Donkey pronouns: Void descriptions?¹

1 The nutshell

(1) Every student wonders which plate he should eat from.

(2) $\llbracket\llbracket\text{Every farmer [who [owns [a donkey]]]}\rrbracket\rrbracket\llbracket\text{beats [it]}\rrbracket\rrbracket$.

(1) has a reading in which every student and he co-vary. This is expected since every student c-commands he and he can function as an individual variable. Therefore every student can bind he.

In (2) a donkey does not c-command it. Therefore a donkey cannot bind it. Yet there is a reading of (2) in which a donkey and it co-vary.

<table>
<thead>
<tr>
<th>E-type analyses:</th>
<th>Cooper:</th>
<th>…beats the donkey he$_{k}$ owns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elbourne:</td>
<td>…beats the donkey in s</td>
</tr>
<tr>
<td></td>
<td>Present:</td>
<td>…beats the entity (owned) in s</td>
</tr>
</tbody>
</table>

Claim: donkey pronouns are essentially void of descriptive content.

Prime data:

(3) Every farmer who owns [a donkey and a goat] beats it$_{entities}$.

Judgment: No donkey reading is available.

(4) Every farmer who owns [two donkeys and a goat] beats them$_{entities}$.

Judgment: Donkey reading is available.

¹I'm very grateful for enlightening discussions, comments, judgments etc. to Paul Elbourne, Eytan Zweig, Anna Szabolcsi, Laura Rimell, Lisa Levinson, Peter Liem, Vlad Rapoport and a few others!
2 The background

2.1 Traditional E-Type analysis: skolem descriptions

(Evans (1977), Cooper (1979), Heim (1990))

*it* is a skolem description, i.e. a definite DP that contains an individual variable.

(5) \([\text{the } \left[R_{<7,<e,et>}, \text{pro}_{<1,e}>\right]]\)  
(cf. Heim and Kratzer (1998))

(6)

- co-variation: *him* is i(-ndividual)-bound

A few problems of the traditional analysis:

- The uniqueness presupposition
- sloppy readings and i-binding
- The formal link
- coordinated antecedents
2.2 Towards a situational E-Type analysis and pure descriptions

2.2.1 The uniqueness presupposition problem
Definite descriptions (e.g. "the donkey owned by farmer Joe") come with a uniqueness presupposition.

(7) Every farmer who owns [a donkey and a goat] beats it.

The traditional analysis predicts that (7) presupposes that the farmers own exactly one donkey each: . . . the unique donkey owned by him.

This is incorrect.

Therefore Heim (1982) takes this to constitute a lethal problem for the traditional E-type analysis.

2.2.2 Situation solution
Heim (1990) (based on a proposal by Berman (1987)) points out that the above problem rests on the premise that conditionals involve quantification over worlds.

If quantification over something smaller, say situations is involved (cf. Kratzer (1989)), the uniqueness presupposition is restricted to each such situation.

Thereby the uniqueness presupposition associated with E-type pronouns is made harmless.

\[
\text{it picks out a donkey that is unique relative to a situation.}
\]
2.2.3 No room for i-binding donkeys: sloppy readings

(8) In this town . . .

a. every farmer who owns a donkey beats it, and the priest does, too. (strict / ?*sloppy)
   readings: (ok) the priest beats the farmers’ donkeys
              * the priest beats his own donkey

b. every farmer who owns a donkey beats the donkey, and the priest does, too. (strict / ?*sloppy)
   readings: (ok) the priest beats the farmers’ donkeys
              * the priest beats his own donkey

c. every farmer who owns a donkey beats the donkey he owns, and the priest does, too. (strict / sloppy)
   readings: (ok) the priest beats the farmers’ donkeys
              (ok) the priest beats his own donkey


The donkey pronoun it patterns with the pure description the donkey and against the skolem description the donkey he owns.

2.2.4 No need for i-binding of donkeys

Elbourne gets co-variation via uniqueness presupposition. => therefore, there’s no need for i-binding into donkey pronouns.

(9) a. Sentence:
   Every farmer who owns a donkey beats it.

b. In formal truth conditions:
   for every x, s_b such that x is a farmer who owns a donkey in s_b
   there is an extended situation of s_b, s_e, in which x beats the unique donkey in s_e.
2.2.5 The problem of the formal link

(Heim (1982), Heim (1990), Kadmon (1987), Elbourne (2001))

(10) a. Every man who has a wife is sitting next to her.
   Judgment: (ok) . . . next to his wife.

b. Every married man is sitting next to her.
   Judgment: * . . . next to his wife.

c. * Every guitarist should bring it.
   Judgment: * . . . bring his guitar.

It has been argued that if at LF the donkey pronoun picks up a salient function (c.f. Cooper (1979), Heim and Kratzer (1998)) then a donkey reading should be available also in (b,c), since

married man makes salient the concept wife and
guitarist makes salient the concept guitar.

2.2.6 The NP-deletion "solution"

Observing that E-type pronouns are subject to essentially the same licensing conditions as NP-deletion, Elbourne (2001), Elbourne (2002) proposes:

E-type pronouns involve NP-deletion.

An antecedent NP, or an extremely salient property is needed to license the deletion. Such an antecedent, he argues, is present in (10a) but not in (b,c).

=> Elbourne puts the burden on NP-deletion licensing.
2.2.7 Arriving at the Elbourne / Büring proposal


*it* is a pure description, i.e. a definite description that does not contain an individual variable.

\[
(11)
\]

\[
S
\]

\[
SU
\]

every

\[
s_b
\]

farmer

\[
RC
\]

who

owns

a donkey

\[
\leq
\]

\[
s_e
\]

beats

OB

\[
\overline{\text{it}_{\text{donkey}}}
\]

\[
s_b = \text{base situation}
\]

\[
s_e = \text{extended situation}
\]

- co-variation: *it* or VP is s(-ituation)-bound

\[
(12) \quad \text{Example:}
\]

<table>
<thead>
<tr>
<th>for every $s_b$ such that:</th>
<th>$\Rightarrow$ there's an $s_e$ such that:</th>
</tr>
</thead>
<tbody>
<tr>
<td>farmer (Joe) has a donkey</td>
<td>he beats the donkey$_{in, s_b}$</td>
</tr>
<tr>
<td>farmer (Jack) has a donkey</td>
<td>he beats the donkey$_{in, s_b}$</td>
</tr>
<tr>
<td>farmer (John) has a donkey</td>
<td>he beats the donkey$_{in, s_b}$</td>
</tr>
<tr>
<td>farmer (Jim) has a donkey</td>
<td>he beats the donkey$_{in, s_b}$</td>
</tr>
</tbody>
</table>

Elbourne leaves vague the relation between the antecedent denotation and the descriptive content of the deleted NP in the donkey pronoun. It is sometimes understood as being a relation of straightforward syntactic/lexical identity (cf. Büring (2004):36).
3 \textit{it is not the donkey: the present proposal}

(13) Every farmer who owns a donkey beats \textit{it}. \[\text{the entity}\]

The present proposal is that in (13) there is no identity condition on NP-deletion involved. A condition that requires the pronoun denotation and the antecedent denotation to be identical is not tenable. I will show that instead the descriptive content of the E-type pronoun must be a superset denotation of all possible antecedent denotations, i.e. it must be void of descriptive content.\(^2\)

- proposal:
  - in (13) \it \equiv \text{the entity (owned)}
- \[\text{[it]}^f = \]
  \[
  \lambda s: \exists !x \text{ such that neuter-entity(x) in } s \& f(x) \text{ in } s.
  \]
  \[
  \exists x \text{ such that neuter-entity(x) in } s \& f(x) \text{ in } s.
  \]
  (where \(f\) is a contextually salient pure property)

So essentially \it differs from \textit{the} in the following respects.\(^3\)

(14) \begin{align*}
\text{DP} & \quad \text{the can take any N(P) complement.} \\
\text{D} & \quad \text{NP} \\
\text{the} & \quad \text{N}
\end{align*}

(15) \begin{align*}
\text{DP} & \quad \text{it is restricted to taking ENTITY} \\
\text{D} & \quad \text{NP} \\
\text{it} & \quad \text{ENTITY}
\end{align*}

This of course corresponds to saying that effectively DPs headed by \textit{the} are composed, while DPs headed by \it may not be.

\(^2\)Among several alternatives which don’t matter for present purposes, we can think of \it as taking an NP complement with the selectional restriction that this has to be the unpronounced nominal \[\lambda P \in D_{\text{ENTITY}} \& \exists s: \exists !x \text{ such that P(x) in } s \& f(x) \text{ in } s. \]

\(^3\)Thanks to Paul Elbourne for enlightening discussion.
3.1 Single antecedents

3.1.1 Problems for NP-deletion

- "degree of salience" is a rather vague notion, to solve the formal link.
- the problem in (10b,c)/(16a) is not only a matter of NP-deletion-licensing:

(16)  
  a. * Every guitarist should bring it\textsubscript{guitar}.
  b. ?* Every guitarist should bring the guitar.

- NP-deletion a priori predicts that (17a) and (b) pattern together:

(17)  
  a. ok Every man who has a wife is sitting next to her.
  b. ?* Every man who has a wife is sitting next to the wife.
  c. ok Every man who has a wife is sitting next to his wife.

3.1.2 Picking up an individual

(18)  
  a. * Every married man is sitting next to her.
  b. ?* Every married man is sitting next to the wife.
  c. ok Every married man is sitting next to his wife.

(19)  
  a. * Every guitarist should bring it.
  b. Every guitarist should bring his guitar.

(18, 19) show that \textit{it} cannot pick up a property that contains a variable.

The above discussion suggests that donkey pronouns cannot live off picking up a property from the base situation.

Instead:

| Donkey pronouns can only live off an \textbf{individual} in the base situation. |

8
3.2 Coordinated Donkeys

The semantics of coordination I am assuming is based on Partee and Rooth (1983).

extensional version of P&R’s Generalized conjunction:

\[ \text{[and]} = \lambda f_{<e,t>} \lambda g_{<e,t>} \lambda Q_{<e,t>} f(Q) \& g(Q) \]

(21)

3.2.1 Donkey-owners and non-owners

Does the coordination as defined above give the right meaning?

(22) [Every farmer who owns a donkey and every butcher] beats it.

Judgment: No donkey reading available.
i.e. it is referential (e.g. "the priest’s goat").

Correctly predicted.

Note:

- Whether the situation variable \( \sigma \) of \( it \) is bound or not is decided at the VP-level (cf. Büring (2004)).

- Therefore \( it \) must be either bound or free, put differently \( it \) must either have an antecedent in both conjuncts or in neither.
3.2.2 Coordinated donkey-owners and goat-owners

(23) [Every farmer who owns a donkey and every priest who owns a goat] beats it.

Judgment: Donkey reading available.

i.e. reading: (ok) farmers beat their donkey(s) and priests beat their goat(s).

What’s the interpretation of the donkey pronoun at LF?

• incorrect analysis:

(24) # [Every farmer who owns a donkey and every priest who owns a goat] beats it\textsubscript{goat}.

• incorrect analysis:

(25) # [Every farmer who owns a donkey and every priest who owns a goat] beats it\textsubscript{donkey}.

• correct analysis:

(26) [Every farmer who owns a donkey and every priest who owns a goat] beats it\textsubscript{entity}.

The descriptive content of the donkey pronoun at LF must be less specific than the denotation of the antecedents.
3.2.3 **Coordinated donkeys and goats**

(27) If Mary sees [a donkey or a goat], she waves to it.
(c.f. Elbourne (2002) who credits Bernhard Schwarz for it.)

Judgment: Donkey reading is available.
i.e. reading: she waves to whichever donkey or goat she sees.

- incorrect analysis:

  (28) If Mary sees [a donkey or a goat], she waves to $\text{it}_{\text{donkey}}$.

- inelegant analysis:

  (29) If Mary sees [a donkey or a goat], she waves to $\text{it}_{\text{donkey or goat}}$.

- correct analysis:

  (30) If Mary sees [a donkey or a goat], she waves to $\text{it}_{\text{entity}}$.

The descriptive content of *it* cannot be *the donkey* nor can it be *the goat*.\(^4\)

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\(^4\)Elbourne mentions the possibility that it might be a disjoint description *the donkey or goat* as in (29), but see below.
3.2.4 "Singular non-donkeys"

(31) Every farmer who owns [a donkey and a goat] beats \textit{it}.

Judgment: No donkey reading is available.

- incorrect analysis:
  
  (32) Every farmer who owns [a donkey and a goat] beats \textit{it}_{\text{donkey}}.

- correct analysis:
  
  (33) Every farmer who owns [a donkey and a goat] beats \textit{it}_{\text{entity}}.

3.2.5 "Plural donkeys"

(34) Every farmer who owns [two donkeys and a goat] beats \textit{them}.

Judgment: Donkey reading is available.

- incorrect analysis:
  
  (35) Every farmer who owns [two donkeys and a goat] beats \textit{them}_{\text{donkeys}}.

- inelegant analysis:
  
  (36) Every farmer who owns [two donkeys and a goat] beats \textit{them}_{\text{donkeysandgoat}}.

- correct analysis:
  
  (37) Every farmer who owns [two donkeys and a goat] beats \textit{them}_{\text{entities}}.
• **Good:**

\[ it = \text{the unique entity in } s \] works for all cases considered

this is simple and elegant, as opposed to:

• **Bad:**

\[ it = \text{the unique donkey in } s \] which does NOT always work

sometimes we need \( it = \text{the unique donkey or the unique goat in } s \) instead

The donkey pronoun **cannot** have just any NP-meaning at LF, but instead must not be specified beyond phi-features.
3.2.6 Murderer sentences (same thing)

(cf. Tomioka (1999), Elbourne (2001))

I call "murderer sentences" examples in which a donkey pronoun is interpreted within a VP-ellipsis site.

(38) Every police officer who arrested a murderer insulted \textit{him}, and every police officer who arrested a burglar did, too.

Tomioka treats \textit{him} as a skolem description like \textit{the person he arrested}. But this makes wrong predictions w.r.t sloppy readings, as pointed out by Elbourne 2001 (see (8)).

- incorrect analysis:

(39) Every police officer who arrested a murderer insulted \textit{him}_{\text{murderer}}, and every police officer who arrested a burglar did \textit{<insult him}_{\text{burglar}}>, too.

- inelegant analysis:

(40) Every police officer who arrested a murderer insulted \textit{him}_{\text{murdererorburglar}}, and every police officer who arrested a burglar did \textit{<insult him}_{\text{murdererorburglar}}>, too.

- correct analysis:

(41) Every police officer who arrested a murderer insulted \textit{him}_{\text{humanentity}}, and every police officer who arrested a burglar did \textit{<insult him}_{\text{humanentity}}>, too.

Same thing again: The donkey pronoun is not be specified beyond phi-features.
3.3 Which one out of two?

(42) Whenever a police officer arrests a burglar, he insul t him.

Judgment: ambiguous: a) officers insult burglars
          b) burglars insult officers
       but not vague: c) * sometimes (a) and sometimes (b)

(43) If a woman talks to a rabbi while a priest is present, he gets mad.

Judgment: ambiguous: a) it’s always the rabbi that gets mad.
          b) it’s always the priest that gets mad.
       but not vague: c) * sometimes (a) and sometimes (b)

The fact that the sentence is ambiguous but not vague shows that we want to be able to distinguish the participants in the pronoun.

This may be achieved by allowing the pronoun to pick up a salient property that modifies it, as is suggested in the proposal.

4 Conclusion

I have attempted to explicate a point left vague in recent situation-semantic E-type analyses of donkey pronouns (cf. Elbourne (2001), Elbourne (2002), Büring (2004)). On the basis of examples in which a donkey pronoun caters to two distinct antecedents, I have argued that the descriptive content of donkey pronouns at LF must be maximally underspecified, i.e. donkey pronouns must be essentially void of descriptive content.5

5Whether the use of the term "E-type pronoun" is still appropriate is questionable, but irrelevant.
References


Heim, Irene. 1982. The semantics of definite and indefinite noun phrases .


