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The distribution of not in there-sentences: scope and polarity sensitivity

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The distribution of *not* in *there*-sentences: scope and polarity sensitivity

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Since at least Milsark (1974) and Carlson (1977), it has been a well-known fact about

there-sentences in English that they require the postverbal NP to take narrow scope with

respect to sentence negation and other operators:

1) There weren't many statues in the garden.

      =It is not the case that many statues were in the garden.   ✓not >many

      ≠There were many statues that weren't in the garden.   *many>not

A little-discussed fact, however, is that *not* has a limited distribution in *there*-sentences,

outside contexts of denial or contrast (2):

      [Describe the garden.]

2) #There are not {several/0/no/few/exactly three/at least three/some} statues in the

      garden.

One might reply that the infelicity of (2) arises because as, a response, it fails to describe

the garden, but then the felicity of "There are no statues in the garden" in the same

context is a mystery.

      Notice too that the determiners in (2) are licensed in this position when *not* is not

present:

3) There are {several/0/no/few/exactly three/at least three/some} statues in the garden.

      Now, unlike the determiners in (2), the determiners in (4) are felicitous with *not*:

4) There are not {many/a few/enough/more/fewer than three} statues in the garden.

What explains this distribution?

Ward and Birner (1995) remark in passing on the limited distribution of *not* in *there*-sentences, suggesting that its limited distribution follows from the *there*-sentence's discourse function; namely, that it makes little sense to deny the existence of something while simultaneously introducing it into the discourse (736). While this is reasonable, no doubt, there is more to be said on the topic.

In particular, on a discourse-functional view the fact that constituent negation *no*—which has been analyzed as an indefinite plus a negation operator with sentential scope (cf. Ladusaw 1992; Zeijlstra 2004) or as a suppletion of *not + any* (cf. Klima 1964)—is felicitous in this environment, but *not* is not (5):

5)   There are no statues in the garden.

In another brief discussion of these facts, Peter Hallman (2000), in an appendix to his UCLA dissertation, remarks on the restricted distribution of negation in *there*-sentences, suggesting they can be negated only with constituent negation ("cannot carry sentence negation" pg. 95). This last claim is problematic given the felicity of sentences such as "There aren't many statues in the garden"—it is difficult to see how the cliticized negation could be analyzed as constituent negation.

In fact, Hallman's explanation for the distribution of cliticized negation in this context is phonological, namely, he claims that in spoken English, *not* requires a phonological host. He proposes that the *there*-sentences in which sentential negation is licensed have undergone two morphological operations to accommodate this requirement, either cliticization to an auxiliary[1] or suppletion of *not + any* to *no*. I include only plural

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[1] Pullum and Zwicky (1983) analyze *n't* as an inflectional morpheme and not a clitic. It is not clear to me that the choice between these proposals is relevant to the current discussion.

examples below (6–10), abstracting away from the fact that in some cases the singular

form is in fact more degraded than the plural, something that requires further discussion.

In a context such as the ones we have been discussing, (6–8) are infelicitous.

[Tell me about the garden.]

6) #There are not statues in the garden.   No host

7) #There aren't statues in the garden.   Cliticization/inflection

8) #There are not any statues in the garden.   No host

9) There aren't any statues in the garden.   Cliticization/inflection + NPI

10) There are no statues in the garden.   Suppletion

Importantly, (7) shows that even with a phonologically reduced form, *n't*, the sentence is

infelicitous in this context; it must additionally co-occur with an NPI to be licensed[2]. So,

the distribution of negation here doesn't seem to be explained by a requirement for *not* to

be phonologically reduced, either.

The proposal

An alternative explanation for the limited distribution of *not* in *there*-sentences is that the

scopal properties of the indefinites and quantificational phrases that are licensed

postverbally in that environment limit their distribution in this context, the chief claim

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[2] Moreover, (9), with both cliticization and an NPI, is appropriate in a limited number of
contexts, as the examples below show. I am unable to precisely characterize these
contexts at present:

   i.   [Tell me about the garden./What's missing in the garden?]
       There aren't any statues.
  ii.   [Describe the garden.]
       #There aren't any statues.

Notice that (9) does not quite suffice as a response to (ii).

being that *it is not* not *which is restricted here, but rather NPs headed by determiners that prefer to, but cannot in this environment, scope above it.*

Let us now turn to some considerations in favor of such a view.

The syntax of scope and the postverbal NP

A number of authors have argued that DPs differ in their interpreted scope positions, that is, that DPs which are referential or presuppositional inhabit a higher position in clause structure than other quantifiers and indefinites, above NegP (Beghelli and Stowell 1997; Diesing 1992, among others). Beghelli and Stowell, for example, argue that there are five QP positions in the clause, the highest being reserved for those which are referential (pg.6).

11) Beghelli & Stowell (1997)

RefP
　CP
　　AgrSP
　　　DistP
　　　　ShareP
　　　　　NegP
　　GQP
　　　　　　AgrOP
　　　NQP
　　　　CQP　　VP
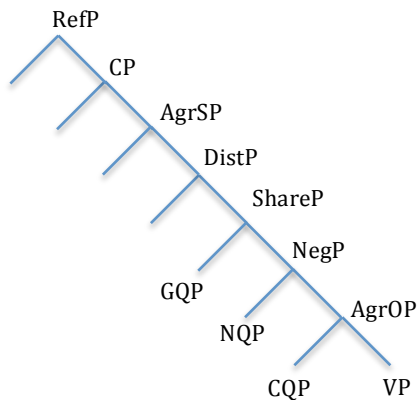
Notice that NegP occupies a relatively low position in the clause structure in (11). Of the two positions available for "weak" NPs, one is higher than negation, ShareP, and one below it, AgrOP. The higher phrase hosts Group-QPs such as those headed by *several*, *some* and *three* on their specific, or presuppositional, interpretation. These QPs may also

appear in the lower position, in which case they are not interpreted presuppositionally. This structure therefore also reflects the correlation, noted by Beghelli and Stowell and others, between the scope of nominals and presupposition (Asarina 2012; Beghelli and Stowell 1997; Diesing 1992; von Fintel 1998).

The lower specifier, AgrOP, is below NegP, and also hosts Counting-QPs, including *few*, *fewer than five*, *more than five*, *more x than y*, etc. These QPs are predicted to take scope below negation, and, in fact, just those determiners may take scope below negation in the *there*-sentence unlike QPs headed by the determiners in (2). As we saw in (3), these determiners can take this lower position only if negation is not realized.

Other environments

Furthermore, this generalization about the scope of the determiners in (2) relative to negation is not limited to the *there*-construction. In neutral contexts, that is, outside contexts of denial or contrast, NPs headed by the determiners in (2) also scope above *not* in object position. (Unsurprisingly, they also scope above negation in subject position.) (12):

12)   John didn't see several statues in the garden.   ✓several >not

*not>several

=For several statues, it is the case that John didn't see them in the garden.

≠It is not the case that John saw several statues in the garden.

Those determiners that can scope below *not* in the *there*-sentence, by contrast, (e.g. *many*, *a few*, *enough*, *more/fewer than three*) may also do so in object position (13):

13) John didn't see many statues in the garden.   ✓not>many

    =It is not the case that John saw many statues in the garden.

Denial or contrast brings about the wide scope reading (e.g. many > not).

Having considered the scopal properties of the determiners that can and cannot scope below negation in the *there*-sentence, notice also that among the determiners in (2) is the positive polarity item (PPI) *some*. And, like *some*, the NPs headed by the determiners in (2) are felicitous in the *there*-sentence so long as negation is not present.

Suppose that like *some*, the other determiners in (2) are also PPIs, unable to scope below clausemate negation.

Asarina (2012) argues that all presuppositional indefinites are PPIs. Of course, the *there*-sentence is a particularly important test case for this view, because presuppositional indefinites aren't licensed postverbally in the construction, but the determiners in (2) are nonetheless infelicitous when negation is present.

Some evidence in favor of the analysis of these NPs as PPIs

Let us look at some evidence in favor of such an analysis. If we take the QPs in (2) to be PPIs, we can also explain the distribution of determiners in *Not*-Q structures (14–15). Namely, the same QPs that in a sentential environment prefer wider scope than negation are ungrammatical below negation in DP, while those that may scope below negation in the sentential environment are also grammatical inside DP.

14) *Not several {not few/not exactly three/not no/not some} dishes are in the sink.

15) Not many {a few/enough/more/fewer than three} dishes are in the sink.

As an aside, notice that, although strong determiners are barred from *there*-sentences, *each* prefers wide scope and is ungrammatical in a *Not*-Q structure, while *every*, which can take narrow scope, is allowed: Not every dish is in the sink/*Not each dish is in the sink. (One boy didn't read every book/One boy didn't read each book.)

Barwise and Cooper (1981) discuss the distribution of quantifiers in the *Not*-Q construction exemplified in (14 and 15), and although they ultimately provide a semantic generalization of the determiners licensed in the construction, they note, "Notice that this distribution cannot be explained purely in terms of the semantics of quantifiers…One might try to explain the unacceptability…as having something to do with the preference of *some* and *each* for wide scope reading" (197). The present analysis, then, can be seen as elaborating on their intuition that scope is part of the explanation of these facts[3].

Another piece of evidence in favor of the account of these determiners as PPIs is that, like PPIs, the determiners in (2) can be "rescued", as Szabolsci 2004 puts it, in an NPI-licensing environment. In (16), for example, the conditional rescues *several*, in (17) there is an intervening operator, and in (18) negation is not clausemate. In all these environments the determiners in (2) are licensed under negation.

16) If there are not several {some} improvements made before Sunday, the client

will go elsewhere.   ✓not > several

17) There are not always several statues in the garden. ✓not > several

18) I don't think there are several statues in the garden.   ✓not > several

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[3] Barwise and Cooper's semantic account of *Not*-Q structures is stated as a universal which bars negation with downward monotone and self-dual quantifiers (1981:198–199). Their account, however, fails to generalize to the determiner *most*.

More recent accounts of the interaction of negation and comparative quantifiers such as *more than three books* have raised problems for a strictly configurational account such as Beghelli and Stowell (1997), pointing out that comparative quantifiers in subject position cannot take scope above negation in matrix clauses but are able to do so when embedded in a subordinate clause (Fleisher 2013; Takahashi 2006, among others). These authors pursue a semantic account of these facts that invokes scope economy conditions which restrict scope shifting with respect to the entailments of the input and output configurations (see, for instance, Mayr and Spector 2012's Generalized Scope Economy Condition, revised in Fleisher 2013).

However, even if we adopt a semantic account of the comparative quantifiers licensed below *not* in *there*-sentences, the inability of the other quantifiers to be licensed in this position remains, as far as I can tell, unexplained—quantifiers such as *several* and *exactly two* are not comparative. The question that would need to be answered in the case of these quantifiers, in an account taking Scope Economy to explain scope interactions, is: Given that these quantifiers can take a low position when negation is not present, what is it that blocks this when negation is present? Although I cannot answer this question at present, it is clearly worth investigating. For now, let me speak in terms of syntactic scope positions, remaining open to the possibilities offered by the semantic conditions mentioned above.

Summary

- Discourse functional, phonological or purely semantic generalizations do not appear to fully capture the distribution of negation in the *there*-sentence.

- Scope or presupposition alone is not enough to explain this distribution, either, as the determiners in (2) are licensed postverbally in the *there*-sentence.

- If we assume that both scope and polarity sensitivity are at work here, the infelicity of negation above these QPs when they take narrow scope, e.g. in the *there*-sentence, in object position and in Not-Q structures, follows.

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