

# Naming and Necessity 19

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## LECTURE I

... The first topic in the pair of topics is naming. By a name here I will mean a proper name, i.e., the name of a person, a city, a country, etc. It is well known that modern logicians also are very interested in definite descriptions: phrases of the form “the  $x$  such that  $\phi x$ ,” such as “the man who corrupted Hadleyburg.” Now, if one and only one man ever corrupted Hadleyburg, then that man is the referent, in the logician’s sense, of that description. We will use the term ‘name’ so that it does *not* include definite descriptions of that sort, but only those things which in ordinary language would be called ‘proper names’. If we want a common term to cover names and descriptions, we may use the term ‘designator’.

It is a point, made by Donnellan,<sup>1</sup> that under certain circumstances a particular speaker may use a definite description to refer, not to the proper referent, in the sense that I’ve just defined it, of that description, but to something else which he wants to single out and which he thinks is the proper referent of the description, but which in fact isn’t. So you may say, “The man over there with the champagne in his glass is happy,” though he actually only has water in his glass. Now, even though there is no champagne in

his glass, and there may be another man in the room who does have champagne in his glass, the speaker *intended* to refer, or maybe, in some sense of ‘refer’, *did* refer, to the man he thought had the champagne in his glass. Nevertheless, I’m just going to use the term ‘referent of the description’ to mean the object uniquely satisfying the conditions in the definite description. This is the sense in which it’s been used in the logical tradition. So, if you have a description of the form “the  $x$  such that  $\phi x$ ,” and there is exactly one  $x$  such that  $\phi x$ , that is the referent of the description. . . .

Many people have said that the theory of Frege and Russell is false, but, in my opinion, they have abandoned its letter while retaining its spirit, namely, they have used the notion of a cluster concept. Well, what is this? The obvious problem for Frege and Russell, the one which comes immediately to mind, is already mentioned by Frege himself. He said,

In the case of genuinely proper names like “Aristotle” opinions as regards their sense may diverge. As such may, e.g., be suggested: Plato’s disciple and the teacher of Alexander the Great. Whoever accepts this sense will interpret the meaning of the statement “Aristotle was born in Stagira,” differently from one who interpreted the sense of “Aristotle” as the Stagirite teacher of Alexander the Great. As long as the nominatum remains the same,

these fluctuations in sense are tolerable. But they should be avoided in the system of a demonstrative science and should not appear in a perfect language.<sup>2</sup>

So, according to Frege, there is some sort of looseness or weakness in our language. Some people may give one sense to the name "Aristotle," others may give another. But of course it is not only that; even a single speaker when asked "What description are you willing to substitute for the name?" may be quite at a loss. In fact, he may know many things about him; but any particular thing that he knows he may feel clearly expresses a contingent property of the object. If "Aristotle" meant *the man who taught Alexander the Great*, then saying "Aristotle was a teacher of Alexander the Great" would be a mere tautology. But surely it isn't; it expresses the fact that Aristotle taught Alexander the Great, something we could discover to be false. So, *being the teacher of Alexander the Great* cannot be part of [the sense of] the name.

The most common way out of this difficulty is to say "really it is not a weakness in ordinary language that we can't substitute a *particular* description for the name; that's all right. What we really associate with the name is a *family* of descriptions." A good example of this is in *Philosophical Investigations*, where the idea of family resemblances is introduced and with great power.

Consider this example. If one says "Moses did not exist," this may mean various things. It may mean: the Israelites did not have a *single* leader when they withdrew from Egypt—or: their leader was not called Moses—or: there cannot have been anyone who accomplished all that the Bible relates of Moses— . . . But when I make a statement about Moses,—am I always ready to substitute some *one* of those descriptions for "Moses"? I shall perhaps say: by "Moses" I understand the man who did what the Bible relates of Moses, or at any rate, a good deal of it. But how much? Have I decided how much must be proved false for me to give up my proposition as false? Has the name "Moses" got a fixed and unequivocal use for me in all possible cases?<sup>3</sup>

According to this view, and a *locus classicus* of it is Searle's article on proper names,<sup>4</sup> the referent of a name is determined not by a

single description but by some cluster or family. Whatever in some sense satisfies enough or most of the family is the referent of the name. I shall return to this view later. It may seem, as an analysis of ordinary language, quite a bit more plausible than that of Frege and Russell. It may seem to keep all the virtues and remove the defects of this theory.

Let me say (and this will introduce us to another new topic before I really consider this theory of naming) that there are two ways in which the cluster concept theory, or even the theory which requires a single description, can be viewed. One way of regarding it says that the cluster or the single description actually gives the meaning of the name; and when someone says "Walter Scott," he means *the man such that such and such and such and such*.

Now another view might be that even though the description in some sense doesn't give the *meaning* of the name, it is what *determines its reference* and although the phrase "Walter Scott" isn't *synonymous* with "the man such that such and such and such and such," or even maybe with the family (if something can be synonymous with a family), the family or the single description is what is used to determine to whom someone is referring when he says "Walter Scott." Of course, if when we hear his beliefs about Walter Scott we find that they are actually much more nearly true of Salvador Dali, then according to this theory the reference of this name is going to be Mr. Dali, not Scott. There are writers, I think, who explicitly deny that names have meaning at all even more strongly than I would but still use this picture of how the referent of the name gets determined. A good case in point is Paul Ziff, who says, very emphatically, that names don't have meaning at all, [that] they are not a part of language in some sense. But still, when he talks about how we determine what the reference of the name was, then he gives this picture. Unfortunately I don't have the passage in question with me, but this is what he says.<sup>5</sup>

The difference between using this theory as a theory of meaning and using it as a theory of reference will come out a little more clearly

later on. But some of the attractiveness of the theory is lost if it isn't supposed to give the meaning of the name; for some of the solutions of problems that I've just mentioned will not be right, or at least won't clearly be right, if the description doesn't give the meaning of the name. For example, if someone said "Aristotle does not exist" *means* "there is no man doing such and such," or in the example from Wittgenstein, "Moses does not exist," *means* "no man did such and such," that might depend (and in fact, I think, does depend) on taking the theory in question as a theory of the meaning of the name "Moses," not just as a theory of its reference. Well, I don't know. Perhaps all that is immediate now is the other way around: if "Moses" means the same as "the man who did such and such" then to say that Moses did not exist is to say that the man who did such and such did not exist, that is, that no one person did such and such. If, on the other hand, "Moses" is not synonymous with any description, then even if its reference is in some sense determined by a description, statements containing the name cannot in general be *analyzed* by replacing the name by a description, though they may be materially equivalent to statements containing a description. So the analysis of singular existence statements mentioned above will have to be given up, unless it is established by some special argument, independent of a general theory of the meaning of names; and the same applies to identity statements. In any case, I think it's false that "Moses exists" means that at all. So we won't have to see if such a special argument can be drawn up.<sup>6</sup>

Before I go any further into this problem, I want to talk about another distinction which will be important in the methodology of these talks. Philosophers have talked (and, of course, there has been considerable controversy in recent years over the meaningfulness of these notions) [about] various categories of truth, which are called 'a priori', 'analytic', 'necessary'—and sometimes even 'certain' is thrown into this batch. The terms are often used as if *whether* there are things answering to these concepts is an interesting question, but we might as well regard them all as

meaning the same thing. Now, everyone remembers Kant (a bit) as making a distinction between 'a priori' and 'analytic'. So maybe this distinction is still made. In contemporary discussion very few people, if any, distinguish between the concepts of statements being a priori and their being necessary. At any rate I shall *not* use the terms 'a priori' and 'necessary' interchangeably here.

Consider what the traditional characterizations of such terms as 'a priori' and 'necessary' are. First the notion of a priority is a concept of epistemology. I guess the traditional characterization from Kant goes something like: a priori truths are those which can be known independently of any experience. This introduces another problem before we get off the ground, because there's another modality in the characterization of 'a priori', namely, it is supposed to be something which *can* be known independently of any experience. That means that in some sense it's *possible* (whether we do or do not in fact know it independently of any experience) to know this independently of any experience. And possible for whom? For God? For the Martians? Or just for people with minds like ours? To make this all clear might [involve] a host of problems all of its own about what sort of possibility is in question here. It might be best therefore, instead of using the phrase 'a priori truth', to the extent that one uses it at all, to stick to the question of whether a particular person or knower knows something a priori or believes it true on the basis of a priori evidence.

I won't go further too much into the problems that might arise with the notion of a priority here. I will say that some philosophers somehow change the modality in this characterization from *can* to *must*. They think that if something belongs to the realm of a *priori* knowledge, it couldn't possibly be known empirically. This is just a mistake. Something may belong in the realm of such statements that *can* be known a *priori* but still may be known by particular people on the basis of experience. To give a really common sense example: anyone who has worked with a computing machine knows that the computing

machine may give an answer to whether such and such a number is prime. No one has calculated or proved that the number is prime; but the machine has given the answer: this number is prime. We, then, if we believe that the number is prime, believe it on the basis of our knowledge of the laws of physics, the construction of the machine, and so on. We therefore do not believe this on the basis of purely a priori evidence. We believe it (if anything is a posteriori at all) on the basis of a posteriori evidence. Nevertheless, maybe this could be known a priori by someone who made the requisite calculations. So 'can be known a priori' doesn't mean 'must be known a priori'.

The second concept which is in question is that of necessity. Sometimes this is used in an epistemological way and might then just mean a priori. And of course, sometimes it is used in a physical way when people distinguish between physical and logical necessity. But what I am concerned with here is a notion which is not a notion of epistemology but of metaphysics, in some (I hope) nonpejorative sense. We ask whether something might have been true, or might have been false. Well, if something is false, it's obviously not necessarily true. If it is true, might it have been otherwise? Is it possible that, in this respect, the world should have been different from the way it is? If the answer is "no," then this fact about the world is a necessary one. If the answer is "yes," then this fact about the world is a contingent one. This in and of itself has nothing to do with anyone's knowledge of anything. It's certainly a philosophical thesis, and not a matter of obvious definitional equivalence, either that everything a priori is necessary or that everything necessary is a priori. Both concepts may be vague. That may be another problem. But at any rate they are dealing with two different domains, two different areas, the epistemological and the metaphysical. Consider, say, Fermat's last theorem—or the Goldbach conjecture. The Goldbach conjecture says that an even number greater than 2 must be the sum of two prime numbers. If this is true, it is presumably necessary, and, if it is false, presumably necessarily false. We are taking

the classical view of mathematics here and assume that in mathematical reality it is either true or false.

If the Goldbach conjecture is false, then there is an even number,  $n$ , greater than 2, such that for no primes  $p_1$  and  $p_2$ , both  $< n$ , does  $n = p_1 + p_2$ . This fact about  $n$ , if true, is verifiable by direct computation, and thus is necessary if the results of arithmetical computations are necessary. On the other hand, if the conjecture is true, then every even number exceeding 2 is the sum of two primes. Could it then be the case that, although in fact every such even number is the sum of two primes, there might have been such an even number which was not the sum of two primes? What would that mean? Such a number would have to be one of 4, 6, 8, 10, . . . ; and, by hypothesis, since we are assuming Goldbach's conjecture to be true, each of these can be shown, again by direct computation, to be the sum of two primes. Goldbach's conjecture, then, cannot be contingently true or false; whatever truth-value it has belongs to it by necessity.

But what we can say, of course, is that right now, as far as we know, the question can come out either way. So, in the absence of a mathematical proof deciding this question, none of us has any a priori knowledge about this question in either direction. We don't know whether Goldbach's conjecture is true or false. So right now we certainly don't know anything a priori about it. . . .

Let's use some terms quasi-technically. Let's call something a 'rigid designator' if in every possible world it designates the same object, a 'nonrigid' or 'accidental designator' if that is not the case. Of course we don't require that the objects exist in all possible worlds. Certainly Nixon might not have existed if his parents had not gotten married, in the normal course of things. When we think of a property as essential to an object we usually mean that it is true of that object in any case where it would have existed. A rigid designator of a necessary existent can be called 'strongly rigid.'

One of the intuitive theses I will maintain in these talks is that *names* are rigid designators.

Certainly they seem to satisfy the intuitive test mentioned above: although someone other than the U.S. President in 1970 might have been the U.S. President in 1970 (e.g., Humphrey might have), no one other than Nixon might have been Nixon. In the same way, a designator rigidly designates a certain object if it designates that object wherever the object exists; if, in addition, the object is a necessary existent, the designator can be called 'strongly rigid.' For example, "the President of the U.S. in 1970" designates a certain man, Nixon; but someone else (e.g., Humphrey) might have been the President in 1970, and Nixon might not have; so this designator is not rigid.

In these lectures, I will argue, intuitively, that proper names are rigid designators, for although the man (Nixon) might not have been the President, it is not the case that he might not have been Nixon (though he might not have been *called* "Nixon"). Those who have argued that to make sense of the notion of rigid designator, we must antecedently make sense of "criteria of transworld identity" have precisely reversed the cart and the horse; it is *because* we can refer (rigidly) to Nixon, and stipulate that we are speaking of what might have happened to *him* (under certain circumstances), that "transworld identifications" are unproblematic in such cases.<sup>7</sup>

The tendency to demand purely qualitative descriptions of counterfactual situations has many sources. One, perhaps, is the confusion of the epistemological and the metaphysical, between a *prioricity* and necessity. If someone identifies necessity with a *prioricity*, and thinks that objects are named by means of uniquely identifying properties, he may think that it is the properties used to identify the object which, being known about it *a priori*, must be used to identify it in all possible worlds, to find out which object is Nixon. As against this, I repeat: (1) Generally, things aren't 'found out' about a counterfactual situation, they are stipulated; (2) possible worlds need not be given purely qualitatively, as if we were looking at them through a telescope. And we will see shortly that the properties an object has in every counter-

factual world have nothing to do with properties used to identify it in the actual world. . . .

## LECTURE II

Last time we ended up talking about a theory of naming which is given by a number of theses:

(1) To every name or designating expression " $X$ ," there corresponds a cluster of properties, namely the family of those properties  $\phi$  such that  $A$  believes " $\phi X$ ."

(2) One of the properties, or some conjointly, are believed by  $A$  to pick out some individual uniquely.

(3) If most, or a weighted most, of the  $\phi$ 's are satisfied by one unique object  $y$ , then  $y$  is the referent of " $X$ ."

(4) If the vote yields no unique object, " $X$ " does not refer.

(5) The statement, "If  $X$  exists, then  $X$  has most of the  $\phi$ 's" is known *a priori* by the speaker.

(6) The statement, "If  $X$  exists, then  $X$  has most of the  $\phi$ 's" expresses a necessary truth (in the idiolect of the speaker).

(C) For any successful theory, the account must not be circular. The properties which are used in the vote must not themselves involve the notion of reference in such a way that it is ultimately impossible to eliminate.

(C) is not a thesis but a condition on the satisfaction of the other theses. In other words, theses (1)–(6) cannot be satisfied in a way which leads to a circle, in a way which does not lead to any independent determination of reference. The example I gave last time of a blatantly circular attempt to satisfy these conditions was a theory of names mentioned by William Kneale. I was a little surprised at the statement of the theory when I was reading what I had copied down, so I looked it up again. I looked it up in the book to see if I'd copied it down accurately. Kneale *did* use the past tense. He said that though it is not trifling to be told that Socrates was the greatest philosopher of ancient Greece, it is trifling to be told that Socrates was called "Socrates." Therefore, he concludes, the

name "Socrates" must simply mean "the individual called 'Socrates'." Russell, as I've said, in some places gives a similar analysis. Anyway, as stated using the past tense, the condition wouldn't be circular, because one certainly could decide to use the term "Socrates" to refer to whoever was called "Socrates" by the Greeks. But, of course, in that sense it's not at all trifling to be told that Socrates was called "Socrates." If this is any kind of fact, it might be false. Perhaps we know that we call him "Socrates"; that hardly shows that the Greeks did so. In fact, of course, they may have pronounced the name differently. It may be, in the case of this particular name, that transliteration from the Greek is so good that the English version is not pronounced *very* differently from the Greek. But that won't be so in the general case. Certainly it is not trifling to be told that Isaiah was called "Isaiah." In fact, it is false to be told that Isaiah was called "Isaiah"; the prophet wouldn't have recognized this name at all. And of course the Greeks didn't call their country anything like "Greece." Suppose we amend the thesis so that it reads: it's trifling to be told that Socrates is called "Socrates" by us, or at least, by me, the speaker. Then in some sense this is fairly trifling. I don't think it is necessary or analytic. In the same way, it is trifling to be told that horses are called "horses," without this leading to the conclusion that the word "horse" simply *means* "the animal called a 'horse'." As a theory of the reference of the name "Socrates" it will lead immediately to a vicious circle. If one was determining the referent of a name like 'Glunk' to himself and made the following decision, "I shall use the term 'Glunk' to refer to the man that I call 'Glunk'," this would get one nowhere. One had better have some independent determination of the referent of "Glunk." This is a good example of a blatantly circular determination. Actually sentences like "Socrates is called 'Socrates'" are very interesting and one can spend, strange as it may seem, hours talking about their analysis. I actually did, once, do that. I won't do that, however, on this occasion. (See how high the seas of language can rise. And at the lowest

points too.) Anyway this is a useful example of a violation of the noncircularity condition. The theory will satisfy all of these statements, perhaps, but it satisfies them only because there is some independent way of determining the reference independently of the particular condition: being the man called "Socrates."

I have already talked about, in the last lecture, thesis (6). Theses (5) and (6), by the way, have converses. What I said for thesis (5) is that the statement that if  $X$  exists,  $X$  has most of the  $\varphi$ 's, is a priori true for the speaker. It will also be true under the given theory that certain converses of this statement hold true also a priori for the speaker, namely: if any unique thing has most of the properties  $\varphi$  in the properly weighted sense, it is  $X$ . Similarly a certain converse to this will be *necessarily* true, namely: if anything has most of the properties  $\varphi$  in the properly weighted sense, it is  $X$ . So really one can say that it is both a priori and necessary that something is  $X$  if and only if it uniquely has most of the properties  $\varphi$ . This really comes from the previous theses (1)–(4), I suppose. And (5) and (6) really just say that a sufficiently reflective speaker grasps this theory of proper names. Knowing this, he therefore sees that (5) and (6) are true. The objections to theses (5) and (6) will *not* be that some speakers are unaware of this theory and therefore don't know these things.

What I talked about in the last lecture is thesis (6). It's been observed by many philosophers that, if the cluster of properties associated with a proper name is taken in a very narrow sense, so that only one property is given any weight at all, let's say one definite description to pick out the referent—for example, Aristotle was the philosopher who taught Alexander the Great—then certain things will seem to turn out to be necessary truths which are not necessary truths—in this case, for example, that Aristotle taught Alexander the Great. But as Searle said, it is not a necessary truth but a contingent one that Aristotle ever went into pedagogy. Therefore, he concludes that one must drop the original paradigm of a single description and turn to that of a cluster of descriptions.

To summarize some things that I argued last

time, this is not the correct answer (whatever it may be) to this problem about necessity. For Searle goes on to say,

Suppose we agree to drop "Aristotle" and use, say, "the teacher of Alexander," then it is a necessary truth that the man referred to is Alexander's teacher—but it is a contingent fact that Aristotle ever went into pedagogy, though I am suggesting that it is a necessary fact that Aristotle has the logical sum, inclusive disjunction, of properties commonly attributed to him. . . .<sup>8</sup>

This is what is not so. It just is not, in any intuitive sense of necessity, a necessary truth that Aristotle had the properties commonly attributed to him. There is a certain theory, perhaps popular in some views of the philosophy of history, which might both be deterministic and yet at the same time assign a great role to the individual in history. Perhaps Carlyle would associate with the meaning of the name of a great man his achievements. According to such a view it will be necessary, once a certain individual is born, that he is destined to perform various great tasks and so it will be part of the very nature of Aristotle that he should have produced ideas which had a great influence on the western world. Whatever the merits of such a view may be as a view of history or the nature of great men, it does not seem that it should be trivially true on the basis of a theory of proper names. It would seem that it's a contingent fact that Aristotle ever did *any* of the things commonly attributed to him today, *any* of these great achievements that we so much admire. . . .

To clear up one thing which some people have asked me: When I say that a designator is rigid, and designates the same thing in all possible worlds, I mean that, as used in *our* language, it stands for that thing, when *we* talk about counterfactual situations. I don't mean, of course, that there mightn't be counterfactual situations in which in the other possible worlds people actually spoke a different language. One doesn't say that "two plus two equals four" is contingent because people might have spoken a language in which "two plus two equals four" meant that seven is even. Similarly, when we speak of a coun-

terfactual situation, we speak of it in English, even if it is part of the description of that counterfactual situation that we were all speaking German in that counterfactual situation. We say, "suppose we had all been speaking German" or "suppose we had been using English in a nonstandard way." Then we are describing a possible world or counterfactual situation in which people, including ourselves, did speak in a certain way different from the way we speak. But still, in describing that world, we use *English* with *our* meanings and *our* references. It is in this sense that I speak of a rigid designator as having the same reference in all possible worlds. I also don't mean to imply that the thing designated exists in all possible worlds, just that the name refers rigidly to that thing. If you say "suppose Hitler had never been born" then "Hitler" refers here, still rigidly, to something that would not exist in the counterfactual situation described.

Given these remarks, this means we must cross off thesis (6) as incorrect. The other theses have nothing to do with necessity and can survive. In particular thesis (5) has nothing to do with necessity and it can survive. If I use the name "Hesperus" to refer to a certain planetary body when seen in a certain celestial position in the evening, it will not therefore be a necessary truth that Hesperus is ever seen in the evening. That depends on various contingent facts about people being there to see and things like that. So even if I should say to myself that I will use "Hesperus" to name the heavenly body I see in the evening in yonder position of the sky, it will not be necessary that Hesperus was ever seen in the evening. But it may be a priori in that this is how I have determined the referent. If I have determined that Hesperus is the thing that I saw in the evening over there, then I will know, just from making that determination of the referent, that if there is any Hesperus at all it's the thing I saw in the evening. This at least survives as far as the arguments we have given up to now go.

How about a theory where thesis (6) is eliminated? Theses (2), (3), and (4) turn out to have a large class of counterinstances. Even

when theses (2)–(4) are true, thesis (5) is usually false; the truth of theses (3) and (4) is an empirical ‘accident’, which the speaker hardly knows a priori. That is to say, other principles really determine the speaker’s reference, and the fact that the referent coincides with that determined by (2)–(4) is an ‘accident’, which we were in no position to know a priori. Only in a rare class of cases, usually initial baptisms, are all of (2)–(5) true.

What picture of naming do these Theses [(1)–(5)] give you? The picture is this. I want to name an object. I think of some way of describing it uniquely and then I go through, so to speak, a sort of mental ceremony: By “Cicero” I shall mean the man who denounced Catiline; and that’s what the reference of “Cicero” will be. I will use “Cicero” to designate rigidly the man who (in fact) denounced Catiline, so I can speak of possible worlds in which he did not. But still my intentions are given by first, giving some condition which uniquely determines an object, then using a certain word as a name for the object determined by this condition. Now there may be some cases in which we actually do this. Maybe, if you want to stretch and call it description, when you say: I shall call that heavenly body over there “Hesperus.”<sup>9</sup> That is really a case where the theses not only are true but really even give a correct picture of how the reference is determined. Another case, if you want to call this a name, might be when the police in London use the name “Jack” or “Jack the Ripper” to refer to the man, whoever he is, who committed all these murders, or most of them. Then they are giving the reference of the name by a description.<sup>10</sup> But in many or most cases, I think the theses are false. So let’s look at them.<sup>11</sup>

Thesis (1), as I say, is a definition. Thesis (2) says that one of the properties believed by *A* of the object, or some conjointly, are believed to pick out some individual uniquely. A sort of example people have in mind is just what I said: I shall use the term “Cicero” to denote the man who denounced Catiline (or first denounced him in public, to make it unique). This picks out an object uniquely in this particular reference. Even some writers

such as Ziff in *Semantic Analysis*, who don’t believe that names have meaning in any sense, think that this is a good picture of the way reference can be determined.

Let’s see if thesis (2) is true. It seems, in some a priori way, that it’s got to be true, because if you don’t think that the properties you have in mind pick out anyone uniquely—let’s say they’re all satisfied by two people—then how can you say which one of them you’re talking about? There seem to be no grounds for saying you’re talking about the one rather than about the other. Usually the properties in question are supposed to be some famous deeds of the person in question. For example, Cicero was the man who denounced Catiline. The average person, according to this, when he refers to Cicero, is saying something like “the man who denounced Catiline” and thus has picked out a certain man uniquely. It is a tribute to the education of philosophers that they have held this thesis for such a long time. In fact, most people, when they think of Cicero, just think of a *famous Roman orator*, without any pretension to think either that there was only one famous Roman orator or that one must know something else about Cicero to have a referent for the name. Consider Richard Feynman, to whom many of us are able to refer. He is a leading contemporary theoretical physicist. Everyone *here* (I’m sure!) can state the contents of one of Feynman’s theories so as to differentiate him from Gell-Mann. However, the man in the street, not possessing these abilities, may still use the name “Feynman.” When asked he will say: well he’s a physicist or something. He may not think that this picks out anyone uniquely. I still think he uses the name “Feynman” as a name for Feynman.

But let’s look at some of the cases where we do have a description to pick out someone uniquely. Let’s say, for example, that we know that Cicero was the man who first denounced Catiline. Well, that’s good. That really picks someone out uniquely. However, there is a problem, because this description contains another name, namely “Catiline.” We must be sure that we satisfy the conditions in such a way as to avoid violating the non-



circularity condition here. In particular, we must not say that Catiline was the man denounced by Cicero. If we do this, we will really not be picking out anything uniquely, we will simply be picking out a pair of objects  $A$  and  $B$ , such that  $A$  denounced  $B$ . We do not think that this was the only pair where such denunciations ever occurred; so we had better add some other conditions in order to satisfy the uniqueness condition.

If we say Einstein was the man who discovered the theory of relativity, that certainly picks out someone uniquely. One can be sure, as I said, that everyone *here* can make a compact and independent statement of this theory and so pick out Einstein uniquely; but many people actually don't know enough about this stuff, so when asked what the theory of relativity is, they will say: "Einstein's theory," and thus be led into the most straightforward sort of vicious circle.

So thesis (2), in a straightforward way, fails to be satisfied when we say Feynman is a famous physicist without attributing anything else to Feynman. In another way it may not be satisfied in the proper way even when it is satisfied: If we say Einstein was "the man who discovered relativity theory," that does pick someone out uniquely; but it may not pick him out in such a way as to satisfy the noncircularity condition, because the theory of relativity may in turn be picked out as "Einstein's theory." So thesis (2) seems to be false. . . .

Let's go on to thesis (3): If most of the  $\varphi$ 's, suitably weighted, are satisfied by a unique object  $\gamma$ , then  $\gamma$  is the referent of the name for the speaker. Now, since we have already established that Thesis (2) is wrong, why should any of the rest work? . . . Suppose most of the  $\varphi$ 's are in fact satisfied by a unique object. Is that object necessarily the referent of " $X$ " for  $A$ ? Let's suppose someone says that Gödel is the man who proved the incompleteness of arithmetic, and this man is suitably well educated and is even able to give an independent account of the incompleteness theorem. He doesn't just say, "Well, that's Gödel's theorem," or whatever. He actually states a certain theorem, which he attributes to Gödel as the discoverer. Is it the case, then,

that if most of the  $\varphi$ 's are satisfied by a unique object  $\gamma$ , then  $\gamma$  is the referent of the name " $X$ " for  $A$ ? Let's take a simple case. In the case of Gödel that's practically the only thing many people have heard about him—that he discovered the incompleteness of arithmetic. Does it follow that whoever discovered the incompleteness of arithmetic is the referent of "Gödel"?

Imagine the following blatantly fictional situation. (I hope Professor Gödel is not present.) Suppose that Gödel was not in fact the author of this theorem. A man named "Schmidt," whose body was found in Vienna under mysterious circumstances many years ago, actually did the work in question. His friend Gödel somehow got hold of the manuscript and it was thereafter attributed to Gödel. On the view in question, then, when our ordinary man uses the name "Gödel," he really means to refer to Schmidt, because Schmidt is the unique person satisfying the description, "the man who discovered the incompleteness of arithmetic." Of course you might try changing it to "the man who *published* the discovery of the incompleteness of arithmetic." By changing the story a little further one can make even this formulation false. Anyway, most people might not even know whether the thing was published or got around by word of mouth. Let's stick to "the man who discovered the incompleteness of arithmetic." So, since the man who discovered the incompleteness of arithmetic is in fact Schmidt, we, when we talk about "Gödel," are in fact always referring to Schmidt. But it seems to me that we are not. We simply are not. One reply, which I will discuss later, might be: You should say instead, "the man to whom the incompleteness of arithmetic is commonly attributed," or something like that. Let's see what we can do with that later.

But it may seem to many of you that this is a very odd example, or that such a situation occurs rarely. This also is a tribute to the education of philosophers. Very often we use a name on the basis of considerable misinformation. The case of mathematics used in the fictive example is a good case in point. What do we know about Peano? What many people in

this room may 'know' about Peano is that he was the discoverer of certain axioms which characterize the sequence of natural numbers, the so-called "Peano axioms." Probably some people can even state them. I have been told that these axioms were not first discovered by Peano but by Dedekind. Peano was of course not a dishonest man. I am told that his footnotes include a credit to Dedekind. Somehow the footnote has been ignored. So on the theory in question the term "Peano," as we use it, really refers to—now that you've heard it you see that you were really all the time talking about—Dedekind. But you were not. Such illustrations could be multiplied indefinitely.

Even worse misconceptions, of course, occur to the layman. In a previous example I supposed people to identify Einstein by reference to his work on relativity. Actually, I often used to hear that Einstein's most famous achievement was the invention of the atomic bomb. So when we refer to Einstein, we refer to the inventor of the atomic bomb. But this is not so. Columbus was the first man to realize that the earth was round. He was also the first European to land in the western hemisphere. Probably none of these things are true, and therefore, when people use the term "Columbus" they really refer to some Greek if they use the roundness of the earth, or to some Norseman, perhaps, if they use the "discovery of America." But they don't. So it does not seem that if most of the  $\phi$ 's are satisfied by a unique object  $\gamma$ , then  $\gamma$  is the referent of the name. This seems simply to be false.<sup>12</sup>

Thesis (4): If the vote yields no unique object the name does not refer. Really this case has been covered before—has been covered in my previous examples. First, the vote may not yield a *unique* object, as in the case of Cicero or Feynman. Secondly, suppose it yields *no* object, that nothing satisfies most, or even any, substantial number, of the  $\phi$ 's. Does that mean the name doesn't refer? No: in the same way that you may have false beliefs about a person which may actually be true of someone else, so you may have false beliefs which are true of absolutely no one. And these may constitute the totality of your beliefs. Suppose, to vary the example about Gödel, no one had discovered the incomplete-

ness of arithmetic—perhaps the proof simply materialized by a random scattering of atoms on a piece of paper—the man Gödel being lucky enough to have been present when this improbable event occurred. Further, suppose arithmetic is in fact complete. One wouldn't really expect a random scattering of atoms to produce a correct proof. A subtle error, unknown through the decades, has still been unnoticed—or perhaps not actually unnoticed, but the friends of Gödel. . . . So even if the conditions are not satisfied by a unique object the name may still refer. I gave you the case of Jonah last week. Biblical scholars, as I said, think that Jonah really existed. It isn't because they think that someone ever was swallowed by a big fish or even went to Nineveh to preach. These conditions may be true of no one whatsoever and yet the name "Jonah" really has a referent. In the case above of Einstein's invention of the bomb, possibly no one really deserves to be called the "inventor" of the device.

Thesis 5 says that the statement "If  $X$  exists, then  $X$  has most of the  $\phi$ 's," is a priori true for  $A$ . Notice that even in a case where (3) and (4) *happen* to be true, a typical speaker hardly knows a priori that they are, as required by the theory. I *think* that my belief about Gödel *is* in fact correct and that the "Schmidt" story is just a fantasy. But the belief hardly constitutes a priori knowledge. . . .

Someone, let's say, a baby, is born; his parents call him by a certain name. They talk about him to their friends. Other people meet him. Through various sorts of talk the name is spread from link to link as if by a chain. A speaker who is on the far end of this chain, who has heard about, say Richard Feynman, in the marketplace or elsewhere, may be referring to Richard Feynman even though he can't remember from whom he first heard of Feynman or from whom he ever heard of Feynman. He knows that Feynman is a famous physicist. A certain passage of communication reaching ultimately to the man himself does reach the speaker. He then is referring to Feynman even though he can't identify him uniquely. He doesn't know what a Feynman diagram is, he doesn't know what the Feynman theory of pair production and

annihilation is. Not only that: he'd have trouble distinguishing between Gell-Mann and Feynman. So he doesn't have to know these things, but, instead, a chain of communication going back to Feynman himself has been established, by virtue of his membership in a community which passed the name on from link to link, not by a ceremony that he makes in private in his study: "By 'Feynman' I shall mean the man who did such and such and such and such." . . . On our view, it is not how the speaker thinks he got the reference, but the actual chain of communication, which is relevant.

I think I said the other time that philosophical theories are in danger of being false, and so I wasn't going to present an alternative theory. Have I just done so? Well, in a way; but my characterization has been far less specific than a real set of necessary and sufficient conditions for reference would be. Obviously the name is passed on from link to link. But of course not every sort of causal chain reaching from me to a certain man will do for me to make a reference. There may be a causal chain from our use of the term "Santa Claus" to a certain historical saint, but still the children, when they use this, by this time probably do not refer to that saint. So other conditions must be satisfied in order to make this into a really rigorous theory of reference. I don't know that I'm going to do this because, first, I'm sort of too lazy at the moment; secondly, rather than giving a set of necessary and sufficient conditions which will work for a term like reference, I want to present just a *better picture* than the picture presented by the received views.

Haven't I been very unfair to the description theory? Here I have stated it very precisely—more precisely, perhaps, than it has been stated by any of its advocates. So then it's easy to refute. Maybe if I tried to state mine with sufficient precision in the form of six or seven or eight theses, it would also turn out that when you examine the theses one by one, they will all be false. That might even be so, but the difference is this. What I think the examples I've given show is not simply that there's some technical error here or some mistake there, but that the whole picture

given by this theory of how reference is determined seems to be wrong from the fundamentals. It seems to be wrong to think that we give ourselves some properties which somehow qualitatively uniquely pick out an object and determine our reference in that manner. What I am trying to present is a better picture—a picture which, if more details were to be filled in, might be refined so as to give more exact conditions for reference to take place.

One might never reach a set of necessary and sufficient conditions. I don't know, I'm always sympathetic to Bishop Butler's "Everything is what it is and not another thing"—in the nontrivial sense that philosophical analyses of some concept like reference, in completely different terms which make no mention of reference, are very apt to fail. Of course in any particular case when one is given an analysis one has to look at it and see whether it is true or false. One can't just cite this maxim to oneself and then turn the page. But more cautiously, I want to present a better picture without giving a set of necessary and sufficient conditions for reference. Such conditions would be very complicated, but what is true is that it's in virtue of our connection with other speakers in the community, going back to the referent himself, that we refer to a certain man.

There may be some cases where the description picture is true, where some man really gives a name by going into the privacy of his room and saying that the referent is to be the unique thing with certain identifying properties. "Jack the Ripper" was a possible example which I gave. Another was "Hesperus." Yet another case which can be forced into this description is that of meeting someone and being told his name. Except for a belief in the description theory, in its importance in other cases, one probably wouldn't think that that was a case of giving oneself a description, i.e., "the guy I'm just meeting now." But one can put it in these terms if one wishes, and if one has never heard the name in any other way. Of course, if you're introduced to a man and told, "That's Einstein," you've heard of him before, it may be wrong, and so on. But maybe in some cases such a paradigm works—especially for the man who first gives someone

or something a name. Or he points to a star and says, "That is to be Alpha Centauri." So he can really make himself this ceremony: "By 'Alpha Centauri' I shall mean the star right over there with such and such coordinates." But in general this picture fails. In general our reference depends not just on what we think ourselves, but on other people in the community, the history of how the name reached one, and things like that. It is by following such a history that one gets to the reference. . . .

A rough statement of a theory might be the following: An initial "baptism" takes place. Here the object may be named by ostension, or the reference of the name may be fixed by a description.<sup>13</sup> When the name is "passed from link to link," the receiver of the name must, I think, intend when he learns it to use it with the same reference as the man from whom he heard it. If I hear the name "Napoleon" and decide it would be a nice name for my pet aardvark, I do not satisfy this condition.<sup>14</sup> (Perhaps it is some such failure to keep the reference fixed which accounts for the divergence of present uses of "Santa Claus" from the alleged original use.)

Notice that the preceding outline hardly *eliminates* the notion of reference; on the contrary, it takes the notion of intending to use the same reference as a given. There is also an appeal to an initial baptism which is explained in terms either of fixing a reference by a description, or ostension (if ostension is not to be subsumed under the other category).<sup>15</sup> (Perhaps there are other possibilities for initial baptisms.) Further, the George Smith case casts some doubt as to the sufficiency of the conditions. Even if the teacher does refer to his neighbor, is it clear that he has passed on his reference to the pupils? Why shouldn't their belief be about any other man named "George Smith"? If he says that Newton was hit by an apple, somehow his task of transmitting a reference is easier, since he has communicated a common misconception about Newton.

To repeat, I may not have presented a theory, but I do think that I have presented a better picture than that given by description theorists.

I think the next topic I shall want to talk about is that of statements of identity. Are these necessary or contingent? The matter has been in some dispute in recent philosophy. First, everyone agrees that descriptions can be used to make contingent identity statements. If it is true that the man who invented bifocals was the first Postmaster General of the United States—that these were one and the same—it's contingently true. That is, it might have been the case that one man invented bifocals and another was the first Postmaster General of the United States. So certainly when you make identity statements using descriptions—when you say "the  $x$  such that  $\phi x$  and the  $x$  such that  $\psi x$  are one and the same"—that can be a contingent fact. But philosophers have been interested also in the question of identity statements between names. When we say "Hesperus is Phosphorus" or "Cicero is Tully," is what we are saying necessary or contingent? Further, they've been interested in another type of identity statement, which comes from scientific theory. We identify, for example, light with electromagnetic radiation between certain limits of wavelengths, or with a stream of photons. We identify heat with the motion of molecules; sound with a certain sort of wave disturbance in the air; and so on. Concerning such statements the following thesis is commonly held. First, that these are obviously contingent identities: we've found out that light is a stream of photons, but of course it might not have been a stream of photons. Heat is in fact the motion of molecules; we found that out, but heat might not have been the motion of molecules. Secondly, many philosophers feel damned lucky that these examples are around. Now, why? These philosophers, whose views are expounded in a vast literature, hold to a thesis called "the identity thesis" with respect to some psychological concepts. They think, say, that pain is just a certain material state of the brain or of the body, or what have you—say the stimulation of C-fibers. (It doesn't matter what.) Some people have then objected, "Well, look, there's perhaps a *correlation* between pain and these states of the body; but this must just be a contingent correlation between two different

things, because it was an empirical discovery that this correlation ever held. Therefore, by 'pain' we must mean something different from this state of the body or brain; and, therefore, they must be two different things."

Then it's said, "Ah, but you see, this is wrong! Everyone knows that there can be contingent identities." First, as in the bifocals and Postmaster General case, which I have mentioned before. Second, in the case, believed closer to the present paradigm, of theoretical identifications, such as light and a stream of photons, or water and a certain compound of hydrogen and oxygen. These are all contingent identities. They might have been false. It's no surprise, therefore, that it can be true as a matter of contingent fact and not of any necessity that feeling pain, or seeing red, is just a certain state of the human body. Such psychophysical identifications can be contingent facts just as the other identities are contingent facts. And of course there are widespread motivations—ideological, or just not wanting to have the 'nomological dangler' of mysterious connections not accounted for by the laws of physics, one to one correlations between two different kinds of thing, material states, and things of an entirely different kind, which lead people to want to believe this thesis.

I guess the main thing I'll talk about first is identity statements between names. . . .

Let's suppose we refer to the same heavenly body twice, as "Hesperus" and "Phosphorus." We say: Hesperus is that star over there in the evening; Phosphorus is that star over there in the morning. Actually, Hesperus is Phosphorus. Are there really circumstances under which Hesperus wouldn't have been Phosphorus? Supposing that Hesperus is Phosphorus, let's try to describe a possible situation in which it would not have been. Well, it's easy. Someone goes by and he calls two *different* stars "Hesperus" and "Phosphorus." It may even be under the same conditions as prevailed when we introduced the names "Hesperus" and "Phosphorus." But are those circumstances in which Hesperus is not Phosphorus or would not have been Phosphorus? It seems to me that they are not.

Now, of course I'm committed to saying that they're not, by saying that such terms as "Hesperus" and "Phosphorus," when used as names, are rigid designators. They refer in every possible world to the planet Venus. Therefore, in that possible world too, the planet Venus is the planet Venus and it doesn't matter what any other person has said in this other possible world. How should *we* describe this situation? He can't have pointed to Venus twice, and in the one case called it "Hesperus" and in the other "Phosphorus," as we did. If he did so, then "Hesperus is Phosphorus" would have been true in that situation too. He pointed maybe neither time to the planet Venus—at least one time he didn't point to the planet Venus, let's say when he pointed to the body he called "Phosphorus." Then in that case we can certainly say that the name "Phosphorus" might not have referred to Phosphorus. We can even say that in the very position when viewed in the morning that we found Phosphorus, it might have been the case that Phosphorus was not there—that something else was there, and that even, under certain circumstances it would have been *called* "Phosphorus." But that still is not a case in which Phosphorus was not Hesperus. There might be a possible world in which, a possible counterfactual situation in which, "Hesperus" and "Phosphorus" weren't names of the things they in fact are names of. Someone, if he did determine their reference by identifying descriptions, might even have used the very identifying descriptions we used. But still that's not a case in which Hesperus wasn't Phosphorus. For there couldn't have been such a case, given that Hesperus is Phosphorus.

Now this seems very strange because in advance, we are inclined to say, the answer to the question whether Hesperus is Phosphorus might have turned out either way. So aren't there really two possible worlds—one in which Hesperus was Phosphorus, the other in which Hesperus wasn't Phosphorus—in advance of our discovering that these were the same? First, there's one sense in which things might turn out either way, in which it's clear that that doesn't imply that the way it finally turns out isn't necessary. For example, the

four color theorem might turn out to be true and might turn out to be false. It might turn out either way. It still doesn't mean that the way it turns out is not necessary. Obviously, the 'might' here is purely 'epistemic'—it merely expresses our present state of ignorance, or uncertainty.

But it seems that in the Hesperus-Phosphorus case, something even stronger is true. The evidence I have before I know that Hesperus is Phosphorus is that I see a certain star or a certain heavenly body in the evening and call it "Hesperus," and in the morning and call it "Phosphorus." I know these things. There certainly is a possible world in which a man should have seen a certain star at a certain position in the evening and called it "Hesperus" and a certain star in the morning and called it "Phosphorus"; and should have concluded—should have found out by empirical investigation—that he names two different stars, or two different heavenly bodies. At least one of these stars or heavenly bodies was not Phosphorus, otherwise it couldn't have come out that way. But that's true. And so it's true that given the evidence that someone has antecedent to his empirical investigation, he can be placed in a sense in exactly the same situation, that is a qualitatively identical epistemic situation, and call two heavenly bodies "Hesperus" and "Phosphorus," without their being identical. So in that sense we can say that it might have turned out either way. Not that it might have turned out either way as to Hesperus's being Phosphorus. Though for all we knew in advance, Hesperus wasn't Phosphorus, that couldn't have turned out any other way, in a sense. But being put in a situation where we have exactly the same evidence, qualitatively speaking, it could have turned out that Hesperus was not Phosphorus; that is, in a counterfactual world in which "Hesperus" and "Phosphorus" were not used in the way that we use them, as names of this planet, but as names of some other objects, one could have had qualitatively identical evidence and concluded that "Hesperus" and "Phosphorus" named two different objects.<sup>16</sup> But we, using the names as we do right now, can say in advance, that if Hesperus and

Phosphorus are one and the same, then in no other possible world can they be different. We use "Hesperus" as the name of a certain body and "Phosphorus" as the name of a certain body. We use them as names of those bodies in all possible worlds. If, in fact, they are the *same* body, then in any other possible world we have to use them as a name of that object. And so in any other possible world it will be true that Hesperus is Phosphorus. So two things are true: first, that we do not know a priori that Hesperus is Phosphorus, and are in no position to find out the answer except empirically. Second, this is so because we could have evidence qualitatively indistinguishable from the evidence we have and determine the reference of the two names by the positions of two planets in the sky, without the planets being the same.

Of course, it is only a contingent truth (not true in every other possible world) that the star seen over there in the evening is the star seen over there in the morning, because there are possible worlds in which Phosphorus was not visible in the morning. But that contingent truth shouldn't be identified with the statement that Hesperus is Phosphorus. It could only be so identified if you thought that it was a necessary truth that Hesperus is visible over there in the evening or that Phosphorus is visible over there in the morning. But neither of those are necessary truths even if that's the way we pick out the planet. These are the contingent marks by which we identify a certain planet and give it a name.

## NOTES

1. Keith Donnellan, "Reference and Definite Descriptions," *Philosophical Review* 75 (1966), pp. 281–304, [reprinted in this volume]. See also Leonard Linsky, "Reference and Referents," in *Philosophy and Ordinary Language*, ed. Caton (University of Illinois Press, Urbana: 1963.) Donnellan's distinction seems applicable to names as well as to descriptions. Two men glimpse someone at a distance and think they recognize him as Jones. "What is Jones doing? Raking the leaves." If the distant leaf-raker is actually Smith, then in some sense they are *referring* to Smith, even though they both use "Jones" as a name of Jones. In the text, I speak

of the 'referent' of a name to mean the thing named by the name—e.g., Jones, not Smith—even though a speaker may sometimes properly be said to use the name to refer to someone else. Perhaps it would have been less misleading to use a technical term, such as 'denote' rather than 'refer'. My use of 'refer' is such as to satisfy the schema, "The referent of 'X' is X," where "X" is replaceable by any name or description. I am tentatively inclined to believe, in opposition to Donnellan, that his remarks about reference have little to do with semantics or truth-conditions, though they may be relevant to a theory of speech acts. Space limitations do not permit me to explain what I mean by this, much less defend the view, except for a brief remark: Call the referent of a name or description in my sense the 'semantic referent'; for a name, this is the thing named, for a description, the thing uniquely satisfying the description.

Then the speaker may refer to something other than the semantic referent if he has appropriate false beliefs. I think this is what happens in the naming (Smith-Jones) cases and also in the Donnellan 'champagne' case; the one requires no theory that names are ambiguous, and the other requires no modification of Russell's theory of descriptions.

2. Gottlob Frege, "On Sense and Nominatum," translated by Herbert Feigl in *Readings in Philosophical Analysis*, ed. Herbert Feigl and Wilfrid Sellars (Appleton Century Crofts: 1949), p. 86.
3. Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe (MacMillan: 1953), §79.
4. John R. Searle, "Proper Names," *Mind* 67 (1958), 166–73. [Reprinted in this volume.]
5. Ziff's most detailed statement of his version of the cluster-of-descriptions theory of the reference of names is in "About God," reprinted in *Philosophical Turnings* (Cornell University Press, Ithaca, and Oxford University Press, London: 1966) pp. 94–96. A briefer statement is in his *Semantic Analysis*, (Cornell University Press, Ithaca: 1960) pp. 102–105 (esp. pp. 103–104). The latter passage suggests that names of things with which we are acquainted should be treated somewhat differently (using ostension and baptism) from names of historical figures, where the reference is determined by (a cluster of) associated descriptions. On p. 93 of *Semantic Analysis* Ziff states that "simple strong generalization(s) about proper names" are impossible; "one can only say what is so for the most part . . ." Nevertheless Ziff clearly states that a cluster-of-descriptions theory is a reasonable such rough statement, at least for historical figures. For Ziff's view that proper names ordinarily are not words of the language and

ordinarily do not have meaning, see pp. 85–89 and 93–94 of *Semantic Analysis*.

6. Those determinists who deny the importance of the individual in history may well argue that had Moses never existed, someone else would have arisen to achieve all that he did. Their claim cannot be refuted by appealing to a correct philosophical theory of the meaning of 'Moses exists'.
7. Of course I don't imply that language contains a name for every object. Demonstratives can be used as rigid designators, and free variables can be used as rigid designators of unspecified objects. Of course when we specify a counterfactual situation, we do not describe the whole possible world, but only the portion which interests us.
8. Searle, "Proper Names," in Caton, op. cit., p. 160. [Reprinted in this volume.]
9. An even better case of determining the reference of a name by description, as opposed to ostension, is the discovery of the planet Neptune. Neptune was hypothesized as the planet which caused such and such discrepancies in the orbits of certain other planets. If Leverrier indeed gave the name "Neptune" to the planet before it was ever seen, then he fixed the reference of "Neptune" by means of the description just mentioned. At that time he was unable to see the planet even through a telescope. At this stage, an a priori material equivalence held between the statements "Neptune exists" and "some one planet perturbing the orbit of such and such other planets exists in such and such a position," and also such statements as "if such and such perturbations are caused by a planet, they are caused by Neptune" had the status of a priori truths. Nevertheless, they were not *necessary* truths, since "Neptune" was introduced as a name rigidly designating a certain planet. Leverrier could well have believed that if Neptune had been knocked off its course one million years earlier, it would have caused no such perturbations and even that some other object might have caused the perturbations in its place.
10. Following Donnellan's remarks on definite descriptions, we should add that in some cases, an object may be identified, and the reference of a name fixed, using a description which may turn out to be false of its object. The case where the reference of "Phosphorus" is determined as the "morning star," which later turns out not to be a star, is an obvious example. In such cases, the description which fixes the reference clearly is in no sense known a priori to hold of the object, though a more cautious substitute may be. If such a more cautious substitute is available, it is really the substitute which fixes the reference in the sense intended in the text.

11. Some of the theses are sloppily stated in respect of fussy matters like use of quotation marks and related details. (For example, theses (5) and (6), as stated, presuppose that the speaker's language is English.) Since the purport of the theses is clear, and they are false anyway, I have not bothered to set these things straight.
12. The cluster-of-descriptions theory of naming would make "Peano discovered the axioms for number theory" express a trivial truth, not a misconception, and similarly for other misconceptions about the history of science. Some who have conceded such cases to me have argued that there are *other* uses of the same proper names satisfying the cluster theory. For example, it is argued, if we say, "Gödel proved the incompleteness of arithmetic," we are, of course, referring to Gödel, not to Schmidt. But, if we say, "Gödel relied on a diagonal argument in this step of the proof," don't we here, perhaps, refer to *whoever proved the theorem*? Similarly, if someone asks, "What did Aristotle (or Shakespeare) have in mind here?", isn't he talking about the author of the passage in question, whoever he is? By analogy to Donnellan's usage for descriptions, this might be called an "attributive" use of proper names. If this is so, then assuming the Gödel-Schmidt story, the sentence "Gödel proved the incompleteness theorem" is false, but "Gödel used a diagonal argument in the proof" is (at least in some contexts) true, and the reference of the name 'Gödel' is ambiguous. Since some counterexamples remain, the cluster-of-descriptions theory would still, in general, be false, which was my main point in the text; but it would be applicable in a wider class of cases than I thought. I think, however, that no such ambiguity need be postulated. It is, perhaps, true that sometimes when someone uses the name "Gödel," his main interest is in whoever proved the theorem, and *perhaps*, in some sense, he 'refers' to him. I do not think that this case is different from the case of Smith and Jones. If I mistake Jones for Smith, I may *refer* (in an appropriate sense) to Jones when I say that Smith is raking the leaves; nevertheless I do not use "Smith" ambiguously, as a name sometimes of Smith and sometimes of Jones, but univocally as a name of Smith. Similarly, if I erroneously think that Aristotle wrote such-and-such passage, I may perhaps sometimes use "Aristotle" to *refer* to the actual author of the passage, even though there is no ambiguity in my use of the name. In both cases, I will withdraw my original statement, and my original use of the name, if apprised of the facts. Recall that, in these lectures, 'referent' is used in the technical sense of the thing named by a name (or uniquely satisfying a description), and there should be no confusion.
13. A good example of a baptism whose reference was fixed by means of a description was that of naming Neptune in n. 9. The case of a baptism by ostension can perhaps be subsumed under the description concept also. Thus the primary applicability of the description theory is to cases of initial baptism. Descriptions are also used to fix a reference in cases of designation which are similar to naming except that the terms introduced are not usually called 'names'. The terms "one meter," "100 degrees Centigrade," have already been given as examples, and other examples will be given later in these lectures. Two things should be emphasized concerning the case of introducing a name via a description in an initial baptism. First, the description used is not synonymous with the name it introduces but rather fixes its reference. Here we differ from the usual description theorists. Second, most cases of initial baptism are far from those which originally inspired the description theory. Usually a baptizer is acquainted in some sense with the object he names and is able to name it ostensively. Now the inspiration of the description theory lay in the fact that we can often use names of famous figures of the past who are long dead and with whom no living person is acquainted; and it is precisely these cases which, on our view, cannot be correctly explained by a description theory.
14. I can transmit the name of the aardvark to other people. For each of these people, as for me, there will be a certain sort of causal or historical connection between my use of the name and the Emperor of the French, but not one of the required type.
15. Once we realize that the description used to fix the reference of a name is not synonymous with it, then the description theory can be regarded as presupposing the notion of naming or reference. The requirement I made that the description used not itself involve the notion of reference in a circular way is something else and is crucial if the description theory is to have any value at all. The reason is that the description theorist supposes that each speaker essentially uses the description he gives in an initial act of naming to determine his reference. Clearly, if he introduces the name "Cicero" by the determination, "By 'Cicero' I shall refer to the man I call 'Cicero'," he has by this ceremony determined no reference at all.  
Not all description theorists thought that they were eliminating the notion of reference altogether. Perhaps some realized that some notion of ostension, or primitive reference, is required to back it up. Certainly Russell did.
16. There is a more elaborate discussion of this point in the third lecture, where its relation to a certain sort of counterpart theory is also mentioned.