Weak NPIs as Double Scope Quantifiers

Kiyomi Kusumoto
Christopher Tancredi

Abstract: In this paper, we show that current accounts of NPI *any*, especially Kadmon and Landman (1993) and accounts based thereon, fail to account for the grammaticality of occurrences of NPI *any* in the scope of *only*, they fail to explain why universal quantification cannot intervene interpretationally between NPI *any* and the expression that licenses it, and they fail to explain why NPI *any* cannot occur in the subject position of a negated sentence. We develop a double-quantifier double-scope presuppositional analysis of NPI *any* which overcomes these three problems, and show that the analysis explains the distribution of *any*.

Key words: NPI, *any*, presupposition, downward entailment

1. Introduction:

Ever since Ladusaw (1979) proposed that Negative Polarity Items (NPIs) like *any* and *ever* are licensed in the scope of downward entailing operators the question has loomed of why such a restriction should occur. Kadmon and Landman (1993) (henceforth K&L) proposed to derive the restriction by analyzing *any* as widening the domain over which it quantifies and stipulating that the result of such widening has to entail the quantification over the pre-widening domain. This analysis represented a clear step forward in relating downward entailment to the semantics of *any*, though the stipulated entailment requirement still leaves the theorist somewhat unsatisfied. The requirement is attached to *any*, but it is not a requirement that is satisfied locally. It is rather a requirement imposed on a full proposition built up out of *any*, with the specific mechanisms by which such a requirement becomes imposed left unspecified. Van Rooij (2003) notes in addition that the analysis does not deal adequately with questions, proposing to reduce K&L’s analysis to informativity effects. Once again, however, we end up with restrictions at the level of a proposition (or question) triggered by the presence of the single lexical item *any* with no proposal for how that item triggers the restrictions. In this paper, we seek to overcome these problems by proposing a semantic analysis of *any* which by itself will derive the observed restrictions on its occurrence without need to resort to *ad hoc* global pragmatic restrictions tied directly to specific lexical items.

Ladusaw’s generalization forms the cornerstone of K&L’s analysis. Therefore, to the extent to which that generalization is mistaken the analysis is undermined. We will
thus proceed by examining that generalization, or rather the extension thereof proposed by Von Fintel (1994). In doing so we will show not only that the generalization is mistaken in that it fails to account for intervention effects, but also that the kinds of examples that gave rise to von Fintel’s extension of the generalization pose an intractable problem for all current analyses of any based on that generalization. We will then give our proposal and show how it accounts for the correct generalization while simultaneously overcoming the problems facing other accounts.

2. The von Fintel-Ladusaw Generalization

Von Fintel (1994) noticed that Ladusaw’s characterization of the environments in which NPI any can occur is incomplete. Among other things, he showed that any is acceptable in the scope of only, as in (1) below.

(1) Only John bought anything

However, as attested below, anything in (1) is not in a downward entailing environment: substitution of the subset denoting expression large clock in (2b) for the superset denoting clock in (2a) fails to result in a sentence entailed by (2a).

(2) a. Only John bought a clock (does not entail)
   b. Only John bought a large clock

The problem, obviously, is that (2b) will only be true if John bought a large clock, but the truth of (2a) fails to guarantee that to be the case. To overcome this problem, von Fintel proposes that the relevant environment that licenses NPIs like any is not a downward entailing environment but rather a Strawson downward entailing environment. The crucial difference between these two is that an environment is Strawson downward entailing if it is downward entailing whenever the presuppositions of the sentences involved are satisfied. In the case at hand, the sentence in (2b) presupposes that John bought a large clock. In every situation in which (2a) is true and in which the presupposition of (2b) is satisfied, (2b) is true. Hence, clock is in a Strawson downward entailing position, making the position of anything in (1) also Strawson downward entailing. In this way von Fintel gives us a more empirically adequate characterization of the environments in which NPIs like any can occur.

While von Fintel’s characterization is a distinct improvement over Ladusaw’s, it leaves us with four problems. The most important problem is one inherited from Ladusaw – giving a characterization of the environments in which NPI any can occur does not constitute an explanation of why it can occur in these and only these environments.
This problem will be put off until we turn to developing our own analysis of NPI *any*. The remaining three problems we spell out in detail below.

### 2.1 The Problem of Presuppositions

In refining the environment in which NPIs can occur, von Fintel (1994) brought the licensing potential of *only* to light. However, this raises the challenging problem of how to account for the acceptability of sentences combining *only* and *any* such as (1). Given the standard analysis of *only*, we should expect this sentence to have the presupposition in (3a) and assertion in (3b) below.

(3) a. John bought anything
b. No one other than John bought anything

The problem is that the presumed presupposition in (a) is ungrammatical, and yet the original sentence is perfectly acceptable. And while it may be tempting to replace *anything* in (a) with a simple existential quantifier and ignore the problem, such an approach would give us no insight into why it is that NPIs like *any* are restricted in the way they are. In particular, such an approach would be as applicable to (3a) as an independent sentence as it would be to (3a) as a presupposition, and so we would end up with the prediction that as a sentence (3a) should be acceptable with the meaning that John bought something, counter to fact.

It could perhaps be suggested that the very concept of an ungrammatical presupposition is an absurdity, since presuppositions are characterized in a metalanguage by formal analysis while ungrammaticality is a property of expressions of an object language. The challenge, though, is to give a proper metalanguage formalization not only of *only* but also of *any* in a way that captures the restrictions on the distribution of the latter while also capturing the presuppositions associated with the former, and an analysis that simply treats *any* as an existential quantifier fails in this respect. It should be noted that in general when a sentence has a presupposition that would be ungrammatical if spelled out as an independent sentence, that results in the original sentence as a whole becoming ungrammatical, as can be seen below:

(4) *Only John gathered
Presupposition: *John gathered
Assertion: No one non-identical to John gathered

The problem with the presupposition of *only* in (1) could, of course, be obviated if we could analyze *any* as taking wide scope with respect to *only John*. In that case presumably all that would remain of *any* within the scope of *only* would be a variable.
Unfortunately, hope of generating such an analysis for only is slim at best. Under a structural account of scope, such an analysis would take the following form (e.g. at LF):

\[ \text{[Qx: thing (x)] (Only John bought x)} \]

The problem is that no value of Q in (5) – not some, no, every, most, few or any other determiner meaning – will give the sentence the correct truth conditions.

We take the problem posed by (1) to show that any must be the main operator of that clause. Were it to operate entirely within the scope of only John it would be impossible to avoid generating an ungrammatical presupposition, while locating it outside of only John would make it impossible to generate the proper meaning. Only by having any(thing) operate over only John is it possible to avoid these problems, since only then can any be licensed by only John without giving rise to unwanted presuppositions. We will support this claim by developing an analysis along these lines below. It is important to note, however, that the conclusion we draw from (1) is incompatible with an analysis like that of Jackson (1994,1995) which takes any to be licensed not by an operator but by an environment.

2.2 Illicit NPIs in DE Environments

The remaining two problems center around positions that qualify as DE (and hence as Strawson DE) and yet in which NPI any fails to be fully licensed.

2.2.1 NPIs under universal quantifiers

Kroch (1979), Linebarger (1980,1987) and Szabolcsi (2004) among others notice that universal quantifiers can block licensing of an NPI if they intervene between the NPI and its licenser.

(6)  
   a. She didn’t wear any earrings to every party. (Linebarger 1987)  
   b. No man gave every woman anything.

The example in (6b) shows that the intervention in question relates to the logical order of the interpretations of the expressions, not their linear order. Assuming that any is given an essentially existential interpretation (to be justified and expanded on below), while both of these examples are acceptable under a no(t) > any > every reading, neither is acceptable under a no(t) > every > any reading. Acceptability under the former interpretation is expected given the Ladusaw-von Fintel generalization about NPI licensing, since any earrings and anything in (6) occupy DE environments.
However, even when every takes scope over any, the positions occupied by any earrings and anything still qualify as DE environments, a fact noted by Linebarger (1980) that can be seen from the following entailment relations:

(7) \[ \neg[\forall x: \text{party}(x)] \ (\text{she wore earrings at } x) \ \rightarrow \ \neg[\forall x: \text{party}(x)] \ (\text{she wore gold earrings at } x) \]

(8) \[ \neg[\forall x: \text{man}(x)] \ ((\forall y: \text{woman}(y)) \ (x \text{ gave } y \text{ a gift})) \ \rightarrow \ \neg[\forall x: \text{man}(x)] \ ((\forall y: \text{woman}(y)) \ (x \text{ gave } y \text{ a nice gift})) \]

The unacceptability of these examples is thus unexpected under the Ladusaw-von Fintel generalization. Of course, since being in a (Strawson) DE position was never claimed to be a sufficient condition for licensing NPIs these examples are somewhat less problematic than the presupposition problem example considered earlier. Still, there is nothing in the characterization that suggests a reason for the blocking effects of every, and the examples further serve to highlight the non-explanatory nature of the environment characterization.

### 2.2.2  NPIs in subject position

The subject position of a negated clause is a downward entailing position, as can be seen by the following entailment.

(9) Men didn’t come \( \rightarrow \) Tall men didn’t come

Despite qualifying as a DE position, however, this position is one in which NPI any fails to be licensed:

(10) *Any men didn’t come.

This is problematic for analyses that base the distribution of any only on properties of the environment (or more specifically analyses that predict being a DE environment to be sufficient for licensing any). This example differs from those of the previous section, of course, in that here it is not obvious that any is in the scope of negation. This makes it possible to take the relevant licensing condition not to be a particular property of an environment as explicitly argued for in Jackson (1994,1995) but rather to be a relation between the NPI and a licensing operator. Once again the problem is not devastating, but it does show that an analysis is needed that will derive these effects.

We take (10) to show that the Ladusaw-von Fintel generalization should be cast as a
restriction on the relation of NPIs to a licensing operator, and not simply to an
environment. As a first approximation we take this restriction for any to be the
following, borrowing ideas from Ladusaw, von Fintel and Linebarger:

(11) *Any* is licensed by being in the immediate scope of a Strawson downward
entailing operator.

3. **Kadmon and Landman 1993**

K&L provide an account of NPI *any* that derives Ladusaw’s generalization interpreted
as a restriction on DE environments. The analysis consists of two parts. Semantically, *any*
is taken to denote an existential quantifier that widens the domain over which it quantifies. In addition, such widening is required to result in
strengthening, i.e. the resulting interpretation must entail the interpretation of the same
structure with respect to the pre-widening domain. This strengthening requirement
derives the restriction of *any* to DE environments.

While K&L’s analysis represents a clear conceptual advance over Ladusaw’s, it cannot
handle any of the three problems illustrated in the previous section. Consider first the
presupposition problem illustrated by (1) (*Only John bought anything*). The problem
here occurs at the point at which *only John* combines compositionally with *bought
anything*. For the resulting combination to be acceptable it must satisfy the
presupposition of *only*, namely that the interpretation of *bought anything* apply
truthfully to John. Given K&L’s analysis of *any*, this will be the case if and only if
John bought something among a wide domain of objects and his having done so entails
his having bought something among a pre-widened domain of objects. However, such
an entailment fails to go through. This results in the presupposition of *only* not being
satisfied, leading us to expect the example to yield presupposition failure. There is no
such failure, though.

The problem posed by intervening universal quantifiers is equally recalcitrant for
K&L’s analysis. As mentioned, the strengthening analysis has as a consequence that
*any* is restricted to DE environments (and not that it must be in a particular relation to a
DE operator). As we saw, however, a universal quantifier occurring in a DE
environment does not change the DE status of the environment within its scope. It is
thus predicted by K&L that *any* should be fine even when separated from its licensor by
every, contrary to fact. The exact same problem arises with *any* in subject position of a
negative sentence. While it is possible to account for these intervention effects by
supplementing their analysis with a syntactic restriction on the occurrence of *any*, it’s
clear that their analysis does not by itself account for these effects.
A separate problem specific to K&L’s analysis can be seen in the assumption that domain widening is taken to apply to all occurrences of *any*. As K&L themselves mention, it is only when *any* is focused that we get the intuition of domain widening. This observation remains unexplained under their analysis. We can go further, though, and show that widening of the domain has to be prohibited for occurrences of *any* that are not focused. Consider the following conversation among professors in the same department.

(12) A: Did you go to the university graduation ceremony?
    B: Yes, but I didn’t see any students so I couldn’t congratulate any students.

Given the fact that most students go to their graduation, it is implausible to take B’s comment to mean that he saw no university students whatsoever. More plausible would be to assume an implicit restriction to students in the department that A and B belong to. The first problem, then, is to see how this could plausibly represent a widening of the domain. If anything it looks more like a purposeful restriction of the domain. More damning, though, is the second occurrence of *any*. If *any* is required to expand the domain, then presumably the domain of individuals quantified over by the second occurrence of *any* should be wider than that quantified over by the first. However, if this were the case the conclusion would fail to follow from the premise. The fact that B failed to see students a, b or c does not justify concluding that he couldn’t congratulate a, b, c, d or e, so the word *so* should be inappropriate here, contrary to fact.

4. Proposal:
Our approach to accounting for the facts outlined in section 2 is to generate a presupposition from *any* that is unproblematic when *any* is in the immediate scope of a licensing operator but which gives rise to a strange consequence otherwise. Following Ladusaw (1979), we analyze *any* as contributing an existential quantifier to the assertive content within the scope of its licensor. The key to accounting for the presupposition puzzle illustrated in section 2.1 is to analyze the presuppositional contribution of *any* as introducing an existential quantifier that takes scope outside that licensing operator. This approach makes it necessary for *any* to be in a position where it can take that operator as an argument, accounting for Linebarger’s (1980) observation that *any* needs to be in the immediate scope of a licensor.

We propose to analyze *any* as a cross-categorial operator. For concreteness we assume that *any* $N$ raises at LF, adjoins to the operator that licenses it, and takes that operator
and the operator’s scope as separate arguments, as in (13).\footnote{\([\phi]^{x_i}\) is the result of analyzing every \(i\)-indexed trace inside of \([\phi]\) as the variable \(x\).}

\[(13) \quad \llbracket [\text{OP } [\text{any } N], \phi] \rrbracket =\]
\[
P(\text{resupposition}): \quad \text{APPLY } ([\exists x:N(x)]) ([\llbracket \text{OP} \rrbracket] (\llbracket \phi \rrbracket)^{x_i}))\]
\[
A(\text{assertion}): \quad [\llbracket \text{OP} \rrbracket \ (\text{APPLY } ([\exists x:N(x)]) (\llbracket \phi \rrbracket)^{x_i}))]
\]

We use the APPLY operator as a simple bookkeeping device, combining the expression in the scope of \([\exists x:N(x)]\) with whatever variables are needed to make it of type \(t\) and then lambda abstracting back over those variables just above the existential quantifier. Significantly, we derive all of the restrictions on \(\text{any}\) directly from this lexical semantic analysis.

The most straightforward application of the analysis of \(\text{any}\) is when it is licensed by sentential negation. If we analyze negation as a propositional operator, the APPLY function becomes superfluous and can be ignored. The relevant structure, presupposition (P) and assertion (A) for \(\text{John didn’t buy anything}\) will then be as follows:

\[(14) \quad \llbracket \text{not [anything}_1 \ [\text{John bought } t_1] \rrbracket \]
\[
P: \quad [\exists x:\text{thing}(x)] (\neg \text{John bought } x)\]
\[
A: \quad \neg [\exists x:\text{thing}(x)] (\text{John bought } x)
\]

According to the present analysis, this sentence presupposes that there is something that John didn’t buy and asserts that there’s nothing that John did buy.

The example in (1) that gave rise to the presupposition problem is more complicated in two ways. First, it involves embedded presuppositions, one from \(\text{any}\) and one from \(\text{only}\). Second, because \(\text{only John}\) is not a propositional operator the APPLY operator needs to fix up types appropriately so that things can combine as needed.

\[(15) \quad [[\text{only John}] \ [\text{anything}_1 \ [\text{bought } t_1]]]\]

The analysis generates the following presupposition and assertion from \(\text{any}\).

\[(16) \quad P_{\text{any}}: \quad \text{APPLY } ([\exists x:\text{thing}(x)]) ([[\text{Only John}]] (\llbracket \text{bought } t_1]^{x_i}))\]
\[
= [\exists x:\text{thing}(x)] \quad P_{\text{only}}: \quad \text{John bought } x\]
\[
A_{\text{only}}: \quad [\forall z \neq \text{John}] (z \text{ bought } x)\]
\[
A_{\text{any}}: \quad [[\text{Only John}] \ (\text{APPLY } ([\exists x:\text{thing}(x)]) (\llbracket \text{bought } t]^{x_i}))]
\]
To simplify things, we will assume that presuppositions embedded within another presupposition can be conjoined with the assertional content embedded within the latter presupposition. This makes the presupposition of any that there is something that John and only John bought. Adding the presupposition contributed by only within the assertion of any in this case is vacuous. The assertion of any ends up then as the assertion of only within A_any, namely that no one other than John bought something.

One consequence of the above analysis is that a sentence with anything in it is predicted to be acceptable only if anything can take a non-upward entailing operator as its first argument. To see why, consider the following simplified schematic illustration of the semantics.

\[
\text{(17)} \quad \text{Op anything } \phi \\
\text{Presupposes: } \exists x: \text{thing}(x) \circ (\text{Op } \phi(x)) \\
\text{Asserts: } \text{Op} \circ \exists x: \text{thing}(x) \circ \phi(x)
\]

If Op is upward entailing, then the presupposition in (17) will entail the assertion, making the assertion vacuous.\(^2\) For example, with the sentence *Everyone bought anything*, the presupposition that there is something everyone bought would entail the assertion that for everyone there is something he or she bought. It is plausible to take this entailment to make the sentence infelicitous with such an Op. Given this last assumption, it will follow that anything will have to be interpreted immediately adjacent to a licensing operator. This accounts immediately for the second problem above – the blocking effect of every – since if every intervenes between anything and its licensor at LF it will be impossible for any to take its licensor as its first argument. It also suggests that the problem with any N in subject position is a syntactic one: any N needs to be able to take two arguments, with the first (structurally higher) argument being a non-upward entailing operator. Plausibly, in the matrix subject position of a

---

\(^2\) Proof: Op is upward entailing iff for any \(\phi, \psi\), \((\phi \rightarrow \psi) \iff (\text{Op} \phi \rightarrow \text{Op} \psi)\).

\([\exists x: \text{thing}(x)]\) is upward entailing, so

For any \(\phi, \psi\), \((\phi \rightarrow \psi) \iff ([\exists x: \text{thing}(x)] \circ \phi \rightarrow [\exists x: \text{thing}(x)] \circ \psi)\)

If Op is upward entailing, then

\((\phi \rightarrow \psi) \iff (\text{Op} \phi \rightarrow \text{Op} \psi) \iff ([\exists x: \text{thing}(x)] \circ \phi \rightarrow [\exists x: \text{thing}(x)] \circ \psi)\) and

\((\phi \rightarrow \psi) \iff ([\exists x: \text{thing}(x)] \circ \phi \rightarrow [\exists x: \text{thing}(x)] \circ \psi) \iff (\text{Op} [\exists x: \text{thing}(x)] \circ \phi \rightarrow \text{Op} [\exists x: \text{thing}(x)] \circ \psi)\), hence

\(([\exists x: \text{thing}(x)] \circ \phi \rightarrow [\exists x: \text{thing}(x)] \circ \psi) \iff (\text{Op} [\exists x: \text{thing}(x)] \circ \phi \rightarrow \text{Op} [\exists x: \text{thing}(x)] \circ \psi)\)
simple negative sentence this possibility can’t be realized.³

The above explanation suggests that intervention effects should extend to all operators and not be limited to universal quantifiers. For example, a quantifier phrase such as *most presents* should not be able to intervene between a licensing negation and *any*, meaning that the scope order *not > most > any* should be impossible. As can be seen in (18), this prediction is borne out.

(18) a. John didn’t give anyone most presents
   b. John didn’t give most presents to anyone
      Not > any > most
      *Not > most > any

The fact that this restriction applies just as much to (18b) as it does to (18a) gives strong support to the analysis since it shows that the need for *any* to be licensed locally obviates the inherent preference for scope paralleling linear order.⁴

4.1 Objections and Refinements

³ There are two observations that need to be made here. First is that when an NPI licensing expression is fronted triggering Subject-Aux inversion there is no problem licensing *any N* in subject position, as in *Never has anyone done that*. Second is that licensing of *any N* in subject position is impossible in sentences with a wide scope object quantifier, as in *Anyone saw only John*. Note that topicalizing an NPI licenser does not help in this kinds of examples: *Only John anyone saw.* (Cf. *Only John did anyone see.*) While our analysis does not account for these facts directly, it will do so if SAI raising is retained at LF while topicalized expressions are reconstructed.

⁴ Certain adverbs appear to be exceptions to this generalization when occurring with negation, though not when occurring with QP licensors. Thus compare the following:

i: John didn’t regularly/always buy anything.
   Not > regularly/always > any, *Not > any > regularly/always

ii: No one regularly/always bought anything
   *No > regularly/always > any, No > any > regularly/always

The fact that *any* can’t be interpreted between negation and these adverbs suggests that the relation between the negation and the adverbs might be something special. Indeed, these two expressions appear to function as a single constituent when fronted, as in:

iii: Not regularly/always did John buy anything.

This suggests that the adverbs might be forming a constituent with negation in (i) as well, in which case it would be the negation-adverb combination which will have to act as the licenser for *any*. This is consistent with our analysis of multiple occurrences of *any* given below.
While the above analysis gives a plausible account of the facts uncovered in section 2, it raises three questions. The first is how it is that having the presupposition of a sentence entail its assertion leads to awkwardness. It is, after all, not similarly infelicitous to utter a sentence that is entailed by the context it occurs in – repetition can be used for various effects – and the main pragmatic role of presuppositions is to ensure that the context entails the proposition presupposed. Still it could be argued that uttering a proposition already entailed by the local context differs from uttering a sentence whose assertion is entailed by its own presupposition, since in the latter case the assertion is guaranteed to do no work beyond what is accomplished by the presupposition.

It is unfortunately very difficult to find other examples of sentences with presuppositions that entail their assertions that we can use to test our analysis. The following sentence might be felt at first to do so.

(19) The Queen of England is an English queen.

However, on reflection it can be seen not to. The definite description presupposes that there is exactly one queen of England. The assertion, however, is not about there being an English queen. It’s about a particular individual who is taken to be that queen. And the existence of a unique English queen does not entail anything about the person who happens to be that English queen, not even the fact that she is the queen. Thus, while it is unclear exactly how awkwardness of a sentence should follow from its presupposition entailing its assertion, it is also difficult to falsify the claim.

The second question that arises is whether the presupposition that the analysis generates is correct. In this regard, consider the following example.

(20) John doesn’t like any unicorns

According to the proposal, this sentence presupposes that there are unicorns that John doesn’t like, and yet that contradicts our general understanding about the existence of unicorns. However, we take this consequence of the theory to be not entirely undesirable. First, one does get the sense that the speaker of (20) suggests that there are unicorns. This becomes even clearer when the sentence is contrasted with John doesn’t like unicorns. And while the suggestion is easily cancelled by following the sentence with That’s because there are no unicorns, the same holds for presuppositions

5 Note that a similar problem arises for van Rooij (2008), who assumes that an occurrence of NPI any N presupposes the existence of Ns.
generated by definite descriptions in the same context. For example, a person who utters *John doesn’t like the king of France* can very easily continue by saying *That’s because France has no king* without clear infelicity. And as argued by von Fintel (1999), even in cases like these where the feeling of there being a presupposition is relatively weak, a case can be made that the presupposition exists nonetheless. For the present case, this can be shown by following (20) with:

(21) Wait a minute. I didn’t know there are unicorns.

Of course, the presupposition we are arguing for is not a mere existence presupposition. And while the existence presupposition can be felt to be intuitively present, this is less clear with the presupposition we argue for. It is, after all, not natural to follow (20) with:

(22) Wait a minute. I didn’t know there are unicorns John doesn’t like.

Still, in this case the objection in (22) entails the objection in (21), and the former is the more plausible objection given our world knowledge. Indeed there are few if any situations in which the more complete latter objection would be more appropriate than the former, so this could hold quite generally.

The third question that arises is how our analysis interacts with presupposition projection. When a sentence S having presupposition P is embedded under another operator A, one of several things can happen. The full sentence AS can inherit the presupposition of S, inheritance can be blocked, or A can operate on P and yield a more complex presupposition. These three behaviors are illustrated below.

(23) a. It’s significant that John will sell his cello. P: John has a cello
    b. John said he’ll sell his cello. P: –
    c. John believes he will sell his cello. P: John believes he has a cello.
       (Heim)

Unfortunately, only the last of these behaviors makes it possible to maintain our simple presupposition analysis without having to make unmotivated assumptions. Consider the sentence *Everyone bought anything*. According to the analysis of section 4 this sentence is bad because its presupposition – that there is something that everyone bought – entails its assertion – that everyone bought something. Once we embed this sentence, however, that relation between presupposition and assertion can disappear. Thus, in (24a) and (24b) below, the predicted presupposition of the matrix sentence fails to entail the assertion of that sentence.

12
(24)  a. *It’s significant that everyone bought anything.
   Predicted P:  There’s something that everyone bought (some > every)
   b. *John said that everyone bought anything.  P:  –
   c. *John believes everyone bought anything.
   Predicted P:  John believes there’s something everyone bought (K. Von Fintel 1999)

Only in the case of (24c) does the entailment go through. If having a presupposition that entails an assertion is what makes any unlicensed, we would expect anything to be acceptable in (24a,b) but unacceptable in (24c). This prediction is not borne out, however.

This problem highlights a part of the proposal that it shares in common with K&L and others, namely that it predicts that the licensing of any should be determined by properties of the entire matrix sentence that it is included in. The failure of the analysis to apply under embedding suggests that this aspect of the analysis needs to be revised. It would be possible to claim, of course, that what counts is not the entailment relations between the presupposition and assertion of the matrix sentence but rather that at every point in the composition of a sentence. However, it is difficult to see how the local entailments of a presupposition can lead to awkwardness of a larger utterance. Indeed it is even more difficult than seeing how presuppositions entailing assertions at the matrix level leads to infelicity in the first place.

To preserve the general explanation, we revise the presupposition generated by any. Rather than generate a simple existential presupposition, we propose a more complicated one, namely that the presupposition in the original analysis of any not entail the assertion. This presupposition is generated from the combination of any with its licensing operator and its nuclear scope. While the revision keeps the general character of the explanation intact, the unacceptability of unlicensed any is derived from presupposition failure rather than from entailments of the presupposition. The revised analysis of any is given below.

(25)  \[ [[\text{OP} [\text{any N}], \varphi]] = \]
   P:  APPLY ([\exists x: N(x))] ( [[\text{OP}]] ([[\varphi]]_{x}))
       does not entail  [[\text{OP}]] (APPLY ([\exists x: N(x))] ( [[\varphi]]_{x}))
   A:  [[\text{OP}]] (APPLY ([\exists x: N(x))] ( [[\varphi]]_{x}) )

Applied to (20), it yields the following presupposition: there being a unicorn that John doesn’t like fails to entail there not being a unicorn that he does like. This is a
perfectly acceptable result. Applied to the example in (1) it yields the presupposition that there being something that only John bought fails to entail only John having bought something, a presupposition that is once again satisfied as required. And applied to an example like *Everyone bought anything*, the presupposition is the following: that there is something that everyone bought does not entail that everyone bought something. And this presupposition is not satisfied. This revised analysis thus now produces a presupposition failure for sentences that either lack a proper licensing operator or in which *any* does not occur immediately below such an operator at LF, and the presupposition failure is local.

5. Applying the Analysis with Other Licensors

We have so far limited our attention to a small range of examples, and in particular have not looked too closely at the operators that qualify as NPI licensors. In this section we examine a broader range of licensors and show how our analysis applies in several other cases. While there are many cases that could be used for illustration, beyond the first case of sentential negation we select only those licensors where application of the analysis is non-obvious or where it brings in something novel.

5.1 Negation

We have already seen how the simplified analysis applies in the case of negation. For completeness we include here the results from the full analysis, once more using the sentence *John didn’t buy anything* for illustration.

(26) [not [ anything ] [ John bought t ]]

P: [∃x:thing(x)](¬John bought x) does not entail ¬[∃x:thing(x)](John bought x)
A: ¬[∃x:thing(x)](John bought x)

Since there being something that John didn’t buy fails to entail there being nothing that he did buy, the presupposition is satisfied. The sentence then asserts that there is nothing that John bought, in accord with intuition.

5.2 *Any* in the Restrictive Clause of Quantifiers

Occurrences of *any* in the restrictive clause of a quantifier make it necessary to analyze the notion of entailment employed in the presupposition of *any* as cross-categorial. To see why, consider the sentence *Every boy who bought anything was happy*. We take the LF structure to be that given below.6

---

6 It is probably more plausible to analyze *every boy* as a constituent, with *anything*
Applying the semantics of *any* directly to its two arguments *every* and *boy who bought t1*, we derive the following presuppositional and assertional parts:

\[
\text{P: } \lambda P. \exists x: \text{thing(x)} \left( \left[ \text{Every } y: \text{boy(y) and } y \text{ bought } x \right] (P(y)) \right)
\]

\[
\text{A: } \lambda P. \exists x: \text{thing(x)} \left( \left[ \text{boy(y) and } y \text{ bought } x \right] (P(y)) \right)
\]

While the assertional part will then combine with the predicate *was happy*, however, the presuppositional part does not: the presupposition triggered by *any* only involves its two immediate arguments, not the arguments of these arguments. That means we need to be able to determine whether entailment holds between two quantifier meanings here, not between two propositions. For that we need to employ cross-categorial entailment, which we define as follows:

\[
\text{(29) Cross-Categorial Entailment (⇒)}
\]

For p,q of type \(\langle s,t \rangle\): \(p \Rightarrow q\) iff \(p\) entails \(q\), i.e. if \(\{w: p(w)\} \subseteq \{w: q(w)\}\)

For \(f,g\) of type \(\langle \sigma,\tau \rangle\), \(\sigma\) and \(\tau\) types, \(f \Rightarrow g\) iff for all \(x\) of type \(\sigma\): \(f(x) \Rightarrow g(x)\)

Given this definition, the entailment in (28) will fail to go through as long as *Something is such that every boy who bought it P* fails to entail *Every boy who bought something P* for some property \(P\). We can show that the entailment does indeed fail to go through by choosing as \(P\) the property of being happy (or of being unhappy, for that matter). Thus we see that the presupposition of *any* is satisfied here, and we can thus derive the assertion below for the sentence.

\[
\text{(30) A: } \left[ \text{Every } y: \exists x: \text{thing(x)} \left[ \text{boy(y) and } y \text{ bought } x \right] \right] (\text{happy}(y))
\]

This same analysis will apply to all quantifiers. That is, if substituting a quantifier for \(Q\) in (31) below makes the statement true, then that quantifier is predicted to license *any* in its restrictive clause.

\[
\text{(31) } \lambda P. \exists x: \text{thing(x)} \left[ \left[ Q \ y: \text{boy(y) and } y \text{ bought } x \right] (P(y)) \right]
\]

operating over this constituent and the relative clause it selects. While the details of the derivation would change, the analysis would go through equally as well and with the same semantic consequences. We use the structure in (27) because it represents the more standard assumption in the semantic literature. Cf. Heim and Kratzer (1998).
does not entail \( \lambda P. [Q y: [\exists x:\text{thing}(x)](\text{boy}(y) \text{ and } y \text{ bought } x)](P(y)) \)

Of particular interest are the quantifiers exactly \( N \) and \( \text{most} \). While these quantifiers are not downward entailing in their restrictive clauses, and in fact not even Strawson downward entailing, they do license occurrences of \( \text{any} \) there, which is exactly what the present analysis predicts, as the reader can verify.

### 5.3 Surprise, Doubt, Deny

When we look at instances of NPIs licensed by embedding verbs like \( \text{surprise}, \text{doubt} \) and \( \text{deny} \) we find some interesting consequences. As observed in Progovac (1988), the verbs \( \text{doubt} \) and \( \text{deny} \) license \( \text{any} \) in a complement clause but not in direct object position, as can be seen below.

(32) a. *John doubts/denies anything
   
   b. John doubts/denies that anything happened

This is exactly what is predicted on our analysis. The only word that could possibly act as a licensor in each of these sentences is the verb. Raising \( \text{anything} \) to the position immediately below the verb, however, will result in an ill-formed presupposition and assertion in the case of (32a). The assertion would require \( \text{deny/doubt} \) to combine with an existential quantifier quantifying exclusively over its own trace, yielding the following:

(33) \( \lambda z. [z \text{denies/doubts } ([\exists x:\text{thing}(x)](x)) \]

The presupposition would contain this same ill-formed interpretation, making the sentence uninterpretable. In the case of (32b), of course, there will be no problem licensing \( \text{any} \) since the existential quantifiers it contributes will all have scope over something propositional as required.

The case of \( \text{surprise} \) adds a small twist to the above account. Like \( \text{deny} \) and \( \text{doubt} \), \( \text{surprise} \) licenses \( \text{any} \) in its sentential complement but not in its direct object, as seen below.

(34) a. *It surprised anyone Bill came
   
   b. It surprised Bill anyone came

---

\(^7\) The sentence is more or less acceptable under a free choice interpretation of \( \text{any} \), a reading we put aside throughout this paper.
The fact that the direct object and sentential complement can both occur together has no effect on the explanation of the badness of (34a). Here just as with (32a) above, trying to have any licensed by the verb results in an illicit quantification of the form $[\exists x: \text{thing}(x)](x)$. If moving anyone adjacent to surprise were the only way to have anything licensed, however, (34b) should be at least as bad as (34a). Indeed, mechanical application of the semantics of any in that case would yield the assertion below, in which the existential quantification is again uninterpretable. Depending on the exact syntax and semantics of surprise, the variable in the embedded VP could also potentially end up free.

(35)  surprised ($[\exists x: \text{thing}(x)](\text{Bill})$) (x came)

Fortunately we are not forced to analyze the sentence in this manner. We have in addition the option of taking the licenser of any to be the phrase surprise Bill. Under this analysis, anything will raise to adjoin to surprise Bill as in (36a) and will generate the presupposition and assertion in (36b).

(36)  a.  [it [surprised Bill] [anyone1] [t1 came]]
     b.  P:  $[\exists x: \text{thing}(x)]$ (surprised Bill x came)
         does not entail (surprised Bill ($[\exists x: \text{thing}(x)]$ (x came))
         A:  (surprised Bill ($[\exists x: \text{thing}(x)]$ (x came))

5.4 Questions

It is widely observed that questions can license NPIs like any, and yet questions are neither upward nor downward entailing. Indeed the very notion of entailment would appear at first glance to be completely inapplicable to questions. This makes applying the analysis developed above to questions a challenge. Whatever we do to account for questions will thus have to involve an extension of the analysis in some way. We choose to maintain the centrality of entailment in the analysis of any and to define what it means for one question to entail another.

The analysis given of any requires that there be some expression within the same sentence that licenses it. In a yes-no question we take that expression to be a covert

---

8 This option of course assumes that surprised Bill is a syntactic constituent, an assumption that could be called into question based on the fact that a quantificational object can bind into the embedded clause, as seen below.

i:  It surprised no one1 that he1 failed.
question operator ? . Thus the LF associated with the question Did anyone come? will be that in (37).

(37) ? anyone1 [t1 came]

A straightforward attempt to interpret this will give us the following presupposition and question:

(38) P: APPLY [∃x:person(x)] (? x came)  
    does not entail ? [∃x:person(x)] (x came)  
Q: ? [∃x:person(x)] (x came)

This poses two challenges. The first is to figure out how the existential quantifier can be applied to a question. The second is to determine what it means for the result to entail (or not) another question.

According to Hamblin's (1973) semantics of questions, a yes-no question p? denotes the set of all possible complete answers to the question, namely {p, ¬p}. Given this assumption, a natural way to modify the notion of entailment to apply to questions would be as follows:

(39) Question Q entails question Q' iff for all q' in Q' there is some q in Q such that q entails q'.

With this extension of the notion of entailment we can now ask when a particular question entails another. A little thought will immediately show that in the case of yes-no questions no question will entail another in this way unless the two questions are identical. The reason for this is simple. A yes-no question p? partitions the space of possible worlds into two pieces: a p piece and a not p piece. For the p piece to be entailed by another question q?, either the q worlds or the not q worlds will have to be a subset of the p worlds. Suppose it’s the q worlds that are a proper subset of the p worlds. Then the not q worlds cannot be a subset of the not p worlds. Indeed, by the definition of partition, the subset relation is guaranteed to go the other way: the not p worlds will be a subset of the not q worlds. This means that when p? and q? are different questions, at most only one of p and not p can be entailed by q? and hence that p? cannot be entailed by q?. Only in the case where the two questions partition the worlds identically will both propositions in one of the questions be entailed by some proposition in the other. In that case, each of the questions will entail the other, which is to say that any yes-no question entails exactly one yes-no question: itself.
Adopting the modified definition of entailment above goes a long way toward explaining why any is licensed in questions, especially if we analyze wh-questions as based on yes-no questions. However, we still have the technical problem of determining how the existential quantifier \( [\exists x : \text{person}(x)] \) in (38) combines with the question \( ?x \text{ came} \) in that example. Building on Higginbotham (1996),\(^9\) we can take the combination to involve quantification into the question, which will yield a set of blocks of partitions. In our case, the partitions in question will all have the form \( \{x \text{ came}, \neg x \text{ came}\} \). Every block of partitions will contain a partition of this type for at least some individual \( x \). Under Higginbotham’s analysis, if we have individuals a and b we will have the following set of blocks of partitions denoting the question.

\[
(40) \{ \{a \text{ came}, \neg a \text{ came}\} \\
\{b \text{ came}, \neg b \text{ came}\} \\
\{a \text{ came}, \neg a \text{ came}\}, \{b \text{ came}, \neg b \text{ came}\} \}
\]

This suggests that the question can be answered either by answering whether a came, by answering whether b came, or by answering both whether a and whether b came. Including this last option in the semantics of the question, of course, is entirely superfluous since answering both questions will count as a complete answer by virtue of the fact that it answers every question in each of the first two blocks. While including this superfluous block in the question is harmless as far as identifying complete answers is concerned, however, doing so has unwanted consequences for incorporating quantification into questions into our analysis of any. We will thus eliminate the superfluous block by assuming that each block in the set of blocks of this type of question has the minimal number of partitions required by the quantifier. In our case, with the quantifier being some we will only admit blocks with a single partition. Thus we revise the denotation of the question as follows:

\[
(41) \{ \{a \text{ came}, \neg a \text{ came}\} \\
\{b \text{ came}, \neg b \text{ came}\} \}
\]

A complete answer to such a question is a proposition that completely answers every partition in one of the blocks. Thus the answer a came would count as a complete answer to this complex question since it is a complete answer to the single question contained in the first block, namely the question of whether a came.

\(^9\) Higginbotham gives the following interpretation for quantifying into a question X:
If X is translated as \( \alpha \), Q as Q*, and Y as \( \delta \), then \([[[Q[\pi]Y]],[\text{CP}X]]\) is translated as:
\[
(\lambda V)(\forall \pi)(V(\pi) \rightarrow (\exists x_i) \pi = \alpha) \& [Q^*x_i;\delta](\exists \pi)(V(\pi) \& \pi = \alpha)
\]
With this understanding of how to interpret quantification into questions, we can revise our notion of entailment among questions to fit. Our earlier analysis of entailment was based on the assumption that a yes-no question contained a set of propositions, where each proposition in the set constituted a complete answer. No distinction needed to be made between being a complete answer and being a member of the set denoting the question. With sets of blocks of partitions as a potential form for questions, however, this identification can no longer be assumed. We propose to make use, then, not of members of the relevant set denoted by a question but rather of complete answers to a question.

(42) A question Q entails a question Q' iff every complete answer to Q' is entailed by some complete answer to Q.

We can now apply this definition in the case of our question *Did anyone come?* Taking the set of blocks of partitions in (43) to be the denotation of the question \([\exists x: \text{person}(x)] \ (? x \ \text{came})\), the list of possible complete answers to this question will be the following:

(43) a came, ¬a came, b came, ¬b came

The question \(? [\exists x: \text{person}(x)] \ (x \ \text{came})\) is a simple yes-no question, where the quantification is contained within the question. It thus denotes a simple partition, namely:

(44) \{[\exists x: \text{person}(x)] \ (x \ \text{came}), ¬[\exists x: \text{person}(x)] \ (x \ \text{came})\} = \{\text{Someone came, No one came}\}

The proposition *someone came* in this latter question is entailed by the proposition *a came* (as well as by *b came*). However, the proposition *no one came* is not entailed by any of the complete answers to the former question. We thus see that the question \([\exists x: \text{person}(x)] \ (? x \ \text{came})\) fails to entail the question \(? [\exists x: \text{person}(x)] \ (x \ \text{came})\). Returning now to the analysis of the question *Did anyone come?*, we can now see from this fact that the presupposition induced by *any* is satisfied, and that the question gets interpreted as (45).

(45) \(? [\exists x: \text{person}(x)] \ (x \ \text{came})\)

While we will not go into a detailed analysis, analyzing *if*-clauses as introducing questions along the lines of Starr (2009) will make it possible to extend the analysis of questions to explain the licensing of *any* in conditionals.
6  Multiple Occurrences of *Any*

One of the obvious properties of NPIs is that they can be iterated within a single sentence, as seen below:

(46) Nobody gave anyone anything

Given that our analysis requires *any N* to raise and adjoin to a licensing operator, this might be felt to be problematic. After all, at most one of the two occurrences of *any N* in (46) can adjoin directly to *Nobody*. However, the analysis actually predicts that such multiple occurrences of *any* should be allowed. To see this, consider the derivation of (47) given below.

(47) [[[Nobody] anyone₁] anything₂] [gave t₁ t₂]

P_{anything} : (∃x:thing(x)) ((( Nobody anyone₁ )) ([[gave t₁ t₂]])^{x/1,y/2})

does not entail [[[Nobody anyone₁]] (∃x:thing(x)) ([[gave t₁ t₂]])^{x/1,y/2})

= [[∃x:thing(x)] P_{anyone} : (∃y:person(y)) (Nobody gave x y)

does not entail

[No z: person(z)] [∃y:person(y)] (z gave x y)

A_{anyone} : [No z: person(z)] [∃y:person(y)] (z gave x y)

does not entail

P_{anyone} : [∃y:person(y)] ([No z: person(z)] [[∃x:thing(x)] (z gave x y)])

does not entail

[No z: person(z)] ([∃y:person(y)] (z gave x y)))

A_{anyone} : [No z: person(z)] (∃y:person(y)) (z gave x y))

A_{anything} : [[[Nobody anyone₁]] (∃x:thing(x)) ([[gave t₁ t₂]])^{x/1,y/2})

=P_{anyone} : [∃y:person(y)] ([No z: person(z)] (z gave x y))

does not entail

[No z: person(z)] (z gave x y))

A_{anyone} : [No z: person(z)] (z gave x y))

The derivation is fairly complicated, and once again it forces us to deal with presuppositions embedded within other presuppositions. If we assume once again that within the scope of one presupposition all other presuppositions and assertions simply get conjoined, we can simplify this somewhat as follows:

(48) X = For some thing x, there being someone that nobody gave x to does not entail there being nobody who gave x to a person, and nobody gave x to a person.

Y = That there’s a person who nobody gave anything to does not entail that
nobody gave a person a thing, and nobody gave a person a thing.

P: Y, and X does not entail Y
A: Nobody gave a person a thing

While this is still very complex, note that P can be established by establishing X and Y and then establishing that there being a thing that nobody gave to a person does not entail there being nobody who gave a person a thing.

7 Blocking and Non-Blocking Operators

We have so far noted that neither universal quantifiers nor distributive numeral quantifiers can intervene semantically between any and its licensor. We took this as motivation for the movement-to-licensor analysis that we gave. However, it turns out that there are some quantifier-like expressions that can be interpreted between any and its licensing operator. Jackson (1995) gives the examples of more than a few and indefinite a, though we can add bare plurals and non-distributive weak quantifiers to the list, as seen below:

(49) a. No student gave more than a few people any apples
    b. No student gave a teacher any apples
    c. No student gave teachers any apples
    d. No student gave 3 teachers any apples
    e. No student gave many teachers any apples

The judgments become even clearer when the quantifier expressions are placed into the there-construction, where only the weak readings of the expressions are possible independently.

(50) a. No one thought there were (3/many/more than a few) students eating anything

These examples contrast with strong quantifiers, which are seen to be uniformly bad under the relevant interpretation. (Judgments are for a not > Q > any interpretation.)

(51) a. *No student gave at least a few people anything
    b. *No student gave each teacher anything
    c. *No student gave most teachers anything
    d. *No student gave both teachers anything

We tentatively account for this difference by analyzing the weak expressions in (49) and (50) as denoting properties rather than quantifiers. If we follow Landman (2000) in
allowing property-denoting arguments of a verb to be entered directly into the verb’s event domain, then the different interpretational possibilities found for these expressions could be derived from the many different interpretations made available by this process.

8 Domain Widening

As mentioned in section 3, K&L propose that any widens the domain it quantifies over, and require that the widening result in strengthening. This analysis had an intuitive appeal for occurrences of any that are focused, though as we saw it made problematic predictions when any is not focused. That is, K&L predict widening to occur everywhere, while at best it only occurs with focus. The analysis developed in section 4 goes to the other extreme. There is nothing in that analysis that would lead one to predict a widening of the domain of quantification under focus any more than without focus. In this respect the present analysis does not surpass K&L—it trades over-generation in for under-generation. In this section we make a tentative proposal to rectify this situation.

As a starting point, we accept the observation that focus on any in a simple sentence gives rise to an impression of domain widening. We further accept that this domain widening is specific to any and does not occur with other determiners. The question that remains is how to account for the widening effect of focus without predicting widening everywhere. To this end, we propose that any differs from other determiners in including a domain of quantification variable in its semantics. We can implement this suggestion by adding the variable C to the semantics of any as follows:

\[(52) [[OP \lceil \text{any N} \rceil \varphi]] = \]
\[P: \text{APPLY} ((\exists x: [N \cap C](x))) ([[\varphi]]^{\chi}) \]
\[\text{does not entail} \quad [[OP]] (\text{APPLY} ((\exists x: [N \cap C](x))) ([[\varphi]]^{\chi})) \]
\[A: \text{APPLY} ((\exists x: [N \cap C](x))) ([[\varphi]]^{\chi}) \]

What this does for us is make it possible for focus to contrast the domain of quantification with some previously occurring domain. This gives us a natural account of discourses like the following.

\[(53) A: \text{Did you see any students at graduation?} \]
\[B: \text{No, I DIDn’t see any students. In fact, I didn’t see ANY students. I didn’t go.} \]

A’s question can naturally be taken in the right context to be asking B whether he saw any of his own students, or perhaps any of A or B’s students, and B’s first response with
any can be taken to answer this question as intended. B’s focus on any in his second sentence can then be taken to contrast this latter occurrence of any students with the former occurrence. Under plausible assumptions, the occurrence of the free variable C is the only possible locus of a difference in the interpretation of these two sentences. If we take focus to require contrast, we can then derive the observed fact that the domain of quantification changes in B’s second sentence.

While predicting the location of contrast in this manner is a desirable result, the account is not yet complete. After all, requiring a focused occurrence of any to contrast in its domain of quantification does not guarantee that the contrast will result in widening rather than in narrowing – either would justify contrastive focus. For this we will need to tell a story for why speakers always choose to widen rather than to narrow. And such a story can be told. Widening of a domain has a natural target – widening to the domain of all individuals. Narrowing, on the other hand, does not. The only unique target one could hope to aim for would be the empty domain, but taking C to be empty in (53) leads to an inherent contradiction in the presupposition of any. If no other target is uniquely available through narrowing, it is plausible that narrowing will never be allowed, leaving widening to the full domain of individuals as the only pragmatically available option.

This sketch is not intended as a definitive analysis of how focus on any gives rise to the impression of domain expansion. Doing justice to the analysis would require an in-depth analysis of how domains of quantification can arise and change through the course of discourse as well as of what determines availability of domains for anaphoric interpretation, questions that are orthogonal to the main concerns of this paper. What is important, however, is that there is a plausible path by which the analysis of any given in section 4 of this paper could be extended to account for one of the core intuitions behind K&L’s analysis.

9 Conclusion

In this paper we have been concerned with the semantics of NPI any. We showed that under standard assumptions an occurrence of any licensed by only will give rise to a problematic presupposition, one in which any must occur but is not properly licensed. We overcame this problem by proposing that any is the main operator of such a sentence, making it possible for any to contribute only a run-of-the-mill existential quantifier to the presupposition of only. In implementing this proposal, we took any to move at LF and adjoin to the operator that licenses it. A Cooper storage account could be developed as easily and would not raise questions

10
entailing operator, the resulting interpretation was analyzed as resulting in presupposition failure, while if adjoined to a non-upward entailing operator the result was well-formed. In this way we accounted for the licensing of *any* entirely from its semantics.

In accounting for the properties of *any*, we argued that the acceptability of *any* should be determined by its semantic relation to a licensing operator, not simply by properties of the environment it finds itself in. In this regard our analysis differs from a range of analyses stemming from K&L, including Krifka (1994), Lahiri (1998) and van Rooij (2003, 2008) as well as proposals by Jackson (1994, 1995). We take the purely semantic nature of our analysis to be a strong point in its favor in that it provides all of the mechanisms needed to connect NPI licensing to both the NPI itself and its licensor.

The analysis developed in this paper has been for the word *any*, and not for NPIs in general. Given the near identical licensing conditions for *ever*, it is natural to extend the analysis to this word as well. Other NPIs, though, differ in their licensing conditions from *any* and *ever*. *At all*, for example, is not licensed by comparatives, *any more* is in addition not licensed by *before*, minimizers like *a red cent* are fine under *before* but not with comparatives, can’t be used in questions except rhetorically, and are marginal in the scope of *only*, though unlike *any* are fine in the associate of *only*, and punctual *until* is essentially only licensed by negation and in the nuclear scope of DE quantifiers. None of these differences have been accounted for in this paper. The analysis developed for *any* does, on the other hand, suggest that a presuppositional analysis might be developed for these other items as well. Under such an approach, the differences in licensing environments would have to come from differences in the details of the presuppositions associated with each of these items. While we take this to be a promising avenue of research, it is not one we will undertake here.

**References**


about the legitimacy of the movement operations we have assumed. We leave that as an option for the reader to explore.


