

REFERENCE AND ANAPHORA

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1 Introduction

In contexts like the following

1. A mosquito is buzzing about our room. It is keeping me awake

the pronoun “it” in the second part is anaphorically dependent upon, but not in the classical sense bound by, the indefinite noun phrase “a mosquito”. This paper claims that the behavior of such pronouns reveals essential features of reference in general. Reference is a unified phenomenon: referential expressions are cognitively processed in similar ways, they serve to organize information, though no information is essential to their functioning, and an adequate description of their referential role does not require them to have a referent. Variations on this theme include reference which depends upon unbound anaphoric pronouns, demonstratives, definite descriptions and proper names.

We are tempted to say that, in (1), “it” refers back to the mosquito introduced by the first sentence. This cannot be quite right, for even if the first sentence is true, there is no mosquito which, as a matter of its meaning, it introduces; this is more clearly so if it is false. The first aim of this paper, undertaken in §2, is to diagnose this temptation; the upshot in §3 is an account of the reference of dependent pronouns according to which the tempting view is close to the truth. This account does not directly explain understanding, which is the topic of §4 and §5. The conclusions are applied to proper names in §6. In this rest of this section I briefly mention some features which I believe are uncontroversial.

As (1) is most naturally understood, the semantic role of “it” is in some way dependent upon the preceding utterance, in particular upon the phrase “a mosquito”.

It is very difficult to hear “it” as other than semantically dependent upon “a mosquito” (for example, to hear it as deictic); and even if an independent reading is possible in some cases, the reality of dependent readings cannot be doubted. There is also syntactic dependence: in the most obvious readings, the pronoun should agree in gender and number.

In such cases, the pronoun does not function like a bound variable of first order logic.

In a well-formed formula of the form “ $\exists x (\dots x \dots)$ ”, the scope of the quantifier terminates with the rightmost parenthesis. Accordingly, we could not both represent the first sentence in (1) as a well-formed formula, and also regard the “it” in the second part as bound by a quantifier in the first part. Yet the first part has everything we require of a natural language analogue of a well-formed formula: it is evaluable for absolute truth just as it stands, and does not require the sentence which follows for its full intelligibility and correctness. This is not just an accident of punctuation, for similarly dependent subsequent occurrences of “it” can cross boundaries of speech act and speaker. If one were to try to represent the “it” of (1) as a bound variable, one would need to determine the scope of the binding quantifier: one would need to know where its rightmost parenthesis falls. Until this has been determined, we cannot represent the “it” as contained within a sentence which is evaluable for truth. Intuitively, however, the possibility of evaluating each component of (1) for truth is independent of whether the discourse has ended, or whether someone is going to add “It’s not very dangerous”. If the addition is going to be made, then attempts at evaluating (1) for truth are, on the bound variable hypothesis, completely misguided. This is a wholly unintuitive upshot.

The uses of pronouns to be discussed here probably show that the notion of variable binding derived from first order logic needs to be radically refashioned before it can be applied to natural language. The same difficulty besets the attempt to represent natural language universal quantifiers as binding variables in the way that first order logical quantifiers do. A sentence like the following is perfectly in order:

2. Every material thing is particulate. Either it is an elementary particle, or else it is a clump of such particles held together by various forces.

The first part is truth evaluable independently of the second, yet if the “every” corresponds to a first order quantifier which binds the occurrences of “it” in the second, the first part cannot correspond to a well-formed formula, and cannot receive a truth value on an interpretation. As in the case of (1), there is no limit to how many further dependent occurrences of “it” there might be, perhaps belonging to different speech acts and different speakers.

Refashioned conceptions of quantifier binding have been offered within dynamic semantics, according to which it will be at best misleading to call the

occurrence of “it” in the second part of (1) unbound. By using “unbound” in these cases, I merely mark the uncontroversial fact that they cannot be regarded as classical first order bound variables.

“It” is not “lazy” with respect to “a mosquito” (that is, replacing “it” by “a mosquito” does not preserve all significant features of (1)).

The laziness hypothesis is (at least approximately) syntactically acceptable but not semantically.

3. A mosquito is buzzing about our room. A mosquito is keeping me awake

does not entail that a mosquito buzzing in our room is keeping me awake; but (1) does. Indeed, (3) suggests that one mosquito is buzzing and another keeping me awake.

2 The Problem

The problem arises if one holds both of two views: that even on those occasions on which indefinite nouns phrases do not refer, they are capable of serving as antecedents to subsequent pronouns which they do not bind; and that on some such occasions the subsequent pronouns meet some reasonable criteria for being “referring expressions”: at a minimum, they serve to enable thought about individual objects. Although both views are open to dispute, in this section I suggest that both are true. The problem then is that the manner in which the antecedent indefinite controls the subsequent pronouns is not any familiar relation: it is not sameness of reference, because the antecedents (in the problematic cases) do not refer; it is not classically-conceived variable binding, because by hypothesis these cases are unbound; yet it needs somehow to make reference possible, if some such subsequent pronouns are rightly counted as referring expressions.

Historically, the most common response to the problem has been to treat indefinites as some kind of referring expression, at least in those uses in which they serve as antecedents to pronouns in the manner of (1).¹ This approach has to confront the fact that there are anaphor-sustaining uses of indefinites which are consistent with there being more than one satisfier of the noun, and this means that the indefinite itself does not meet the following condition for being a singular referring expression: that if it refers to x and to y , then $x=y$. Davidson makes the point like this:

We recognize that there is no singular term referring to a mosquito in “There is a mosquito in here” when we realize that the truth of this sentence is not impugned if there are two mosquitos [sic] in the room. (Davidson 1969: 167)

Davidson's point is not likely to be challenged for cases without anaphoric dependence: most would agree that the claim that a spy is in our midst is not refuted by there being more than one, and that the claim is to be negated by saying that no spy is in our midst, not by saying that there is either none or more than one. The unnegated "spy" sentence can sustain anaphora (it might be followed by "He is spilling the beans to the Taliban"). The possibility of anaphora without a referring indefinite is specially vivid in examples like this:

4. A: A mosquito is buzzing around our room.
 B: Yes, I can hear it too.
 A: In fact there are hundreds of them.

A's second remark appears consistent with her first, so we can suppose that both are true. (The relation between A's remarks is like that between "there is at least one F" and "there are exactly two Fs".) Yet the first remark, even though verified by more than one insect, was adequate at least to make B's remark intelligible. (It is a more difficult question whether it is true or false or neither.)

I conclude that an adequate solution to the problem should not regard indefinite noun phrases as referring expressions, or as having truth conditions upon which there is an object which they introduce into discourse and make available for subsequent back reference. As we shall see in the next section, this is consistent with their being associated with a unique object: the implausible claim is that this association is constitutive of their truth condition.

The other thesis required for the problem under discussion to exist is that some pronouns which are in this way anaphorically dependent are referring expressions.² A proper defence of this thesis would require an account of what it is to be a referring expression. Two (among several) possible views are these:

- (i) a referring expression is one which has a referent, and which would be unintelligible if it did not; its referent (which is typically context-relative) will be specified by a correct semantics for the language.
 (ii) a referring expression is one that "purports to refer", and needs to succeed if an unembedded occurrence of the expression is to express a truth, but which may fail to refer without detriment to intelligibility; a correct semantics will associate it with a reference condition rather than with a referent.

The first conception goes with what I shall call a Strawsonian account of the truth conditions of sentences of the form "*t* is *F*", where "*t*" is a referring expression: such a sentence is true iff "*t*" has a unique referent which satisfies "*F*" and false iff it has a unique referent which fails to satisfy "*F*". By contrast, the second conception goes with an Ockhamist account of these truth conditions: such a sentence is true iff "*t*" has a unique referent which satisfies "*F*", and is otherwise false. On the first conception, absence of a referent means

the expression is not a referring expression, so there is nothing for the Strawsonian truth conditions to apply to;³ unless the sentence can be classified as having some other logical form, it is not associated with any truth condition, and so is unintelligible. On the second conception, there can be a referring expression, *t*, which lacks a referent: in this case, “*t* is *F*” is false, and so unintelligible. On the first conception, there is no sentence “*t* is *F*” in which “*t*” is a referring expression which lacks a referent, hence there is no negation of it; on the second conception, there is such a negation and it is true. The first conception is consistent with classical logic, and accepts that referring expressions meet the condition upon “*a*” in the classical theorem schema “ $\exists x(x=a)$ ”. The second conception is not. For example, what was just said about the truth of the negation of a sentence with failure of reference shows that classical unrestricted existential generalization cannot be regarded as valid. An appropriate logic, given the Ockhamist truth condition, will be negative free logic.

One thesis of this paper is that the second conception is the correct one for the kind of dependent pronouns under consideration, and also for proper names. Since these conceptions are clearly fairly theoretical, one cannot expect any intuitions to tell directly in favour of one or the other. One must gather various pieces of evidence from different aspects of the use of language, and see which conception gives the best account overall. This paper presents some of the relevant evidence.

Wishing to make Jill jealous, Jack says

5. I met a girl last night. She was absolutely gorgeous.

Jill rises to the bait, and starts making enquiries: “How old is she? What colour hair? Were you alone with her? What’s her name?”. Jack gives answers, and a painful silence descends. The next morning, noticing Jack’s distracted air, Jill asks:

6. Are you thinking about her?

Unreflectively, we are strongly inclined to say that Jill referred to the girl Jack met. We assume that we need the utterances which contain the dependent pronouns (“she”, “her”) to be intelligible, if we are to explain Jill’s state of mind, the motivation for her enquiries, the dynamics of her exchange with Jack, and their emotional situation. However, I have not yet said whether Jack’s remark (5) was true or false. Perhaps he was making the whole story up. If he was, there was no referent, but the pronouns were the kind of expression that should have referred. If things had gone as well as could be and Jack had told the truth, they would have succeeded in referring, and this would be so in virtue of something about Jack’s initial use of the indefinite “a girl”.

If this is accepted, the original problem is in place: indefinites are not referring expressions, but pave the way for reference. However they do this, it is

not by coreference or variable binding, and the problem is to give a correct specification of the relation. If the description of how things are if Jack lies when asserting (5) is correct, the reference for which indefinites pave the way is reference according to the second conception: reference conditions rather than referents, Ockhamist rather than Strawsonian truth conditions, and free rather than classical logic.

3 Fixing the Referent of Dependent Pronouns

3.1 *Evans's proposal*

The kind of solution to the problem to be considered in this section has the following features: it accepts at face value that some dependent pronouns refer, and do so at least partly in virtue of some feature of the governing indefinite; and it accepts that the indefinites themselves do not refer, and do not require a unique satisfier for their truth. There are many ways in which the utterance of a sentence containing an indefinite may be linked with a unique object. Even if the association is required neither for the truth nor for the intelligibility of the utterance itself, it may be required for the truth or for the intelligibility of a subsequent utterance containing a dependent pronoun. In short, the proposed accounts share the feature that the first part of utterances like (1) do typically introduce an object for subsequent back-reference; it is just that this is not a matter of their truth conditions. On some of the accounts, they can introduce an object even if false and fail to introduce one even if true.

The best-known account of this kind was given by Evans (1977) in his theory of E-type pronouns. Evans presents his account in two distinct ways. According to one of these, the suggestion is that a sentence like (1) can be understood as equivalent to:

7. A mosquito is buzzing about our room. The mosquito that is buzzing about our room is keeping me awake.

This guides us to the semantics of anaphora only in the presence of a theory of descriptions (which will need to decide some difficult questions, including ones about scope). But the core of Evans's idea can be entirely detached from these controversial issues, and he sometimes presents it in this alternative way:

8. If in an utterance like (1) the first part has a unique verifier, this is the referent of the dependent pronoun in the second part.

Having a unique verifier is not a condition for the truth of the first part of (1), but, on this account, it is a condition which must obtain if this first part is to supply a referent for a dependent pronoun. It is not a condition which must

obtain for a dependent pronoun to be intelligible, for (8) supplies the pronoun with a reference condition even in the absence of a referent.

This account has the following welcome features: it does not suppose that the indefinite noun phrases are referring expressions or that simple sentences containing them are true only if uniquely satisfied; it allows that dependent pronouns are referring expressions; it gives the semantics of these referring expressions in terms of reference-conditions rather than by assigning referents outright, and so commits to an approach which makes room for (though it does not entail) Ockhamist rather than Strawsonian truth conditions and some form of free logic. So from my perspective, everything about the structure of the account is as it should be.

It has often been thought that Evans's account does not do justice to the semantic details. Considering

Socrates owned a dog and it bit Socrates

(which he numbers as (16)) Evans makes the following admission:

if Socrates owned two dogs, on the proposal which I am defending (16) is not true; the second conjunct would not be true for failure of reference of "it". (Evans 1977: 127)

By the same token, in the most usual kind of situation in which (1) would be uttered (situations containing more than one mosquito), its second part would fail to be true; and not everything said in (4) could be true. These results are often regarded as counterintuitive, and have historically formed a frequent basis for rejecting Evans's account.

Rejection on this basis alone may have been too hasty. It might be that Evans is right about the strict and literal truth value, and our sense that his position is counterintuitive is based upon a natural attempt to "accommodate", for example envisaging some kind of restriction on the indefinite phrase which does yield a unique satisfier. Accommodation of this kind is familiar in other cases, so it would not be surprising if it applied here. Moreover, every account needs to do justice to the impact of the singular. An explicit recognition of a plurality of witnesses to the indefinite utterance makes a subsequent singular anaphoric pronoun infelicitous, as in the following:

9. A mosquito is buzzing around our room. In fact there are hundreds of them. It's keeping me awake.

The "it" may refer to the fact of there being buzzing mosquitoes, but not to a mosquito. Evans's account offers some kind of explanation: the truth of the second part precludes there being a unique verifier of the first.⁴

There are other examples—correction cases—which in my opinion provide a firmer basis on which to regard Evans’s account as inadequate. I distinguish two kinds of case. The first is exemplified by the following perfectly natural dialog:

10. A: A mosquito is buzzing about our room.
 B: It’s not a mosquito. It’s just a gnat.

We can imagine B’s remark to be true (along with A’s being either true or false). If so, the referent of “It” in B’s utterance cannot be a mosquito.⁵ In this case B corrects a mistake which A makes, and it might be that an accommodation story could be told.

The second kind of correction case has features which rule out accommodation. Suppose that Jack’s painful conversation with Jill which began with (5) (“I met a girl last night ...”) has been going on for some time when Jack utters:

11. In fact, I met her before last night, not last night, but couldn’t face telling you at the start of this conversation.

Let us assume that Jack did indeed meet the girl he has been talking about before last night and met no one last night. We would like to say that Jill nonetheless was thinking of the right girl all along, and now, if she believes Jack, changes her mind about when Jack met that girl. Yet on Evans’s proposal, none of either Jack or Jill’s pronouns has a referent at all, and (11) cannot be true. There is no question of accommodation, for the referent (if any) of the pronoun has already been determined before (11) is uttered.⁶

Evans is aware of that there are problems in this area, and suggests that his account should be “liberalized”:

In order to effect this liberalization we should allow the reference of the E-type pronoun to be fixed not only by predicative material explicitly in the antecedent clause, but also by material which the speaker supplies on demand. This ruling has the effect of making the truth conditions of such remarks somewhat indeterminate; a determinate proposition will have been put forward only when the demand has been made and the material supplied. (Evans 1977: 130)

The demand in question relates to the use of the dependent pronoun, and takes the form: “Who?” or “What?”. In the dialog in (10) above, B could respond: “the insect which A was talking about (and which he wrongly thought was a mosquito)”. This is not just a liberalization of the original theory but a new one, and one which gives unlimited licence to speakers’ intentions, as if these were in no way governed by facts of language use. Reverting to Jack’s disagreeable remark (5), suppose he did indeed meet just one girl, but that he found her in no way attractive and was simply trying to make Jill jealous. Falling for his

trick, Jill might assume that Jack was madly attracted to this girl, and so might answer an identificatory question concerning her use of “she” or “her” in these words: “Why, the girl Jack is so madly attracted to”. On Evans’s liberalized account, taken at face value, this would mean that nothing Jill can say using such a pronoun (unembedded) is true. This is strikingly counterintuitive. In general, one cannot put the referent at the mercy of any old beliefs that speakers or hearers might have.

Evans’s account may be inadequate, but I believe that it is not beyond repair. I begin by considering proposals in a similar spirit, but which I argue are also unsatisfactory. I then consider the proposed repairs.

3.2 *Intention and salience*

Another way to link a unique object to an indefinite is through some specific intention on the part of the utterer. Candidate objects range from ones concerning which the utterer of the indefinite has communicative intentions, to ones he merely “has in mind”.

It is clearly not correct to make anaphoric dependence turn on communicative intentions concerning specific objects. Knowing that you do not know my friend Jill, with whom I am having dinner this evening, I may tell you this:

12. I am having dinner with a friend this evening

without there being anyone I intend you to identify, and so without having communicative intentions towards any object.

The best form of the intentional dependence view is likely to be the weakest, perhaps captured by the idea that the relevant object is the one I have “in mind” in my utterance. Perhaps I do have Jill and no one else in mind when I utter (12), so this would provide an object for subsequent pronouns to refer back to (e.g. “She’s coming down from Manchester”). In this case there is an object I have in mind: an object to which I stand in some special epistemic and causal relations. This would not be so in a typical utterance of the following:

13. A girl, I don’t yet know who, has been smoking in the lavatories. (I distinctly observed a smell of smoke.) When I find out who it was she will be punished severely.

There need be no girl whom the headmistress who utters (13) “has in mind”, and she makes this manifest; yet this undermines neither the intelligibility nor the truth of the last part of her utterance, containing the dependent “she”. This makes “having in mind”, regarded as a relation between an object and a speaker, a relation which cannot explain all cases. For (13) it would wrongly predict that “she” has no referent, so that the last utterance is not true.

There is a weaker, non-extensional, relation (so perhaps not really a relation) which may be intended by the notion of having in mind. We do use the phrase “have in mind” for cases in which there is no object to which the thinker is related by special epistemic or causal relations. For example, the headmistress in this sense has the culprit in mind, even if there is in fact no culprit, and she mistook bonfire smoke for cigarette smoke. This resembles Evans’s “liberalized” account. The idea would be that the referent, if any, of the dependent pronoun, is whatever uniquely satisfies the description the user of the pronoun would give of what she had in mind in using it. As we have seen, this seems to leave too much scope to speaker idiosyncrasies: a speaker might have in mind a description which is intuitively irrelevant to fixing the referent of the pronoun, especially if some other speaker was responsible for the first pronominal link in the anaphoric chain.

It has been proposed that the notion of salience will achieve what we need. Indefinites are often used in perceptual contexts, including those in which something is perceived by both speaker and hearer in a situation in which this fact is likely to be common knowledge. As a result of a normal safari utterance of “Look! There’s a black rhino” a unique rhino may get raised to salience, and thus become available for subsequent reference. In David Lewis’s words:

although indefinite descriptions—that is, idioms of existential quantification—are not themselves referring expressions, they may raise the salience of particular individuals in such a way as to pave the way for referring expressions that follow. (Lewis 1979: 180)

There is room for doubting whether this story holds even for all perceptual cases, and other cases seem to provide clear counterexamples.

Suppose I don’t see the rhino which was salient to you. This does not prevent me intelligibly and truly continuing: “I can’t see it.” One might have taken Lewis to be thinking of the “raising to salience” as delivering mutual salience, shared by speaker and hearer and playing a part in explaining their communicative success. The case just considered, in which nothing relevant is salient to the hearer, shows that this would not be a well-advised position, so let us just take it that salience to whomsoever will determine reference. Then “it” in my remark (“I can’t see it”) refers to a presumed unique rhino salient to the speaker. This position has two counterintuitive aspects. One is that the exchange goes as smoothly, and the truth of the second speaker’s utterance is unimpugned (“I can’t see it”), if two rhinos have an equal degree of salience for the first speaker (“There’s a black rhino”). The second counterintuitive aspect is that if there was no black rhino, nor anything else of even roughly the same kind, and the speaker was tricked by the light, the response “I can’t see it” is certainly intelligible, and I have a strong inclination to regard it as true. So we seem to have anaphoric connection in the absence of a salient object.

Non-perceptual cases seem to me clearer. Called to the scene of a disturbance, a policeman says:

14. Someone with large feet crossed this muddy area. The footsteps end at the wall. He probably jumped over.

No one is salient to speaker or (typically) hearer, but the anaphora is intelligible, and all the utterances may intuitively be true. So salience does not constitute a necessary condition for the intelligibility of unbound pronouns, and could not feature as a necessary condition for the truth conditions of utterances containing them.

It may be that object-directed intentions or salience could be used in a more complex account, in which these features were distributed across different kinds of case. However, I will show how Evans's account can be modified to accommodate the kinds of counterexample we have discussed.

3.3 *Evans's account amended*

I suggest that Evans's account gives the default reference-conditions for dependent pronouns, but if this condition does not deliver a referent, other conditions are invoked. Once one begins to tinker with Evans's account, one can, if one wishes, accommodate the intuition that a multiply satisfied utterance containing an indefinite may introduce an anaphoric pronoun with a referent. In the original mosquito case (1), we imagine that the remark is prompted by some one out of the various mosquitoes, one which played a causal role in producing the utterance, and this intuitively is the mosquito we take to be the referent of the subsequent "it". The condition is:

- (b) x both uniquely prompted the utterance of "An F is G " and satisfies F -and- G .

The headmistress example (13) shows that we cannot simply eliminate the second conjunct: if no girl, but a whiff of bonfire smoke, had uniquely prompted the remark, the whiff would not be the referent of "she".

The required notion of prompt is not easy to articulate, beyond the obvious fact that it is a causal notion. In this example (given by King 1992: 32), we need the prompt to be whoever gave rise to the account, typically by doing some or all of the things related:

15. A Hawaiian surfer was surfing fifteen foot waves at Pipeline about ten years ago. He took off on a big wave, fell and became trapped in an underwater cave.

Intelligible corrections include that he was not a Hawaiian, or was not a surfer, or was not trapped but only nearly so. If the teller learned the story at second-hand, we do not want his "source" (in this journalistic sense) to count as the referent. Likewise if the story was pure fabrication: though the fabricator is the source, he or she should not count as the referent. Some ways in which the

notion of a prompt can be qualified so as to help determine a suitable reference condition are considered in connection with examples (10) and (11).

In the case in which the speaker mistakes a gnat for a mosquito (10), nothing satisfies the *F*-and-*G* condition, but intuitively the “it” refers to the gnat which prompted the remark. This is because it is easy to make the mistake in question. If B had replied “It’s not a mosquito, it’s a penguin” we would need a great deal more scene-setting to achieve an interpretation of the remark upon which it is plausibly true. This suggests that if (b) does not deliver a referent, we should look to the following:

- (c) *x* both uniquely prompted the utterance of “An *F* is *G*” and the speaker mistook it for a satisfier of *F*-and-*G*.

This still does not get things right for the case in which, deep into the conversation, Jack retracts some initial information on which occurrences of the pronoun were dependent (11). We need a further condition, to determine a referent if the others fail:

- (d) *x* is such that it both uniquely prompted the utterance of “An *F* is *G*” and the speaker represented it as a satisfier of *F*-and-*G*.

Summarizing, the suggestion is this:

16. For any object *x*, and any pronoun anaphorically dependent upon an utterance of the form “An *F* is *G*”, the pronoun refers to *x* iff:
- a) *x* uniquely satisfies *F*-and-*G*, or nothing meets this condition but
 - b) *x* both uniquely prompted the utterance of “An *F* is *G*” and satisfies *F*-and-*G*, or nothing meets either (a) or (b) but
 - c) *x* both uniquely prompted the utterance and the speaker mistook it for a satisfier of *F*-and-*G*, or nothing meets either (a) or (b) or (c) but
 - d) *x* both uniquely prompted the utterance and the speaker represented it as a satisfier of *F*-and-*G*.

Disjunct (a) on its own is Evans’s account, and is modified to deal with cases of multiple satisfiers of *F*-and-*G* and correction cases. Disjunct (b) addresses multiple satisfier cases, (c) gnat-style correction cases like (10) and (d) the Jack-style correction cases like (11) (in which there is no mistake).

I am not aware of counterexamples to this account, but it is somewhat unhappy in various ways. For one thing, although there is some kind of similarity among the conditions (they are either Evans’s pure unique *F*-and-*G* condition or else some intelligible departure from it), there seems no real unity. The closest to a unifying idea is that the referent of the pronoun (if any) is whatever object the speaker was representing as being uniquely *F*-and-*G*; but on a natural understanding of this condition, it is wrong for the headmistress’s remark,

which may have a referent even if there is no object she represents as being thus-and-so; it is also doubtful for gnat-style correction cases. The lack of unity means that we have no way of being sure that there are no counterexamples, and so we should advance the account with caution. We might transform it into something more general and more unified: the referent of an anaphoric pronoun, when it is the first in the chain, is to be determined by general holistic applications of the principle of charity; subsequent links in the same chain must agree in referent with the first. This may improve the truthfulness of the principle, since it will now collect anything that is needed for it to deliver the right result; but at the expense of any useful specificity.

Unification in another direction is required, for intuitively, as Evans said, it cannot be that pronouns in the use we have studied are semantically wholly distinct from their use in other cases, for example, those in which they depend upon an indefinite which occurs within the scope of a quantifier. Some such cases may suggest a line of unification. In cases like

17. Everyone who owns a car washes it on Sunday

we may explain the truth conditions in terms a series of assignments of people to the blank in

18. If ... owns a car, ... washes it on Sunday.

Relative to any such assignment, “it” gets as referent, if any, the assigned person’s car. Here only condition (a) of (16) would appear to apply. Reference on an assignment can be seen as a variant upon reference on a condition. But it is not clear how far this idea (which is present in Evans) can be extended. For example, it may not be able to do justice to the universal force of “it” in

19. No farmer who owns a donkey beats it,

which is false if any donkey-owning farmer beats any of his donkeys.⁷

One feature of an Evans-style account, one it shares with all those discussed in this section, seems certainly correct, if reference is to play a role in describing these pronouns: its reference-conditional form, which could be abstracted to the following:

For any utterance of the form “An *F* is *G*” which supports subsequent anaphora, there is some feature such that for any object, *x*, a subsequent dependent pronoun refers to *x* iff *x* uniquely posses that feature.

Having this reference-condition ensures the intelligibility of such pronouns; whether they have a referent is another question, determined by whether the associated feature has a unique instance.

Fixing the referent of these pronouns does not explicitly address their meaning or what is involved in understanding them. It is tempting to think that they are closely associated with certain information, the most likely candidate, and that adopted in different forms by Evans, Neale and others, being the information that the referent is *F*-and-*G*. This does not follow from the account proposed here. In particular, the examples suggest that even in the cases in which speaker and hearer are referring to something by using these pronouns, they need be in no mental state internalistically distinguishable from cases in which there is nothing for them to refer to. This means that an account of understanding according to which an understander is internalistically distinguishable from a non-understander should not appeal to an internalistic notion of knowledge of the referent.

4 Understanding Dependent Pronouns

Can understanding a dependent pronoun (of the kind under discussion) be identified with knowing its reference-condition, or with coming to know what its referent (if any) is on the basis of the reference-condition together with further contextually supplied information? In the case of deictically used pronouns, one would expect the following answer: understanding a sentence (an expression type) containing such a pronoun involves an implicit appreciation of how the context of an arbitrary utterance would determine the referent of the pronoun. The general rule, Kaplan's character, would supply something like a reference-condition, and its application in context would deliver a referent. Understanding an utterance may plausibly be held to consist in using knowledge of its character, the reference-condition, together with knowledge of the context, to arrive at the referent, one which, no doubt, would be the object of a singular truth condition.

There is a difficulty about offering an analogous answer for anaphorically dependent pronouns, within the framework of an Evans-style account. One general difference is that whereas it is usually assumed that in deictic cases there must be a referent if there is to be understanding, we have already seen that this would not be an appropriate requirement for anaphoric cases; we will therefore couch the analogy in terms just of reference condition, and not referent. There is also a structural difficulty in bending an Evans-style account of reference conditions to an account of interpretation or understanding. When the interpreter encounters an anaphoric pronoun, he needs already to possess something which will permit interpretation on the basis of his interpretation of the previous link in the anaphoric chain. If the previous link was itself a pronoun, then its interpretation should simply be carried forward. If it was not a pronoun, then its interpretation should already have equipped the interpreter with a reference-condition. The difficulty is that according to a position like Evans's one is to interpret an indefinite noun phrase essentially as an existential quantifier. Thus the interpretation of the first part of (1), for example, does not require anything pertaining to uniqueness.

In the process of interpretation, we expect understanders to carry previous interpretations forward and for them thus to be available for solving new problems of interpretation. It would be quite another thing to expect them to carry forward memories of precise linguistic forms. It is a familiar phenomenon that among people who use two languages interchangeably in their conversations, it often happens that one remembers what the other said, but not in which language she said it. Interpretation is remembered, but not linguistic form. In the cases under discussion, the reference-conditions for the dependent pronouns do not emerge from the interpretation of the antecedent indefinite noun phrase. That is the price we pay for not regarding the indefinites as referential. The consequence is that, given only the account so far, there is no guarantee that those who can interpret the antecedent sentences are thereby well placed to interpret the subsequent pronouns.

The difficulty could be modelled in a crude way like this. In interpreting the first part of, say, (1) (“A mosquito is buzzing about our room”) we come to know that what the speaker has said is true iff there is at least one mosquito which is buzzing around our room, and we throw away all other information about the utterance, including the words in which it was couched. We then move on to the second part, and encounter the “it” (“It is keeping me awake”). On the proposed reference-condition account, the referent of “it” is fixed by a series of tests which start with the query: is there is a unique satisfier of a certain conjunction of predicates in the first part of the utterance? But we have thrown away the words, and now have only the interpretation, and so we are in no position to ask or answer the question. So far as the interpretation goes, the words could as well have been “Our room is affected by mosquito-buzz”, which is also presumably true iff there is at least one mosquito which is buzzing around our room. We need to backtrack to make a test relating to the first utterance which goes beyond any test we needed to make in order to interpret it. Intuitively, however, interpreting the first part gives us all the information we need in order to go on to interpret the second.

It is a familiar fact that anaphoric dependence is a function not just of possible world truth conditions but also of linguistic form. Even though, in the two following sentences, the first parts agree in these truth conditions, only the first of the pair happily supports anaphora:

- 20. Pedro owns a donkey. Harry vaccinates it.
- 21. Pedro is a donkey-owner. Harry vaccinates it.

The most straightforward way to accommodate this phenomenon is to treat the interpretations of the first parts of these two examples as different, and to be sure to include in the interpretation of the first part of (20) something which enables the second part to be interpreted (without any kind of backtracking). However, this is not what an Evans-style account offers. The first parts of both are simply interpreted as true iff there is an x such that x is a donkey and Pedro owns x . What is needed in order to interpret the pronoun is something that can

be derived from the linguistic form of (20) but not from that of (21). If we cannot expect interpreters to keep track of linguistic forms, as opposed to keeping track of interpretations, we cannot use Evans's account as a complete account of interpretation.

We know from Discourse Representation Theory (Kamp 1981, Kamp and Reyle 1993) and from File Change Semantics (Heim) that it is possible to provide an interpretation of (20) which differs from that of (21). This gives interpreters different interpretations to carry forward: one which in the case of (20) but not in that of (21) will provide what it takes to interpret an anaphoric pronoun. In the next section, I borrow selectively, and without further acknowledgement, from their work. These authors and I have very different goals. The linguistic detail which is their central concern is subsidiary from my point of view. Moreover, they seem not to provide for the possibility that different utterances within a single discourse, which use anaphorically linked pronouns, should have different truth values and, as a connected issue, they give no weight to correction cases, which it is difficult to imagine being accommodated on their accounts. Without supposing that these problems, or others which have been mentioned in the literature, provide knock-down arguments against their positions, I have here taken the opposite line, moved by the general intuition that we are often wrong about specific objects, and so have to delete as well as accumulate information relating to a single object. This dynamic is not easy to register in DRT.

5 Interpretation and Individual Concepts

Instead of asking about reference we can ask about how interpreters process the constructions we are discussing. The account of processing I propose starts with a notion of an individual concept. This is a familiar phrase, but it is used here in a possibly unfamiliar way: an individual concept is not a function from worlds to individuals, nor the Fregean sense of a singular term, but rather an aspect of individual psychology (a mental token) and not something directly available to contribute to an account of the sense of an expression in a public language.

An individual concept is exercised when a person thinks of an individual or specific group of individuals: in thinking of London, I exercise a concept of London, in thinking of the capital cities of Europe, I exercise a concept of the capital cities of Europe. (For simplicity I will henceforth bracket the plural cases.) An individual concept serves as an address or receptacle for information which is represented as belonging to a certain object.⁸

Interpreting indefinite noun phrases, as they occur in the first part of (1) or (5), requires one to introduce a new individual concept. This is then available in interpreting the subsequent pronouns. What is needed for interpretation of the second part is already contained in the interpretation of the first part, without back-tracking. The cognitive analogue of "back-reference" is re-use of an

individual concept. I will say something about individual concepts in general, something about why they should be introduced in interpreting indefinite noun phrases, and then show how they do justice to the various examples that have been used in this paper.

5.1 *Individual concepts*

An individual concept is an aspect of an individual's psychology. It is a mental state with a causal origin, causal powers and a fairly specific temporal extent. It is a repository of, or address for, information which typically may change over time. This is not a matter of belief, but of representation: for example, an interpreter may have to add or subtract information from an individual concept in order to represent the message he is being sent, but this does not mean (and will not mean if he does not give credence to the message) that he believes things to be as the information represents them.⁹ It may be that there are individual concepts for which some or all of the contained information is part of their essence; but this is not a kind of individual concept I will consider.

An individual concept may or may not have a referent; if it has one at any time, it has that referent at every time. The point of this stipulation is to permit the smooth description of cases in which a thinker changes her mind about how things are with an object: we want to be able to describe a thinker who thinks of the same object as the same over time, no matter to what extent she revises the information she associates with it. We also need to see the emptiness or non-emptiness of an individual concept as independent of the subject's opinion: a subject might use an individual concept wrongly to think that there is no such object, or wrongly to think that there is such an object.

Two individual concepts may refer to the same object, and this gives rise to quasi-Fregean possibilities, though without any such entities as senses or even anything corresponding to the relation of sameness of sense. This is to allow for the smooth description of such cases as those in which a thinker fails to recognize what is in fact a familiar object, and so introduces a new individual concept when there is an existing one which had the object as its referent.¹⁰

The claims about individual concepts can be regarded as stipulations, so the substantive question is whether they have any useful or intelligible applications, perhaps including those suggested by the examples just given of phenomena that need to be described.

Theorists of all persuasions, even direct reference theorists or those who believe in *de re* senses, should allow for empty individual concepts (ones which have no referent). It is a familiar claim that there are two states of the world which could verify a sentence like

22. John wants someone to be his wife.

One is that John has a purely general desire to terminate his bachelorhood, and the other is that someone is the object of John's matrimonial desires. It is less

often remarked that there is a third possible state of affairs in which (22) would be true.¹¹ It might be that John falsely believes that William has a delectable sister, Martha, and this is who he wants to marry. But William is an only child, and John's dreams about Martha have been pure fantasy (it is not that there is some girl who he wants to marry and who he falsely believes is William's sister). Here John's desires have something in common with the internal configuration they would have if they had an object, despite having no object: in both cases, he would be happy to represent his desires in a way he would regard as singular, as opposed to existentially general. He is in a state which differs both from that of one who merely wants relief from bachelorhood, and from that of one for whom there really is an object of matrimonial desire. I shall say that in both of the two not purely general cases, but not in the purely general one, John exercises an individual concept, a concept which in one case is empty and in the other is not.¹²

The information which an individual concept contains may vary over time. Accumulation must be allowed for, as a subject learns more about an object. We must also allow for deletion, as a subject changes his mind about an object: a change of mind does not involve commitment to a contradiction. In the cases to be considered here, there is no core of information that needs to persist for the individual concept to persist. This corresponds to the fact that there is no upper limit to the number of false beliefs we may have about an object, and we may succeed in thinking about something even though we are misinformed about it, and even if the information we most trust, or learned first, is in fact incorrect. This is an application to individual concepts of what Kripke said about proper names: no information is privileged beyond possibility of retraction. The point is at its most controversial as applied to empty individual concepts, but it seems intuitively correct even in these cases. Because John greatly admired William and believed him to have a sister, he set his heart on marrying her. The fantasy developed in a rather pathological way over the weeks. John came to persuade himself that the woman was not really William's sister or indeed anyone else's sister, but that she was an only child who had been raised in William's family; and then even that she was not raised in William's family although William had pretended this was so. It is plausible to hold that the same individual concept is being exercised throughout, and that according to John's fantasy there was always just one woman about whose properties he changed his mind. Even the description "the woman John wants to marry" may not be constant throughout the fantasy for in subsequent elaborations he may dump her, and maliciously fantasise about how she takes this rejection. What makes the various thought episodes ones involving the same individual concept is to be settled in terms of functional and causal roles: for example, John must appreciate that he has changed his mind as opposed to merely changing his fantasy. The individual concept persists in virtue of causal relations between thought episodes, not in virtue of the persistence of some associated information.

Information may be "uniquely identifying" in one of two ways. It may be of the form "is *F*" (for example, "is a natural satellite of the earth") and be sat-

isified by a unique object. Such information I shall call “objectively uniquely identifying”. If empty individual concepts are allowed, not all individual concepts will be receptacles for objectively uniquely identifying information. Alternatively, the information may have uniqueness built into the content, expressible along the lines “is the *F*”. Such information I shall call “structurally uniquely identifying”. It is characterized solely in virtue of its form (to use Russell’s words about denoting phrases) and not by a semantic relation. A concept may be a receptacle for structurally uniquely identifying information without having a referent. It is a plausible hypothesis that every individual concept is a receptacle for structurally uniquely identifying information, explicit or implicit.

Allowing both for a concept to be empty and for it to hold different information at different times poses difficulties for individuating concepts. We cannot in every case individuate by referent else there could be at most one empty concept. We cannot individuate by contained information, else a single concept could not hold different information at different times. The remaining resources for individuation are causal origin and functional role; in this paper, I assume that these resources can deliver an adequate account.

The following principle affords an example of how role can play a part in individuation:

if *c* contains the information “is *F*” and *c*’ contains the information “is *G*” and the subject’s representations do not entail that something is both *F* and *G*, then $c \neq c'$.

Although the correctness of the principle cannot be challenged, its explanatory value is not optimal, since the notion of entailment to which it appeals is defined in terms of content, a notion which in this development is not available before that of individual concept. But it may ground some optimism that the account can be usefully pursued.

Possession of an individual concept for an object does not entail anything at all demanding in terms of capacity to distinguish that object from all other things. This does not mean that the notion cannot be put to use in describing cases for which heavier-duty notions of “identification” have been used. Gareth Evans considers a case in which one of two participants in a conversation says

Do you remember that bird we saw years ago? I wonder whether it was shot. (Evans 1982: 308)

Evans says that the hearer does not fully understand the speaker “until he *remembers* the bird—until the *right* information is retrieved”. Nothing more is needed than that the hearer access and bring to bear the individual concept for the bird which he introduced on the earlier occasion. The concept is very unlikely to contain any information which would distinguish the bird from many others. But one mark of a previously introduced concept being currently exer-

cised is that some information originally associated with the concept now becomes available to the thinker. In this sense, remembering the bird does require retrieval of some “right information”: information from the original individual concept.

5.2 *Individual concepts and indefinites*

Why should interpreting a merely indefinite noun phrase require the introduction of a corresponding individual concept, a concept fit to be exercised in thinking about a definite individual object? An individual concept is exercised when a person “thinks about” an object, and cases of such thinking are not confined to those in which there is an object she thinks about. It is a hot day. Imagine that you are drinking a beer. In thinking about the situation by imagining it, there need be no beer to which you are related. But what you imagine is in some respects like what you would experience if things were as you imagine them: you are drinking a definite and particular beer, and not some merely existentially quantified beer; the only drinkable beers are definite and particular.

In building a model of an existentially quantified situation, it is natural to introduce a witness to the quantification. Consider a team of architects planning a building. “Let’s have a large tree here”, says one, moving a piece of green plastic to a certain position on the model. We cannot distinguish between what he has thereby asked us to imagine, and what he would have asked us to imagine by saying “Let’s bring it about that *there is* a large tree here”. Berkeley was right to say that we cannot imagine there being a tree which exists unperceived without imagining a tree existing unperceived. More generally, thinking of what it would be for an existential fact to obtain typically involves thinking of an individual as a witness. But thinking of an object involves exercising an individual concept. So interpreting the existential facts which are stated by indefinites typically involves exercising an individual concept. The indefinite shows that there is no definite fact about which object to think of, and hence we are not to draw upon our existing repertoire of thought-about objects. It enjoins us to think of an object even though there is no object of which it enjoins us to think.

As stressed in particular by Heim, the individual concept introduced in interpreting an indefinite needs to be “new”: by using an indefinite, the speaker marks the fact that she is not requiring her hearer to have a suitable individual concept already in his repertoire. This is why re-using an indefinite suggests (even if it does not entail) that a further object is in question, as in (3). A hearer may in fact have a suitable individual concept in his repertoire. Reconsidering my utterance of (12) (“I am having dinner with a friend this evening”) it may be that you already know quite well that the friend in question is Jill.¹³ Even so, it would be wrong for you to use some existing individual concept of Jill in interpreting my remark, for doing so was not what my remark required.¹⁴

Combining the points, the claim is that interpreting an indefinite noun phrase in the kinds of case in question requires that the hearer introduce a new indi-

vidual concept for a satisfier of the phrase. Of many aspects of this claim requiring refinement, one is the delimitation of the kinds of case in question. One should consider excluding some sorts of negated examples (“John doesn’t own a donkey”) and cases in which the indefiniteness is used for generalization (“A sleepy rattler is a harmless rattler”); one could raise questions about cases that might be treated as identities (“That’s a black rhino”) and also about cases in which the noun phrase is playing a predicative role (“John is a lawyer”). It would be satisfying if a syntactic criterion delimited those cases which served as antecedents for anaphoric dependence.

5.3 Individual concepts and anaphora

Imagine what Jill should do to interpret the first part of Jack’s remark

5. I met a girl last night. She was absolutely gorgeous.

The first part is true iff there is at least one witnessing singular fact. If there is a witness, she is a girl whom Jack met last night. Understanding the remark involves introducing an individual concept fit to enable thought about the witness if there is one. This individual concept prepares Jill to organize further information in an appropriate way, coordinating it with the original representation as if there were a single thing concerning which the information is being collected. If there is no witness, it does not follow that dependent pronouns have no referent (assuming the modified Evans account); and if there is no referent it does not follow that the subsequent dependent pronouns are other than fully intelligible.

The concept introduced for the interpretation of “a girl” in the first part of (5) is available for the interpretation of “she” in the second part. A subsequent exercise of an individual concept counts as the exercise of the same individual concept only if appropriately causally related to earlier exercises. The information behaves as if stored in functionally the same “individual file”. A manifestation of this is that Jill typically exercises the same concept only if she appreciates (no doubt in some implicit way) that, according to Jack, a single witness verifies both parts of his remark.

It would not be enough for Jill’s thoughts to remain purely general in form as she interprets Jack’s remark. She wants to know more about *this woman*, and so needs an individual concept to organize the information she seeks. The individual concept can be enriched as subsequent information “about the same girl” becomes available. All these remarks are neutral about whether this will be an empty or a non-empty individual concept. If there is a girl whom Jack met, then at least after the dialog has developed over hours or days one cannot doubt that it has a referent and that Jill’s remarks refer to that referent.

This account gives an interpretation of the temptation to believe that these pronouns refer back to an object introduced by an indefinite noun phrase. The processing truth is that in understanding such pronouns we access and exercise

an existing individual concept introduced in the course of understanding the indefinite noun phrase.

An individual concept is robust with respect to the information it contains. Anything can be deleted without impairing the concept's identity, which is sustained by causal links (mainly memory links). That enables Jill to use the same individual concept, the one she introduced in interpreting the first part of (5), when she digests the information Jack supplies in his correction (11) ("... before last night"). In using her individual concept to represent what Jack has claimed, she will delete "Jack met x last night", for this has been retracted by Jack, and will insert "Jack met x before last night". (She may or may not believe that things stand as Jack now represents them.) Likewise in other correction cases. Speaker B in (10) ("It's not a mosquito, it's just a gnat") uses an individual concept introduced in the interpretation of "a mosquito". As a representation of what the speaker has said, the individual concept contains " x is a mosquito", but if B speaks sincerely he does not believe this, and his belief intuitively relates to the very same thing as that which prompted A's remark; hence, in using the individual concept to represent how things stand in the world, he will delete " x is a mosquito" and add " x is a gnat".¹⁵

In the headmistress case (13), an interpreter will introduce an individual concept in interpreting "A girl" and this may be available later if there really is a culprit and her identity becomes known: the interpreter may attain a belief expressible as "That's her". In one kind of case, "that" will be associated with an individual concept introduced perceptually; "her" will be associated with a reuse of the individual concept introduced in the interpretation of "A girl". This story is thrown into disarray if it turns out that there were many smokers. In these circumstances, it seems to me that there are no firm intuitions about the truth value of (13), and in particular no firm intuition that it is true, or that the headmistress has thereby committed herself to punishing all the smokers.

5.4 *Understanding and singular truth conditions*

Even if it is agreed that the account of understanding is correct as far as it goes, it may be doubted whether it is complete. If knowledge of reference conditions does not play a role, then there seems no room for knowledge of truth conditions. Yet intuitively knowing what is said by the use of anaphorically dependent pronouns involves knowing what would be so if the utterances in which they are used are true. The present account must somehow address this intuition.

Developing Kripke's distinction between *de re* and *de jure* rigid designation, François Récanati (1993) has suggested that a directly referential expression can be defined as one which is "semantically marked" as having a singular truth condition, where this is one of the form:

There is something, x , such that the utterance is true iff x is¹⁶

This means that an adequate semantics for such an expression should link it with this form of truth condition. Moreover, it would intuitively seem that many

uses of pronouns, for example deictic uses, are directly referential in this sense: uses of these pronouns introduce singular truth conditions. Finally, it would seem that the same goes for some uses of anaphorically dependent pronouns, at least at the later stages of a chain of uses. If Jack was largely telling the truth about his adventures, and replies affirmatively to Jill's enquiry the next morning whether he is thinking of *her* (6), it is natural to suppose that there is an x (the girl he met two nights earlier) such that he has affirmed that he is thinking of x .

If all this is correct, it ought to be reflected in a proper account of understanding, for on the present conception of a semantic description or mark, such a thing is constrained by its giving a correct picture of understanding. Yet no such connection with singular truth conditions has been forged by the account of understanding offered here; hence the account is inadequate.

Much of this is to be accepted. There is one major modification: since, on the view presented here, understanding does not differentiate between the case in which Jack is telling the truth and the case in which he is not, there cannot be an absolute requirement of knowledge of a singular truth condition, for in the empty case there will be no relevant object. What I believe is involved in understanding is implicit knowledge of relativized truth conditions for uses of utterances containing dependent pronouns: according to Jack, there is an x such that Jack's utterances are true iff x is This registers the fact that an understander must appreciate that one who uses such pronouns represents his utterances as having singular truth conditions. It leaves more to be said about understanding, for the occurrence of the relevant variable is embedded not only in a context of quantification, but also within some non-extensional "according to ..." operator. Individual concepts will be required in explicating knowledge thus represented.

The claim that an understander of ordinary sentences requires implicit grasp of a notion of *according to ...* is justified by the fact that in interpretation we must distinguish between how things are and how things are said to be. The latter contains a representation of how things are according to the speaker, and we need to appreciate that this is so, and that things may not be the way they are said to be. Such knowledge requires at least implicit grasp of an *according to* concept. The fact that this concept is so intimately involved in the most ordinary acts of interpretation helps explain why fictional discourse is so easy for us, as consumers and as producers. The crucial, though not the only, component of recognizing discourse as fictional is that we appreciate that the speaker is not even claiming that things are really as they are according to his words.

6 Proper Names

"The simplest way to introduce a proper name into discourse is just to start using it" (Chastain 1975: 217). In these words, Charles Chastain presents a truth about names which I regard as central. That it is a truth undermines extravagant views about the identificatory abilities that need to be possessed

by one who understands a name. Explaining how it comes to be true is helped by the picture of interpretation and cognition which has been introduced in the discussion of anaphoric pronouns.

Some empty and some non-empty proper names are introduced to new users through anaphorically used but unbound pronouns. The painful dialog we envisaged between Jack and Jill, which began with Jack's remark (5) ("I met a girl last night. She was absolutely gorgeous") could well have included at some later point "She's called Susan". Such names will inevitably inherit some of the semantic features of the introducing pronouns. In particular, they may be empty, and the information with which they are associated does not feature in their semantic content, and may or may not be true of their referent (if they have one). These may seem like harmless observations, but the first rules out standard forms of theories of direct reference or *de re* sense while the second rules out standard forms of description theory. By contrast, the observations are perfectly consistent with reference condition theories which do not supply the reference condition in a standard descriptive or qualitative form, a form which would supply something naturally called "information".

Although there is this broad similarity, there are also many differences, including syntactic ones. Proper names, unlike pronouns, can be attached to determiners: "An Alex Dubois is wanted on the telephone", but not "A he is wanted".¹⁷ They can be modified in a way that pronouns cannot: "The Mary I met recently called me today", but not "The she I met recently". Names can be incorporated into noun phrases in a way that pronouns cannot: thus "Stalin-hater" but not "him-hater".¹⁸ They accept adjectives in a way that pronouns do not: "Mighty Caesar conquered Gaul" but not "Mighty he conquered Gaul" (Oliver 1999). They have an apparently predicative use which pronouns do not: "She's no Mozart" but not "She's no he" (Oliver 1999). It is not that no adequate context has been provided for the reference of the pronouns but that the examples with pronouns are all grammatically unsatisfactory, so that no amount of context could help.

Anaphorically used pronouns are less stable and transportable than names. The explanation is not merely that a pronoun can be used of many different things, for so can a name. Rather, anaphorically used pronouns depend more closely on their linguistic setting: they depend upon some appreciation of the previous link in the anaphoric chain, either a previous use of the same pronoun in the same role or else on the interpretation of a source of dependence, like an indefinite. Reliable access to that individual concept normally depends upon reliable memory of some dialog in which it was used.¹⁹ If Jack had absolutely no memory of what he had said to Jill the night before, he would not be able to interpret her breakfast remark (6) ("Are you thinking about her?"). The same does not hold for names. Even if I must have used the name on previous occasions, as speaker or hearer, I need have no memory of any such occasion in order to use it or interpret it now. A name may depend upon links, but speakers need not appreciate this in the way they must for pronouns.

A speaker who uses a proper name without qualification represents himself as expecting this very usage of the name to be familiar to his audience. If I tell you that I am having dinner tonight with Jill, I expect this name, in this use, to be one with which you are familiar; I expect you to “know who (this) Jill is”. When a speaker continues the first part of (1) with “It is keeping me awake” there can be no precisely corresponding expectation, since this is the very first use of “it” in this usage: the hearer should expect me to interpret it without having done so before.

If a speaker knows that her hearer is not familiar with a name (in the relevant usage), etiquette demands a qualification. Perhaps I should say that I’m having dinner tonight with my psychologist friend Jill. The additional information may easily meet the demands of etiquette without supplying my hearer with “identificatory information”, if this means something true only of Jill: we may both know that I have many psychologist friends. If you as hearer are unfamiliar with the name (in the relevant usage) there is no call for panic: just introduce an individual concept and use it to organize the information introduced under that name. Very soon, you will count as a full member of the relevant name-using practice. In this case, you behave much as you do when interpreting an anaphoric pronoun. You can certainly do this successfully without having “identifying knowledge of the referent”, if that means being able to produce qualitative information of which the referent is the unique satisfier. For one thing, there may be no referent; and even if there is, there is no need for you to have information of this kind.

The transfer of semantic features from pronouns to names arises from the fact that a name could be introduced with little syntactic or semantic rearrangement in the place of an anaphoric pronoun. Instead of (1) we could say, with an oddness that has nothing to do with semantics:

23. A mosquito is buzzing about our room. Freddie—for that’s what he’s called/what I’ll call him—is keeping me awake.

No additional interpretive effort is required, beyond what is involved in interpreting (1), and, hey presto, a new name has been added to one’s repertoire.

Reflecting on the class of names introduced in this anaphoric way makes it very easy for a non-Meinongian to see how there can be intelligible empty names in fiction, myth, and in straightforward factual discourse (like the early discourse using “Vulcan”): their intelligibility is as unproblematic as the intelligibility of “she” or “Susan” if Jack has made up the whole story about meeting a girl. Many names are introduced with more or less explicit indicators that the introducing indefinite phrases are not satisfied, for example:

24. Once upon a time there was a queen called Matilda. She ruled strictly yet benevolently.

If the “upon a time” is omitted, we have the start of a narrative with no clear internal indication of whether it is to be treated as fact or fiction. We can understand the narrative while agnostic on this issue, and many ways of settling which way to take it depend upon the assumption that the narrative is intelligible to one who has not yet settled this. For these names, an accurate description of what is involved in the use and understanding of utterances involving them requires that there be no discrimination between empty and non-empty ones. Understanding proceeds in the same way in both cases; semantic theory must thus treat them alike.

Many names are introduced not through indefinite expressions but on the basis of perception and perceptually based deixis: “I baptise this child Matthew”. Because perception is generally reliable, this method of introducing a name normally secures it a referent, though there can be no guarantee that this will be so. This may encourage the theorist to regard such names as belonging to a special class, one for which, perhaps, the classical direct reference theory holds. There is a simple but conclusive reason not to do this: a name which was originally introduced by a perception-based method may also be introduced to a novice by the anaphoric method, a method which by its nature must allow for the empty case. The name “Susan” might be introduced to Jill for the first time in the dialog which begins with (5). Suppose that Jack was largely speaking the truth: Susan’s name was no doubt originally bestowed on some perceptual basis, but Jill comes to be a complete master of it through an anaphoric route based on an indefinite phrase.

Any name can be learned by the anaphoric method and this method is one which as such cannot preclude emptiness. Therefore all names need to be treated in a way which does not rule out that they are empty. At the same time, names, like dependent pronouns, cannot correctly be thought of as having a content consisting of the information they file or any privileged subset of it. These conditions are not met by the most popular current theories of names, but they can, I believe, be met by a suitable reference condition theory, one which is set within a free logical framework and assigns Ockhamist truth conditions.²⁰

Notes

1. One example, from an author whose position I find in many ways congenial, is Chastain 1975: 209: “[indefinite descriptions] qualify as singular terms in some contexts”.
2. More strictly, what is required is that these expressions typically refer, in the weak sense of making an object one about which speaker and hearer think in using the expression on that occasion. The second conception of “referring expression”, about to be introduced in the text above, requires more than this, but I think the data support the stronger view: not merely do these expressions sometimes refer in these contexts, they are referring expressions in the sense of ones a correct semantics will associate with a reference condition.

3. Strawson did not need the distinction between sentence and statement to make the point that on his view, reference-failure brings about not a truth-value gap but a situation in which there is nothing truth-evaluable.
4. Considerations of this kind, if they count as reasonable explanations, would also explain why negation within the indefinite typically ensures that anaphora cannot be sustained: "Pedro did not buy a donkey. Harry vaccinated it". It is hard to give a precise account of the role of negation, for the following is acceptable: "Pedro did not buy any donkeys, so Harry did not have to vaccinate them".
5. Such cases are more problematic for the alternative version of Evans's account, developed by Neale (1990), according to which B's remark is interpreted as equivalent to the manifest contradiction "The mosquito that is buzzing around our room is not a mosquito". On the present version, Evans's account simply delivers that B's "It" has no referent and so his remark is not true.
6. A third kind of case involves some kind of fiction. An example might be

A: A burglar must have made all this mess.

B: He's just a figment of your imagination. You just never clear up.

This raises questions about how any negative existential truth is possible, and about the nature of fiction and pretence, which go beyond what can be addressed in this paper. It may turn out that these cases raise no special problem for Evans's account.

7. It is not obvious that the "universal force" needs to be linked directly to the pronoun. What (19) denies is that there is a farmer and a donkey such that he beats it. The universality involved in the denial of an existential may pose no more problems for a theory of singular pronouns than those posed by cases like (17).
8. Some idea of this kind has been used by many others. See for example Perry 1980, Larson and Segal 1995, Everett 2000 ("0-notions", p. 44–5). The idea is analogous to Heim's "file cards" (1982/8), and discourse referents in Karttunen 1976 and in Kamp 1981.
9. Alternatively, one might regard all associated information as belief, and treat the information that is associated by interpretation as prefaced, for the sceptical or agnostic interpreter, by "according to the speaker, ...".
10. The phenomena to be described are complicated and the present paper does not begin to do justice to them. For example, we can distinguish the following different kinds of "recognition": (i) someone keeps an object in view over time, never doubting but that it is the same object; (ii) someone treats a familiar object as familiar, that is, as the same as one previously identified; (iii) someone comes to judge ("in a flash of recognition") a currently perceived object to be the same as one previously encountered. In all these cases an individual concept persists, but a perspicuous description needs to draw on additional materials.
11. The example and the point are from Grice (1969: 144–5). One does not need to suppose that this third state of affairs corresponds to a distinctive "reading" or "disambiguation" of the sentence.
12. One of Grice's interesting suggestions, formulated in the terminology of the present paper, is that a referential use of an expression is to be defined in terms of the exercise of an individual concept. If this concept is empty, a referential use will correspond to no object. This opens up the possibility of an empty name being introduced by a referentially used definite description (Grice 1969: 143).

13. If I know you know this, my remark is most naturally interpreted as arch.
14. If the dialog continues for long, through a number of dependent uses of “she”, it will be natural for you to use in interpretation a concept of Jill you already possess, but you will have gone beyond what has strictly been offered by the speaker.
15. The information “according to A, x , is a mosquito” does not need deleting. This is what distinguishes this case from that of Jack’s correction of when he met the girl.
16. In fact this part of Récanati’s account applies to expression types; it adapts well to the present context in which linked tokens are at issue.
17. The range of determiners that can replace “An” in such examples may be very modest, and seems to exclude “the”.
18. Several of these examples are from Tyler Burge (e.g. Burge 1973).
19. This is not always so. An angry wife might open her remarks to her husband who is late home yet again with “Just tell me her name”.
20. For more details on how such a theory might be developed, see Sainsbury (2001). For helpful discussions and comments on this paper, I would like to thank Jason Stanley, Yannis Stephanou and Nicholas Asher and the members of his Dynamic Semantics Reading Group. I would also like to express my gratitude to the Leverhulme Trust for a Senior Research Fellowship, during the tenure of which this paper was written.

References

- Burge, T. (1973). “Reference and proper names.” *The Journal of Philosophy* **70**: 425–39.
- Chastain, C. (1975). “Reference and context”. In K. Gunderson (ed.), *Language, Mind, and Knowledge*, 194–269. Minneapolis: University of Minnesota Press.
- Davidson, D. (1969). “On saying that.” *Synthese* **19**: 130–46. Reprinted in his *Inquiries into Truth and Interpretation*, Oxford: Clarendon Press, 1984: 93–108.
- Evans, G. (1977). “Pronouns, quantifiers and relative clauses (I).” *Canadian Journal of Philosophy* **7**(3): 467–536. Reprinted in his *Collected Papers*, Oxford: Clarendon Press, 1985: 76–152.
- Evans, G. (1982). *The Varieties of Reference*. Oxford, Clarendon Press.
- Everett, A. (2000). “Referentialism and empty names”. In A. Everett and T. Hofweber (eds), *Empty Names, Fiction, and the Puzzles of Non-Existence*, 37–60. Stanford, Calif.: CSLI Publications.
- Grice, H. P. (1969). “Vacuous names”. In D. Davidson and J. Hintikka (eds), *Words and Objections: Essays on the Work of W. V. Quine*, 118–145. Dordrecht: Reidel.
- Heim, I. (1982/88). *The Semantics of Definite and Indefinite Noun Phrases*. Ann Arbor, University Microfilms International.
- Kamp, H. (1981). “A theory of truth and semantic representation”. In J. A. G. Groenendijk, T. M. V. Janssen and M. B. J. Stockhof (eds), *Formal Methods in the Study of Language*, 277–322. Amsterdam: Mathematisch Centrum.
- Kamp, H. and U. Reyle (1993). *From Discourse to Logic*. Dordrecht, Kluwer.
- Karttunen, L. (1976). “Discourse referents”. In J. McCawley (ed.), *Syntax and Semantics, vol. 7: Notes from the Linguistic Underground*, New York: Academic Press.
- King, J. (1992). “Unbound anaphora.” Unpublished manuscript (UC Davis).
- Larson, R. and G. Segal (1995). *Knowledge of Meaning: an Introduction to Semantic Theory*. Cambridge, MA, MIT Press.
- Lewis, D. (1979). “Scorekeeping in a language game”. In R. Bäuerle, U. Egli and A. v. Stechow (eds), *Semantics From Different Points of View*, 172–187. Berlin: Springer-Verlag.
- Neale, S. (1990). *Descriptions*. Cambridge, Mass., London, MIT Press.

- Oliver, A. (1999). "A few more remarks on logical form." *Proceedings of the Aristotelian Society* **99**: 247–272.
- Perry, J. (1980). "A problem about continued belief." *Pacific Philosophical Quarterly* **5**: 533–42. Reprinted in his *The Problem of The Essential Indexical and Other Essays*, New York: Oxford University Press, 1993: 69–90.
- Récanati, F. (1993). *Direct Reference*. Oxford, Blackwell Publishers.
- Sainsbury, R. M. (2001). "Sense without reference". In A. Newen, U. Nortmann and R. Stuhlmann-Laeisz (eds), *Building on Frege*, 211–30. Stanford, CA: CSLI Publications.