Donkey Demonstratives*

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Abstract: Donkey pronouns (e.g. *it* in *Every farmer who owns a donkey beats it*) are argued to have an interpretation more similar to a demonstrative phrase (e.g. *beats that donkey*) than to any of the other alternatives generally considered (e.g. *…the donkey(s) he owns, … a donkey he owns*). Like the demonstrative phrase, the pronoun is not equivalent to Evans’ E-type paraphrase, nor to either the weak or the strong reading sometimes claimed for donkey sentences. A consequence is to narrow the range of formal analyses.

1. Introduction.

This paper considers a paraphrase of ‘donkey sentences’ which seems to have been undeservedly neglected, so neglected that it is not included in the list of four possible interpretations given by Kanazawa (1994, ex. 5.-8.):

(1) a. E-type reading:
   Q farmer who owns a donkey beats the donkey he owns.
 b. Pair quantification reading:
   Q{<x, y>|farmer(x)∧donkey(y)∧own(x, y)}{<x, y>|beat(x, y)}.
 c. Weak reading:
   Q farmer who owns a donkey beats a donkey he owns.
 d. Strong reading:
   Q farmer who owns a donkey beats every donkey he owns.

nor even the list of seven given by Schubert and Pelletier (1989, ex. 7.):

(2) a. [Deictic Reading] If Pedro owns a donkey, Pedro will ride [some otherwise specified object, not any donkey mentioned in the antecedent] to town tomorrow.
 b. [Generic Reading] Pedro has the habitual disposition to generally ride donkeys Pedro owns to town tomorrow.
 c. [Universal Reading] For any donkey \(x\), if Pedro owns \(x\), Pedro will ride \(x\) to town tomorrow.
 d. [Specific Existential Reading] If Pedro owns a certain donkey [e.g. the speaker might ‘mean’ Annabelle], Pedro will ride it to town tomorrow.
 e. [Non-Specific Existential Reading] There is some donkey \(x\) such that if Pedro owns \(x\), Pedro will ride \(x\) to town tomorrow.
 f. [Definite Lazy Reading] If Pedro owns a donkey, Pedro will ride the donkey Pedro owns to town tomorrow.
 g. [Indefinite Lazy Reading] If Pedro owns a donkey, Pedro will ride some donkey Pedro owns to town tomorrow.
The neglected paraphrase would replace the pronouns in question (hereinafter occasionally ‘donkey pronouns’) with demonstrative phrases. For Schubert and Pelletier’s example in (2) this would be (2h):

(2) h. [Demonstrative Reading] If Pedro owns a donkey, Pedro will ride that donkey to town tomorrow

This neglected option has some intuitive support; pre-theoretically (2h) does seem to be a closer paraphrase of (2) than any of the other options suggested in (1) and (2).¹ In the remainder of this paper I want to outline some of the advantages of seeing donkey pronouns as akin to demonstratives.

We will start by comparing this view to E-type approaches which, following Evans 1977, 1980, view the pronoun in (2) as interpreted by, or as a replacement for, a definite description, as in (1a) or (2f). Then we will consider other interpretations, including a comparison of demonstratives to incomplete definite descriptions, and the issue of weak vs. strong interpretations ((1c) vs. (1d)). It should be made clear here at the start that the demonstrative paraphrase is not being put forward as a proposed level of representation for donkey sentences, but rather as a guide to their interpretation. My main point will be that demonstrative paraphrases are a better match for donkey sentences than any other. However I will not be providing a formal analysis for the demonstrative paraphrases, and hence not for the donkey sentences themselves.

2. Uniqueness.

One well-known problem with E-type approaches is that they contain a uniqueness implication that is not always welcome. The sentence in (2f) seems to entail that if Pedro owns a donkey he owns at most one. That does not seem faithful to (2), and the implication runs into more serious problems in a number of other cases. One is in (3), which was attributed to Geach by Evans (1980, 343, n. 5):

(3) Socrates kicked a dog and it bit him and then Socrates kicked another dog and it did not bite him.

Clearly the first occurrence of it in (3) cannot mean the only dog Socrates kicked. Evans attempts to explain away Geach’s example on the basis of the different times of kicking, but that tack will not work for stative examples like (4):

(4) Socrates has a dog and he feeds it tasty morsels; Socrates has another dog but he only feeds it scraps.

Notice that (4) sounds strained if we replace the pronouns with definite descriptions as in (4’):

(4’) Socrates has a dog and he feeds the dog he has tasty morsels; Socrates has another dog but he only feeds the other dog he has scraps.

The strain may not be obvious on first reading, since when one reaches the phrase the dog, only one dog has been mentioned, but by the end of the sentence there is a sense of anomaly.

Another type of example commonly cited as problematic for the E-type approach is Heim’s ‘sageplant’ example, given below in (5).

(5) Everybody who bought a sageplant here bought 8 others along with it. [= Heim 1982, ex. 12, p. 89.]
If it in (5) were equivalent to ‘the sageplant they bought’, (5) should sound strange. Compare (5'):

(5') Everybody who bought a sageplant here bought 8 others along with the sageplant they bought.

Another well-known type of example problematic for the uniqueness entailment is (6), from Rooth 1987.

(6) No father with a teenage son lends him the car on weekdays. [= Rooth 1987, ex. 48.]

(6) does not imply that the fathers in question have only one son.

In each case replacing the relevant donkey pronoun with a demonstrative gives a satisfactory paraphrase:

(3) a. Socrates kicked a dog and that dog bit him and then.…
(4) a. Socrates has a dog and he feeds that dog tasty morsels.…
(5) a. Everybody who bought a sageplant here bought 8 others along with that sageplant.
(6) a. No father with a teenage son lends that son the car on weekdays.

Although (3) - (6) indicate that (2) does not entail that if Pedro owns a donkey he owns only one, nevertheless (2) does convey that assumption. The sentences in (7) also convey this idea.

(7) a. Pedro owns a donkey.
    b. Every farmer owns a donkey.
    c. Kim bought a sageplant.

This suggests that the uniqueness implication is not due to the pronoun in (2), but is instead an upper-bounding scalar implicature. Since the utterer of any of the sentences in (7) used a singular NP, and is assumed ceteris paribus to be in a knowledgeable position regarding the facts and to be giving all the relevant information, said utterer conversationally implicates that Pedro/every farmer owns only one donkey, or that Kim bought only one sageplant.

Other examples, such as conditional donkey sentences, lack this implicature. Compare (8) and (9).

(8) If someone is in Athens, he is not in Rhodes. [≈ Heim 1982, ex. 1, p. 44; the Stoic Chrysippos is credited.]
(9) If a girl is brought up in Australia, she learns to swim early. [≈ S. Barker 1997, ex. 3.]

These are generic sentences and hence the singular indefinite is understood as representative of a category rather than that category’s only member. To read it as implying uniqueness would rob the sentence of any generality. Compare the sentences in (10), where the topic singular indefinites are understood generically while the underlined indefinites, while still generic, suggest a reading of ‘at most one per farmer/gardener’.

(10) a. In those days, a farmer owned a donkey and a horse.
    b. A gardener will often plant a sageplant for cooking purposes.

Of course it is possible to have more than one indefinite in a generic understood generically, depending on particulars of the example, its context and its stress pattern. See e.g. C. Barker 1996 and the works cited there for discussion.
In any case, E-type definite description paraphrases of (8) and (9), given below in (8a) and (9a), do imply uniqueness, which results in anomaly. That is not true of the demonstrative paraphrases.

(8)  
a. If someone is in Athens, the person in Athens is not in Rhodes.
   
b. If someone is in Athens, that person is not in Rhodes.

(9)  
a. If a girl is brought up in Australia, the girl who is brought up in Australia learns to swim early.
   
b. If a girl is brought up in Australia, that girl learns to swim early.

In order to solve the problem presented by ‘sageplant’ examples while maintaining the definite description analysis, Neale 1990 modified Evans’ E-type approach by suggesting a type of definite description unmarked for number (cf. Neale 1990, 228ff).

(11a) gives Evans E-type analysis of (11), and (11b) gives a paraphrase of Neale’s ‘numberless’ or ‘number neutral’ version:

(11)  
a. Every farmer who owned a donkey vaccinated it.
   
b. Every farmer who owned a donkey vaccinated the donkey they owned. [Evans]
   
   b. Every farmer who owned a donkey vaccinated whatever donkey(s) they owned. [Neale]

(The approach in Lappin and Francez 1994, employing maximal i-sums, gives a similar result in these cases.) While the paraphrase in (11b) gets rid of the assumption that each farmer who owned a donkey owned at most one, it maintains another entailment of (11a), namely that all of the donkeys owned by the farmers got vaccinated. While for independent reasons that entailment may seem to hold for (11) (see the discussion below), that is not the case for other examples, e.g.

(12)  I have to show this document to three colleagues. They are in a meeting…. I have to show it to at least two other colleagues, but they have already left….[= Kadmon 1990, ex. 11.]

The coherence of this discourse shows that the underlined they cannot be understood as ‘whatever colleagues I have to show this document to’. Once again a demonstrative (those colleagues) is a better paraphrase. Similar results hold for examples like (3) and (4) above. This issue reappears in the guise of the ‘strong’ reading of donkey sentences, discussed below in § 4. (See Kanazawa 2001 for some other arguments against the number neutral analysis of donkey pronouns.)

3. Demonstratives and incomplete definite descriptions

At this point one may be wondering what the difference would be between the demonstrative approach and one suggested by Evans’ E-type analysis but using an incomplete definite description – one which does not contain sufficient descriptive material to uniquely identify a referent. This is a good question. Indeed (2i)

(2)  
i. If Pedro owns a donkey he will ride the donkey into town..

seems as good a paraphrase of (2) as (2h), with the demonstrative that donkey.

Incomplete definite descriptions are often (though not always) used referentially, in the sense of Donnellan (1966), and it has been suggested that in the referential use, definite descriptions are semantically equivalent to demonstrative phrases (compare
Peacocke 1975; Larson and Segal 1995, 339ff). However there are differences between demonstratives and referentially used incomplete definite descriptions. One difference has been noted by King (2001, 27). In a deictic use, a given demonstrative phrase may be used repeatedly with different pointings. Incomplete definite descriptions may not be so used. Compare the sentences in (13):

(13) a. I would like that hat, and that hat, and that hat.
   b. I would like the hat, and the hat, and the hat.

As King points out, this behavior is a reflection of the essential role of speaker intentions in determining the referent of a demonstrative phrase – a feature apparently not shared by definite descriptions. On the other hand pronouns are similar to demonstratives in being able to be used in this way. Imagine someone choosing a softball team with the utterance in (14), plus pointings.

(14) I want her and her and her.
(For some reason this does not seem possible with it; perhaps that is because it is supplanted in this usage by pronominal that.)

One value in thinking in terms of demonstratives is that it makes patent this role of speaker intentions in determining referents. Use of an explicit demonstrative phrase may include a nominal head, which may (Burge 1974, King 2001) or may not (Larson and Segal 1995, 213) narrow down the choice of a referent as far as determining the truth or falsity of what the speaker said. But in any case there is no implication that the descriptive content applies uniquely. Instead, the speaker’s intention plays a key role in fixing the reference of the phrase and any descriptive material is an aid to the addressee in figuring out which entity that is. The same seems to hold in general of pronouns, which often do not include enough descriptive information to determine a referent.

Another potentially relevant difference between demonstrative phrases and definite descriptions is that demonstrative phrases sound somewhat more natural in positions where they are directly bound. Elbourne (2001c) notes that many speakers do not like (15a), below, preferring (15b) (62).

(15) a. Mary talked to no senator before the senator was lobbied. [= Elbourne 2001c, ex. 32]
   b. Mary talked to no senator before that senator was lobbied. [= Elbourne 2001c, ex. 28]
   c. Mary talked to no senator before he or she was lobbied

Of course pronouns are also natural in those positions, as (15c) shows.

Heim 1990 sketched an E-type analysis of donkey pronouns with quantification over minimal situations. This allows donkey pronouns to be interpreted as incomplete descriptions, which are in effect complete relative to a minimal situation. Elbourne (2001a, 2001b, 2001c) has developed his own version of this approach as one on which pronouns are articles, where a rule of NP deletion deletes the phrasal constituent with which the pronoun/article combines. (This solves the problem Heim’s analysis had with accounting for the need for an explicit linguistic antecedent for donkey pronouns; see the papers cited in this paragraph for details.)
One difficulty for the Heim/Elbourne type of analysis is what Heim called ‘the problem of indistinguishable participants’, which she discussed in connection with examples like (16).

(16) When a bishop meets another bishop, he always blesses him.

The problem is that any situation, even a minimal one, which is characterized by the first clause will have two individuals with identical properties (being a bishop who is meeting another bishop). The semantics for the incomplete descriptions requires a uniquely described entity but that is not the case in this type of example.

Elbourne suggests that definite descriptions are possible in place of the pronouns in (16), as shown below.

(17) a. When a bishop meets another bishop, the bishop always blesses the bishop. [=Elbourne 2001a, ex. 66a]
   b. When a bishop meets another bishop, the bishop always blesses the other bishop. [=Elbourne 2001a, ex. 66b]

He takes this to indicate that the problem is with the analysis of the definite article itself, rather than an analysis which takes donkey pronouns as equivalent to definite descriptions. Elbourne speculates that the uniqueness condition is sometimes relaxed (Elbourne 2001a, 268), and in defense of this speculation he notes the difference between (18a) and (18b):

(18) a. Amnesty International, the human rights group, claims in a new report that… [= Elbourne 2001a, ex. 67.]
   b. Amnesty International, the only entity which is a human rights group, claims in a new report that…[= Elbourne 2001a, ex. 69]

(18b) is infelicitous, given the common knowledge that Amnesty International is not the only entity which is a human rights group, but (18a) is not.

There are several things to be said in response to this. First of all the example in (18a) may not be directly relevant to this issue, since the definite description there is used in apposition to an already referential phrase. Intuitively the speaker is clarifying which entity they are speaking of, rather than using the definite description alone to refer. This is unlike the definite descriptions in (17) which are being used by themselves. On the other hand the speaker of (18b) has gone out of their way to articulate the patently false claim that there is no other human rights group, hence the infelicity.

It should also be pointed out that the examples in (17) are not completely natural, especially (17a). Certainly they are not as natural as (16), and I believe this to be because of a uniqueness claim implicit in the definite article. On the other hand it must be admitted that replacing the pronouns with demonstrative phrases does not result in complete naturalness either, as shown in (19)

(19) a. When a bishop meets another bishop, that bishop always blesses that bishop.
   b. When a bishop meets another bishop, that bishop always blesses that other bishop.

However I would like to suggest that the infelicity of the examples in (19) is the result of a different cause from the infelicity of those in (17). One function served by demonstrative phrases is to direct the addressee’s attention to an entity which then becomes the center of attention of the discourse. My suggestion is that the problem with
(19) is a strain caused by an unmotivated attempt to create two different centers of attention. Notice that (19a') below is perfectly natural.
(19) a.' When a bishop meets another bishop, that bishop always blesses the other bishop.
This pragmatic factor is independent of my claim that the referential properties of pronouns are more similar to demonstratives than they are to definite descriptions.

4. Weak vs. strong readings
A core issue which arises in connection with donkey sentences, especially universally quantified ones, is that of weak vs. strong, or existential vs. universal, interpretations. Kanazawa’s schematic paraphrases for weak and strong readings, given above in (1), are repeated here.

(1)  c. Weak reading:
    Q farmer who owns a donkey beats a donkey he owns.
    d. Strong reading:
    Q farmer who owns a donkey beats every donkey he owns.
This issue only arises in cases where, contrary to the upper-bounding conversational implicature cited above, there is more than one entity satisfying the conditions of the antecedent clause. The issue then is, how many of these entities must also have the main predicate apply to them. For (11), repeated here,

(11) Every farmer who owned a donkey vaccinated it.
for example, the issue is how many donkeys must have been vaccinated by a multiple-donkey-owning farmer. Neale’s analysis gives the strong reading; Schubert and Pelletier’s analysis of conditional donkey sentences, such as (2), repeated below, gives the weak reading.

(2) If Pedro owns a donkey, he will ride it to town tomorrow.
Others (e.g. Rooth 1987; Heim 1990; Chierchia 1992, 1995; Kanazawa 1994; Lappin and Francez 1994), argue that either reading is possible depending on facts about the particular example, its prosody, and/or the context of utterance.

As many have noted, following Rooth 1987, judgments are not secure on these issues. Rooth 1987 compares the sentences in (20):

(20) a. Every man who owns a donkey beats it.
    b. Every donkey which is owned by a man is beaten by him.
He remarks:

…suppose John owns ten donkeys and beats exactly nine of them, and that every other man beats every donkey he owns. Then is [20a] true?
Informants have given me varied and guarded judgements about this case.
What everyone agrees however is that [20b] is false under these circumstances. (Rooth 1987, 253f)
This difference in clarity of intuitions is important, since if (20a) were assigned the strong, universal reading semantically, (20b) should be a good paraphrase, but that does not seem to be the case.

On the other hand the weak paraphrase in (1c) has been claimed to be the only, or the dominant, reading for examples such as Schubert and Pelletier’s example (2) as well
as the relative clause examples in (21). ((Chierchia attributes (21a) to Robin Cooper; (21b) is based on an example in Schubert and Pelletier 1989.)

(21) a. Every person who has a credit card will pay his bill with it. [= Chierchia 1992, ex. 6a].

b. Every person who has a dime will put it in the meter. [= Chierchia 1992, ex. 6b]

c. Every man who has a daughter thinks she is the most beautiful girl in the world. [= Cooper 1979, ex. 60]

Although it is less obvious, I believe the weak paraphrase is also not completely accurate, even for these examples. Consider (2) for example. Even if Pedro has more than one donkey it would be unlikely for him to ride more than one of them into town. Schubert and Pelletier argue that (2) would nevertheless be true under such circumstances, contrary to what the strong reading says. However they are also aware of a bit of tension in this circumstance. Note that if we imagine a context in which people who own any donkeys at all own more than one, then (2) is definitely strained. I believe the same holds for the examples in (21b) and (21c). Cooper’s example (21c) is jocular, not only in attributing many beliefs at most one of which could be accurate, but also (contra Cooper as well as the weak paraphrase) in attributing contradictory beliefs to fathers with more than one daughter.

The strain in these examples is obscured because our real world assumptions allow for many cases where the ‘at most one’ implicature is satisfied, and where it is not, the plurality is not extreme (i.e. people may have only 2 or 3 credit cards, dimes in their pocket, or daughters). However consider (22):

(22) Everybody who has ever gone to a movie went to see it last Friday.

If the weak reading paraphrase were accurate then (22) should be as natural as (22a).

(22) a. Everybody who has ever gone to a movie went to see a movie they had gone to last Friday.

But it isn’t. Instead it is odd, because we naturally assume that anybody who has ever gone to one movie has gone to many. The demonstrative paraphrase preserves the strangeness of (22):

(22) b. Everybody who has ever gone to a movie went to see that movie last Friday.

Of the researchers in this area Kanazawa has been the one to recognize most clearly the weakness of judgements in these situations, even pointing out that one of his informants refuses to accept (21b) (Kanazawa 1994, 116, n. 12). Kanazawa also notes Rooth’s observation that, when the ‘at most one’ implicature is not satisfied, people’s intuitions about donkey sentences seem to be clear only in cases where it is assumed that the pronominal entities are treated consistently – e.g. each multiple-donkey-owning farmer either vaccinates all or none of their donkeys (Rooth 1987, 256). Noting that under these circumstances the difference in truth conditions between weak and strong readings collapses, Kanazawa makes the following observation:

Empirical observation: People’s intuitions about donkey sentences with respect to consistent donkey-beating situations accord with the truth conditions given by the weak reading and the strong reading. (Kanazawa 1994, 113)
On the present approach this observation is explained as a consequence of the fact that the consistent situations are ones in which speakers are not required to exercise intuitions that go beyond the kind of case where the conversational implicature of ‘at most one’ is satisfied.

Kanazawa has also been the researcher most concerned with the need to account for the weakness and variability of judgments matched against inconsistent situations. In the more speculative portion of Kanazawa 1994, he suggests that donkey sentences may actually be indeterminate in interpretation as far as the grammar goes, and that when people are forced to make decisions they use general heuristics whose aim is to extend basic reasoning patterns which work for the quantifiers in question in ordinary sentences without donkey anaphora. The data we are considering support that conclusion.

5. Concluding remarks.

The purpose of this paper has been to point out the existence of a paraphrase of donkey sentences which has almost never been considered in the literature on this topic, and to argue for its superiority relative to other paraphrases. The value in doing so is to help get clearer on the interpretation of these sentences. If the arguments given here are correct then a number of analyses are ruled out: analyses based on Evans’ E-type approach using a complete definite description, including ‘numberless’ theories (on the latter, this paper supports the conclusions of Kanazawa 2001), as well as analyses which assign donkey sentences an interpretation which is equivalent to either the weak or the strong reading in general – i.e. not just when the conversational implicature of uniqueness is met and the distinction between weak and strong is neutralized. If the arguments of this paper are correct, it should be useful to look at the analysis of demonstrative phrases for insights into the analysis of donkey pronouns. At the time this paper was originally written no general analysis of demonstrative phrases (including anaphoric as well as deictic uses) was known to me. However more recently several analyses have appeared (Lepore and Ludwig 2000, King 2001). Whether one of these can be adapted for donkey pronouns is a question for future research.

Endnotes

*An earlier version of this paper was read at the annual LSA meeting, January 2001, and I am grateful to that audience as well as to Larry Hauser, Alan Munn, Ellen Prince, Jerry Sadock and two anonymous referees for comments which have resulted in substantial improvements.

1 Curiously, Robin Cooper seems to have briefly considered this alternative. He remarks concerning one example of a donkey pronoun, that it ‘is not exactly demonstrative, since it is related to an NP that occurs earlier in the discourse’ (1979, 72). But, as the sentence in (2h) shows, demonstratives, like personal pronouns, can be anaphoric as well as
deictic. Cooper does not seem to be the only one to assume that demonstratives cannot be anaphoric; c.f. e.g. Larson and Segal 1995, 201; von Heusinger 1997, 61. Of course it may be that all of these people consider demonstratives to be, by definition, expressions keyed to the nonlinguistic context, so that *that donkey* in (2h) would not count as a demonstrative. In any case there are exceptions to the neglect of the perspective supported in this paper, e.g. Wilson 1991 and Slater 1997, 2000.

2 If we replace *him* in (6) with *his son*, the result is quite normal sounding:
(i) No father with a teenage son lends his son the car on weekdays.

However it should be noted that possessive determiners, though they are often considered to be just a variant of the definite article, in fact do not convey the meaning of uniqueness as strongly as the definite article. Haspelmath (1999) has argued that uniqueness is not part of the meaning of possessive determiners but is only conveyed pragmatically, via their complementarity with the article.

3 Schubert and Pelletier (1989, 200) suggest that this implicature of at most one donkey comes from cultural assumptions about typical Latin American donkey-owners, but its presence in (7c) suggests that is not the case. This kind of upper-bounding implicature is common in a variety of contexts.

4 An anonymous referee has pointed out that use of the term ‘referent’ (also ‘refer’, ‘referring’ etc.) may not be appropriate for generic or quantificational expressions, but I continue in this usage for want of a succinct alternative.

5 In (13) above, on the other hand, the linguistic context serves to justify the successive foci to which the demonstrative phrases (plus the pointings) direct the addressee’s attention.

REFERENCES


