ mind of the speaker; yet they in their thoughts give them a secret reference to two other things.

First, They suppose their words to be marks of the ideas in the minds also of other men, with whom they communicate: for else they should talk in vain, and could not be understood, if the sounds they applied to one idea were such as by the hearer were applied to another, which is to speak two languages. But in this men stand not usually to examine, whether the idea they, and those they discourse with have in their minds be the same: but think it enough that they use the word, as they imagine, in the common acceptation of that language; in which they suppose that the idea they make it a sign of is precisely the same to which the understanding men of that country apply that name.

5. *To the reality of things.* Secondly, because men would not be thought to talk barely of their own imagination, but of things as really they are; therefore they often suppose the words to stand also for the reality of things. But this relating more particularly to substances and their names, as perhaps the former does to simple ideas and modes, we shall speak of these two different ways of

applying words more at large, when we come to treat of the names of mixed modes and substances in particular: though give me leave here to say, that it is a perverting the use of words, and brings unavoidable obscurity and confusion into their signification whenever we make them stand for anything but those ideas we have in our own minds.

6. *Words by use readily excite ideas of their objects.* Concerning words, also, it is further to be considered:

First, that they being immediately the signs of men's ideas, and by that means the instruments whereby men communicate their conceptions, and express to one another those thoughts and imaginations they have within their own breasts; there comes, by constant use, to be such a connexion between certain sounds and the ideas they stand for, that the names heard, almost as readily excite certain ideas as if the objects themselves, which are apt to produce them, did actually affect the senses. Which is manifestly so in all obvious sensible qualities, and in all substances that frequently and familiarly occur to us.

d→ 7. *Words are often used without signification, and why.* Secondly, That though the proper and immediate signification of words are ideas in the mind of the speaker, yet, because by familiar use from our cradles, we come to learn certain articulate sounds very perfectly, and have them readily on our tongues, and always at hand in our memories, but yet are not always careful to examine or settle their significations perfectly; it often happens that men, even when they would apply themselves to an attentive consideration, do set their thoughts more on words than things. Nay, because words are many of them learned before the ideas are known for which they stand: therefore some, not only children but men, speak several words no otherwise than parrots do, only because they have learned them, and
e→ have been accustomed to those sounds. But so far as words are of use and signification, so far is there a constant connexion between the sound and the idea, and a designation that the one stands for the other; without which application of them, they are nothing but so much insignificant noise.

8. *Their signification perfectly arbitrary, not the consequence of a natural connexion.* Words, by long and familiar use, as has been said, come to excite in men certain ideas so constantly and readily, that they are apt to suppose a natural connexion between them. But that
f→ they signify only men's peculiar ideas, and that by a perfect arbitrary imposition, is evident, in that they often fail to excite in others (even that use the same language) the same ideas we take them to be signs

of: and every man has so inviolable a liberty to make words stand for what ideas he pleases, that no one hath the power to make others have the same ideas in their minds that he has, when they use the same words that he does. And therefore the great Augustus himself, in the possession of that power which ruled the world, acknowledged he could not make a new Latin word: which was as much as to say, that he could not arbitrarily appoint what idea any sound should be a sign of, in the mouths and common language of his subjects. It is true, common use, by a tacit consent, appropriates certain sounds to certain ideas in all languages, which so far limits the signification of that sound, that unless a man applies it to the same idea, he does not speak properly: and let me add, that unless a man's words excite the same ideas in the hearer which he makes them stand for in speaking, he does not speak intelligibly. But whatever be the consequence of any man's using of words differently, either from their general meaning, or the particular sense of the person to whom he addresses them; this is certain, their signification, in his use of them, is limited to his ideas, and they can be signs of nothing else.

Commentary on Locke

Locke aimed for an account of words that explains how, as 'sociable creatures', we achieve our communicative goals. A person's ideas are not accessible to other people, Locke thought; but a person can communicate her thoughts to others using the sounds of speech: her words are signs standing for her ideas, and others can hear her words.

In what follows, we shall consider whether Locke's account is adequate to his aim. Locke's view of words is not popular with philosophers today. So it seems appropriate to focus on two main questions here. A: Does Locke have a good argument for his view? B: What problems are there for it? Under B, we shall see that things that Locke said himself can be suggestive of problems.

A. Locke's argument

An argument for the claim that the words a speaker uses are signs of their ideas starts at [b]→ and continues to the end of the section.

Can you spell out the argument following [b]→? Why does Locke take it to be ruled out that words should stand for something other than the speaker's ideas?

Locke thinks that words *must* be signs of the speaker's ideas, because words are significant, and there is nothing else in which their significance could reside. The argument here appears to rely upon two claims: (1) that words are 'voluntary signs'; (2) that one can make a word a sign for something only if that something is *immediately* present to one and *known* to one. Both of these claims might be challenged.

(1) Locke spells out the first claim further at §8 when he says 'every man has [an] inviolable liberty to make words stand for what ideas he pleases'.

In order to think about this, 'make the following experiment: [suggested by Wittgenstein[1]] *Say* "It's cold here" and *mean* "It's warm here".'

Probably you don't find it easy to come out with the sound of the word 'cold' and use it to mean anything except *cold*. You might try to imagine yourself speaking ironically; but even in that case it doesn't seem as if you straightforwardly mean *warm* when you say 'cold'.[2] Perhaps the difficulty here stems from the fact that 'cold' is a word of English whose meaning you and others know, and which you cannot do whatever you please with. If so, then the words that belong to spoken languages are not 'voluntary'. Humpty Dumpty said, 'When *I* use a word, it means just what I choose it to mean, neither more nor less'; and this seems ridiculous.[3]

Even if words are not voluntary, it might still be allowed that they are 'arbitrary', which is how Locke describes them at f→. You should think about the difference between voluntariness and arbitrariness.

To say that words are 'arbitrarily imposed' is to say that one sound (say 'red') could have signified what another (say 'green') actually does. 'Red' actually applies to red things (or, in Locke's view, to an idea of red), but it could have been that 'red' applied to the green things. Locke thinks that speakers of English have 'tacitly consented' to using 'red' as a sign of their ideas of red. And he acknowledges that one wouldn't speak intelligibly if one made the word 'red' signify something different from other people. So Locke might acknowledge that there is one respect in which one isn't free to use words exactly as one pleases: one must use them as others do if one is going to be understood.

(2) To contest Locke's second claim is to start to contest his empiricism itself. So one would need to read much more than Book III of Locke's *Essay* properly to evaluate it. But we can notice here that the claim certainly can be questioned. One might think that a person could have immediate knowledge

[1] Wittgenstein, §510, *Philosophical Investigations* (Oxford: Blackwell, 1953).
[2] Irony, which is a sort of non-literalness, is touched on in Chapter 6.
[3] This is in Ch. 6 of Lewis Carroll's *Alice Through the Looking Glass* (1871).

of something in the world (as opposed to the mind). And/or one might think that some of the contents of a person's mind need to be explained not just in terms of the person's own individual sense experience but of their interactions with other people. Thus someone who took a different view from Locke might say that a child's mind is formed, and its contents are gained, as the child grows up and learns a language. It would then seem appropriate to think about words' meanings in connection with concepts people share with one another rather than in connection with the ideas of each isolated speaker.

B. Problems for Locke

There are problems with Locke's treatment of 'general signs'. These are problems that Mill recognized, so that we postpone discussion of them to the Commentary on Mill below.

1. At [a]→ we come across an exception to Locke's general principle about words, that they stand for ideas.[4]

Locke gives 'ignorance' and 'barrenness' as examples of words belonging in the category of words signifying the absence of positive ideas. What other words do you think belong in this category?

You may not find this exercise straightforward. Perhaps 'rejection' belongs in the category? Perhaps 'fruitless' does? The question is difficult to answer. The point of the exercise is to show that it may be harder than Locke allowed to know what, exactly, is involved in some word's signifying the absence of one of your ideas.

Indeed, you may be puzzled even about what it is for a word to stand for a positive idea. If you choose a word whose meaning you know – 'cold', for instance – then you might say, 'I know what "cold" means: it means *cold*, and this is the idea that the word "cold" signifies for me.' But here it seems that in isolating an idea you rely upon knowing what the English word 'cold' means; if so, then you have not isolated an idea in Locke's sense. In Locke's sense, an idea is something that you can discover in your mind, so that, by attaching a sound to it, you can go on to mean something using that sound. Such an idea could evidently not be one that you relied upon knowledge of word meaning to find in your mind. We may well wonder quite what Locke thinks *is* in our minds when we take our words to be meaningful.

[4] Locke did not think that *all* words stand for ideas. He made a definite exception of words which, following seventeenth-century English usage, he called 'particles' – such as 'and' and 'not' and 'but'. These signify neither ideas nor their absence but 'the connection that the Mind gives to ideas, one with another' (Book III, Ch.7, §1).

2. At [c]→ Locke talks about people supposing that words might stand for ideas in other people's minds, or stand for things outside of any mind. Locke thinks that people *wrongly* suppose both these things. The problem for Locke is that it is hard to see how people could get it so wrong.

Take the case of a proper name. The reason why it seems only right to say that 'Guy' stands for Guy (for the man, as opposed to an idea) is that a speaker will only get across her thought that Guy is in London when she says 'Guy is in London' if the hearer knows that she is talking about Guy. If both speaker and hearer know whom 'Guy' stands for, then it is easy to see how her thought can be communicated. But on Locke's account, it is not at all easy. It looks as if the hearer could only surmise that the idea he has when he hears the word is an idea of the same sort as the one whom the speaker chose to attach the word 'Guy' to. And it looks as if he would need further to surmise that it is Guy (that man) whom both the speaker and himself then have an idea of. If we really did have to guess, in the case of every word we hear, what idea the speaker signified by it, and whether our idea is an idea of the same thing as the speaker's, then would it not be a great deal harder to understand people than actually it is? And would we ever be right in thinking that we knew what had been said to us?

3. At [d]→ Locke talks of words as often used without signification.

What would be examples of 'speaking words no otherwise than parrots do'? Are words used 'without signification' in such cases?

One sort of example might be of someone acting as a mouthpiece. You pass on a telephone message, 'Andrew needs the book', but you don't know who Andrew is or which book he needs. Another sort of example might be of someone who doesn't fully understand some words. I say, 'Quarks come in six flavours', and a physicist who hears me concurs; but I am not certain what quarks are, and don't really know what 'flavour' means when it is used to differentiate between quarks. Examples of these sorts apparently fit Locke's idea of words used by a speaker who has not 'settled their significations perfectly'. But it is doubtful whether we should agree with Locke that the words in these cases are 'nothing but... insignificant noise'. When you pass on the message, the person you speak to knows exactly what you are saying if they know which person called Andrew and which book are in question. The physicist who concurs with me finds what I say perfectly meaningful.

When Locke speaks of 'insignificant noise', he is speaking of words applied without any 'constant connection' between sound and idea (see [e]→). Locke takes it for granted that usually, when a particular word is used from occasion to occasion, there is a regular match between the idea of its speaker and the idea of those who hear the speaker. The examples we have just looked at are ones where speakers' and hearers' ideas would seem to be mismatched, but without necessarily destroying the words' significance.

We have already questioned whether the existence of the regular matches that Locke takes for granted can really be taken for granted by someone who thinks that it is up to people in the role of speakers to make a sound a mark of their own idea. But it is important to recognize that Locke wants to allow that there are regularities of meaning; and that what he says about the arbitrariness of the relation between sounds and meanings seems correct.[5] When we examined Locke's argument, we saw that it may be tempting to think that the words of a language someone learns as a child and speaks as an adult are common currency among those who also speak that language. What has been at issue here is not so much whether Locke actually rejected this tempting thought, as whether the account he gave of words entitles him to embrace it.

We noted at the outset that Locke's account of words is no longer popular. Certainly his view that words are names of *ideas* no longer finds favour. Mill, whom we come to next, had no truck with it. 'When I use a name for the purpose of expressing a belief, it is a belief concerning the thing itself, not concerning my idea of it', he said.[6]

Introduction to Mill

John Stuart Mill (1806–73) is probably best known for his work in political and moral and philosophy. His *On Liberty* was published in 1859, and *Utilitarianism* in 1863. *System of Logic, Ratiocinative and Inductive* was Mill's first major work. It was published in 1843, and went through eight editions in Mill's lifetime; it is in two volumes, amounting to about eleven hundred pages. 'Logic', said Mill in his introduction, 'comprises the science of reasoning, as well as an art, founded in that science'. And Mill used 'reasoning' in its most general sense. The final part of *System of Logic* is concerned with the right method of thinking for constructing a 'science of human nature' that would include psychology, sociology, and economics.

The first chapter of *System of Logic* is devoted to explaining why an analysis of language should precede the rest of Mill's enquiries. 'Of Names' is the second chapter.

In keeping with the usage of his contemporaries, Mill used the word 'name' broadly. Probably, when asked to think of names, we think of words such as 'Jane' and 'John', i.e. of proper names. But so far as Mill was concerned, 'woman' and 'man' are equally names, and, for that matter so are 'white' and 'brave', and 'John Nokes, who was mayor of the town' (this last, Mill called a

[5] Philosophers have sometimes wanted to capture the idea of there being arbitrary regularities between words and what those words stand for (regularities which Locke would have said speakers 'tacitly consent to') using the notion of a convention. For more about convention, see Commentary on Wright in Chapter 3, and the reading list on Language and Convention.

[6] Mill, *System of Logic*, Book I, Ch. 2, §1.

'many-worded name'). Mill thought that all words were either names or parts of names. He worked with a historically long-standing division between categorematic words and syncategorematic words. Categorematic words or phrases are meaningful when they stand alone, and these are all names for Mill; syncategorematic words or phrases convey no meaning until they are joined with other words or phrases. It may be controversial exactly how we should understand the idea of something that has meaning when it stands alone, and thus controversial what belongs in Mill's category of 'name'. Suffice it here to say that Mill did not think that all words are names, but that in treating all the words that he termed names, he covered an enormous amount of ground.

Mill's purpose, in the following extracts, is to establish a classification of names. He made three principal divisions among them. Presupposed to these divisions is a distinction between things and attributes of things – a distinction that can be understood by reference to simple subject-predicate sentences. Thus in the sentence, 'Socrates is wise', the attribute wisdom is predicated of the thing Socrates; in 'That book is red', the attribute redness is predicated of the thing which is that book. (Some philosophers would use the word 'property' or 'quality' rather than 'attribute' here.) Mill's classification of names is of interest for two main reasons. First, when we know what different kinds of names there are, we can go on to say something about the different kinds of *things* there are; this is the topic of Mill's subsequent chapter. Second, the differences between names of different sorts correspond to differences in the workings of different sorts of words. Although Mill's way of thinking about these differences has largely been overtaken by work in compositional semantics (see Chapters 3 and 5), it can be instructive to think about individual words and the various ways in which they behave, or have meaning. The divisions, Mill said, were 'according to their signification'.

J. S. Mill, 'Of Names' (extracts from *System of Logic*, Book 1, Ch. 2)

§3. 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 a name 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 economizing the use of language. But it is
a > 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
b ⊢> 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 anything 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 not unusual, by way of explaining what is meant by a general name, to say that it is the name of a class. But this, though a convenient mode of expression for some purposes, is objectionable as a definition, since it explains the clearer of two things by the more obscure. It would be more logical to reverse the proposition, and turn it into a definition of the word *class*: "A class is the indefinite multitude of individuals denoted by a general 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 76th 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 76th regiment, and Thompson is the 76th regiment, and Smith is the 76th regiment. We can only say, Jones, and Thompson, and Smith, and Brown, and so forth (enumerating all the soldiers), are the 76th regiment.

"The 76th 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.

§4. 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.

I have used the words concrete and abstract in the sense annexed to them by the schoolmen, who, notwithstanding the imperfections of their philosophy, were unrivalled in the construction of technical language, and whose definitions, in logic at least, though they never went more than a little way into the subject, have seldom, I think,
[c]→ been altered but to be spoiled. A practice, however, has grown up in more modern times, which, if not introduced by Locke, has gained currency chiefly from his example, of applying the expression "abstract name" to all names which are the result of abstraction or generalization, and consequently to all general names, instead of confining it to the names of attributes. The metaphysicians of the Condillac school, – whose admiration of Locke, passing over the profoundest speculations of that truly original genius, usually fastens with peculiar eagerness upon his weakest points, – have gone on imitating him in this abuse of language, until there is now some difficulty in restoring the word to its original signification. A more wanton alteration in the meaning of a word is rarely to be met with;

for the expression *general name*, the exact equivalent of which exists in all languages I am acquainted with, was already available for the purpose to which *abstract* has been misappropriated, while the misappropriation leaves that important class of words, the names of attributes, without any compact distinctive appellation. The old acceptation, however, has not gone so completely out of use, as to deprive those who still adhere to it of all chance of being understood. By *abstract*, then, I shall always 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 *colour*, which is a name common to whiteness, redness, &c. 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 attributes. But when only one attribute, neither variable in degree nor in kind, is designated by the name; as visibleness; tangibleness; equality; squareness; milkwhiteness; 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, but 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
d > *white*, for example, is as much the name of the colour 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 colour. We mean that they are things having the colour. The reverse is the case with the word whiteness; what we affirm to *be* whiteness is not snow, but the colour of snow. Whiteness, therefore, is the name of the colour exclusively: white is a name of all things whatever having the colour; 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.

§5. 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, &c., and implies, or as it was termed by the schoolmen, *connotes*,[1] the attribute *whiteness*. The word white is not predicated of the attribute, but of the subjects, snow, &c.; but when we predicate it of them, we imply or connote, 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 its 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

[1] *Notare*, to mark; *con*notare, to mark *along with*; to mark *with* or *in addition to* another.

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* were not 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 pace 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.

* **Editors' note:** The Houyhnhnms are one of the nations of creatures that Gulliver encounters in Jonathan Swift's 1726 satirical novel *Gulliver's Travels*.

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
⌊e⌋→ belonging to those individuals. When we name a child by the name Paul, or a dog by the name Cæsar, these names are simply marks used to enable those individuals to be made subjects of discourse. It maybe 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 Dartmouth, 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 Dartmouth, 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.

⌊f⌋→ 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, 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 connexion with some determinate event, and the connexion 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, "Cæsar's army" is an individual name, if it appears from the context that the army meant is that which Cæsar 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 word 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 afterwards 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.[2]

[2] Archbishop Whately, who in the later editions of his *Elements of Logic* aided in reviving the important distinction treated of in the text, proposes the term "Attributive" as a substitute for "Connotative," (p. 22, 9th ed.). The expression is, in itself, appropriate; but as it has not the advantage of being connected with any verb, of so markedly distinctive a character as "to connote," it is not, I think, fitted to supply the place of the word Connotative in scientific use.

[g]→ If, like the robber in the Arabian Nights, we make a mark with chalk on a house to enable us to know it again, the mark has a purpose, but it has not properly any meaning. The chalk does not declare anything about the house; it does not mean, This is such a person's house, or This is a house which contains booty. The object of making the mark is merely distinction. I say to myself, All these houses are so nearly alike that if I lose sight of them I shall not again be able to distinguish that which I am now looking at, from any of the others; I must therefore contrive to make the appearance of this one house unlike that of the others, that I may hereafter know, when I see the mark – not indeed any attribute of the house – but simply that it is the same house which I am now looking at. Morgiana chalked all the other houses in a similar manner, and defeated the scheme: how? simply by obliterating the difference of appearance between that house and the others. The chalk was still there, but it no longer served the purpose of a distinctive mark.

When we impose a proper name, we perform an operation in some degree analogous to what the robber intended in chalking the house. We put a mark, not indeed upon the object itself, but, so to speak, upon the idea of the object. A proper name is but an unmeaning mark which we connect in our minds with the idea of the object, in order that whenever the mark meets our eyes or occurs to our thoughts, we may think of that individual object. Not being attached to the thing itself, it does not, like the chalk, enable us to distinguish the object when we see it; but it enables us to distinguish it when it is spoken of, either in the records of our own experience, or in the discourse of others; to know that what we find asserted in any proposition of which it is the subject, is asserted of the individual thing with which we were previously acquainted.

[...]

Commentary on Mill

We shall focus on two matters in this commentary: first, Mill's treatment of general names, which contrasts with Locke's treatment of them; secondly, Mill's treatment of proper names, which we shall come to see contrasts with Frege's.

But first we should take stock, and consider Mill's classification of names.

How did Mill characterize the three principal divisions among names that he makes in the extract?

A name is *singular* or *general* according to whether it is the name of *one thing* or is capable of being applied to *many things*.[1] A name is *concrete* or *abstract* according to whether it is a name of a *thing* or of an *attribute*. A name is *connotative or non-connotative* according to whether or not it *implies – that is, indirectly signifies – an attribute*.

What distinction did Mill make within the category of singular names?

Mill makes a distinction between proper names and other singular (or individual) names in the sentences following [b]→, and he elaborates this further at [f]→. The examples Mill gives of names that are singular but not proper come into a category known as definite descriptions – 'the king who succeeded William the Conqueror', 'the Prime Minister', 'Caesar's army', etc. The topic of definite descriptions is something we set aside here;[2] the discussion under 'proper names' below concerns only one sub-species of Mill's own category of singular names.

General names

When Mill takes exception to Locke's terminology at [c]→, his quarrel is over more than Locke's choice of the word 'abstract' for general signs. So far as Locke is concerned, the only reason for our having general signs is convenience: it would be inconvenient to give a different name to every single object (see §3 of his Ch. 1 above). For Locke the difference between a particular sign and a general one – between 'Fido' and 'dog', say – is a difference between ideas of two sorts: speakers attach a particular idea to the word 'Fido', an abstract one to the word 'dog'. Whereas Locke treats singular and general names as behaving in the same way (names of both sorts attach to an idea, and stand for it), Mill thinks that singular and general names behave differently from one another. In Mill's treatment of them, the difference between 'Fido' and 'dog' is that 'Fido' denotes Fido alone, but 'dog', denotes all the things that are dogs.[3]

[1] Mill usually uses 'thing' so that things are not abstract, indeed so as to make a distinction between things and attributes. But Mill sometimes needs to use the word 'thing' with a broad application, so that attributes are included among things – they are then abstract things. There is an example of the broad use of 'thing' here: it enables Mill to treat the singular/general distinction as having application to abstract names as well as to concrete ones.

[2] Bertrand Russell put forward a theory about definite descriptions: Russell rejects Mill's assumption that definite descriptions should be treated as categorematic (cf. Introduction to Mill above). An enormous amount of philosophical attention has been devoted to the question of whether Russell was right. We supply a reading list on Definite Descriptions.

[3] Here we pick up on the word 'denote', which is the word Mill most commonly uses for the relation between names and things. In the Conclusion to this chapter, there is something about the variety of terms used for word/thing relations.

Mill's distinction between abstractness and generality surely represents an advance on Locke. Of course dogs are not abstract things; and this is recorded when a distinction is made between the question of whether a name is general and the question of whether the name denotes something abstract. Such a distinction is excluded in Locke's way of thinking about words.

Mill's treatment of general names has two further advantages over Locke's. First, it enables a distinction to be made between words like 'doghood' or 'whiteness' and words like 'dog' or 'white'. 'Whiteness' is a singular name denoting an attribute possessed by white things, whereas 'white' is a general name denoting white things. Secondly, Mill is able to think of general names as allowing us to assert general propositions: see ⌊a⌋→. When Mill recognizes that speakers may want to say something about more than one object, there is an implicit criticism of Locke: it could not be the sole rationale for the presence in language of general terms that speakers want to avoid the inconvenience of giving a separate name to each object.

Nevertheless, it is hard to leave matters where Mill left them: it is hard to rest content with the idea that 'dog' denotes dogs and that it can occur in generalizations. Mill speaks of the 'principal use' of a general name as its use 'in predication' (see d→). But it seems that we need to understand how the same word 'dog' which occurs in 'Fido is a dog' – where it is employed simply in predicating an attribute of Fido – can also occur in 'All dogs are four-legged' and in 'A dog barked at John'. It seems that we ought to be able to find something to say about general terms that will enable us to understand how they combine with a variety of other terms. Well, the development of the predicate calculus has provided a way of treating predication and generality hand in hand. This calculus relies upon a notation of quantifiers and variables, which Frege discovered (you have probably encountered it if you have done some elementary logic). In the wake of Frege's discovery, the category of predicate has supplanted Mill's category of general names. (This may be part of the explanation why the word 'name' is nowadays seldom given the broad application that it had among Mill and his predecessors and contemporaries.)

One consequence of Mill's recognizing a class of general words that are not abstract is that there are two dimensions in his account of meaning where there was only one in Locke's. Mill saw that there was more to be said about the meaning of the word 'dog' than could be said using the idea of denotation. An explanation of what a word like 'dog' means will allude to an attribute, Mill thought. 'Dog' denotes, or is truly attributable to, all and only the things that are dogs, but it is so attributable in virtue of an attribute of those things. It connotes that attribute: it indirectly signifies the attribute of doghood.

Proper names

We spoke of the difference between 'Fido' and 'dog' as a difference between a word that denotes one thing, and a word that is such as to denote many things. Mill allows that many things may have the same proper name as one another: see [b]→. There could be many things called 'Fido', but in any ordinary use of 'Fido' as a name it stands for just one thing. Mill says that when 'Fido' is used to stand for some particular thing, it does so simply because the name has been given to that thing, and not because of any of its attributes. Here Mill sows the seeds of his view that proper names are not connotative. The view comes to be stated in various ways later on: proper names are 'without signification'; they are 'unmeaning marks'.

Mill gives arguments in support of his view that proper names lack connotation at [e]→ and [g]→. Do you find these arguments forceful?

Mill's first argument is that even where a proper name might seem to depend upon an attribute of the thing named, still the name's continued functioning does not depend upon the attribute. In Mill's second argument, he invites us to compare a chalk mark attached to a house in order to single it out with a proper name attached to an object. He suggests that we should no more think of a proper name as working through knowledge of some attribute of what it singles out than we think of the chalk mark as working through such knowledge.

We shall return to proper names in connection with Frege. What we should notice now is that in Mill's scheme of things, crediting a word with a connotation is the only way, besides attributing a denotation to the word, of registering the word's significance. This is why the claim for which Mill argues – that proper names do not indirectly signify any attribute – boils down to the claim that proper names are 'not affirmed in any sense at all', are 'without signification', are 'unmeaning'. Whether or not we agree with Mill, his claim about the difference between 'dog' and 'Fido' – that 'dog' has connotation, whereas 'Fido' lacks it – perhaps explains why we should find ourselves saying (what was suggested in the Introduction) that a simple idea of words as standing for things seems well suited to the words that are proper names, but that a simple idea of 'standing for' does not work quite so straightforwardly for 'run' or 'dog' or 'green'.

Introduction to Frege

Gottlob Frege (1848–1925) was a German mathematician, logician, and philosopher who worked at the University of Jena. In mentioning the predicate calculus above, we have already spoken of one of Frege's great

achievements. The notation that Frege devised for this calculus was first outlined in his *Begriffsschrift* (1879), to which Frege refers in the extract below. Frege's aim, in devising the notation, was to find a way of regimenting thought and reasoning so as to make it possible to formalize proofs used in mathematics.

In the course of providing a foundation for views about the relationship of logic and mathematics, Frege came up with a comprehensive theory of language. The main ideas of that theory are presented in 'On Sense and Reference' (1892).

The first paragraph of 'On Sense and Reference' has assumed enormous importance in the history of twentieth-century philosophy. It presents what is known as 'Frege's Puzzle about Identity'. Frege's first examples of statements of identity there are '$a = a$' and '$a = b$'. Here Frege uses the '=' sign, in a way familiar in arithmetic, to express identity. In everyday English, the word 'is' sometimes expresses identity; where it does, it can be replaced with 'is the same as' or 'is identical to'. Thus if I say that Ruth Rendell is Barbara Vine, I mean that Ruth Rendell is the same person as Barbara Vine. So the contrast Frege intends – between '$a = a$' and '$a = b$' – is a contrast between statements such as:

$125 = 125$
The morning star is identical to the morning star
Peter Parker is Peter Parker

and statements such as:

$78 + 47 = 125$
The morning star is identical to the evening star
Peter Parker is Spider-Man

It is a good idea to think of examples when reading Frege. (You could work with these, or think up examples of your own.)

It is worth noticing at the outset that Frege uses 'proper names' for all of the signs in statements such as these. (He says that he calls them all proper names 'for brevity'.) Thus in Frege's usage 'proper name' covers the entire category of Mill's singular names: it includes definite descriptions along with proper names proper. In order to compare Frege with Mill, we shall need to think about cases where Mill and Frege would have agreed on calling an expression a proper name. Thus, to the list above, we can add the example:

Phosphorus is [identical to] Phosphorus

and

Hesperus is [identical to] Phosphorus

This example is very famous, and widely used in discussions of Frege. The planet Venus can be seen from Earth just before sunrise (at some times of the year) and just after sunset (at other times). There were early Greeks who thought that the morning and evening appearances of Venus were appearances of two different objects, calling it 'Phosphorus' when it appeared in the eastern morning sky and 'Hesperus' when it appeared in the western evening sky (cf. 'the morning star' and 'the evening star' of Frege's own example). The identity – the fact that Hesperus is Phosphorus – has been known for a very long time, having been first discovered by the ancient Babylonians.

Gottlob Frege, 'On Sense and Reference' (extract)

Identity[1] gives rise to challenging questions which are not altogether easy to answer. Is it a relation? A relation between objects, or between names or signs of objects? In my *Begriffsschrift*[2] I assumed the latter.
[a] The reasons which seem to favour this are the following: $a = a$ and $a = b$ are obviously statements of differing cognitive value; $a = a$ holds a priori and, according to Kant, is to be labelled analytic, while statements of the form $a = b$ often contain very valuable extensions of our knowledge and cannot always be established a priori. The discovery that the rising sun is not new every morning, but always the same, was one of the most fertile astronomical discoveries. Even today the identification of a small planet or a comet is not always a matter of course. Now if we were to regard identity as a relation between that which the names '*a*' and '*b*' designate, it would seem that $a = b$ could not differ from $a = a$ (i.e. provided $a = b$ is true). A relation would thereby be expressed of a thing to itself, and indeed one in which each thing stands to itself but to no other thing. What is intended to be said by $a = b$ seems to be that the signs or names '*a*' and '*b*' designate the same thing, so that those signs themselves would
[b] be under discussion; a relation between them would be asserted. But

[1] I use this word strictly and understand '$a = b$' to have the sense of '*a* is the same as *b*' or '*a* and *b* coincide'.
Editors' note: We have replaced the translators' word 'equality' with 'identity' here: this brings the translation into line with current English-language philosophers' usage.
[2] **Translators' note:** The reference is to Frege's *Begriffsschrift, eine der arithmetischen nachgebildete Formelsprache des reinen Denkens* (Halle, 1879).

this relation would hold between the names or signs only in so far as they named or designated something. It would be mediated by the connexion of each of the two signs with the same designated thing. But this is arbitrary. Nobody can be forbidden to use any arbitrarily producible event or object as a sign for something. In that case the *sentence* $a - b$ would no longer refer to the subject matter, but only to its mode of designation; we would express no proper knowledge by its means. But in many cases this is just what we want to do. If the sign '*a*' is distinguished from the sign '*b*' only as object (here, by means of its shape), not as sign (i.e. not by the manner in which it designates something), the cognitive value of $a = a$ becomes essentially equal to
[c] → that of $a = b$, provided $a = b$ is true. A difference can arise only if the difference between the signs corresponds to a difference in the mode of presentation of that which is designated. Let *a*, *b*, *c* be the lines connecting the vertices of a triangle with the midpoints of the opposite sides. The point of intersection of *a* and *b* is then the same as the point of intersection of *b* and *c*. So we have different designations for the same point, and these names ('point of intersection of *a* and *b*', and 'point of intersection of *b* and *c*') likewise indicate the mode of presentation; and hence the statement contains actual knowledge.

It is natural, now, to think of there being connected with a sign (name, combination of words, letter), besides that to which the sign refers, which may be called the reference of the sign, also what I should like to call the sense of the sign, wherein the mode of presentation is contained. In our example, accordingly, the reference of the expressions 'the point of intersection of *a* and *b*' and 'the point of intersection of *b* and *c*' would be the same, but not their senses. The reference of 'evening star' would be the same as that of 'morning star', but not the sense.

It is clear from the context that by 'sign' and 'name' I have here understood any designation representing a proper name, which thus has as its reference a definite object [...]. The designation of a single object can also consist of several words or other signs. For brevity, let every such designation be called a proper name.

[d] > The sense of a proper name is grasped by everybody who is sufficiently familiar with the language or totality of designations to which it belongs;[3] but this serves to illuminate only a single aspect of the

[3] In the case of an actual proper name such as 'Aristotle' opinions as to the sense may differ. It might, for instance, be taken to be the following: the pupil of Plato and teacher of Alexander the Great. Anybody who does this will attach another sense to the sentence 'Aristotle was born in Stagira' than will a man who takes as the sense of the name: the teacher of Alexander the Great who was born in Stagira. So long as the reference remains the same, such variations of sense may be tolerated, although they are to be avoided in the theoretical structure of a demonstrative science and ought not to occur in a perfect language.

reference, supposing it to have one. Comprehensive knowledge of the reference would require us to be able to say immediately whether any given sense belongs to it. To such knowledge we never attain.

The regular connexion between a sign, its sense, and its reference is of such a kind that to the sign there corresponds a definite sense and to that in turn a definite reference, while to a given reference (an object) there does not belong only a single sign. The same sense has different expressions in different languages or even in the same language. To be sure, exceptions to this regular behaviour occur. To every expression belonging to a complete totality of signs, there should certainly correspond a definite sense; but natural languages often do not satisfy this condition, and one must be content if the same word has the same sense in the same context. It may perhaps be granted that every grammatically well-formed expression representing a proper name always has a sense. But this is not to say that to the sense there also corresponds a reference. The words 'the celestial body most distant from the Earth' have a sense, but it is very doubtful if they also have a reference. The expression 'the least rapidly convergent series' has a sense; but it is known to have no reference, since for every given convergent series, another convergent, but less rapidly convergent, series can be found. In grasping a sense, one is not certainly assured of a reference.

[c] >

If words are used in the ordinary way, what one intends to speak of is their reference. It can also happen, however, that one wishes to talk about the words themselves or their sense. This happens, for instance, when the words of another are quoted. One's own words then first designate words of the other speaker, and only the latter have their usual reference. We then have signs of signs. In writing, the words are in this case enclosed in quotation marks. Accordingly, a word standing between quotation marks must not be taken as having its ordinary reference.

In order to speak of the sense of an expression 'A' one may simply use the phrase 'the sense of the expression "A" '. In reported speech one talks about the sense, e.g., of another person's remarks. It is quite clear that in this way of speaking words do not have their customary reference but designate what is usually their sense. In order to have a short expression, we will say: In reported speech, words are used *indirectly* or have their *indirect* reference. We distinguish accordingly the *customary* from the *indirect* reference of a word; and its *customary* sense from its *indirect* sense. The indirect reference of a word is accordingly its customary sense. Such exceptions must always be borne in mind if the mode of connexion between sign, sense, and reference in particular cases is to be correctly understood.

[f] >

[g] > The reference and sense of a sign are to be distinguished from the associated idea. If the reference of a sign is an object perceivable by

the senses, my idea of it is an internal image,[4] arising from memories of sense impressions which I have had and acts, both internal and external, which I have performed. Such an idea is often saturated with feeling; the clarity of its separate parts varies and oscillates. The same sense is not always connected, even in the same man, with the same idea. The idea is subjective: one man's idea is not that of another. There result, as a matter of course, a variety of differences in the ideas associated with the same sense. A painter, a horseman, and a zoologist will probably connect different ideas with the name 'Bucephalus'. This constitutes an essential distinction between the idea and the sign's sense, which may be the common property of many and therefore is not a part of a mode of the individual mind. For one can hardly deny that mankind has a common store of thoughts which is transmitted from one generation to another.[5]

In the light of this, one need have no scruples in speaking simply of the sense, whereas in the case of an idea one must, strictly speaking, add to whom it belongs and at what time. It might perhaps be said: Just as one man connects this idea, and another that idea, with the same word, so also one man can associate this sense and another that sense. But there still remains a difference in the mode of connexion. They are not prevented from grasping the same sense; but they cannot have the same idea. *Si duo idem faciunt, non est idem.* If two persons picture the same thing, each still has his own idea. It is indeed sometimes possible to establish differences in the ideas, or even in the sensations, of different men; but an exact comparison is not possible, because we cannot have both ideas together in the same consciousness.

The reference of a proper name is the object itself which we designate by its means; the idea, which we have in that case, is wholly subjective; in between lies the sense, which is indeed no longer sub-
$\overline{\text{h}}\rightarrow$ jective like the idea, but is yet not the object itself. The following analogy will perhaps clarify these relationships. Somebody observes the Moon through a telescope. I compare the Moon itself to the reference; it is the object of the observation, mediated by the real image projected by the object glass in the interior of the telescope, and by the retinal image of the observer. The former I compare to the sense, the latter is like the idea or experience. The optical image in

[4] We can include with ideas the direct experiences in which sense-impressions and acts themselves take the place of the traces which they have left in the mind. The distinction is unimportant for our purpose, especially since memories of sense-impressions and acts always help to complete the perceptual image. One can also understand direct experience as including any object, in so far as it is sensibly perceptible or spatial.

[5] Hence it is inadvisable to use the word 'idea' to designate something so basically different.

the telescope is indeed one-sided and dependent upon the standpoint of observation; but it is still objective, inasmuch as it can be used by several observers. At any rate it could be arranged for several to use it simultaneously. But each one would have his own retinal image. On account of the diverse shapes of the observers' eyes, even a geometrical congruence could hardly be achieved, and an actual coincidence would be out of the question. This analogy might be developed still further, by assuming A's retinal image made visible to B; or A might also see his own retinal image in a mirror. In this way we might perhaps show how an idea can itself be taken as an object, but as such is not for the observer what it directly is for the person having the idea. But to pursue this would take us too far afield.

i ⊢ We can now recognize three levels of difference between words, expressions, or whole sentences. The difference may concern at most the ideas, or the sense but not the reference, or, finally, the reference as well. With respect to the first level, it is to be noted that on account of the uncertain connexion of ideas with words, a difference may hold for one person, which another does not find. The difference between a translation and the original text should properly not overstep the first level. To the possible differences here belong also the colouring and shading which poetic eloquence seeks to give to the sense. Such colouring and shading are not objective, and must be evoked by each hearer or reader according to the hints of the poet or the speaker. Without some affinity in human ideas art would certainly be impossible; but it can never be exactly determined how far the intentions of the poet are realized.

In what follows there will be no further discussion of ideas and experiences; they have been mentioned here only to ensure that the idea aroused in the hearer by a word shall not be confused with its sense or its reference.

To make short and exact expressions possible, let the following phraseology be established:

j ⊢ A proper name (word, sign, sign combination, expression) expresses its sense, stands for or designates its reference. By means of a sign we express its sense and designate its reference.

Commentary on Frege

Frege's theory of sense and reference is the mainstay of his very influential account of meaning. We comment on aspects of the theory in the second of the three sections that follow. The first section is devoted to Frege's puzzle, and the final one to his treatment of proper names.

The puzzle about identity

Frege's puzzle concerns how '$a = a$' can convey anything different from '$a = b$'. What treatment of identity statements will explain the difference?

At the outset Frege distinguishes two views of identity. On the first, identity is a relation between objects, on the second, a relation between names (or signs) of objects.

Read from [a]→ to [b]→. What reasons does Frege see as seeming to count against treating identity as a relation between objects and favouring a treatment of it as a relation between signs?

Frege's reasons turn on the difference between (say) the statements that Hesperus = Hesperus and that Hesperus = Phosphorus. (Here we use 'Hesperus' and 'Phosphorus' in place of Frege's 'a' and 'b': see Introduction above.) The difference is that the former statement is *a priori*, i.e. (roughly) can be known independently of experience, whereas the latter is not. Astronomers discovered that Hesperus is Phosphorus, so that this is obviously not an *a priori* truth. Frege calls the difference between two such statements a difference in their cognitive value. And he says that the difference appears to be unaccountable if identity is a relation between objects. If identity were a relation between objects, then both statements alike would seem only to record the fact that some thing is the same as itself. It can then seem as though, in the case where something is learned from an identity statement, it is learned because the two *names* in it are different. And thus it could seem as though what the statement really tells us about is a relation holding between the names/signs.

Read from [b]→ to [c]→. Why does the view of identity as a relation between signs fare no better than the view of it as a relation between objects?

If we took identity statements to speak merely about names, then the cognitive difference between the statements that Hesperus = Hesperus and that Hesperus = Phosphorus would again not be apparent. Obviously 'Hesperus' and 'Phosphorus' are different signs, but that isn't what the statement that Hesperus is Phosphorus conveys. *Any* sign might designate the object Hesperus (it is arbitrary which signs designate which things); so that being told that this, that, or the other sign designates Hesperus could not convey the sort of knowledge which can be expressed with the statement that Hesperus is Phosphorus.

At [c]→ Frege gives his account of how '$a = b$' may record a real discovery. There can be a difference between 'a' and 'b' in respect of how they present

the objects that they name – a difference in their mode of presentation. Thus a certain object may be presented in different ways according to whether '*a*' or '*b*' is used to refer to it. Calling attention to such a difference can explain the difference in cognitive value between '$a = a$' and '$a = b$', which is the very difference that Frege wanted to explain.

Where '$a = b$' is informative and true, '*a*' and '*b*' differ in sense – which accounts for its informativeness – and they have the same reference – which accounts for its truth. Here we start to see that Frege's notion of reference can work hand in hand both with his notion of sense and also with the notion of truth.

Do you agree with Frege that 'Hesperus is Phosphorus' conveys 'proper knowledge' which is not conveyed by saying that the names 'Hesperus' and 'Phosophorus' refer to the same thing?

The account of identity as a relation between names is sometimes known as the metalinguistic account. It is actually not at all attractive. For a person appears to talk about Hesperus, not about the name 'Hesperus', when she says that it is (the same as) Phosphorus, just as much as she talks about Hesperus when she says that Hesperus is visible. (Certainly one can talk about names in saying what is required for the sentence 'Hesperus is Phosphorus' to be true. Thus one might say that 'Hesperus is Phosphorus' is true only if what the name 'Hesperus' refers to is Phosphorus; or – talking now about both names – that it is true only if 'Hesperus' and 'Phosphorus' refer to the same thing. But then one could just as well say that 'Hesperus is visible' is true only if what the name 'Hesperus' refers to is visible. It is not a special feature of identity statements that we can talk about the names that occur within them in saying what their truth requires.)

Sense and reference

Here we shall think both **A**, about how Frege conceives of sense, and **B**, about what else, besides solving the identity puzzle, his account of sense and reference is supposed to achieve.

A. How does Frege tell us to think about sense? Read the whole of [d]→ to [i]→.

Although Frege allows for variations between the sense of a word across different contexts (see [e]→), he is eager to distance his notion of sense from anything like a Lockean notion of idea, in which an idea is the property of an individual speaker. Senses are not subjective, but are 'the common property of many'. This is spelt out in the paragraph beginning at [g]→, and elaborated

further in the telescope analogy at [h]→. Frege compares the sense of an expression with the real image on the glass of the telescope (perceptible by any observer), and compares an idea with a retinal image (belonging to some particular person). Sense, being 'common property', grasped by those who know the language, evidently belongs in an account of language as it is used to communicate: see [d]→.

B. What does Frege have to say about how his notions of sense and reference might work in an account of language?

1. At [f]→ Frege applies his sense/reference distinction to an account of indirect reported speech. By this, he means something of which 'She said that Hesperus is visible' is an example. This contrasts with a direct, quotational report, such as 'She said "Hesperus is visible" '. In the direct report, we may take the quoted words to refer to themselves – to 'Hesperus is visible'. But what are the words which follow 'that' doing in the indirect report? Frege's account has it that we should take such words as referring to their sense, that is to what would customarily – outside the context of indirect speech – be the sense of 'Hesperus is visible'. A consequence of this account is that sameness of sense, not mere sameness of reference, will be required of truth-preserving substitutions of words occurring inside a context of indirect speech.[1] (When we noted above how unattractive a metalinguistic view of identity statements is, we saw, in effect, that there could be a puzzle about how someone might know that Hesperus is visible without knowing that Phosphorus is visible [just as there can be a puzzle about how someone might know that Hesperus is Hesperus without knowing that Hesperus is Phosphorus]. When words following 'knows that' are treated as Frege proposed that words following 'says that' should be treated, the puzzle seems to be solved.)

2. 'Reference' and 'sense' are not the only dimensions of significance that a theorist of language may discern in words and sentences. At [i]→ Frege alludes to 'colouring and shading', which he connects with poetic aura and relegates to the subjective realm of ideas. (There is much more to be said about 'colouring and shading' [which is often called *tone*]. Some people think that many of the differences which Frege would himself have recorded as differences of 'colouring and shading' [or tone] might appropriately be treated as differences of sense. Such a treatment might enable a range of emotive uses of language to be seen as communicative, and not as merely subjective.)

[1] The last sentence here gives a quick indication of what Frege's account of indirect speech may be supposed to achieve. We supply a reading list on Indirect Speech and Propositional Attitude Ascriptions, and in the Commentary on Soames in Chapter 3 below, there is something about the importance, for theories of meaning, of differences of sense.

3. Frege makes it clear that his account of sense and reference has a very general application. The notion of sense has been introduced in solving the puzzle about identity. But the connection of sense with what is *expressed* (and indeed what is *understood*, although Frege does not mention this here) ensures that it has a role to play in an account of every piece of language. We saw above that the notion of reference works hand in hand with the notion of truth. Working as such, it is an indispensable ingredient in Frege's account of how language functions.[2] Fregean reference, like Fregean sense, is a feature of all 'words, expressions and whole sentences'. Frege's idea, which he begins to convey at [j]→ is that, by thinking about the case of proper names, we can fix notions of sense and of reference, and that these notions can then be applied to expressions of all sorts.

Proper names

Let us confine attention now to the category of proper names recognized by Mill. Then we can think of proper names as those words to which Mill denied connotation and to which Frege attributed sense. Of course, Frege attributed sense to all words, and, as we noted, he included definite descriptions among his so-called proper names. But proper names in Mill's sense are the words we usually think of as proper names.[3] And by thinking about proper names in Mill's sense, we can contrast Fregean sense with Millian connotation. We can also make a connexion between Mill's claims about proper names and Frege's identity puzzle.

Frege's puzzle about identity is a real puzzle for Mill. According to Mill's account, a proper name functions 'to show what it is that we are talking about', and that that is *all* there is to be said about its function. Well, when we use the name 'Hesperus' we are talking about a certain heavenly body, and when we use the word 'Phosphorus' we are talking about a certain heavenly body. In fact, of course, we are talking about the same heavenly body in both cases. So if we say 'Hesperus is Phosphorus', then, on Mill's account, we have merely recorded that a certain heavenly body is the same as itself. Although our statement has the form '$a = b$', given what Mill said about how 'a' and 'b' behave, it seems that we might just as well have used a statement of the form

[2] See Chapters 3 and 5 for more about employing the notion of *truth* in an account of *meaning*.

[3] This may not be quite right, because Mill excluded words which lack a denotation from his category of proper names, whereas we may include some words which lack a denotation among proper names: 'Santa Claus' might be an example.

A singular term which lacks a denotation/reference is often called an *empty* term. And Frege certainly thought that proper names in *his* sense could be empty: he gives an example. But, as we have noted, Frege's own way of using 'proper name' conflates the categories of definite descriptions and proper names; and the example he gives of a 'proper name' which lacks a denotation is of a definite description.

'$a = a$'. But of course we could not have said anything informative if we had used such a statement. Yet 'Hesperus is Phosphorus' *can* be used informatively.

One does not need to consider identity statements in order to bring this problem for Mill to light. Consider 'Hesperus is visible' and 'Phosphorus is visible'. These two statements have, as Frege would put it, a different cognitive value: someone might understand both statements and know that one of them was true and not know that the other was. An account of these statements which is suited to showing how they can be used in communication between people is bound to take their cognitive value into account, this being just what is conveyed from one person to another. Frege will explain the difference between 'Hesperus is visible' and 'Phosphorus is visible' by saying that the sense of 'Hesperus' is different from the sense of 'Phosphorus'. But if 'Hesperus' and 'Phosphorus' played exactly the same role in the language, as Mill thought, then it would be impossible to find any difference between the two. It would seem impossible to take account of their communicative use. It would be impossible that someone should have said that Hesperus is visible unless she had said that Phosphorus is visible. (Here one sees one of the points of Frege's treatment of indirect reported speech.)

Mill did not recognize different cognitive values for statements containing different names. And it could then seem as though Mill held a view about names that is totally opposed to Frege's. But there is actually no need for Frege to disagree with two of Mill's main points about proper names. Firstly, when Mill denied that proper names have connotation, he was getting at something that could have been acceptable to Frege. Mill's point was that a proper name does not 'tell us anything' about the object that it names, and Frege could agree. For Frege's notion of 'mode of presentation' as it applies to a name is evidently not the notion of something that we are told about the object when the name is used. In the second place, Frege could agree with Mill when Mill speaks of a proper name as 'showing what it is that we are talking about'. The fact that 'Hesperus' and 'Phosphorus' differ in sense ensures that one employs a different way of showing what one is talking about in using 'Hesperus' from the way one employs in using 'Phosphorus'. But still, when one uses either of these names, one shows what it is that one is talking about.

It now looks as though the disagreement between Mill and Frege might be explained by pointing out that Frege's notion of sense was not available to Mill, who had only the apparatus of denotation and connotation to work with.

Were you convinced by Mill's arguments against crediting names with connotation? Do you accept that there are informative identity statements whose informativeness Mill's apparatus fails to explain?

If you answer *Yes* to both these questions, then you will probably think that the introduction of Frege's notion of sense constitutes a significant advance. Not all philosophers think this, however! Accounts of proper names have been proposed which the present discussion of Mill and Frege has not even touched on.[4]

Conclusion

Think of semantic vocabulary as vocabulary used to speak about how words behave – about their meaning. We have come across a great range of semantic vocabulary in this chapter. It may be useful now to take stock. In Locke, we find 'sign of', 'stand for', and 'make reference to'. In Mill, we find 'name of', 'stand for', 'designate', 'meaning', 'can be truly affirmed of', as well, of course, as 'denote' and 'connote'. And in Frege, we find 'designate', and, of course, 'have sense', 'have reference', and 'colouring and shading'.

It would be nice if we could give definitions of all of this vocabulary, so as to be able to come up with a fixed set of notions to use to talk about the various views there have been about linguistic meaning. But although this would be nice, it isn't possible. For when an author holds a certain view, he will use certain terms to convey that view, and his use of his terms may then not match that of those who take a different view. We have seen some examples of this. Most philosophers use 'refer to' as a relation between a word and a thing; but Locke uses 'refer to' only to speak of our words as *supposedly* making a *secret* reference to things – to things which, in his own view, they are not really (or anyway not directly) signs of. Again, Mill's claim that proper names are 'not affirmed in any sense at all' might look like a flat contradiction of Frege; but we have seen that insofar as Mill meant something different from Frege by 'sense', there may be no contradiction here at all. In the case of Frege, it is very clear that he deliberately departs from the ordinary understandings of the terms he uses when he introduces his own semantic vocabulary. His 'sense' and 'reference' (German: *Sinn* and *Bedeutung*) belong in a systematic theory of meaning for a language. We shall come back to the idea of such a systematic theory in Chapter 3. The point to notice now is that our ordinary, everyday terms for talking about language and meaning may be unsuited to systematic theory. We started with the question, 'What account should we give of words having meaning?'. Perhaps we can see already that in order to answer this question in an illuminating way, we shall need to avail ourselves of other notions than an everyday notion of 'the meaning of a word'.

In the Introduction to this chapter we suggested that a simple idea of individual words as standing for things seems actually to be well suited only to the words that are proper names. You may or may not have agreed.

[4] You will encounter other views if you use the reading list on Proper Names.

However that may be, it has seemed important to many philosophers to mark out a distinctive semantic role for expressions that work like proper names. Mill usually uses 'designate' when he is speaking about the semantic function of his singular names; and many philosophers have used 'designate' in such a way as to confine it to words whose role is just to latch onto an object to be talked about. By contrast, the word 'denote' is typically used more generally, so that an expression (a word, or series of words) may have a denotation even if the relation between the expression and what it denotes is not simply to latch onto a single thing. Other words that are often used to work in the manner of 'denote' are 'apply to', 'is true of', and (echoing Frege's special usage) 'refer to'.

For the reasons gestured at above, it is not possible to set out once and for all exactly how semantic vocabulary has been used by philosophers over the years. But a distinction such as that indicated here between 'designate' and 'denote' will be important if one thinks that latching onto a single thing is a special function of some expressions. Some of the interest in the way that proper names work derives from their apparently having this special function. Which other expressions may also have this function is controversial. And it is also controversial how this special function might best be characterized (our 'latching onto' serves simply as a gesture towards the idea of an especially direct relation between a word and a thing). Some of the debate about definite descriptions is involved with this controversy.[5]

[5] Again see the reading list on Definite Descriptions. We also supply a reading list on Indexicals, among which are included demonstratives such as 'that man' or 'this book'. Demonstratives certainly do seem to have the 'special function'.