Implicit Content and Sloppy Identity

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Abstract

Through an examination of the binding possibilities displayed by downstressed continuations of donkey sentences, this article argues that unarticulated constituents are introduced by situation variables.

1 Introduction

The purpose of this article is to revisit the theories of 'unarticulated constituents,' to use Perry's (1986) phrase, that I analyzed in my paper 'The argument from binding' (Elbourne 2008). I will be introducing some new data involving strict and sloppy readings of downstressed continuations of sentences containing donkey anaphoric definite descriptions. On the basis of these data, I will be arguing that unarticulated constituents are in fact introduced by situation variables.[1]

In section 2 of this article, I will outline the problem of unarticulated constituents (or *implicit content*, as I prefer). Section 3 contains summaries of the five theories of implicit content that featured in Elbourne 2008. (Readers of Elbourne 2008 can safely skip or skim these two sections.) The new data are introduced and discussed in section 4. Section 5 concludes.

2 Implicit Content

In some utterances, some material does not seem to be explicitly expressed in words, but nevertheless seems to be part of the literal content of the utterance rather than an implicature. I call material of this kind *implicit content*. The following are some relevant examples from the literature.

(1) Everyone was sick.

(2) I haven't eaten.

(3) It's raining.

[1] In Elbourne 2008 I presented some data that initially seemed problematic for this claim; but I believe that the analysis outlined in note 11 of that paper will enable the theory in question to deal with them.

Someone who says (1) might be claiming that everyone who attended his dinner party last night was sick (Neale 1990: 94–95), even though the property of attending his dinner party last night does not seem to be the denotation of any overt lexical items in the utterance. In uttering (2), I might be asserting that I have not eaten dinner today (Bach 1994: 135–136), even though I do not use any audible words meaning 'dinner' or 'today'. And in saying (3), I might be claiming that it is raining in Dunwich, Massachusetts, even though I do not appear to mention any place (Perry 1986).

I will be concentrating on two questions concerning implicit content. The first is the question of the level of representation at which implicit content first makes its presence felt. Are there unpronounced items in the syntax of the sentence uttered whose semantic value is implicit content? If so, what are their syntactic properties? Or does implicit content leave no trace, as it were, in the syntax but appear only in the language of thought?

The second problem might be called the problem of the logical form of implicit content. How does it combine with the content provided by the overt constituents in the syntax? I will distinguish two approaches to this latter problem: the global approach and the local approach. The global approach says that the content derived from the overt constituents in the syntax is asserted to be true only of a restricted spatiotemporal part of the world.[2] The local approach says that implicit content can be interwoven with the content provided by overt constituents in the syntax: it could be the value of unpronounced variables in the syntax, as just mentioned, or it could be added to the language of thought constituents that indicate (or *are*) the semantic values of items in the syntax.

On the basis of well known arguments by Westerståhl (1985) and Soames (1986), it is generally reckoned that the global approach is out of the running. I will henceforth confine myself to the local approach. Four versions of this latter theory are prominent in the literature; I added a fifth in Elbourne 2008.

3 Five Theories of Implicit Content

3.1 The Syntactic Relation Variable Approach

The first version of the local approach is what we might call the *syntactic relation variable approach*. According to this theory, there are unpronounced variables in the syntactic structure of the sentence. The content of these variables is established by whatever mechanism fixes the content of overt pronouns. The positioning of such variables is in principle subject to syntactic constraints. Theories of this kind have been advocated by von Fintel (1994), Stanley (2000, 2002a,b), Stanley and Szabó (2000), Pelletier (2003) and Martí (2006).

There are two prominent varieties of the syntactic relation variable approach. According to von Fintel (1994: 30–31), determiners can come with an unpronounced pair of a relation variable and an individual variable. Determiners take

[2]This is the same as what Neale (1990: 95) calls *the implicit approach*.

this pair as their first argument and then take the overt nominal. In the case of (4), we would have a syntactic structure like that in (5).

(4) The table is covered with books.

(5) [[[the [f_1 v_2]] table] [is covered with books]]

In this example, we might imagine that v_2, the individual variable, has as its value a particular room, the one containing the table in question. Let *a* be a name for this room. The relation variable might be assigned a meaning equivalent to that of *in*. In the semantics, the denotation of the definite article would take two arguments and intersect them. On this occasion, they would be the property of being in *a* and the property of being a table. So the definite description ends up meaning 'the table in *a*'.

Why do we need a combination of an individual variable and a relation variable? The following sentence (due to Heim (1991)) is a good reason why (von Fintel 1994: 31). (6) seems to have the reading in (7). This means that we can use the apparatus we have introduced as shown in the simplified syntactic structure (8).

(6) Only one class was so bad that no student passed the exam.

(7) Only one class *x* was so bad that no student in *x* passed *x*'s exam.

(8) [only one class] λ_2[t_2 was so bad that no f_1 v_2 student passed the f_3 v_2 exam]

I follow Heim 1993 and Heim and Kratzer 1998 in positing a λ-operator in the syntax, below the subject. The individual variable v_2 is bound by this operator, as is the trace t_2; f_1 once again means 'in', and f_3 will be assigned a value something like 'belonging to' or 'associated with'. This will produce the attested meaning.

Stanley and Szabó (2000) propose a variant of von Fintel's theory whereby the silent variables appear on nouns rather than on determiners. So (9) would have the syntactic structure in (10); (11) would have the syntactic structure in (12).

(9) The table is covered with books.

(10) [[the [table [f_1 v_2]]] [is covered with books]]

(11) Only one class was so bad that no student passed the exam.

(12) [only one class] λ_2[t_2 was so bad that no student f_1 v_2 passed the exam f_3 v_2]

When two syntactic constituents denoting properties appear as sisters, as in the present examples, their semantic values will be intersected. Apart from the difference in placement of the variables, Stanley and Szabó's theory works like von Fintel's.

3.2 The Language of Thought Relation Variable Approach

We can now consider a possibly novel approach, which I will call the *language of thought relation variable approach*. According to this theory, there are no covert variables in the syntax to do the job of providing implicit content, contra von Fintel (1994) and Stanley and Szabó (2000). Lexical items in the syntax are translated into objects in the language of thought (Fodor 1975). Some of these language of thought objects are complexes that include variables that demand values to be assigned, as it were; at this level what this would presumably boil down to would be a requirement that certain language of thought objects be replaced by other, more contentful, ones. So a simplex lexical item *the* might be translated into a language of thought complex THE R PRO, where R PRO consists of a relation variable and an individual variable capable of being replaced by IN A; we could thus deal with (4).[3] A variant, analogous to Stanley and Szabo's (2000) version of the syntactic relation variable approach, might have nouns or NPs translated into complexes of constant concepts, as it were, plus R PRO: so we might have TABLE R PRO in the first instance, at some point changed to TABLE IN A.

3.3 The Pragmatic Enrichment Approach

The third version of the local approach to implicit content can be called the *pragmatic enrichment approach* (Sperber and Wilson 1986: 189). According to varieties of this theory, the output of the semantics is an object in the language of thought. Supplementation of this object occurs in the language of thought to obtain the mental object that corresponds to (or *is*) the literal content of the utterance. For example, suppose that John and Mary have guests, John enters the house noisily and Mary says (13) to him.

(13) Everyone is asleep!

From the conceptual representation in (14), John (or some aspect of John's inferential faculties) proceeds to (15).

(14) EVERYONE IS ASLEEP

(15) EVERYONE WHO IS A GUEST OF MINE IS ASLEEP

The syntax, then, is not involved, in contrast to the syntactic relation variable approach. Theories along these lines have been advocated by Sperber and Wilson (1986), Recanati (1993), Bach (1994), Bezuidenhout (1997), Carston (2002) and Hall (2008).

Importantly, these theories do not generally incorporate any syntactic restrictions on where in a language of thought object this supplementation can take place (using *syntactic* now to refer to the hypothesized syntactic qualities of the language of thought—see Fodor 1975).

[3] I follow the usual convention of representing language of thought strings as English sentences in capitals.

3.4 The Explicit Approach

The fourth version of the local approach is the 'explicit approach' of Stephen Neale (1990, 2004), which can be seen as a modification of the pragmatic enrichment approach. According to the pragmatic enrichment approach, we act directly on language of thought representations without further reference to the syntax when we understand an utterance that involves implicit content. Neale (2004: 82–83) is content to assume a language of thought and to assume that understanding an utterance involves entertaining a particular language of thought representation. But according to Neale there is a limit on the kind of enrichment of language of thought strings that is permitted: we have to understand phrases involving implicit content as if they were phrases produced by adding words to the phrases actually uttered (Neale 2004: 121–122). For example, we can interpret an utterance of *the table* with the language of thought string THE TABLE MARY BOUGHT THIS MORNING because of the fact that we can extend the English phrase *the table* to an English phrase that would have that interpretation directly, as it were, namely *the table Mary bought this morning*.

3.5 The Syntactic Situation Variable Approach

The fifth and final version of the local approach that I will consider might be called the *syntactic situation variable approach*. Kuroda (1982), Recanati (1996, 2004) and Kratzer (2004) have proposed that implicit content is provided by each predicate being associated with a situation variable in the syntax, so that different predicates in one sentence can be evaluated with respect to different parts of the world (or even different parts of different possible worlds).

Detailed versions of the compositional semantics of systems like this have been provided by Percus (2000) and Büring (2004). Here is a brief sketch, based roughly on their ideas. A sentence like (16) would have an LF like (17).

(16) Every subject is asleep.

(17) Σ_8 [[every [subject s_8]] [is [asleep s_8]]]

By means of a syncategorematic rule, the operator Σ_8 is interpreted as a lambda operator binding coindexed variables in its scope. A predicate like *subject* or *asleep* will take a situation variable as its argument and return the characteristic function of the set of individuals with the relevant property *in the situation in question*. So the semantic value of [asleep s_8] might be something like [$\lambda x.x$ is asleep in s_8], where s_8 will end up being bound. The semantic value of the whole LF (17) will be something like (18).

(18) λs_8. every subject in s_8 is asleep in s_8

Suppose that the semantic value of an utterance is an Austinian proposition (Barwise and Perry 1983), that is a pair of a topic situation about which the speaker tries to say something and a characteristic function of a set of situations. In the present case, we might have something like (19).

(19) $< s^*, \lambda s_8.$ every subject in s_8 is asleep in $s_8 >$

The utterance will be true if the topic situation s^* is a member of the set defined by the lambda-term.

In this initial example, all situation variables are bound by the Σ operator. But at least some of the situation variables in a sentence, according to the current theory, are capable of being referential. They can refer to particular spatiotemporal parts of the world. Take Soames's (1986) example (20).

(20) Everyone is asleep and is being monitored by a research assistant.

This would have a simplified LF something like the following:

(21) Σ_8 [[every [-one s_1]] [[is asleep s_8] and [is being monitored s_8 by a research assistant s_8]]]

The situation variable s_1 would refer to a (possibly doughnut-shaped) part of the world s_1 that contained the experimental subjects and no-one else, while the variables s_8 would be bound, as before, by the Σ operator. The semantic value of this LF would be as follows:

(22) $\lambda s_8.$ everyone in s_1 is asleep in s_8 and being monitored by a research assistant in s_8

If this function is paired with a topic situation that includes the experimental subjects and the research assistant, the right results, it seems, will be obtained.

The situation semantics in Elbourne 2005 can also deal with examples like the one just analyzed. This system does not have situation variables in the syntax, but can imitate the effect of the unbound s_1 in (21) by means of its operator s_0 (Elbourne 2005: 103), shown in (23).

(23) $[\![s_0]\!]^g = \lambda f_{\langle se,st\rangle}.\lambda u_{\langle s,e\rangle}.\lambda s.f(u)(g(0)) = 1$

The denotation of the *-one* in *everyone* would be (24) without s_0 adjoined and (25) with it.

(24) $[\![\text{one}]\!]^g = \lambda u_{\langle s,e\rangle}.\, \lambda s.\, u(s)$ is a person in s

(25) $[\![\text{one } s_0]\!]^{[0\rightarrow s_1]} = \lambda u_{\langle s,e\rangle}.\, \lambda s.\, u(s_1)$ is a person in s_1

In this way, a restriction to a situation s_1 can be achieved to deal with examples like (20), and the truth conditions in (22) can be obtained. The next section of the present article contains more details of the system in Elbourne 2005. I will count it as an honorary member of the class of syntactic situation variable approaches, since, although it does not have situation variables in the syntax, it does provide an operator in the syntax for introducing reference to particular situations.

This description of the syntactic situation variable approach has so far concentrated on quantifier domain restriction. It will presumably be possible to analyze other kinds of examples, such as (2) and (3), repeated here as (26) and

(27), by means of the judicious choice of topic situations in Austinian propositions.[4]

(26) I haven't eaten.

(27) It's raining.

If topic situations are basically spatiotemporally restricted parts of the world, all will go smoothly. The topic situation could include only times after afternoon tea on the day of the utterance in the case of (26), and only the environs of the unhallowed Dunwich, Massachusetts, in the case of (27).

4 Some New Data

The new data are as follows. Small italics indicate downstressing, which in turn indicates, roughly, that the phrase in question conveys old information—a property repeated from another part of the sentence in the current cases.[5]

(28) a. In this village, if a farmer owns a donkey, he beats the donkey and the priest *beats the donkey* too. (strict, *sloppy)

b. In this village, if a farmer owns a donkey, he beats the donkey he owns and the priest *beats the donkey he owns* too. (strict, sloppy)

(29) a. In this village, every farmer who owns a donkey beats the donkey, and the priest *beats the donkey* too. (strict, *sloppy)

b. In this village, every farmer who owns a donkey beats the donkey he owns, and the priest *beats the donkey he owns* too. (strict, sloppy)

According to one reading of the (b) sentences, the village priest is said to beat his own donkey; whereas no such claim can be made with the (a) sentences. The basic observation, in other words, is that a donkey anaphoric definite description that does not contain an overt pronoun does not give rise to a sloppy reading in a downstressed continuation.

How well do the five theories that we surveyed in section 3 deal with these data? To start with, the syntactic relation variable approach seems to be in trouble, since it effectively analyzes (28a) and (29a) as silent versions of (28b) and (29b) respectively. Recall that this theory analyzes (6), repeated here as (30), as something like (31).

[4]This provision allows the syntactic situation variable approach to combine the resources of what I called the global approach and the local approach above.

[5]The literature on the information-theoretic effects of focus and downstressing is huge. For discussion of downstressed definite descriptions in particular, see Umbach 2002. The observation that pronouns in downstressed continuations give rise to both strict and sloppy readings goes back to Fiengo and May (1994: 110). The data in (28) and (29) are replicable with VP-ellipsis, but the effects are sharper with downstressing. (28) and (29) are based on examples (72) and (74) of Elbourne 2005: Chapter 2, pages 69–70; but these original examples featured donkey pronouns in the place of the donkey anaphoric definite descriptions of (28a) and (29a).

(30) Only one class was so bad that no student passed the exam.

(31) [only one class] λ_2[t_2 was so bad that no f_1 v_2 student passed the f_3 v_2 exam]

This theory posits combinations of relation variables and bindable individual variables that attach to determiners (or, in Stanley and Szabó's version, to nouns). So there is nothing to prevent *the donkey* in (28a) or (29a) from meaning 'the donkey owned by x'. But that would mean that it should behave exactly like *the donkey he owns*, which also contains a bound individual variable combined with an item denoting the owning relation. But it does not.

The language of thought relation variable approach would also seem to have met a significant problem, for a very similar reason. This theory would be able to analyze (28a) or (29a) as giving rise to LOT strings containing OWNED-BY combined with a bound individual variable. But then we would expect these sentences to behave like (28b) and (29b), contrary to fact.

The pragmatic enrichment approach and the explicit approach also appear to overgenerate here. On these approaches there is nothing to prevent the addition of LOT material equivalent to 'he owns' to the definite descriptions in (28a) or (29a); but that would give rise to unattested sloppy readings. Note that the addition of material equivalent to 'he owns' satisfies the constraint placed on LOT insertions by the explicit approach. The explicit approach says that such insertions can only take place if they give a LOT string that is the interpretation of a natural language sentence formed from the original one by the addition of extra material in the syntax; but (28b) and (29b) precisely constitute such sentences with respect to (28a) and (29a).[6]

Lastly, let us turn to the syntactic situation variable approach. This approach seems to be corroborated. The other theories provide enough material to make the final *the donkey* in (28a) and (29a) interpretable by means of *the priest* binding an individual variable in it, thus wrongly predicting a sloppy reading. But this is impossible on the syntactic situation variable approach, which generally does not supply individual variables at all for this kind of thing.[7]

But how exactly would the syntactic situation variable approach analyze (28a) and (29a)? As it happens, I have already, in effect, provided detailed situation semantics analyses of these sentences in another context (Elbourne 2005: 71–77), and so will not fully recapitulate them here.[8] But, to give the

[6]The considerations in Hall 2008 do not help the pragmatic enrichment approach with these examples. Hall (2008: 445) proposes that "free enrichment is essentially local: it applies to subpropositional constituents, either replacing encoded concepts with inferred concepts, or adding material (unarticulated constituents) to change the interpretation of some encoded element." The changes necessary to give (28a) and (29a) the meanings of (28b) and (29b) clearly satisfy this desideratum, and yet they do not seem to be possible.

[7]This does not rule out the possibility that a few words like *local* might idiosyncratically subcategorize for a silent individual variable, as argued by Partee (1989).

[8]To be precise, I have provided analyses of sentences whose LFs I claimed were the same as those of (28a) and (29a). My thesis in that part of my book was that *If a man owns a donkey he beats it* has the same LF as *If a man owns a donkey he beats the donkey*, and similarly with donkey sentences introduced by *every*. I made up sentences with donkey pronouns and

flavor of the enterprise, here is an analysis of (28a) in the system of Elbourne 2005.

The system in Elbourne 2005 does not posit situation variables in the syntax. Here is a representative sample of lexical entries.

(32) $[\![\text{Mary}]\!]^g = \lambda s.\,\text{Mary}$
$[\![\text{brays}]\!]^g = \lambda u_{\langle s,e\rangle}.\,\lambda s.\,u(s)$ brays in s
$[\![\text{donkey}]\!]^g = \lambda u_{\langle s,e\rangle}.\,\lambda s.\,u(s)$ is a donkey in s
$[\![\text{owns}]\!]^g = \lambda u_{\langle s,e\rangle}.\,\lambda v_{\langle s,e\rangle}.\,\lambda s.\,v(s)$ owns $u(s)$ in s
$[\![\text{every}]\!]^g = \lambda f_{\langle\langle s,e\rangle,\langle s,t\rangle\rangle}.\,\lambda g_{\langle\langle s,e\rangle,\langle s,t\rangle\rangle}.\,\lambda s.$ for every individual x: for every minimal situation s' such that $s' \leq s$ and $f(\lambda s.x)(s') = 1$, there is a situation s'' such that $s'' \leq s$ and s'' is a minimal situation such that $s' \leq s''$ and $g(\lambda s.x)(s'') = 1$
$[\![\text{a}]\!]^g = \lambda f_{\langle\langle s,e\rangle,\langle s,t\rangle\rangle}.\,\lambda g_{\langle\langle s,e\rangle,\langle s,t\rangle\rangle}.\,\lambda s.$ there is an individual x and a situation s' such that s' is a minimal situation such that $s' \leq s$ and $f(\lambda s.x)(s') = 1$, such that there is a situation s'' such that $s'' \leq s$ and s'' is a minimal situation such that $s' \leq s''$ and $g(\lambda s.x)(s'') = 1$
$[\![\text{the}]\!]^g = \lambda f_{\langle\langle s,e\rangle,\langle s,t\rangle\rangle}.\,\lambda s : \exists!x f(\lambda s'.x)(s) = 1.\,\iota x f(\lambda s'.x)(s) = 1$
$[\![\text{he}]\!]^g = \lambda f_{\langle\langle s,e\rangle,\langle s,t\rangle\rangle}.\,\lambda s : \exists!x f(\lambda s'.x)(s) = 1.\,\iota x f(\lambda s'.x)(s) = 1$
$[\![\text{always}]\!]^g = \lambda p_{\langle s,t\rangle}.\,\lambda q_{\langle s,t\rangle}.\,\lambda s.$ for every minimal situation s' such that $s' \leq s$ and $p(s') = 1$, there is a situation s'' such that $s'' \leq s$ and s'' is a minimal situation such that $s' \leq s''$ and $q(s'') = 1$
$[\![\text{who}]\!]^g = \lambda f_{\langle\langle s,e\rangle,\langle s,t\rangle\rangle}.\,\lambda u_{\langle s,e\rangle} : \forall s\ u(s)$ is a person. $\lambda s.\,f(u)(s) = 1$
$[\![\text{if}]\!]^g = \lambda p_{\langle s,t\rangle}.\,p$

A *minimal* situation s such that p is one that contains just enough individuals, relations and properties to make p true (Heim 1990). Situations in this kind of framework are subject to an ordering $\leq$, the reflexive *part-of* relation (Kratzer 1989). A situation s is part of a situation s' if and only if s' contains all the individuals, properties and relations that s does (and possibly some others).

We assume a set of composition rules as follows, based on the ones in Heim and Kratzer 1998.

(33) a. *Functional Application (FA)*
If α is a branching node and $\{\beta, \gamma\}$ the set of its daughters, then, for any assignment g, α is in the domain of $[\![\ ]\!]^g$ if both β and γ are, and $[\![\beta]\!]^g$ is a function whose domain contains $[\![\gamma]\!]^g$. In that case, $[\![\alpha]\!]^g = [\![\beta]\!]^g([\![\gamma]\!]^g)$.

b. *Predicate Modification (PM)*
If α is a branching node and $\{\beta, \gamma\}$ the set of its daughters, then,

downstressed continuations, closely analogous to (28a) and (29a), and showed that they do not have sloppy readings, contrary to the prediction of theories such as Cooper 1979 that would place bound individual variables in donkey pronouns. I should have added that my theory correctly predicted that the sentences with donkey pronouns would display the same strict/sloppy behavior as (28a) and (29a).

for any assignment g, α is in the domain of $[\![\ ]\!]^g$ if both β and γ are, and $[\![\beta]\!]^g$ and $[\![\gamma]\!]^g$ are of type $\langle\langle \mathrm{s}, \mathrm{e}\rangle, \langle \mathrm{s}, \mathrm{t}\rangle\rangle$. In that case, $[\![\alpha]\!]^g = \lambda u_{\langle \mathrm{s},\mathrm{e}\rangle}.\lambda s.\, [\![\beta]\!]^g(u)(s) = 1$ & $[\![\gamma]\!]^g(u)(s) = 1$.

c. *Predicate Abstraction (PA)*
For all indices i and assignments g, $[\![\lambda_i\, \alpha]\!]^g = \lambda u_{\langle \mathrm{s},\mathrm{e}\rangle}.\, [\![\alpha]\!]^{g^{u/i}}$.

d. *Traces (TR)*
If α is a trace, g is a variable assignment, and $i \in \mathrm{dom}(g)$, then $[\![\alpha_i]\!]^g = g(i)$.

We will also need a standard notion of λ-conversion.

Now let us consider the LF structure of our example (28a), repeated here with the addition of an explicit quantificational adverb as (34).

(34) In this village, if a farmer owns a donkey, he always beats the donkey and the priest *beats the donkey* too. (strict, *sloppy)

Following Berman (1987) and Heim (1990), I assume that quantificational adverbs impose the structure in (35) on their LFs.

(35) [[always [if α]] β]

This means that the donkey sentence in (36) has the LF structure in (37), momentarily abstracting away from any complexity there may be behind the pronouns.

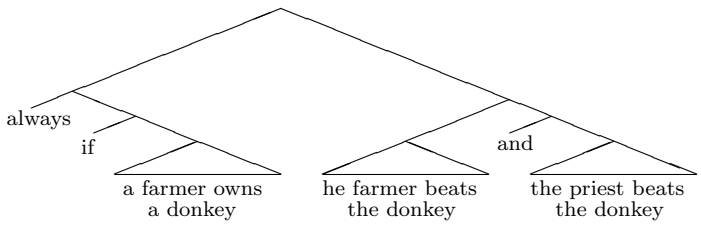
(36) If a man owns a donkey, he always beats it.

(37) [[always [if [[a man] [λ_6 [[a donkey] [λ_2 [t_6 owns t_2]]]]]]] [he beats it]]

The LF structure of (34) depends on what the two conjuncts of *and* are. The sentence *the priest beats the donkey too* must form one of the conjuncts. Since it is a sentence, there seem to be two possibilities for the overall structure. Either *the priest beats the donkey too* is conjoined with *he beats the donkey*, and thus forms a continuation of the consequent of the conditional; or it is conjoined with *if a farmer owns a donkey he beats the donkey*. I will here examine only the first possibility, and refer interested readers to Elbourne 2005 for the second.

The structure of the first option, where the sentence with the phonologically reduced VP simply forms part of the consequent of the conditional, is shown in (38). I assume the theory of Elbourne 2005 whereby donkey pronouns are definite determiners with nominal content supplied by NP-deletion: thus we have [he farmer] for *he*.

(38)



Applying our semantics, we obtain the truth-conditions in (39), given in simplified form in order to aid exposition.

(39) λs_1. for every minimal situation s_2 such that $s_2 \leq s_1$ and there is an individual x such that x is a farmer in s_2 and there is an individual y such that y is a donkey in s_2 and x owns y in s_2, there is a situation s_3 such that $s_3 \leq s_1$ and s_3 is a minimal situation such that $s_2 \leq s_3$ and the unique farmer in s_3 beats in s_3 the unique donkey in s_3 and the unique priest in s_3 beats in s_3 the unique donkey in s_3.

These truth conditions are intuitively correct. Each situation s_2 contains exactly one donkey, since it is a *minimal* situation in which a farmer owns a donkey. Each situation s_2, furthermore, is part of a corresponding situation s_3, and so, for each situation s_2, the unique donkey in s_2 is a constituent of the corresponding situation s_3. This means that, for each pair of a situation s_2 and a situation s_3, 'the unique donkey in s_3' must be the donkey that also appears in s_2. If it were any other donkey—if, in other words, some other donkey tries to sneak into one of the situations s_3—we would no longer be able to talk about 'the *unique* donkey in s_3'. This means, then, that the donkeys beaten by the priest are the same as the ones beaten by the farmers, and were introduced in the definition of the situations s_2 as belonging to the farmers. A strict reading is obtained, therefore, as desired, and there is no evident way of obtaining a sloppy reading.

Inspection of the lexical entries in (32) will reveal that, as one would expect, it is the meaning of *always* that sets up the situation structure just explicated. And inspection of the lexical entry of *every* in that list will reveal that it works in a very similar way, lending plausibility to the contention that only strict readings are available here. But in order to avoid unnecessary duplication I will not analyze (29a) here, or the other possible syntactic structure for (28a), but will refer interested readers to Elbourne 2005: 71–77.

5 Conclusion

The examples I have used concern the interpretation of incomplete definite descriptions, and strictly speaking I have established at most that situation semantics must be the method by which these phrases are interpreted. But, as Neale (1990) has emphasized, there is no good reason to think that definite descriptions are any different from any other DPs when it comes to the provision of implicit content, and so we might tentatively take the result of the present article to generalize to other DPs too. Furthermore, Recanati (1996, 2004) and Kratzer (2004) have maintained that all cases of implicit content should be analyzed by means of situations. The results of the current article give us good reason to pursue this hypothesis.

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