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THE CAUSAL THEORY OF NAMES

Gareth Evans and J. E. J. Altham

I—Gareth Evans

I

1. In a paper which provides the starting point of this enquiry Saul Kripke opposes what he calls the Description Theory of Names and makes a counter-proposal of what I shall call the Causal Theory.[1] To be clear about what is at stake and what should be the outcome in the debate he initiated seems to me important for our understanding of talk and thought about the world in general as well as for our understanding of the functioning of proper names. I am anxious therefore that we identify the profound bases and likely generalizations of the opposing positions and do not content ourselves with counter-examples.

I should say that Kripke deliberately held back from presenting his ideas as a theory. I shall have to tighten them up, and I may suggest perhaps unintended directions of generalization; therefore his paper should be checked before the Causal Theory I consider is attributed to him.

There are two related but distinguishable questions concerning proper names. The first is about what the name denotes upon a particular occasion of its use when this is understood as being partly determinative of what the speaker strictly and literally said. I shall use the faintly barbarous coinage: *what the speaker denotes* (upon an occasion) for this notion. The second is about *what the name denotes;* we want to know what conditions have to be satisfied by an expression and an item for the first to be the, or a, name of the second. There is an entirely parallel pair of questions concerning general terms. In both cases it is ambiguity which prevents an easy answer of the first in terms of the second; to denote x it is not sufficient merely to utter something which is x's name.

Consequently there are two Description Theories, not

distinguished by Kripke.[2] The Description Theory of speaker's denotation holds that a name 'N.N.' denotes x upon a particular occasion of its use by a speaker S just in case x is uniquely that which satisfies all or most of the descriptions ϕ such that S would assent to 'N.N. is ϕ' (or '*That* N.N. is ϕ'). Crudely: the cluster of information S has associated with the name determines its denotation upon a particular occasion by *fit*. If the speaker has no individuating information he will denote nothing.

The Description Theory of what a name denotes holds that, associated with each name as used by a group of speakers who believe and intend that they are using the name with the same denotation, is a description or set of descriptions cullable from their beliefs which an item has to satisfy to be the bearer of the name. This description is used to explain the rôle of the name in existential, identity and opaque contexts. The theory is by no means committed to the thesis that every user of the name must be in possession of the description; just as Kripke is not committed to holding that every user of the expression 'one metre' knows about the metre rod in Paris by saying that its reference is fixed by the description 'Length of stick S in Paris'. Indeed if the description is arrived at in the manner of Strawson[3] —averaging out the different beliefs of different speakers— it is most unlikely that the description will figure in every user's name-associated cluster.

The direct attack in Kripke's paper passes this latter theory by; most conspicuously the charge that the Description Theory ignores the social character of naming. I shall not discuss it explicitly either, though it will surface from time to time and the extent to which it is right should be clear by the end of the paper.

Kripke's direct attacks are unquestionably against the first Description Theory. He argues:

(a) An ordinary man in the street can denote the physicist Feynman by using the name 'Feynman' and say something true or false of him even though there is no description uniquely true of the physicist which he can fashion. (The conditions aren't necessary.)

(b) A person who associated with the name 'Gödel' merely the description 'prover of the incompleteness of Arithmetic' would nonetheless be denoting Gödel and saying something

false of him in uttering 'Gödel proved the incompleteness of Arithmetic' even if an unknown Viennese by the name of Schmidt had in fact constructed the proof which Gödel had subsequently broadcast as his own. (If it is agreed that the speaker does not denote Schmidt the conditions aren't sufficient; if it is also agreed that he denotes Gödel, again they are not necessary.)

The strong thesis (that the Description Theorist's conditions are sufficient) is outrageous. What the speaker denotes in the sense we are concerned with is connected with saying in that strict sense which logicians so rightly prize, and the theory's deliverances of strict truth conditions are quite unacceptable. They would have the consequence, for example, that if I was previously innocent of knowledge or belief regarding Mr. *Y*, and *X* is wrongly introduced to me as Mr. *Y*, then I must speak the truth in uttering 'Mr. *Y* is here' since *X* satisfies the overwhelming majority of descriptions I would associate with the name and *X* is there. I have grave doubts as to whether anyone has ever seriously held this thesis.

It is the weaker thesis—that some descriptive identification is necessary for a speaker to denote something—that it is important to understand. Strictly, Kripke's examples do not show it to be false since he nowhere provides a convincing reason for not taking into account speakers' possession of descriptions like 'man bearing such-and-such a name'; but I too think it is false. It can be seen as the fusion of two thoughts. First: that in order to be saying something by uttering an expression one must utter the sentence with certain intentions; this is felt to require, in the case of sentences containing names, that one be aiming at something with one's use of the name. Secondly—and this is where the underpinning from a certain Philosophy of Mind becomes apparent—to have an intention or belief concerning some item (which one is not in a position to demonstratively identify) one must be in possession of a description uniquely true of it. Both strands deserve at least momentary scrutiny.

We are prone to pass too quickly from the observation that neither parrots nor the wind *say* things to the conclusion that to say that *p* requires that one must intend to say that *p* and therefore, so to speak, be able to identify *p* independently of one's sentence. But the most we are entitled to conclude is that

to say something one must intend to say something by uttering one's sentence (one normally will intend to say what it says). The application of the stricter requirement would lead us to relegate too much of our discourse to the status of mere mouthing. We constantly use general terms of whose satisfaction conditions we have but the dimmest idea. 'Microbiologist', 'chlorine' (the stuff in swimming pools) 'nicotine' (the stuff in cigarettes); these (and countless other words) we cannot define nor offer remarks which would distinguish their meaning from that of closely related words. It is wrong to say that we say nothing by uttering sentences containing these expressions, even if we recoil from the strong thesis, from saying that what we do say is determined by those hazy ideas and half-identifications we would offer if pressed.

The Philosophy of Mind is curiously popular but rarely made perfectly explicit.[4] It is held by anyone who holds that S believes that a is F if and only if

$$\exists\phi[(\text{S believes } \exists x(\phi x \ \& \ (\forall y)\ (\phi y \rightarrow x = y) \ \& \ \text{Fx})) \ \& \ \phi a \ \& \ (\forall y)\ (\phi y \rightarrow y = a)]$$

Obvious alterations would accommodate the other psychological attitudes. The range of the property quantifier must be restricted to exclude such properties as 'being identical with a' otherwise the criterion is trivial.[5] The situation in which a thinking planning or wanting human has some item which is the object of his thought plan or desire is represented as a species of essentially the same situation as that which holds when there is no object and the thought plan or desire is, as we might say, purely general. There are thoughts, such as the thought that there are 11-fingered men, for whose expression general terms of the language suffice. The idea is that when the psychological state involves an object, a general term believed to be uniquely instantiated and in fact uniquely instantiated by the item which is the object of the state will figure in its specification. This idea may be coupled with a concession that there are certain privileged objects to which one may be more directly related; indeed such a concession appears to be needed if the theory is to be able to allow what appears an evident possibility: object-directed thoughts in a perfectly symmetrical or cyclical universe.

This idea about the nature of object-directed psychological attitudes obviously owes much to the feeling that there must

be something we can say about what is believed or wanted even when there is no appropriate object actually to be found in the world. But it can also be seen as deriving support from a Principle of Charity: so attribute objects to beliefs that true belief is maximized. (I do not think this is an acceptable principle; the acceptable principle enjoins minimizing the attribution of *inexplicable* error and therefore cannot be operated without a theory of the causation of belief for the creatures under investigation.)

We cannot deal comprehensively with this Philosophy of Mind here. My objections to it are essentially those of Wittgenstein. For an item to be the object of some psychological attitude of yours may be simply for you to be placed in a context which relates you to that thing. What makes it one rather than the other of a pair of identical twins that you are in love with? Certainly not some specification blue printed in your mind; it may be no more than this: it was one of them and not the other that you have met. The theorist may gesture to the description 'the one I have met' but can give no explanation for the impossibility of its being outweighed by other descriptions which may have been acquired as a result of error and which may in fact happen to fit the other, unmet, twin. If God had looked into your mind, he would not have seen there with whom you were in love, and of whom you were thinking.

With that I propose to begin considering the Causal Theory.

2. The Causal Theory as stated by Kripke goes something like this. A speaker, using a name 'NN' on a particular occasion will denote some item x if there is a causal chain of *reference-preserving links* leading back from his use on that occasion ultimately to the item x itself being involved in a name-acquiring transaction such as an explicit dubbing or the more gradual process whereby nick names stick. I mention the notion of a reference-preserving link to incorporate a condition that Kripke lays down; a speaker S's transmission of a name 'NN' to a speaker S' constitutes a reference-preserving link only if S intends to be using the name with the same denotation as he from whom he in his turn learned the name.

Let us begin by considering the theory in answer to our question about speaker's denotation (*i.e.*, at the level of the individual speaker). In particular, let us consider the thesis that it is *sufficient* for someone to denote x on a particular occasion

with the name that this use of the name on that occasion be a causal consequence of his exposure to other speakers using the expression to denote *x*.

An example which might favourably dispose one towards the theory is this. A group of people are having a conversation in a pub, about a certain Louis of whom *S* has never heard before. *S* becomes interested and asks: 'What did Louis do then?' There seems to be no question but that *S* denotes a particular man and asks about him. Or on some subsequent occasion *S* may use the name to offer some new thought to one of the participants: 'Louis was quite right to do that'. Again he clearly denotes whoever was the subject of conversation in the pub. This is difficult to reconcile with the Description Theory since the scraps of information which he picked up during the conversation might involve some distortion and fit someone else much better. Of course he has the description 'the man they were talking about' but the theory has no explanation for the impossibility of its being outweighed.

The Causal Theory can secure the right answer in such a case but I think deeper reflection will reveal that it too involves a refusal to recognize the insight about contextual determination I mentioned earlier. For the theory has the following consequence: that at any future time, no matter how remote or forgotten the conversation, no matter how alien the subject matter and confused the speaker, S will denote one particular Frenchman—perhaps Louis XIII—so long as there is a causal connexion between his use at that time and the long distant conversation.

It is important in testing your intuitions against the theory that you imagine the predicate changed—so that he says something like 'Louis was a basketball player' which was not heard in the conversation and which arises as the result of some confusion. This is to prevent the operation of what I call the 'mouthpiece syndrome' by which we attach sense and reference to a man's remarks only because we hear someone else speaking through him; as we might with a messenger, carrying a message about matters of which he was entirely ignorant.

Now there is no knock-down argument to show this consequence unacceptable; with pliant enough intuitions you can swallow anything in philosophy. But notice how little *point*

there is in saying that he denotes one French King rather than any other, or any other person named by the name. There is now nothing that the speaker is prepared to say or do which relates him differentially to that one King. This is why it is so outrageous to say that he believes that Louis XIII is a basketball player. The notion of saying has simply been severed from all the connexions that made it of interest. Certainly we did not think we were letting ourselves in for this when we took the point about the conversation in the pub. What has gone wrong?[6]

The Causal Theory again ignores the importance of surrounding context, and regards the capacity to denote something as a magic trick which has somehow been passed on, and once passed on cannot be lost. We should rather say: in virtue of the context in which the man found himself the man's dispositions were bent towards one particular man—Louis XIII—whose states and doings alone he would count as serving to verify remarks made in that context using the name. And of course that context can persist, for the conversation can itself be adverted to subsequently. But it can also disappear so that the speaker is simply not sensitive to the outcome of any investigations regarding the truth of what he is said to have said. And at this point saying becomes detached, and uninteresting.

(It is worth observing how ambivalent Kripke is on the relation between denoting and believing; when the connexion favours him he uses it; we are reminded for example that the ordinary man has a false belief about Gödel and not a true belief about Schmidt. But it is obvious that the results of the 'who are they believing about?' criterion are bound to come dramatically apart from the results of the 'who is the original bearer of the name?' criterion, if for no other reason than that the former must be constructed to give results in cases where there is no name and where the latter cannot apply. When this happens we are sternly reminded that 'X refers' and 'X says' are being used in *technical* senses.[7] But there are limits. One could regard the aim of this paper to restore the connexion which must exist between strict truth conditions and the beliefs and interests of the users of the sentences if the technical notion of strict truth conditions is to be of interest to us.)

Reflection upon the conversation in the pub appeared to provide one reason for being favourably disposed towards the

Causal Theory. There is another connected reason we ought to examine briefly. It might appear that the Causal Theory provides the basis for a general non-intentional answer to the Problem of Ambiguity. The problem is clear enough: What conditions have to be satisfied for a speaker to have said that *p* when he utters a sentence which may appropriately be used to say that *q* and that *r* and that *s* in addition? Two obvious alternative answers are

(a) the extent to which it is reasonable for his audience to conclude that he was saying that *p*

(b) his intending to say that *p*

and neither is without its difficulties. We can therefore imagine someone hoping for a natural extension of the Causal Theory to general terms which would enable him to explain for example how a child who did not have determinative intentions because of the technical nature of the subject matter may still say something determinate using a sentence which is in fact ambiguous.

I touch upon this to ensure that we are keeping the range of relevant considerations to be brought to bear upon the debate as wide as it must be. But I think little general advantage can accrue to the Causal Theory from thus broadening the considerations. The reason is that it simply fails to have the generality of the other two theories; it has no obvious application, for example, to syntactic ambiguity or to ambiguity produced by attempts to refer with non-unique descriptions, or pronouns. It seems inconceivable that the general theory of disambiguation required for such cases would be inadequate to deal with the phenomenon of shared names and would require *ad hoc* supplementation from the Causal Theory.

I want to stress how, precisely because the Causal Theory ignores the way context can be determinative of what gets *said*, it has quite unacceptable consequences. Suppose for example on a T.V. quiz programme I am asked to name a capital city and I say 'Kingston is the capital of Jamaica'; I should want to say that I had said something strictly and literally true even though it turns out that the man from whom I had picked up this scrap of information was actually referring to Kingston-upon-Thames and making a racist observation.

It may begin to appear that what gets said is going to be determined by what name is used, what items bear the name,

and general principles of contextual disambiguation. The causal origin of the speaker's familiarity with the name, save in certain specialized 'mouthpiece cases', does not seem to have a critical rôle to play.

This impression may be strengthened by the observation that a causal connexion between my use of the name and use by others (whether or nor leading back ultimately to the item itself) is simply not necessary for me to use the name to say something. Amongst the Wagera Indians, for example, 'newly born children receive the names of deceased members of their family according to fixed rules . . . the first born takes on the name of the paternal grandfather, the second that of the father's eldest brother, the third that of the maternal grandfather.'[8] In these and other situations (names for streets in U.S. cities *etc.*,) a knowledgeable speaker may excogitate a name and use it to denote some item which bears it without any causal connexion whatever with the use by others of that name.

These points might be conceded by Kripke while maintaining the general position that the denotation of a name in a community is still to be found by tracing a causal chain of reference preserving links back to some item. It is to this theory that I now turn.

3. Suppose a parallel theory were offered to explain the sense of general terms (not just terms for natural kinds). One would reply as follows:

'There aren't two fundamentally different mechanisms involved in a word's having a meaning: one bringing it about that a word acquires a meaning, and the other—a causal mechanism —which operates to ensure that its meaning is preserved. The former processes are operative all the time; whatever explains how a word gets its meaning also explains how it preserves it, if preserved it is. Indeed such a theory could not account for the phenomenon of a word's changing its meaning. It is perfectly possible for this to happen without anyone's intending to initiate a new practice with the word; the causal chain would then lead back too far.'

Change of meaning would be decisive against such a theory of the meaning of general terms. Change of denotation is similarly decisive against the Causal Theory of Names. Not only are changes of denotation imaginable, but it appears that

they actually occur. We learn from Isaac Taylor's book: *Names and their History*, 1898:

> "In the case of 'Madagascar' a hearsay report of Malay or Arab sailors misunderstood by Marco Polo . . . has had the effect of transferring a corrupt form of the name of a portion of the African mainland to the great African Island."

A simple imaginary case would be this: Two babies are born, and their mothers bestow names upon them. A nurse inadvertently switches them and the error is never discovered. It will henceforth undeniably be the case that the man universally known as 'Jack' is so called because a woman dubbed some other baby with the name.

It is clear that the Causal Theory unamended is not adequate. It looks as though, once again, the intentions of the speakers to use the name to refer to something must be allowed to count in determination of what it denotes.

But it is not enough to say that and leave matters there. We must at least sketch a theory which will enable 'Madagascar' to be the name of the island yet which will not have the consequence that 'Gödel' would become a name of Schmidt in the situation envisaged by Kripke nor 'Goliath' a name of the Philistine killed by David. (Biblical scholars now suggest that David did not kill Goliath, and that the attribution of the slaying to Elhannan the Bethlehemite in 2 *Samuel* 21 xix is correct. David is thought to have killed a Philistine but not Goliath[9].) For although this has never been explicitly argued I would agree that even if the 'information' connected with the name in possession of an entire community was merely that 'Goliath was the Philistine David slew' this would still not mean that 'Goliath' referred in that community to that man, and therefore that the sentence expressed a truth. And if we simultaneously thought that the name *would* denote the Philistine slain by Elhannan then both the necessity and sufficiency of the conditions suggested by the Description Theory of the denotation of a name are rejected. This is the case Kripke should have argued but didn't.

4. Before going on to sketch such a theory in the second part of this paper let me survey the position arrived at and use it to make a summary statement of the position I wish to adopt.

We can see the undifferentiated Description Theory as the expression of two thoughts.

(a) the denotation of a name is determined by what speakers intend to refer to by using the name

(b) the object a speaker intends to refer to by his use of a name is that which satisfies or fits the majority of descriptions which make up the cluster of information which the speaker has associated with the name.

We have seen great difficulties with (a) when this is interpreted as a thesis at the micro level. But consideration of the phenomenon of a name's getting a denotation, or changing it, suggests that there being a community of speakers using the name with such and such as the intended referent is likely to be a crucial constituent in these processes. With names as with other expressions in the language, what they signify depends upon what we use them to signify; a truth whose recognition is compatible with denying the collapse of saying into meaning at the level of the individual speaker.

It is in (b) that the real weakness lies: the bad old Philosophy of Mind which we momentarily uncovered. Not so much in the idea that the intended referent is determined in a more or less complicated way by the associated information, but the specific form the determination was supposed to take: *fit*. There is something absurd in supposing that the intended referent of some perfectly ordinary use of a name by a speaker could be some item utterly isolated (causally) from the user's community and culture simply in virtue of the fact that it fits better than anything else the cluster of descriptions he associates with the name. I would agree with Kripke in thinking that the absurdity resides in the absence of any causal relation between the item concerned and the speaker. But it seems to me that he has mislocated the causal relation; the important causal relation lies between that item's states and doings and the speaker's body of information—not between the item's being dubbed with a name and the speaker's contemporary use of it.

Philosophers have come increasingly to realize that major concepts in epistemology and the philosophy of mind have causality embedded within them. Seeing and knowing are both good examples.

The absurdity in supposing that the denotation of our

contemporary use of the name 'Aristotle' could be some unknown (*n.b.*) item whose doings are causally isolated from our body of information is strictly parallel to the absurdity in supposing that one might be seeing something one has no causal contact with solely upon the ground that there is a splendid match between object and visual impression.

There probably is some *degree of fit* requirement in the case of seeing which means that after some amount of distortion or fancy we can no longer maintain that the causally operative item was still being seen. And I think it is likely that there is a parallel requirement for referring. We learn for example from E. K. Chambers' *Arthur of Britain* that Arthur had a son Anir "whom legend has perhaps confused with his burial place". If Kripke's notion of reference fixing is such that those who said Anir was a burial place of Arthur might be denoting a person it seems that it has little to commend it, and is certainly not justified by the criticisms he makes against the Description Theory. But the existence or nature of this 'degree of fit' requirement will not be something I shall be concerned with here.

We must allow then that the denotation of a name in the community will depend in a complicated way upon what those who use the term intend to refer to, but we will so understand 'intended referent' that typically a *necessary* (but not sufficient) condition for x's being the intended referent of S's use of a name is that x should be the source of causal origin of the body of information that S has associated with the name.

II

5. The aim I have set myself, then, is modest; it is not to present a complete theory of the denotation of names. Without presenting a general theory to solve the problem of ambiguity I cannot present a theory of speaker's denotation, although I will make remarks which prejudice that issue. I propose merely to sketch an account of what makes an expression into a name for something that will allow names to change their denotations.

The enterprise is more modest yet for I propose to help myself to an undefined notion of speaker's reference by borrowing

from the theory of communication. But a word of explanation.

A speaker may have succeeded in *getting it across* or in *communicating* that *p* even though he uses a sentence which may not appropriately be used to say that *p*. Presumably this success consists in his audience's having formed a belief about him. This need not be the belief that the speaker intended to say in the strict sense that *p*, since the speaker may succeed in getting something across despite using a sentence which he is known to know cannot appropriately be used to say that *p*. The speaker will have referred to *a*, in the sense I am helping myself to, only if he has succeeded in getting it across that *Fa* (for some substitution *F*). Further stringent conditions are required. Clearly this notion is quite different from the notion of denotation which I have been using, tied as denotation is to saying in the strict sense. One may refer to *x* by using a description that *x* does not satisfy; one may not thus denote *x*.

Now a speaker may know or believe that there is such-and-such an item in the world and intend to refer to it. And this is where the suggestion made earlier must be brought to bear, for *that* item is not (in general) the satisfier of the body of information the possession by the speaker of which makes it true that he knows of the existence of the item; it is rather that item which is causally responsible for the speaker's possession of that body of information, or dominantly responsible if there is more than one. (The point is of course not specific to this intention, or to intention as opposed to other psychological attitudes.) Let us then, very briefly, explore these two ideas: source and dominance.

Usually our knowledge or belief about particular items is derived from information gathering transactions, involving a causal interaction with some item or other, conducted ourselves or is derived, maybe through a long chain, from the transactions of others. Perception of the item is the main but by no means the only way an item can impress itself on us; for example, a man can be the source of things we discover by rifling through his suitcase or by reading his works.

A causal relation is of course not sufficient; but we may borrow from the theory of knowledge and say something like this. *X* is the source of the belief *S* expresses by uttering '*Fa*' if there was an episode which caused *S*'s belief in which *X* and *S*

were causally related in a type of situation apt for producing knowledge that something *F-s* ($\exists x (Fx)$)—a type of situation in which the belief that something *F*-s would be caused by something's *F*-ing. That it is a way of producing knowledge does not mean that it cannot go wrong; that is why *X*, by smoking French cigarettes can be the source of the belief *S* expresses by '*a* smokes Greek cigarettes'.

Of course some of our information about the world is not so based; we may deduce that there is a tallest man in the world and deduce that he is over 6 feet tall. No man is the source of this information; a name introduced in relation to it might function very much as the unamended Description Theory suggested.

Legend and fancy can create new characters, or add bodies of source-less material to other dossiers; restrictions on the causal relation would prevent the inventors of the legends turning out to be the sources of the beliefs their legends gave rise to. Someone other than the ϕ can be the source of the belief *S* expresses by '*a* is the ϕ'; Kripke's Gödel, by claiming the proof, was the source of the belief people manifested by saying 'Gödel proved the incompleteness of Arithmetic', not Schmidt.

Misidentification can bring it about that the item which is the source of the information is different from the item about which the information is believed. I may form the belief about the wife of some colleague that she has nice legs upon the basis of seeing someone else—but the girl I saw is the source.

Consequently a cluster or dossier of information can be dominantly *of*[10] an item though it contains elements whose source is different. And we surely want to allow that persistent misidentification can bring it about that a cluster is dominantly of some item other than that it was dominantly of originally.

Suppose I get to know a man slightly. Suppose then a suitably primed identical twin takes over his position, and I get to know him fairly well, not noticing the switch. Immediately after the switch my dossier will still be dominantly of the original man, and I falsely believe, as I would acknowledge if it was pointed out, that *he* is in the room. Then I would pass through a period in which neither was dominant; I had not misidentified one as the other, an asymmetrical relation, but rather confused

them. Finally the twin could take over the dominant position; I would not have false beliefs about who is in the room, but false beliefs about *e.g.*, when I first met the man in the room. These differences seem to reside entirely in the differences in the believer's reactions to the various discoveries, and dominance is meant to capture those differences.

Dominance is not simply a function of *amount* of information (if that is even intelligible). In the case of persons, for example, each man's life presents a skeleton and the dominant source may be the man who contributed to covering most of it rather than the man who contributed most of the covering. Detail in a particular area can be outweighed by spread. Also the believer's reasons for being interested in the item at all will weigh.

Consider another example. If it turns out that an impersonator had taken over Napoleon's rôle from 1814 onwards (post-Elba) the cluster of the typical historian would still be dominantly of the man responsible for the earlier exploits (α in diagram 1) and we would say that they had false beliefs about who fought at Waterloo. If however the switch had occurred much earlier, it being an unknown Army Officer being impersonated, then their information would be dominantly of the later man (β in diagram 2). They did not have

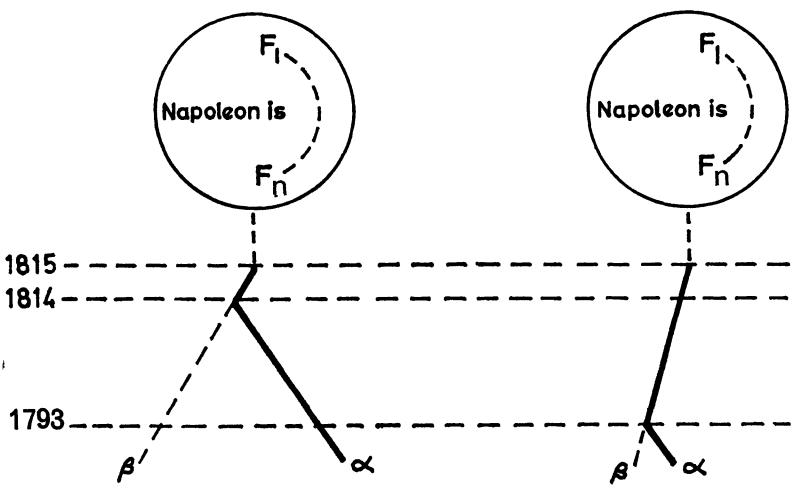

Diagram 1 *Diagram* 2

false beliefs about who was the general at Waterloo, but rather false beliefs about that general's early career.

I think we can say that *in general* a speaker intends to refer to the item that is the dominant source of his associated body of information. It is important to see that this will not change from occasion to occasion depending upon subject matter. Some have proposed[11] that if in case 1 the historian says 'Napoleon fought skilfully at Waterloo' it is the impostor β who is the intended referent, while if he had said in the next breath '. . . unlike his performance in the Senate' it would be α. This seems a mistake; not only was what the man said false, what he intended to say was false too, as he would be the first to agree; it wasn't Napoleon who fought skilfully at Waterloo.

With this background then we may offer the following tentative definition:

'NN' is a name of x if there is a community C

1. in which it is common knowledge that members of C have in their repertoire the procedure of using 'NN' to refer to x (with the intention of referring to x)
2. the success in reference in any particular case being intended to rely on common knowledge between speaker and hearer that 'NN' has been used to refer to x by members of C and not upon common knowledge of the satisfaction by x of some predicate embedded in 'NN'[12]

(In order to keep the definition simple no attempt is made to cover the sense in which an unused institutionally-approved name is a name.)

This distinction (between use-because-(we know)-we-use-it and use upon other bases) is just what is needed to distinguish dead from live metaphors; it seems to me the only basis on which to distinguish the referential functioning of names, which may grammatically be descriptions, from that of descriptions.[13]

The definition does not have the consequence that the description 'the man we call 'NN'' is a name, for *its* success as a referential device does not rely upon common knowledge that *it* is or has been used to refer to x.

Intentions alone don't bring it about that a name gets a denotation; without the intentions being manifest there cannot be the common knowledge required for the practice.

Our conditions are more stringent than Kripke's since for him an expression becomes a name just so long as someone has dubbed something with it and thereby caused it to be in common usage. This seems little short of magical. Suppose one of a group of villagers dubbed a little girl on holiday in the vicinity 'Goldilocks' and the name caught on. However suppose that there were two identical twins the villagers totally fail to distinguish. I should deny that 'Goldilocks' is the name of either—even if by some miracle each villager used the name consistently but in no sense did they fall into two coherent sub-communities. (The name might denote the girl first dubbed if for some peculiar reason the villagers were deferential to the introducer of the name—of this more below.)

Consider the following case. An urn is discovered in the Dead Sea containing documents on which are found fascinating mathematical proofs. Inscribed at the bottom is the name 'Ibn Khan' which is quite naturally taken to be the name of the constructor of the proofs. Consequently it passes into common usage amongst mathematicians concerned with that branch of mathematics. 'Khan conjectured here that . . .' and the like. However suppose the name was the name of the scribe who had transcribed the proofs much later; a small '*id scripsit*' had been obliterated.

Here is a perfect case where there is a coherent community using the name with the mathematician as the intended referent and a consequence of the definition would be that 'Ibn Khan' would be one of his names. Also, 'Malachai' would have been the name of the author of the Biblical work of the same name despite that its use was based upon a misapprehension ('Malachai' means my messenger).[14]

Speakers within such traditions use names under the misapprehension that their use is in conformity with the use of other speakers referring to the relevant item. The names would probably be withdrawn when that misapprehension is revealed, or start a rather different life as "our" names for the items (*c.f.*, 'Deutero Isaiah' *&c.*) One might be impressed by this, and regard it as a reason for denying that those within these traditions spoke the literal truth in using the names. It is very easy to add a codicil to the definition which would have this effect.

Actually it is not a very good reason for denying that speakers within such traditions are speaking the literal truth.[15] But I do not want to insist upon any decision upon this point. This is because one can be concessive and allow the definition to be amended without giving up anything of importance. First: the definition with its codicil will still allow many names to change their denotation. Secondly: it obviously fails to follow from the fact that, in our example, the community of mathematicians were not denoting the mathematician that they were denoting the scribe and were engaged in strictly speaking massive falsehood of him.

Let me elaborate the first of these points.

There is a fairly standard way in which people get their names. If we use a name of a man we expect that it originated in the standard manner and this expectation may condition our use of it. But consider names for people which are obviously nicknames, or names for places or pieces of music. Since there is no standard way in which these names are bestowed subsequent users will not in general use the name under any view as to its origin, and therefore when there is a divergence between the item involved in the name's origin and the speakers' intended referent there will be no *mis*apprehension, no latent motive for withdrawing the name, and thus no bar to the name's acquiring a new denotation even by the amended definition. So long as they have no reason to believe that the name has dragged any information with it, speakers will treat the revelation that the name had once been used to refer to something different with the same sort of indifference as that with which they greet the information that 'meat' once meant groceries in general.

We can easily tell the story in case 2 of our Napoleon diagram so that α was the original bearer of the name 'Napoleon' and it was transferred to the counterfeit because of the similarity of their appearances and therefore without the intention on anyone's part to initiate a new practice. Though this is not such a clear case I should probably say that historians have used the name 'Napoleon' to refer to β. They might perhaps abandon it, but that of course fails to show that they were all along denoting α. Nor does the fact that someone in the know might come along and say 'Napoleon was a fish salesman and

was never at Waterloo' show anything. The relevant question is: 'Does this contradict the assertion that was made when the historians said "Napoleon was at Waterloo"?' To give an affirmative answer to this question requires the prior determination that they have all along been denoting α.

We need one further and major complication. Although standardly we use expressions with the intention of conforming with the general use made of them by the community, sometimes we use them with the *over-riding* intention to conform to the use made of them by some other person or persons. In that case I shall say that we use the expression *deferentially* (with respect to that other person or group of persons). This is true of some general terms too: "viol", "minuet" would be examples.

I should say, for example, that the man in the conversation in the pub used 'Louis' deferentially. This is not just a matter of his ignorance; he could, indeed, have an opinion as to who this Louis is (the man he met earlier perhaps) but still use the expression deferentially. There is an important gap between

intending to refer to the ϕ and believing that a = the ϕ;
intending to refer to a

for even when he has an opinion as to who they are talking about I should say that it was the man they were talking about, and not the man he met earlier, that he intended to refer to.

Archaeologists might find a tomb in the desert and claim falsely that it is the burial place of some little known character in the Bible. They could discover a great deal about the man in the tomb so that he and not the character in the Bible was the dominant source of their information. But, given the nature and point of their enterprise, the archaeologists are using the name deferentially to the authors of the Bible. I should say, then, that they denote that man, and say false things about him. Notice that in such a case there is some point to this characterization.

The case is in fact no different with any situation in which a name is used with the over-riding intention of referring to something satisfying such and such a description. Kripke gives the example of 'Jack the Ripper'. Again, after the arrest of a man a not in fact responsible for the crimes, a can be the dominant source of speakers' information but the intended referent could well be the murderer and not a. Again this will be

productive of a whole lot of falsehood.

We do not use all names deferentially, least of all deferentially to the person from whom we picked them up. For example the mathematicians did not use the name 'Ibn Khan' with the *over-riding* intention of referring to whoever bore that name or was referred to by some other person or community.

We must thus be careful to distinguish two reasons for something that would count as "withdrawing sentences containing the name"

(a) the item's not bearing the name 'NN' ('Ibn Khan', 'Malachai')

(b) the item's not being NN (the biblical archaeologists).

I shall end with an example that enables me to draw these threads together and summarize where my position differs from the Causal Theory.

A youth *A* leaves a small village in the Scottish highlands to seek his fortune having acquired the nickname 'Turnip' (the reason for choosing a nickname is I hope clear). 50 or so years later a man *B* comes to the village and lives as a hermit over the hill. The three or four villagers surviving from the time of the youth's departure believe falsely that this is the long departed villager returned. Consequently they use the name 'Turnip' among themselves and it gets into wider circulation among the younger villagers who have no idea how it originated. I am assuming that the older villagers, if the facts were pointed out would say: 'It isn't Turnip after all' rather than 'It appears after all that Turnip did not come from this village'. In that case I should say that they use the name to refer to *A*, and in fact, denoting him, say false things about him (even by uttering 'Here is Turnip coming to get his coffee again'.)

But they may die off, leaving a homogeneous community using the name to refer to the man over the hill. I should say the way is clear to its becoming his name. The story is not much affected if the older villagers pass on some information whose source is *A* by saying such things as 'Turnip was quite a one for the girls', for the younger villagers' clusters would still be dominantly of the man over the hill. But it is an important feature of my account that the information that the older villagers gave the younger villagers could be so rich, coherent and important to them that *A* could be the dominant

source of their information, so that they too would acknowledge 'That man over the hill isn't Turnip after all'.

A final possibility would be if they used the name deferentially towards the older villagers, for some reason, with the consequence that no matter who was dominant they denote whoever the elders denote.

6. *Conclusion*

Espousers of both theories could reasonably claim to be vindicated by the position we have arrived at. We have secured for the Description Theorist much that he wanted. We have seen for at least the most fundamental case of the use of names (non-deferentially used names) the idea that their denotation is fixed in a more or less complicated way by the associated bodies of information that one could cull from the users of the name turns out not to be so wide of the mark. But of course that the fix is by causal origin and not by fit crucially affects the impact this idea has upon the statement of the truth conditions of existential or opaque sentences containing names. The theorist can also point to the idea of dominance as securing what he was trying, admittedly crudely, to secure with his talk of the 'majority of' the descriptions, and to the "degree of fit requirement" as blocking consequences he found objectionable.

The Causal Theorist can also look with satisfaction upon the result, incorporating as it does his insight about the importance of causality into a central position. Further, the logical doctrines he was concerned to establish, for example the non-contingency of identity statements made with the use of names, are not controverted. Information is individuated by source; if *a* is the source of a body of information nothing else could have been. Consequently nothing else could have been *that a*.

The only theorists who gain no comfort are those who, ignoring Kripke's explicit remarks to the contrary,[16] supposed that the Causal Theory could provide them with a totally *non-intentional* answer to the problem posed by names. But I am not distressed by their distress.

Our ideas also point forwards; for it seems that they, or some close relative, must be used in explaining the functioning of at least some demonstratives. Such an expression as 'That mountaineer' in 'That mountaineer is coming to town tonight'

night' may advert to a body of information presumed in common possession, perhaps through the newspapers, which fixes its denotation. No one can be *that* mountaineer unless he is the source of that information no matter how perfectly he fits it, and of course someone can be that mountaineer and fail to fit quite a bit of it. It is in such generality that defense of our ideas must lie.

But with these hints I must leave the subject.

REFERENCES

[1] S. A. Kripke "Naming and Necessity" in Davidson and Harman (eds.) *Semantics of Natural Languages* pp. 253–355 (+ Appendix).

[2] This can be seen in the way the list of theses defining the Description Theory alternate between those mentioning a speaker and those that don't, culminating in the uneasy idea of an idiolect of one. The Description Theorists of course do not themselves distinguish them clearly either, and many espouse both.

[3] P. F. Strawson *Individuals* (Methuen) p. 191.

[4] For example see J. R. Searle *Speech Acts* p. 87, E. Gellner "Ethics and Logic" *Proceedings of the Aristotelian Society* 1954–5, B. Russell *Problems of Philosophy* p. 29. E. Sosa criticizes it in "Quantifiers Belief and Sellars" in Davis Hockney and Wilson (eds.) *Philosophical Logic* p. 69.

[5] I owe this observation to G. Harman.

[6] Kripke expresses doubts about the sufficiency of the conditions for this sort of reason, see p. 303.

[7] *Id.* p. 348 fn.

[8] E. Delhaise "Les Wagera" *Monogr. Ethnogr.* 1909.

[9] Robinson *History of Israel* p. 187.

[10] The term is D. Kaplan's, see "Quantifying In" in Davidson and Hintikka (eds.) *Words and Objections:* I think there are clear similarities between my notion of a dominant source and notions he is there sketching. However I want nothing to do with vividness. I borrow the term "dossier" from H. P. Grice's paper "Vacuous Names" in the same volume.

[11] K. S. Donnellan "Proper Names and Identifying Descriptions" in Davidson and Harman (eds.) p. 371.

[12] For the notion of "common knowledge" see D. K. Lewis *Convention* and the slightly different notion in S. Schiffer *Meaning* (forthcoming). For the notion of "a procedure in the repertoire" see H. P. Grice "Utterer's Meaning, Sentence Meaning, Word Meaning" *Foundations of Language* 1968. Clearly the whole enterprise owes to Grice but no commitment is here made to any specific version of the theory of communication.

[13] And if Schiffer is right much more as well—see *Meaning*, Chapter V.

[14] See Otto Eissfeldt *The Old Testament* p. 441.

[15] John McDowell has persuaded me of this, as of much else. He detests my conclusions.

[16] Kripke p. 302.

The Causal Theory of Names

Gareth Evans and J. E. J. Altham

II—J. E. J. Altham

Mr. Evans has effectively criticised one version of a causal theory of naming, and since this is so, I shall not take the same starting-point that he has. I wish rather to take up certain points that arise in connexion with the inclusion of a causal element in the analysis of names which might be applicable across a range of possible theories, and it is convenient to do this through further examination of the account that Mr. Evans himself has put forward. His account might perhaps without any disrespect be called the eclectic theory of names. It contains a causal element, it incorporates much that holders of the descriptive theory of names affirm, and it borrows also from the theory of communication. Mr. Evans describes his account as a sketch, and it is perhaps inevitable that, drawing on so many considerations as it does, the sketch should leave some room for uncertainty as to how its details are to be filled in.

I accept the distinction Mr. Evans draws between speaker's denotation and the denotation of a name in a community, and like him, I shall be mainly concerned with the latter. By the descriptive theory of names I shall understand the theory of the denotation of a name in a community; the descriptive theory of speaker's denotation seems to have been shown to be wrong. One question to consider concerning the eclectic theory is just what advantage it has over the descriptive theory of the denotation of a name in a community. In particular, what advantage accrues from the inclusion of a causal element in the eclectic theory? There are two kinds of possible advantage that I have in mind. There would be one kind of advantage if the inclusion of a causal element enabled answers to be given to questions to which the descriptive theory gives no answer. There would be another kind of advantage if the inclusion of a causal element enabled correct answers to be given to

questions to which the descriptive theory gave incorrect answers. The first kind is an advantage in explanatory power, the second kind an advantage in explanatory accuracy. One may ask whether the causal element is brought forward to supplement the descriptive theory, to correct it, or both.

The possible range of topics in the theory of names is too wide for it to be possible to compare the rival accounts over the whole field here, but Mr. Evans has given some useful leads to follow up. One point he makes by drawing a comparison with the causal theory of perception. It is perfectly evident that the fact that there is an excellent match between a person's visual impression and a material object is not a sufficient condition of his perceiving that object, and this truth can be made an important part of a strong case for claiming that for the object to be seen, it must in some way be causally operative in producing a visual impression. Moreover, when the requisite causal relation is present, it is not necessary that the match between impression and object should be very close. Similarly, so the claim goes, the fact that there is an excellent match between an object and a set of descriptions associated with a name is not a sufficient condition of the name's having that object as its denotation. This, one might continue, can be appreciated if we imagine a case where the match is excellent, but the object which satisfies the descriptions has no causal relation with the users of the name.

It should immediately be remarked that this analogy cannot hold universally, since some names denote objects with no causal powers. Abstract objects are obvious examples. But this is perhaps not important, since naming abstract objects raises problems to which no problems in naming material objects correspond. For instance, the transtheoretical identification of abstract objects, *e.g.*, numbers with sets, raises special problems about the criteria of identity of abstract objects, and with these there may well go special considerations about naming them.

Another difficulty with the analogy is that it is not so easy to think of a possible example of an excellent match between description and object where there is no causal relation, particularly until the mode of causal connexion required has been specified precisely. The possibility which is sometimes considered by philosophers that there might have been,

unknown to Jane Austen, a woman satisfying all the descriptions of Emma Wodehouse in the novel, will not do as an example. (I am not suggesting that Mr. Evans thinks it would.) Certainly, if the imagined possibility were actual, 'Emma Wodehouse' as we use the name, would not thereby be a name of the real woman, but this fact has explanations which have nothing to do with a causal connexion. The proper explanation would seem to lie in Jane Austen's and our intentions. Mr. Evans's own example is not very easy to understand, that the denotation of 'Aristotle' might be some person causally insulated from our community and culture. The most important descriptions associated with 'Aristotle' concern the authorship of certain works of learning. We cannot well imagine the causal insulation of the satisfier of these descriptions from our community and culture, because to do so we should seem to have to imagine a non-causal process of transmission of his works, which seems absurd. The difficulty seems to be that causality is so pervasive that Mr. Evans has as it were too good a case. I shall, however, presently give an example of such causal insulation.

But this is shadow-boxing, since the analogy was not meant to bear too much weight. After limbering up in this way, it is worth while to consider a related problem. Let us suppose that we have a set of descriptions associated with a name. Let us suppose that the object that fits the descriptions best is an item X, but that the object which stands in the requisite causal relation is a distinct item Y, which we also suppose to satisfy some of the descriptions. Could there be such a case in which we should conclude that Y was the denotation of the name rather than X? The question itself poses a difficulty; for is not one description associated with the name 'the object which stands in a certain causal relation to us'? If so, then to give the decision to the causal source would be the same thing as to have a descriptive theory which gave especial prominence to one kind of description. But leaving that on one side, there are other problems to be considered before this comparison of the descriptive and the causal theory can be made. For one thing, the descriptive theory should not be saddled with the claim that what fits the associated descriptions best is the same as what fits most of the descriptions, *i.e.*, 'best fit' is not to be

interpreted to mean 'majority fit'. The descriptive theory can allow that some of the associated descriptions are particularly important ones for fixing the denotation of the name, and can (and must) allow that beliefs held about some named item may be preponderantly false. A comparison with the causal theory must allow this to be taken into account.

Next, some consideration must be given to the terms of the causal relation. In the eclectic theory, the relation is between an item in the world and the information associated with the name. This notion of information associated with a name deserves investigation. It cannot be the same as descriptions associated with a name, for descriptions are predicative expressions, and predicative expressions do not have causal sources. That is to say, the question "What is the causal source of '*F*( )?'" is a question with no answer. There is another question, however, which runs "What caused the association of '*F*( )' with the name '*a*'?", and this makes good sense. But it is perhaps ambiguous; it should in this context be read to mean "What caused the belief that would be expressed as '*Fa*'?". For the association of a name with a description is made when that name and description are brought together in a belief. I wish further to remark that for Mr. Evans information cannot be the same thing as descriptions, since he claims that information is individuated by causal source, and this is certainly false of descriptions, which have no causal source. The items of information which could be individuated by causal source are entire propositions, expressible in the form '*Fa*'. The causal relation, then, must be between items and beliefs. It cannot be between items and propositions, since propositions are not caused.

The eclectic theory allows that the same name may figure in different beliefs with different causal sources. But unless the use of the name is confused, one of these sources will be the dominant one. The dominant source is the denotation of the name. At this point one question is 'How can an item *X* be the source of a speaker *S*'s belief that *Fa*?'. Mr. Evans gives an answer: *X* is the source of such a belief if there was an episode which caused *S*'s belief in which *X* and *S* were causally related in a type of situation apt for producing knowledge that something *F*-s. Clearly there are situations of this kind, in which the

belief that something *F*-s is caused. But this is not enough. The causal upshot must be a belief that *Fa*; the name has got to figure in the expression of the belief. This requires that *S* must already have connected the name with *X*, or, in the situation, he must bestow the name upon *X*, or perhaps ask *X* what his name is. If *S* has already connected the name with *X*, or *X* already has a name, this merely takes the discussion back a step. So we consider the model of an item causing a belief that something *F*-s, and *S* bestowing a name on that item. He then has a belief expressible as '*Fa*'.

Now the only beliefs whose source counts in this theory are those whose source goes back, possibly through a long chain of communication, to the item in the world. Beliefs whose source is, for instance, somebody's mere fabrication, do not count.

The notion of dominance can be used independently of the causal theory. Indeed, the notion of certain descriptions being particularly important for fixing the denotation of a name is very close to it. Suppose many descriptions are associated with a name, and it then turns out that some are co-satisfied by one item, while the rest are co-satisfied by another. If our reaction is that the former is the denotation of the name, and we had false beliefs about it expressible in terms of the latter set of descriptions, then the former descriptions are dominant. In such a way can the notion of dominance be used without benefit of causality.

Let us now reformulate the attempt to contrast the descriptive with the eclectic theory. Suppose we have a set of descriptions associated with a name. Suppose the object which satisfies the dominant descriptions is *X*, but the dominant source of the beliefs in which the name occurs is a different object *Y*, which we also suppose to satisfy some of the descriptions. Which item is the denotation of the name? The answer is that the situation cannot arise. For if the denotation is *Y*, this would show that the allegedly dominant descriptions were not after all dominant, since dominance is explained by reference to our reactions to discoveries. Similarly, if the denotation is *X*, this would show that the allegedly dominant source was not after all dominant. Consequently, the eclectic theory and the descriptive theory do not diverge on the question of what the denotation of a name is. On this point, the eclectic theory has neither more nor less explanatory accuracy than the descriptive theory. Here at least

there is nothing to choose between them except the greater simplicity of the descriptive theory.

But suppose that there is actually no causal source of the required sort for the information. Consider a case where a very clever forger puts into circulation a fabricated manuscript telling a tale about a handsome Elizabethan gentleman known as Mr. W. H. It is all part of the forger's sense of fun that the manuscript contains as little as possible which could be construed as linking the gentleman with Shakespeare. The manuscript gets accepted as authentic. There is no independent evidence confirming anything said about the gentleman in the manuscript. But let us imagine that there was a gentleman who satisfies all the descriptions given in the manuscript. Does the name have this real man as its denotation? I think we should answer in the negative, and this appears to favour some theory with a causal element, since the real man *is* causally insulated from the beliefs of the community of Elizabethan scholars.

It does thus appear that the eclectic theory will in certain cases refuse a denotation to a name where the descriptive theory will assert that the name has one, and in the above example this accords with our general feeling for the matter. But is it really causality that makes the difference? Not only did the forger not have any causal contact with any item fitting his story, but he did not even intend to refer to anybody. He intended that others should use his fabrication to intend to refer, but he did not himself intend to refer since, being a forger, he did not believe his own story. This suggests that if we trace back a chain of communication involving the use of a name, and eventually come to a source—a unique source—in which no referential intention was present, we should deny denotation to the name. But this not quite right. For one thing, the name could as it were have picked up denotation along the way. For instance, once it is discovered that the forger's story is true, from then on the name denotes. So let us amend the formulation to exclude such possibilities. More important, however, is the possibility that the person who put the name in circulation did intend to refer, but did not succeed. For example, suppose that our forger, through some delusion, believes his own story. *That* would not make the difference between the name's denoting or not.

It seems to me plausible to suppose that the road leads back to the inclusion of a causal element in the account of names, but by a devious route. To put a name into circulation, *i.e.*, to give it a particular use in a community of speakers, it is necessary for it to be associated with some descriptions. This is common ground between Mr. Evans and myself. Take a case where an item does not have an institutionally approved name. There are certain descriptions I believe to be co-satisfied, and I introduce a name to denote what I believe to co-satisfy these descriptions. Then my having these beliefs is not enough for the performance to be a success, as we have seen. One should add the condition that the beliefs have grounds.

Now existence and uniqueness conditions must be satisfied for a name to be introduced on the basis of descriptions. Existence-conditions must be satisfied to prevent failure of reference, and uniqueness conditions to prevent ambiguity. The introducer of the name must believe these are satisfied. Now it is possible rationally to believe that uniqueness conditions are satisfied on general or logical grounds. 'The first man to climb the Old Man of Hoy' cannot logically be satisfied by more than one person. On the other hand 'Middle-aged English woman with eyes of different colours and a first-class knowledge of Old Iranian' is on general grounds of likelihood a description rationally believed to be satisfied by not more than one person. Existence-conditions can also rationally be believed satisfied on general grounds. But only in special contexts will it be rational to believe that a description—at least an empirical description—is both satisfied and uniquely satisfied, on general grounds alone. Normally, the ground of the belief will involve some causal transaction with the item uniquely satisfying the description.

This does not, however, lead to a causal theory of names, or not immediately, since it is not ruled out that in *some* cases one might have the requisite information to intend rationally to secure reference on grounds which did not involve a causal route back to the referent. But one might conjecture that this does not happen unless there are some points of reference which are fixed by causal means of some kind. This idea might be defended by attending to the link between referring to material things and their locatibility in space and time together with a

causal theory of a more general sort, namely a causal epistemology of knowledge of objects in the external world. To go into this is however outside the present topic.

Descriptive theories of names are associated with the doctrine that some statements of identity made with the use of names are contingent. This is the doctrine that a statement of the form '$a = b$', where 'a' and 'b' are distinct names, is not always necessary, or impossible. A stronger doctrine is that if 'a' and 'b' are distinct names, '$a = b$' is never either necessary or impossible, but this seems to have little to commend it. '5' and 'five' are distinct names, but '5 is five' is surely necessary. Thus there is, on the more plausible weaker doctine, a need for some way of determining which statements '$a = b$' are contingent, and which are either necessary or impossible. (Henceforth instead of 'either necessary or impossible' I shall use the expression 'logically determinate'.) If the names connect with their denotation simply, in the bare way in which, in formal semantics, a constant is assigned to an element in the domain, then the required distinction cannot be drawn. Indeed it seems that the only way of drawing the distinction so as to secure the doctrine is along Fregean lines, by attributing to the names not merely denotation, but also sense, or something which plays a similar rôle. And the only way a descriptive theory of names has of attributing to names anything to play the rôle of Fregean sense is by involving the associated descriptions in the meaning of names. This in turn makes the association of names with descriptions a logical association, in that if the descriptions associated with a name are altered, it follows that the sense of the name changes too, though its denotation need not.

A theory along these lines has well-known attractions. It has seemed a very promising approach to adopt to explain how statements '$a = b$' with distinct names can be informative, and to account for failure of substitutivity of names with the same denotation in epistemic contexts. But it also has disadvantages. Once it is realised that the theory that names abbreviate definite descriptions is hopelessly oversimple, there is great difficulty in specifying the sense of a name in any but the vaguest way. *Which* descriptions are associated with a name varies with time, and with the particular situation of communication, so that the theory, if true, dooms us to a highly

indeterminate semantics for this element of natural language.

I wish to argue that by separating the two characteristic elements of descriptive theories, by retaining one and discarding the other, the advantages can be maintained without the semantic indeterminacy being brought in its train, and that for at least some of the problems of names, no causal element is needed.

It is possible to retain the descriptive theorists' doctrine that the denotation of a name is fixed by descriptions, while discarding the idea that descriptions are involved in the meaning of the name. At first sight this may seem difficult to achieve. If we take a name in use, say 'Aristotle', and successively deny the truth of the usual beliefs about Aristotle, there soon comes a point where the natural reaction is 'Who are you now talking about?' Thus, if I say 'Aristotle did not come from Stagira, nor did he study with Plato, nor teach Alexander the Great, nor write the *Metaphysics*, nor . . .', one soon wonders whom, if anyone, I am referring to. It is tempting to think that it is because the descriptions are involved in the meaning of the name that this doubt arises. But one objection to this view is that if the descriptions were so involved, there should come a point where the conjunctive assertion is actually inconsistent, and this seems not to happen. Apart from that, there is a clear difference in intuitive feel between the list of denials just given, and the corresponding modal conjunction 'Aristotle *might* neither have been born in Stagira, nor . . . nor, *etc.*'. For with the modal conjunction we do not so soon lose our grip on the denotation of the name 'Aristotle'. There are conjunctions of this modal kind to which we are inclined to assent as true, but to whose corresponding categorical conjunction we should react by wondering who was being talked about. This difference might be accounted for by pointing out that in the modal case, the occurrence of the name is outside the modal operator, so that the modal conjunction is no more problematic than an assertion such as 'The author of Waverley might not have written Waverley'. This does not, however, seem to be the whole story, for if we form a modal conjunction with the operator explicitly including the name in its scope, there is one way of doing this which is like the modal conjunction already given rather than the categorical conjunction. That is,

we are inclined to assent as true to 'It is possible that Aristotle should neither have come from Stagira, nor . . .'.

What possibility is it that we have in mind in assenting to an assertion of conjunctive possibility such as this? There is a difference here between

(1) It is possible that Aristotle did not come from Stagira

and

(2) The proposition that Aristotle did not come from Stagira is logically possible.

The interpretation to concentrate on is that of (2). (1) seems naturally to be understood as an epistemic possibility, and just for the moment this is not my concern. I want to concentrate on the assertion of the logical possibility of a conjunction. The difference in reaction to account for, then, is between

(3) Aristotle neither came from Stagira, nor . . .

(4) That Aristotle neither came from Stagira, nor . . . is logically possible.

My claim on intuitive grounds is that there are conjunctions of the form of (3) which puzzle us as to the denotation of the name, whose corresponding assertions of the form (4) do not puzzle us; we assent to the latter as true. This is difficult to account for if the descriptions associated with 'Aristotle' are involved in the meaning (sense) of the name. For if they were so involved, (3) and (4) should be, as they are not, problematic in the same way.

A descriptive theory which holds that the denotation of a name *is* fixed by associated descriptions, but denies that these descriptions contribute to its sense, can make a shot at dealing with this problem. This theory holds that while a name is not *logically free*, as I shall say, of all descriptions, it is logically free of any given sub-set that we actually use to fix the denotation. When the name is being used not within the scope of a modal operator, then we understand who or what is being talked about through the descriptions our community actually associates with the name. But when it is used within the scope of a modal operator, we detach the denotation in imagination from the descriptions actually believed true of it, and suppose it identified by means of some others—other descriptions which *are* true of the denotation, although we do not know that they are. Evidently there will always be such other descriptions,

since nobody ever knows anything like all there is to be known about any nameable item.

This is so far rather obscure. It can be clarified by making use of the language of possible worlds familiar from the semantics of modal logic. I shall outline, very sketchily, a theory of names in modal logic which implements the ideas just expressed obscurely. Consider an ordinary first-order language for modal logic, with the usual apparatus of predicates and constants. Consider also a set of possible worlds to be used to give semantics for the formulae of this language. We distinguish one of these worlds as the actual world *A*. The actual world has a substantial rôle to play, and its semantics need to be fixed first. In the normal way we should, after choosing a domain of objects, assign sets of these as interpretations of the predicates, and members of the domain as denotations of constants, and normally the assignments to predicates and assignments to constants proceed independently of one another. In the present system there is no such independence, and the assignation of members of the domain to constants depends on the assignments to predicates. The idea goes as follows:

In the actual world, sets from the domain are first assigned to predicates. Then, if a certain family of these sets intersect on a unit set, we may assign the member of that unit set as denotation of a constant. The sets assigned to predicates thus correspond to interpreted descriptions, and where these together are satisfied by just one object, a name can be introduced for that object. It should be noted that there may be two or more disjoint families of sets associated with predicates, each of which intersects on the same unit set.

Now consider a possible world *W* which is accessible to the actual world *A*. We require that a constant which denotes in *A* may denote in *W*, but that in certain circumstances it will not. That is, there are some possible worlds in which a constant which denotes in the actual world will continue to denote, and others in which it will not denote, but be vacuous. There is a reason for allowing failure of denotation in some possible worlds. These will be worlds *so* different from the actual world that some entity named in the actual world cannot be recognised as the same in them. The rule for denotation in an accessible world *W* is this: a constant *c* denotes in *W* if and only if

there is a family of predicates which are assigned the same sets in W as they are assigned in A, and these sets intersect on a unit set. In that case c denotes the sole member of that unit set.

To see how this works, return to the actual world. Suppose that in A, there are two families of predicates, and the family of sets assigned to one intersects on the same unit set as does the family of sets assigned to the other. The member of this unit set is assigned as denotation to a constant c. Call these families of predicates F_1 and F_2. Then metaphysically we have two ways of identifying the denotation of c, by the descriptions F_1 and the descriptions F_2. Suppose these are independent of one another. Then the rule implies that in a possible world, so long as at least one of these ways of identifying the denotation of c remains constant, the constant still denotes. Otherwise it does not. c is thus logically free of any *one* descriptive family, so long as there are other suitable ones available.

Epistemologically, c may be tied in the actual world, to one particular family of predicates. These are the ones we should actually use to fix its denotation. The other families whose interpretations intersect on the same object are, we suppose, not available to us. They correspond to truths about the object we do not know. If F_1 has the epistemological tie with a constant in the actual world, and is held steady in a possible world, there is no trouble about thinking that the constant still denotes. If F_1 has the epistemological tie with c in the actual world, but in a possible world its interpretations are different, so that they no longer intersect on a unit set, or intersect on a different one, then so long as F_2 holds steady in the transition from the actual to the possible, the constant still denotes. This can be thought of as a transfer in the epistemological tie from a set of descriptions we do know to be uniquely satisfied to another set of descriptions which we do not *actually* know to be uniquely satisfied by the same object, but which *are* so satisfied. This other set is not actually used for identificatory purposes, but it is in principle available for this use. Thus, to suppose Aristotle as not having some of the properties he actually did have is to suppose a transfer in the association of descriptions with the name to a set of descriptions which *are* satisfied by Aristotle, although we do not (but in principle could) use this latter set to fix the denotation. Aristotle can coherently be divested of much that is

known about him, so long as we do this on a basis of retaining some truths about him which are perhaps not known. For we can suppose them known.

Since the tie between a particular family of predicates and a constant is not a logical one, but at most epistemological, constants do not have sense in this theory. We have thus sketched *a* way of separating the two main elements of the descriptive theory, retaining one and discarding the other. And we have implemented, albeit sketchily, an idea which accounts for the intuitive difference between (3) and (4). For it is only by transition to the possible, but non-actual, that the epistemological tie we *do* employ can be transferred to another set of descriptions.

A constant does not denote at all if *no* family of predicates is held steady in the transition to a possible world. But in any world in which a constant denotes, it denotes the item it denotes in the actual world. Consequently, if '$a = b$' is given no truth-value if one of the names does not denote, '$a = b$' has the same truth-value in every possible world in which it has a truth-value at all. And if we count a proposition as logically determinate if and only if it has the same truth-value in every possible world in which it has any truth-value, then '$a = b$' is always logically determinate. So we have a sketch of a descriptive theory of names in which there are no contingent identity-statements of the form '$a = b$'.

Another consequence is that no constant denotes at all unless it denotes in the actual world. So a possible world in which there is a three-headed dog which guards the gates of the underworld is not a world in which 'Cerberus' denotes. I think this is correct. Such a dog would not *be* Cerberus, just as a real woman with all the properties ascribed to her heroine by Jane Austen would not *be* Emma Wodehouse. But I should not insist on this, and it is not important to the main theme. It does seem, however, that there is a misunderstanding in reading a work of fiction or a piece of mythology as fact, even if, when read as fact, the work in question expresses truths. And corresponding to different ways of reading a story, say as fact or as fiction, go different ways of taking the names it may contain. Use of a name for a mythological beast (a beast understood to be mythological) is a different use from use of it for a beast believed to exist.

Part of the point of going this far into a descriptive theory of names is to indicate that, while the introduction of a causal element into the analysis may be required for some purposes, there is a way of securing the logical determinacy of statements of the form '$a = b$' within the confines of a descriptive theory, and without benefit of causality. It is not wholly clear how Mr. Evans's theory does use causality to secure the logical determinacy of these statements. He says that information is individuated by source. Nothing could have been the source of a body of information other than the item that actually was its source. Taken quite literally and generally this is obviously false. If a particular hedgehog was the source of my belief that there are hedgehogs, it is obvious that another hedgehog might have been the source of that same information. Purely general sentences do not change their sense according to the source of the beliefs they might express.

The only information to which the dictum 'information is individuated by source' might apply is information expressed using names. If X is the source of the information that Fa, nothing else could have been. But that does not express the thought adequately, since it too is allowably false in Mr. Evans's theory. Rather, if X is the *dominant* source of a body of information $F_1a \ldots F_na$, then nothing else could have been. Now 'dominant source' is so *defined* that if X is not the dominant source of $F_1a \ldots F_na$, then the body of information is not about X. So X's being the dominant source is a necessary condition for the information to be information about X, *i.e.*, for 'a' to denote X. Now of course, if 'a' denotes some object other than X, the information is not about X. But this is really all we have so far; source has nothing essentially to do with it. Information of the kind in question is on *any* theory individuated to at least this extent by what the denotation of the name is: difference in denotation is sufficient for difference in information. But what is needed for the logical determinacy of identity-statements is that sameness of denotation is sufficient for sameness of information. On the eclectic theory, we need the truth of the following: if X is the dominant source of $F_1a \ldots F_na$, and X is also the dominant source of $F_1b \ldots F_nb$, then necessarily $a = b$, because the information that $F_1a \ldots F_na$ *is the same information* as $F_1b \ldots F_nb$. This claim, that if X is the

dominant source in both cases, then, if the predicates are the same, the information is the same, may be true, but again, if it is true, it is hard to see why it is the use of the notion of source that makes it so. This deserves a little further discussion.

It could be that the denotation of a name was the dominant source of the associated information, and yet that $F_1a \ldots F_na$ was not the same information as $F_1b \ldots F_nb$, even if the dominant source was the same in both cases. This is so because the theory of dominant source is *compatible* with the idea that descriptive content gets embedded in the meaning of a name, which would again allow for the contingency of '$a = b$'. What rules this out for Mr. Evans is not the introduction of causality, but his use of the theory of communication to state conditions for being a name in a community. The rôle of causality is not by itself to ensure that descriptive content is not embedded in the meaning of the name, but rather to make it possible for *other* elements of the theory to exclude it. But even here I do not think he has *shown* that the causal element is required to make this possible. For it is still an open possibility that some descriptive theory of the kind I have sketched might be similarly combined with the theory of communication in such a way that the descriptions were not embedded in the meaning of names. That would still leave room for causality, but in another place, in a causal theory of belief about particulars, whether or not they are named.

If statements '$a = b$' are logically determinate, then of course the inference from 'Necessarily $A(a)$' and '$a = b$' to 'Necessarily $A(b)$' is a valid one. If that is so, however, it remains true that statements of the form '$a = b$' are still, in at least some cases, *a posteriori*. And if that is so, then the inference from 'John believes that $A(a)$' and '$a = b$' to 'John believes that $A(b)$' is *not* valid, even if '$a = b$' is logically determinate. But if the *information* that $A(a)$ is the same as the *information* that $A(b)$, if $a = b$, then it looks as if this inference in doxastic logic should be valid. However, there is ambiguity in the concept of information used here. If it is an epistemological concept, then if the information that $A(a)$ is the same as the information that $A(b)$, the doxastic inference holds. But in this sense of 'information', the premiss seems false. The logical necessity of '$a = b$' is not sufficient to ensure that the information

(in the epistemological sense) conveyed by '$A(a)$' is the same as that conveyed by '$A(b)$'.

The point I wish to make is this. The Fregean descriptive theory promised, or seemed to promise, the possibility of a unified theory covering both modal contexts and epistemic contexts. Names had sense, and in both sorts of contexts the names would refer to their customary sense rather than their customary reference. The inference from '$L(A(a))$' and '$a = b$' to '$L(A(b))$' was blocked, whether 'L' was a modal or an epistemic operator, and it was blocked in the same way in both cases. But if names do not have sense in the Fregean way, then the treatment of modal contexts falls apart from the treatment of epistemic contexts. We seem to need to distinguish what is strictly said when one says '$A(a)$' from how what is strictly said presents itself in belief when one believes the same thing. There must be *some* difference between '$a = a$' and '$a = b$' to account for the fact that the latter is in some cases *a posteriori* whereas the former is not, even if the modal value of the two is identical. There are so far as I can see only two things that could account for the difference: the sound and shape of the name, and its associations in use, and these must go together in giving the explanation. Thus what was in the earlier theory counted as making up the sense of the name, but has now been extruded in the newer austere doctrine of what is strictly said, makes its reappearance as a kind of epistemological aura around a name, something short of its meaning but more than an irrelevant adjunct. If that is so, we need an epistemological concept of information, distinct from the concept of the propositional content of a sentence, to account for the semantics of epistemic and doxastic contexts, and to explain how '$a = b$' can be *a posteriori*. Causality does not seem to be useful in adding to our explanatory power in this notoriously difficult area of the problem.

In conclusion, I would say that I may have given the impression that the extent of my agreement with Mr. Evans is less than it really is. I have taken leave to doubt whether he has really succeeded in forcing causality into the account of names, but I have sympathy with the project of giving it some position. It does seem to accord well with our intuitions in certain cases where we should refuse to admit that a name had denotation

although its associated descriptions were uniquely satisfied. But I have hinted (but no more than hinted) that the inclusion of causality would be more convincing if presented more generally in a causal theory of reference which covered much more than names. In this I am in accord with the conclusion of Mr. Evans's paper. I have not dissented from the thesis that identity-statements of the form '$a = b$' are logically determinate, but I have demurred at the suggestion that it is the causal element in Mr. Evans's theory that secures, or is necessary to secure, this thesis. I have also taken mild exception to his use of the word 'information', which did not seem to be wholly clear, particularly in the context of the modal status of identity-statements. Finally, I am rather doubtful about the effect that fixing denotations by causal origins has on the account of opaque contexts such as epistemic and doxastic ones. But since he has not gone into this, I do not know how far we disagree.