

ANY AS INHERENTLY MODAL*

ABSTRACT. The primary theoretical focus of this paper is on Free Choice uses of *any*, in particular on two phenomena that have remained largely unstudied. One involves the ability of *any* phrases to occur in affirmative episodic statements when aided by suitable noun modifiers. The other involves the difference between modals of necessity and possibility with respect to licensing of *any*. The central thesis advanced here is that FC *any* is a universal determiner whose domain of quantification is not a set of particular individuals but the set of possible individuals of the relevant kind. In a theory of genericity utilizing situations, an *any* phrase can be seen as having a universal quantifier binding the situation variable of the common noun. This inherent genericity is argued to be at the heart of the intuition that *any* statements support counterfactual inferences and do not involve existential commitments. A conflict in presuppositions is shown to account for the incompatibility of unmodified *any* phrases in affirmative episodic statements and the crucial role played by modification in ameliorating this clash is explicated. In the case of modals of necessity, the interaction between the universal force of *any* and the particular modal base is shown to be crucial. In view of these facts it is argued that FC *any* is not directly licensed by modal or generic operators as generally assumed but that its felicitous use is sensitive to the pragmatics of epistemic modality. Turning to its polarity sensitive uses, language internal as well as crosslinguistic evidence is presented to distinguish it from FC *any* in having the existential quantificational force typical of indefinites. The paper concludes by suggesting that the common tie between them is that they both occur in statements that apply to a class of entities, rather than to particular members of the class.

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1. SOME BACKGROUND

1.1. *The Phenomena*

English *any* has been noted to have a split personality by Horn (1972), Ladusaw (1979), Carlson (1981), among others. In its polarity sensitive (PS) incarnation it is licensed in negative, or more generally, downward entailing, contexts where it can be interpreted as a narrow scope existential or a wide scope universal. In its Free Choice (FC) incarnation it is licensed in modal and characterizing statements where it is interpreted as a wide scope universal.¹ Regular episodic statements in the affirmative do not license FC or PS *any*. This pattern of distribution is shown in (1) and (2):^{2,3}

- (1)a. John didn't talk to any woman.
- b. Any owl can hunt mice.
- c. Any owl hunts mice.
- (2)a. *John talked to any woman.
- b. *Any woman contributed to the fund.
- c. *Any man didn't eat dinner.

Though these generalizations have substantive validity, they are not completely accurate. The generalization that *any* is restricted to modal, characterizing and negative contexts is open to one significant caveat. Non-negative episodic statements may license an *any* phrase if it is modified by a subordinate clause, such as a relative clause. Licensing by a subordinate clause was dubbed *subtriggering* by LeGrand (1975) and that is the term we will use to refer to this phenomenon. The subtriggered cases in (3) contrast sharply with (2):⁴

¹ I use the term *characterizing*, following Krifka et al. (1995), to refer to statements which express generalizations as opposed to reporting on particulars. Habitual statements, which are also characterizing, are discussed in Note 26.

² (2c) is unacceptable because the subject position in English is not in the scope of negation, at least with neutral intonation. The issue of scope inversion under appropriate intonational contours is addressed in section 3.3. Languages like Hindi, Japanese or Korean, however, where negation can normally take scope over subjects license PS items in that position (Davison (1978), Mahajan (1990), Kawashima (1994), Dayal (1995b), Lahiri (1995) and Lee (1996)).

³ In many cases where I use *, the relevant judgement is felt to be that of awkwardness or oddity rather than ungrammaticality. I will abstract away from this distinction unless it affects the discussion in a material way.

⁴ Vendler (1967) classifies such examples as unacceptable. I disregard his judgement since the acceptability of such cases has also been documented in the literature and may be easily verified by checking with native speakers.

- (3)a. John talked to any woman who came up to him.
- b. Any woman who heard the news contributed to the fund.
- c. Any man who saw the fly in the food didn't eat dinner.

A second problem has to do with the generalization that *any* is licensed in modal contexts. In fact, this can only confidently be said of modals of possibility. Licensing by modals of necessity is less reliable. This can be illustrated with the permission-command pair in (4) and epistemic possibility vs. necessity in (5). That modals of necessity do not always disallow *any* is shown by examples like (6):⁵

- (4)a. You may pick any flower.
- b. *You must pick any flower.
- (5)a. Any pilot could be flying this plane.
- b. *Any pilot must be flying this plane.
- (6)a. Any student must work hard.
- b. Any doctor will tell you that.
- c. Any soldier should be prepared to die for her country.

Licensing via subtriggering as well as the differential licensing properties of modals of necessity vs. possibility have been noted by LeGrand (1975), Davison (1980) and Carlson (1981) but have not received much attention in the literature. The thrust of the investigations has been on defining downward entailing contexts, locality conditions on licensing, and determining whether the quantification associated with FC/PS items is universal or existential. In an earlier paper I tried to use the subtriggering and the modality cases as a window into the essential nature of *any* (Dayal 1995a). The present paper may be seen as another attempt in the same direction.

1.2. FC 'Any' as Generic Indefinite

1.2.1. Kadmon and Landman (1993)

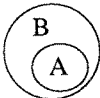
To appreciate the nature of the problems posed by subtriggering and modality, it may be worthwhile to see how they fare in some of the current theories of FC *any*, among the most prominent of which is Kadmon and Landman (1993). Following on the analysis of quantificational variability of ordinary indefinites in Lewis (1975), Kamp (1981) and Heim (1982), K&L argue quite persuasively for a univocal account of *any* as indefinite. According to them, *any* is an indefinite which gets interpreted as a univer-

⁵ The facts are a bit more complex and will be discussed at length in sections 2.3 and 3.1.

sal in precisely those contexts where ordinary indefinites have generic interpretations:⁶

- (7)a. any CN = the corresponding indefinite NP + additional semantic/pragmatic characteristics (i.e. widening and strengthening) contributed by *any*. The sole difference between PS *any* and FC *any* lies in the interpretation of the indefinite NP: in the case of FC *any*, it is an indefinite interpreted generically.
- b. Widening: In an NP of the form *any* CN, *any* widens the interpretation of the common noun phrase along a contextual dimension.
- c. Strengthening: *Any* is licensed only if the widening that it induces creates a stronger statement. That is, only if the statement with *any* CN entails the corresponding statement with *a* CN.

This approach successfully derives the basic generalizations about *any*. Take, for example, the domains of quantification in A and B in (8a), where A is a proper subset of B. The ordinary indefinite would quantify over A; the *any* indefinite over B. Since (8b) entails (8b'), rather than the other way around, *any* is not licensed in the affirmative case. But since (8c') entails (8c), *any* is licensed in the scope of negation:

- (8)a.  $A = \{a, b, c\}$
 $B = \{a, b, c, d, \dots\}$
- b. John talked to a woman. $\exists x \in A[\text{talk}(j, x)]$
- b'. John talked to any woman. $\exists x \in B[\text{talk}(j, x)]$
- c. John didn't talk to a woman. $\neg \exists x \in A[\text{talk}(j, x)]$
- c'. John didn't talk to any woman. $\neg \exists x \in B[\text{talk}(j, x)]$

The appeal of this approach is that it provides a unified account of PS/FC readings of *any*, placing little burden on the semantics of *any* proper in terms of quantificational force. It also accounts for the overwhelming

⁶ See also Lee and Horn (1994) and Lahiri (1995) for an account of *any* as uniformly indefinite. As far as I can tell, the problems I raise for K&L's account also hold for them. For example, Lee and Horn suggest that FC *any* is ruled out where an appropriate kind scale cannot be constructed. If I understand their proposal correctly, this suggests that (2a) should be compared to (i) and (3a) to (ii):

- (i) John kissed even the ugliest woman.
 (ii) John kissed even the ugliest woman who came up to him.

My informants do not find a significant contrast between (i) and (ii).

uniformity that has been observed in the distribution and interpretation of such items across languages. And it ties the analysis of *any* intimately with genericity. In doing so, it captures the intuition that an *any* statement is about more than a contextually given set. This last aspect of the analysis bears emphasizing. It is well accepted since Vendler (1967) that *any* statements do not carry existential commitments and that they support counterfactual inferences. In an account relating *any* statements to generics these effects may find a natural explanation.

1.2.2. *The Challenge of Subtriggering and Modality*

In spite of these appealing features, there are problems with the proposed reduction of FC *any* to a generic indefinite.⁷ Here I will illustrate using FC *any* in three contexts, in characterizing statements, in modals statements and in subtriggered environments. Of these, K&L discuss only the first type of FC *any* but intend their account to extend to the second case. Subtriggering is not addressed by them but it obviously provides a significant empirical test for the generality of their approach.

A well-known fact about characterizing statements involving indefinites is that they can be bound by adverbs of quantification instead of the covert generic operator. (9a) has a plausible reading which claims that most lions are majestic. An *any* statement, on the other hand, clearly resists such binding. (9b) is odd because the only possible reading for the adverb, a frequency reading, is not compatible with the individual-level predicate *be majestic*. This point can also be made by referring to sentences for which a frequency reading is possible. (9c)–(9d), due to Jason Stanley, have distinct truth conditions. The first allows a variable reading and asserts the fallibility of an occasional philosopher. The second has only the frequency reading and asserts the fallibility of every philosopher. The interesting point to note here is that the *any* phrase has universal force even with this reading. This shows, clearly, that the universal quantificational force of an *any* phrase is not parasitic on operators at the tense-aspect level but comes from within. Treating *any* as a generic indefinite with a widened domain leaves this contrast unexplained:⁸

⁷ The use of the term FC *any* here is simply an expedient for referring to those instances of *any* which have universal quantificational force. See Percus (1991) for a discussion of issues involved in classifying FC and PS *any*.

⁸ There are two points worth clarifying here. One, the diagnostic of binding by adverbs requires some care in application. As pointed out to me by Barbara Partee (p.c.), although the contrast holds with adverbs in sentence internal positions, it disappears when the adverb is preposed, as in (i). Note, however, that this is true only for those adverbs that trigger inversion, as shown by (ii). Such cases involve PS *any*, discussed in section 3.

- (9)a. A lion is usually majestic.
- b. *Any lion is usually majestic.
- c. A philosopher is sometimes wrong.
- d. Any philosopher is sometimes wrong.

Consider next, the occurrence of FC *any* with modals. At first glance, one might take these instances to support K&L's approach since cases where *any* is unacceptable seem to disallow a generic interpretation for indefinites. (10a)–(10b) are the ordinary indefinite counterparts of (4b) and (5b), which disallow *any*. (11a)–(11c) are the ordinary indefinite counterparts of (6a)–(6c) which do allow *any*. The indefinites in (10) have existential interpretations and those in (11) have generic interpretations, as expected. One might wonder how a particular modal affects the interpretation of indefinites in (10)–(11), but the problem clearly would not be specific to the semantics of *any*:

- (10)a. You must pick a flower.
- b. A pilot must be flying this plane.
- (11)a. A student must work hard.
- b. A doctor will tell you that.
- c. A soldier should be prepared to die for her country.

The problem for K&L, however, is different. There are acceptable cases of FC *any* whose ordinary indefinite counterparts do not have the relevant generic interpretation. (4a) and (5a), for example, involve FC *any*. They can take modifiers like *almost* and *absolutely* (Horn 1972, Carlson 1981) and exception phrases (LeGrand 1975), which are compatible with universals, not indefinites. In fact, *almost* may not be the best diagnostic for isolating universals since they are also compatible with numerals which are generally treated as indefinites (Partee 1986), but the possibility of

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- (i) Rarely/seldom/never is any lion majestic.
 - (ii) *Usually, Often, Always, any lion is majestic.

The second point worth noting has to do with the quantificational force of an ordinary indefinite when the adverb has a frequency reading. In (9c), for example, the indefinite may have existential force but as pointed out by Hans Kamp (p.c.) it is also possible to have a generic reading for the indefinite. But if that is so, one might argue that FC *any* is licensed under the same conditions. The contrast between (9a) and (9b), however, would remain unexplained.

modification by exception phrases remains significant because they have been shown to exclusively involve universals (von Fintel 1994):⁹

- (12)a. You may pick almost/absolutely any flower.
- b. Almost/Absolutely any pilot could be flying this plane.
- (13)a. You may pick any flower except the rose.
- b. Any pilot except Sue could be flying this plane.

If we look at the ordinary indefinite counterparts of these sentences, however, we see that they have existential interpretations:

- (14)a. You may pick a flower.
- b. A pilot could be flying this plane.

Given these data, the correlation between generic interpretations of indefinites and acceptable contexts for FC *any* cannot be used to explain the difference between modals of necessity and possibility with respect to licensing of *any*.

A third problem, discussed in Dayal (1995a), has to do with the subtrigging cases in (3). It is again easy enough to establish that subtrigged *any* has a FC reading. It passes not only Horn's and Carlson's diagnostics of taking modifiers like *almost* and *absolutely* but also allows for exception phrases:

- (15)a. John talked to almost/absolutely any woman who came up to him.
- b. John talked to any woman who came up to him except Sue.

Sentences like (3) with subtrigged *any* are problematic for K&L because an indefinite in the same position does not have universal force, as shown in (16):¹⁰

⁹ As Zwarts (1995) notes, there are modifiers like *whatsoever* and *at all* that are not compatible with *every* but are perfectly acceptable with *any*. The claim here is not that *any* has all and only the properties that *every* has, merely that it includes some properties that are typical of universals.

¹⁰ Kai von Fintel (p.c.) has pointed out to me that bare plurals also show a shift from an existential to the generic reading when modified by a relative clause and suggested that it may be better to compare *any* with bare plurals rather than with singular indefinites:

- (i) John talked to women/women who came up to him.

While this correlation is suggestive, it does not seem quite reliable to me. The modified version of (i) may still have an existential reading, unlike the corresponding *any* statement which is strictly universal. This contrast is even clearer in the case of (ii) and (iii):

- (ii) John put carrots from his garden in the salad.
- (iii) John put any carrot from his garden in the salad.

- (16)a. John talked to a woman who came up to him.
 b. A woman who heard the news contributed to the fund.
 c. A man who saw the fly in the food didn't eat dinner.

The closest equivalents of the sentences in (3) are the corresponding sentences with a universal, given in (17):

- (17)a. John talked to every woman who came up to him.
 b. Every woman who heard the news contributed to the fund.
 c. Every man who saw the fly in the food didn't eat dinner.

If one wanted to maintain the K&L line that *any* is only a domain extender, one would have to say that it can extend the domain of indefinites as well as universals. But if *any* is allowed to attach to universals, not just to indefinites, we are led to a non-trivial reassessment of the licensing conditions for *any*. To see why, consider domains of the kind given in (8a) where A is a proper subset of B and compare *any* statements with regular universals:

- (18)a. John talked to every woman who came up to him. $\forall x[x \in A \rightarrow \text{talk}(j, x)]$
 a'. John talked to any woman who came up to him. $\forall x[x \in B \rightarrow \text{talk}(j, x)]$
 b. John talked to every woman. $\forall x[x \in A \rightarrow \text{talk}(j, x)]$
 b'. John talked to any woman. $\forall x[x \in B \rightarrow \text{talk}(j, x)]$

Certainly, (18a') entails (18a) so that *any* is predicted to be good in the subtrigging cases. The problem, however, is that by similar reasoning (18b') *John talked to any woman* is predicted to be acceptable. Though *any* does not result in strengthening of statements with indefinites (cf. 8b-b'), it does result in strengthening of statements with universals. Thus, extending the K&L analysis to include universals as potential hosts robs it of its explanation for the distribution of *any*, one of its strongest features.¹¹

For these reasons, then, it does not appear that FC *any* can be reduced to generic indefinite, at least in the form that I take K&L to intend. In

Note also that unlike bare plurals, *any* phrases are not compatible with true kind predication (Perlmutter (1970) and Smith (1975)):

- (iv) Lions are rare in this part of the world.
 (v) *Any lion is rare in this part of the world.

For these reasons, I take the appropriate comparison for *any* to be singular indefinites.

¹¹ See Krifka (1990, 1994 and 1995) for a critique of the notion of widening and K&L for responses to Krifka.

particular, the view of *any* phrases as simply denoting a variable that may be bound by existential closure or a generic operator contributed by the main predicate's tense-aspect specification appears untenable to me. The conclusion I draw from the data is that the universal quantificational force of *any* phrases is NP-internal. K&L's intuition that *any* statements are not about a particular set of individuals but are really characterizing sentences seems correct but the right tie between universal quantification and genericity remains elusive.

1.3. Licensing FC 'Any' via Non-Existence

1.3.1. Dayal (1995a)

In this section I would like to briefly summarize my earlier attempt to deal with the phenomena of subtriggering and differential licensing behavior of modals (Dayal 1995a) and point out the reasons for exploring a fresh approach. The basic thesis there, inspired by K&L, was that *any* widens the domain of quantification. Based on the subtriggering facts, however, I had concluded that *any* can be a universal (FC *any*), in addition to being an indefinite (PS *any*). As shown in section 1.2 above, such a move requires us to give up *strengthening* as a licensing principle. The licensing conditions I proposed to replace it were the following:

- (19)a. *Contextual Vagueness*: *any* is only appropriate in contexts where the speaker cannot identify the individual or individuals that verify *p*.
- b. *Non-existence*: An occurrence of [_{NP} *any* B] in a statement *p* is licit iff it does not entail $\exists Bp$.

There are three aspects of this proposal that I would like to relate to the one I will be developing here. The first aspect is that English is claimed to have two distinct, though related, *any*'s, a position that I will maintain. I have already presented evidence arguing for universal force. In section 3 I will show that an indefinite *any* also needs to be recognized. The second aspect of the proposal has to do with *contextual vagueness*, which may be seen as encoding the same intuition as the one behind K&L's notion of *widening*. This too will be maintained and discussed further in section 2.4. The aspect that I would like to focus on at this point is the requirement of *nonexistence*, which I should note is similar in spirit to the claim in Zwarts (1995) that nonveridicality is the crucial factor in licensing *any*.

While *non-existence* has been supported by evidence from Chinese (Lin

(1996)) and Greek (Giannakidou (1997)), it has also been criticized as a slippery notion to use as a licensing principle (Tovena and Jayez (1997)). Take, for example, the following:

- (20)a. Mary regretted that she did anything to help him.
 b. *Mary talked to any man or any woman.

(20a), first brought to my attention by Larry Horn (p.c.), is a problem because the factive verb *regret* entails that there was something that Mary did to help him which she regrets. *Any* should be ruled out by *non-existence* but is not. An example like (20b), pointed out to me by Roger Schwarzschild (p.c.), entails the existence of an individual that Mary talked to. However, it does not entail the existence of a man that Mary talked to nor does it entail the existence of a woman that Mary talked to. Strictly speaking, *non-existence* would not be violated but *any* is clearly unacceptable here.

Now, it is possible to answer these objections by appealing, in the first case, to a modal base that takes into account Mary's desire worlds. Verbs like *regret* imply that in those worlds Mary does nothing while verbs like *be glad* imply that Mary does something. The former licenses *any*, the latter does not. In the second case, one might appeal to analyses of *or* such as Simons (1996) where a disjunctive noun phrase introduces a single referent in the main DRS with the disjunctive conditions added into subordinate DRS's. *Any* in (20b) would be ruled out because existence of an individual in the union of the set of men and women such that Mary talked to would be entailed.¹² Instead of pursuing these lines, however, I will argue for giving up the notion of *non-existence* as a licensing principle on general theoretical considerations. The link between *any* and lack of existential commitments is stipulated under *non-existence* whereas, ideally, it should be derived from more fundamental features of its meaning.

1.3.2. 'Essential' Nature of the Trigger

Before developing such an account, however, I would like to review two empirical properties of subtriggered *any* noted in Dayal (1995a). The first of these is the *essential* nature of the modifier. To get a sense of this property, consider the ordinary universal statement in (21a). This sentence

¹² Tovena and Jayez (1997) argue that this is not tenable. They develop an account in which lack of individuation, which is analogous to the notion of *contextual vagueness*, is the critical aspect in the semantics of *any*. While I do not accept all of their arguments against *nonexistence*, I will not defend it here since I am abandoning it as a licensing principle. Another paper that emphasizes the notion of arbitrariness as critical is Lee (1996).

is ambiguous between a reading in which membership in the set denoted by the relative clause is accidental and one in which it is essential to the truth of the statement being made. The distinction is reminiscent of the distinction Donnellan (1966) makes between referential and attributive uses of definite descriptions:^{13,14}

- (21)a. Every student who is in Mary's class is working on polarity items.
- b. It happens to be true of every student in Mary's class that he/she is working on polarity items.
- c. Every student in Mary's class, by virtue of being in her class, is working on polarity items.

Now, not every universal modified by a relative clause has this ambiguity. Consider (22a) and (22b), where the nature of the predicates involved favors an accidental interpretation of the relative clause:

- (22)a. Every student (who is) in Mary's class happened to vote Republican.
- b. Every woman standing under that tree is Mary's friend.

(23a) and (23b), on the other hand, are most naturally interpreted with membership in the relative clause as being essential:

- (23)a. The President thanked every soldier who had fought in the Gulf War.
- b. Everybody who attended last week's huge rally signed the petition.

One way of isolating the essential reading is to add the phrase *whoever they may be* after the modified noun phrase or to preface the statement with *we didn't keep a list of the individuals . . .*. These additions are only compatible with the essential reading. They are easily incorporated into (23), as shown in (24). Incorporating them into (22), to the extent that it is even possible, has a semantic impact. In (25a) the choice of *happen to* seems to signal disbelief that the main clause event was a coincidence. In the case of (25b), the addition is odd because it seems to call for an

¹³ See Dayal (1995b) for an explicit connection between the referential-attributive distinction and polarity items in Hindi correlatives.

¹⁴ Note that the distinction in question is not between restrictive and non-restrictive or appositive uses of the relative clause. Both are instances of restrictive relativization. The universal determiner cannot take appositives, and there is no intonation break surrounding the relative clause.

essential connection between the property of standing under a tree and the property of being Mary's friend:

- (24)a. We didn't keep a list of the names, but the President thanked every soldier who had fought in the Gulf War.
 b. Everybody who attended last week's huge rally, whoever they were, signed the petition.
- (25)a. *Every student (who is) in Mary's class, whoever they were, happened to vote Republican.
 b. *Every woman standing under that tree, whoever she may be, is Mary's friend.

Thus the distinction between accidental and essential uses of relative clauses seems to be real and one might safely take the sentences in (22) to involve primarily the first reading, and the sentences in (23) to involve primarily the latter reading.

Now, a clue to the semantics of *any* is revealed when we replace the universal in these sentences with *any*. The sentences in (26) substitute *any* for *every* in (22) and appear odd in precisely the same way that they appeared odd when we added *whoever they may be* in (25). *Any* substituted into (23), on the other hand, is entirely natural. (27) is parallel to (24):

- (26)a. *Any student (who is) in Mary's class happened to vote Republican.
 b. *Any woman standing under that tree is Mary's friend.
- (27)a. The President thanked any soldier who had fought in the Gulf War.
 (27)b. Anybody who attended last week's huge rally signed the petition.

The generalization that emerges from this is that subtriggered *any* is compatible only with the essential reading of the relative clause, while modified *every* has no such restrictions.¹⁵

To further illustrate this point, suppose that Mary is teaching a seminar in semantics as well as a course on Field Methods. It so happens that all the advanced students are enrolled in both courses. Writing a paper on

¹⁵ Heim (1984) has cases of *any* in statements that express accidental generalizations. However, her examples differ in having *any* in the scope of *every*:

- (i) Every restaurant that advertises in any of these papers happens to have four stars in the handbook.

polarity items could be an essential property of Mary's students in the semantics seminar, but an accidental property of her students in Field Methods. Either version of (28) is true, and crucially the same individuals verify the truth of the statement. We can substitute *who is in Mary's Semantics seminar* with the equiextensional property *who is in Mary's Fields Methods course* because we can switch between a property-loaded statement (one which uses the relative clause in an essential way) to an individual-loaded statement (one which uses the relative clause in an accidental way).

- (28) Everybody who is in Mary's semantics seminar/Field Methods course is writing a paper on polarity items.

Based on our demonstration that *any* is compatible only with the essential use of the relative clause we predict that in the scenario described above, (29a) would be appropriate.¹⁶ But it would not be appropriate to make the substitution and say (29b) because a statement with *any* does not have the option of switching to an accidental interpretation.

- (29)a. Anybody who is in Mary's semantics seminar is writing a paper on polarity items.
 b. *Anybody who is in Mary's Fields Methods course is writing a paper on polarity items.

Note that this distinction between *essential* and *accidental* readings is one that is used to identify characterizing statements (Krifka et al. 1995). A theory that encodes this propensity for property-loaded statements in the semantics of *any* would clearly be desirable.

1.3.3. *Prenominal vs. Postnominal Modification*

The second property of subtriggering identified in Dayal (1995a) is a structural one. While we have been looking primarily at modification by relative clauses, other types of postnominal modifiers can also serve as subtriggers for *any*, as shown in (30a). Interestingly, however, prenominal modification does not support *any* (Greg Carlson p.c.), as shown by the contrast between (30b) and (30c):

- (30)a. John talked to any woman at the party.
 b. John talked to any politician who is powerful.
 c. *John talked to any powerful politician.

¹⁶ Differences between *any* and *every* statements with respect to contexts of use will be further addressed in section 3.1.

The contrast between (30b) and (30c) is somewhat subtle and speakers sometimes accept (30c). In fact, there are even cases like (31), pointed out to me by Jason Stanley and Barbara Partee (p.c.), which seem not to require any overt modification at all to license *any*:

- (31)a. Mary confidently answered any objections.
 b. After the dinner, we threw away any leftovers.

There is a clear intuition, however, that *any* phrases are acceptable without postnominal modification only when it is possible to interpret them as having some covert restriction. In the case of (30c), for example, those speakers who accept it tend to add a locative phrase like *there* when accepting it. In (31a) and (31b), acceptability is dependent on the possibility of introducing a phrase like *raised against her proposal* or something like *that we saw*, phrases that seem to introduce some kind of a temporal bound into the interpretation. In fact, if we examine our intuitions about cases like (30b) it becomes clear that the presence of some temporal location is crucial. That is, we think of John talking to powerful politicians on a given occasion. We do not have, at this point, a clear understanding of the conditions under which such covert elements become available.¹⁷ For now, it would be fair, I think, to say that there is a difference between postnominal modification, which readily licenses *any*, and prenominal modification, or absence of modification, where the acceptability of *any* is dependent on contextual clues for the same effect. An account of subtrigging should encode this distinction.¹⁸

A final point worth noting is that postnominal arguments do not license *any*. A postnominal adjunct is needed to do that:

- (32)a. *John bought any picture of Queen Elizabeth.
 b. John bought any picture of Queen Elizabeth that was on sale.

To sum up so far, we have seen that some of the core properties of FC *any* have not been adequately captured in current analyses of the phenomena and my goal in the next section will be to develop an account of FC *any* that does justice to the properties we have identified and discussed.

¹⁷ Greg Carlson has also pointed out to me that in such cases, the plural form is much better than the singular. Again, nothing in the theory of plurals makes it clear why it should be easier to add covert modifiers with plural as opposed to singular nouns phrases.

¹⁸ Though formal accounts of the semantics of noun phrases do not distinguish between prenominal and postnominal modification, Bolinger (1967) and Sadler and Arnold (1994) note various distinctions between them (see Dayal (1995a) for discussion related to subtrigging).

2. FC ANY AS INHERENT GENERIC

2.1. 'Any' in Characterizing Statements

2.1.1. Sources of Genericity

The idea that I would like to present here is that *any* phrases are universal quantifiers whose domain of quantification is the set of possible individuals of the relevant kind, rather than a set of particular individuals.¹⁹ The best way to understand the import of this claim is to see how the proposed NP meaning interacts with sentential semantics. I will therefore consider, in turn, the behavior of an *any* phrase in characterizing statements, in non-negative episodic statements and in sentences with overt modals. All these contexts can be shown to involve FC *any* by the usual diagnostics of modification by *almost/absolutely* and exception phrases. As will become obvious in the course of the discussion, there is no formal licensing relation between FC *any* and modal or generic operators. In section 3 it will be shown instead that FC *any* is felicitous if and only if the context maintains some vagueness about the individuals purported to have the relevant property.²⁰ The relation of FC and PS *any* is also discussed in section 3.

To get a sense of what quantification over possible individuals means, let us begin by comparing characterizing statements with indefinites and *any* phrases. (33a) and (34a), for example, are close correlates but I will argue for assigning distinct logical representations to them. The crucial difference, under my proposal, is that genericity in (33a) is located in the verbal aspect of the matrix predicate while in (34a) there are two sources for it. One is from within the *any* phrase, the other from the verbal aspect. I'm assuming here something like David Lewis' theory of possible worlds and transworld identity, extended to accommodate the possibility of evaluating truth in situations as well as whole worlds, as in Kratzer (1989):

- (33)a. Owls hunt mice/An owl hunts mice.
 b. GEN s, x [owl(x, s) & C(s)] $\exists y$ [mice(y) & hunt(x, y, s)]

¹⁹ Eisner (1994) tries to relate the propensity of FC *any* for taking wide scope to the possibility of it quantifying over possible rather than particular individuals. The particular formalization of inherent genericity that I have in mind has something in common with the notion of inherent genericity Chierchia (1995) proposes for i-level predicates.

²⁰ Jereon Groenendijk (p.c.) has pointed out an interesting contrast between anaphora to an ordinary universal and anaphora to an *any* phrase. While distinctions in modal subordination have not been formally analysed, the paradigm below appears suggestive of the difference in the domains of quantification of ordinary universals and *any* phrases being claimed here:

- (i) Every philosopher is sometimes wrong. He usually doesn't admit it.
 (ii) Any philosopher is sometimes wrong. He usually won't/*doesn't admit it.

- (34)a. Any owl hunts mice.
 b. $\forall s, x$ [owl(x, s) & C(s)]
 [GEN s' [$s < s'$ & C'(s')] $\exists y$ [mice(y, s') & hunt(x, y, s')]]

Let us take the simple case first. (33a) has an indefinite subject and a verbal predicate in the simple present. I adopt here the standard view that the tense-aspect of a characterizing statement has a tripartite structure with a generic operator, a restrictor and a nuclear scope. Assuming that GEN binds situation variables, we can take the subject to provide the restriction on situations, and the matrix to be mapped into the nuclear scope. The formula in (33b) says that all (typical) situations s with an owl in it, extend to owl-situations s' in which there are mice the owl hunts. To simplify the exposition I have not included the variable s' in the nuclear scope of GEN. Note that the restriction includes contextual restrictions that allow us to disregard situations in which an owl would not hunt, such as those in which it is sick or sleeping. Details aside, this general approach to characterizing statements is fairly standard (see Krifka et al. (1995) for other ways of formalizing these intuitions).

Let us turn now to the *any* statement in (34a). The basic claim is that *any* is a universal quantifier. This means that it creates a tripartite structure, quite independently of the tense-aspect of the matrix verb. The restriction on this quantifier is provided by the common noun in the syntactic scope of *any*. Its nuclear scope is determined by the matrix predicate. This much is standard for universal quantifiers. What distinguishes *any*, I claim, is that it quantifies over possible individuals. This is captured here by the universal quantifier binding the situation index on the common noun. The nucleus asserts that these situations extend into situations that verify the matrix predicate.

Turning now to the matrix predicate, if it has a generic interpretation as in (34a), the nuclear scope of the *any* phrase will also end up having a tripartite structure. That is, an *any* phrase in a characterizing predicate will result in a layered structure. This can be seen in (34b) where the first tripartite structure is created by *any* and the embedded tripartite structure by the tense-aspect of the main predicate. The formula says that all situations s that have an owl in them generally extend into situations s' in which the owl hunts mice. Note that the generalization that natural language determiners presuppose non-empty domains of quantification is based on ordinary quantification, not generic quantification. The semantics given here for *any* classifies it as a generic. Lack of existential commitment and validity of counterfactual inferences follow without any stipulation.

This approach to characterizing statements with bare plurals/singular indefinites and *any* phrases also has the immediate consequence of explaining the differences between them noted earlier. Modification of *any* phrases by *almost/absolutely* or the possibility of exception phrases follows from the presence of an actual universal quantifier in the noun phrase. The fact that statements with *any* do not display quantificational variability effects is also explained. Adverbs of quantification can only replace GEN in the nuclear scope of the *any* phrase, it cannot replace the universal quantifier inside the noun phrase.

Consider in this connection (35a) which involves the i-level property *be majestic*. (35c), then, asserts that for any individual lion most situations involving that lion are those in which it is majestic. What we get is something close to a frequency reading for the adverb. This, we know, is incompatible with i-level predicates, which remain constant across temporal-spatial locations:²¹

- (35)a. Any lion is majestic.
 b. $\forall s, x$ [lion(x, s) & C(s)]
 [GEN s' [$s < s'$ & C'(s')] [majestic(x, s')]]
 c. *Any lion is generally majestic.
 d. $\forall s, x$ [lion(x, s) & C(s)]
 [MOST s' [$s < s'$ & C'(s')] [majestic(x, s')]]

As expected, when the predicate supports the frequency reading, as in (36a) we have the predicate apply to all individuals in the restriction:

- (36)a. Any philosopher is sometimes wrong.
 b. $\forall s, x$ [philosopher(x, s) & C(s)]
 [SOME s' [$s < s'$ & C'(s')][wrong(x, s')]]

²¹ Of course, quantifying over situations for such predicates is not straightforward, as pointed out to me by Manfred Krifka and Frederika Moltmann (p.c.), and I would like to briefly outline some ways of thinking about its use here. Chierchia (1995) has argued that i-level predicates do indeed involve generic quantification over situations but the contextual variable in their restriction is meager in content and may be set to a maximally general locative relation *in*. In the case at hand, the restriction that comes with *any* may also select situations that simply have a lion in them. Given the meager content of the restriction in the i-level predication, the set of situations s' and s end up being the same. The question that remains open is how to determine the truth of the nuclear scope for individual lions *Simba is majestic*, *Leo is majestic* . . . since every situation involving the individual does not display evidence of the relevant property. I cannot address this problem here and will refer the reader to Krifka et al. (1995) and Chierchia (1995) for a fuller discussion of this question. A second possibility is to take the i-level predicate in the nuclear scope of *any* to force s' to be a possible world so that checking whether an individual lion has the property is no longer problematic.

This approach also accounts for the observation by Perlmutter (1970) and Smith (1975) that true kind-predicates cannot take *any* phrases as arguments since quantification is over situations with individuals in them. This is unlike bare plurals which have the option of being interpreted as kind-denoting. (37a) comes out as sortally deviant, unless interpreted taxonomically:²²

- (37)a. *Any lion is rare.
 b. $\forall s, x$ [lion(x, s) & C(x)]
 [GEN s' [$s < s'$ & C'(s')][rare(x, s')]]

2.1.2. *The Status of Exceptions*

It might be worth addressing briefly at this point the status of exceptions in characterizing statements with *any*. As is well-known, the generic operator allows for exceptions and K&L have argued that *any* statements do so as well.²³ According to them *any* actually indicates a reduction in tolerance of exceptions, not its complete absence. There is some difference of opinion on this point, however. Krifka et al. (1995), for example, in their discussion of downward entailing properties of characterizing sentences point out that (38a) entails (38b) and (38c). They suggest that in this, *any* phrases are unlike indefinites which do not validate such inferences:

- (38)a. Any tiger has orange fur, marked with black stripes.
 b. Any female tiger has orange fur, marked with black stripes.
 c. Any albino tiger has orange fur, marked with black stripes.

There appears to be a fine line between the two positions, namely, the position that *any* phrases do not allow exceptions and the position that they allow (a reduced number of) exceptions. We might try to sift out the intuitions on the basis of the pair in (39a) and (39b):

- (39)a. Birds fly.
 b. GEN s, x [bird(x, s) & C(s)] [fly(x, s)]
 c. Any bird flies
 d. $\forall s, x$ [bird(x, s) & C'(s)]
 [GEN s' [$s < s'$ & C'(s')] [fly(x, s')]]

Let us take (39a) first. Assuming that we are talking of situations in which

²² Of course, such predication is possible if the statement explicitly refers to kinds. *Any kind of lion is rare* would involve quantification over possible kinds of lions.

²³ See, however, Cohen (1997) who argues that generic statements with bare plurals are less tolerant of exceptions than standardly assumed.

birds move, i.e. when they are not eating or resting for example, it asserts that most such situations are those in which the bird flies. Of course, there may be some atypical birds, such as emus and penguins, who don't. Generic quantification allows the statement to still be true. Now consider (39c). We have universal quantification over situations with birds in them and the assertion is that if it extends into a situation in which the bird moves, that situation is generally one in which the bird flies. It seems to me that the existence of emus and penguins falsifies the statement. Of course, the context may specifically exclude such birds from consideration. This could be done via the contextual restriction $C'(s)$, analogous to domain restriction in the case of ordinary quantifiers. If so, (39c) may be judged true. However, there will remain a difference between (39a), which is a claim about typical birds, and (39c), which is a claim about every individual bird. For example, if there is a bird who doesn't fly, not because it is an emu or a penguin but because it is simply quirky, it seems to me (39a) would still be true but (39c) false. It is in this sense that I think *any* appears intolerant of exceptions.

2.1.3. *The Status of the Situation Variable*

Before moving on to other contexts in which *any* occurs, I would like to provide independent motivation for the kind of inherent genericity I am proposing for *any* phrases. The crux of the analysis lies in separating out the situation variable in the *any* phrase from the one associated with verbal morphology. Enç's work on the temporal specification of noun phrases, I think, has already set the stage for this (Enç 1986). She argues on the basis of examples like (40) and (41) that it must be possible for the temporal specification of noun phrases to be distinct from that of the main predicate:

- (40)a. All fugitives are in jail now.
 b. $\forall x[\text{fugitive at } t(x) \rightarrow \text{in jail at } t'(x) \ \& \ \mathbf{NOW}(t')]$
- (41)a. All lizards will die.
 b. $\mathbf{F} \forall x[\text{lizard}(x) \rightarrow \text{die}(x)]$
 c. $\forall x[\text{lizard}(x) \rightarrow \mathbf{F} \text{die}(x)]$

A statement like (40a) only makes sense if the individuals who are in jail now, were fugitives at some other (past) time. Similarly, (41a) can have the reading in (41b) where at some given point in the future, all the individuals who are lizards then die simultaneously. More plausibly, however, it has the reading in (41c) where all the present lizards die at some

(possibly different) point in the future. In order to capture this reading, Enç argues, the temporal index of the noun phrase must be kept distinct from the temporal index of the matrix predicate. She concludes that it is an indexical expression.²⁴

As Enç notes, the problem really has to do with world-time pairs but given her concerns, it reduces to the temporal parameter. In my demonstration of the generic character of *any* phrases I have used situation variables, but Enç's point carries over. The situation variable of a noun phrase is not dependent on the situation variable of the matrix predicate. But once we allow a free situation variable in the denotation of a noun phrase, there is no reason why natural language cannot exploit the possibility of having determiners that can bind this variable. My claim is that this is precisely what *any* does. It universally binds the free situation variable in its scope and yields a statement, not about a particular set of individuals, but about all possible individuals with the relevant property.

2.2. 'Any' in Non-negative Episodic Statements

Let us turn now to affirmative episodic sentences and see how the proposed meaning of *any* combines with the meaning of such sentences. Recall that the key contrast is between sentences like (42a) where the *any* phrase with an unmodified common noun is unacceptable and sentences like (43a) where the *any* phrase is redeemed via subtriggering by a relative clause:

- (42)a. *Yesterday John talked to any woman.
 b. $\forall s, x$ [woman(x, s) & C(s)]
 $\exists s'[s < s' \text{ \& yesterday}(s') \text{ \& talk}(j, x, s')]$
- (43)a. Yesterday John talked to any woman he saw.
 b. $\forall s, x$ [woman(x, s) & C(s) & $\exists s''[s < s'' \text{ \& P}(s'') \text{ \& see}(j, x, s'')]$]
 $\exists s'[s < s' \text{ \& yesterday}(s') \text{ \& talk}(j, x, s')]$

Consider (42a) first. As in the earlier cases we discussed, the *any* phrase creates a tripartite structure with the common noun restricting the set of situations under consideration. The difference, however, is in the interpretation of the material in the nucleus. Here, the tense-aspect of the predicate is episodic so there is no further tripartite structure created. The situation variable is existentially closed and temporally bound within the

²⁴ See Musan (1995) for refinements of Enç's claims. Musan draws a link between the temporal variable in the noun phrase and the ontology of kinds that relates to the use I am making of these ideas.

interval denoted by the adverbial. (42b) says that all possible woman situations extend into a situation located at a particular interval, namely yesterday. Now, clearly, there will be many situations that will render the statement false, for example, all those women situations that do not overlap with John's existence. There is something infelicitous in making a statement that is doomed to be false. One way to formalize this intuition about the unacceptability of *any* in episodic statements, suggested to me by Gennaro Chierchia (p.c.), is to treat it as a case of presupposition failure.²⁵ In using an *any* phrase the speaker chooses explicitly to talk about all possible situations but in making an assertion about a bounded time interval, she must focus on a restricted set of situations. This results in an unresolvable conflict in presuppositions.²⁶

Let us see now how subtriggering saves the situation. Taking (43b) for concreteness, we note that the quantifier and the nuclear scope remain unchanged. The common noun still restricts quantification to women situations. But we also have a relative clause with its own temporal specification. Since it too has episodic tense, its interpretation is also temporally bounded. Given the predicates *see* and *talk* we might take the interval of the relative clause to be the same as that of the main clause. Of course, nothing hinges on this. Any appropriate interval would serve the purpose of restricting quantification to those possible woman-situations that extend into situations that fall within a given interval. That is, the assertion is about possible situations that are temporally bounded. And, of course, this

²⁵ In an earlier formulation I ruled out such cases as necessarily false. Jason Stanley noted that their unacceptability is different from necessarily false statements like (i):

- (i) Snow is white and snow is not white.

The difference, of course, is that the atomic sentences in (i) do express contingent propositions. It is their conjunction that creates a garden path effect. At any rate, the present formulation in terms of a clash of presuppositions makes the relation to (i) less significant. Another reason for giving up the earlier version of the constraint has to do with negative statements like (ii):

- (ii) Any man didn't eat dinner.

This is a contingent statement since it can be falsified by one man's eating dinner at the given interval and verified by the absence of men eating dinner at that time. However, the statement is as unacceptable as affirmative episodic statements. This shows that moving to a presuppositional account for the unacceptability of *any* is necessary.

²⁶ Note that habituais do not suffer the same fate because the tripartite structure in the nuclear scope of *any* can include further restrictions. The following, for example, asserts that all situations *s* with a student in it extend to situations *s'* in which Mary talks to the student if *s'* has Mary in it.

- (i) Mary talks to any student.
 (ii) $\forall s, x$ [student(*x*, *s*) & C(*s*)] [GEN *s'* [*s* < *s'* & in(*m*, *s'*)] [talk(*m*, *x*, *s'*)]]

restricted set may or may not extend into situations of John talking to women. There is no conflict in presuppositions and *any* becomes acceptable.

Recall that we had taken it as desiderata to derive two properties of subtriggered *any* identified in Dayal (1995a). The first was the *essential* nature of the connection between the relative clause and the main clause predicate. The present analysis postulates that *any* phrases are about possible individuals (not particular individuals) who satisfy the restriction. This means that the connection between the restriction and the matrix cannot be *accidental*. It captures the intuition, pointed out to me by David Dowty and Dick Oehrle, that (43a) seems more a statement about John's disposition than about his actual behavior. The lack of existential commitment and validity of counterfactual inferences noted earlier follow.

Another property that was identified had to do with the fact that postnominal modifiers are better subtriggers than prenominal ones. Sadler and Arnold (1994) argue that prenominal modification is quasi-lexical, syntactic or morphological compounding at X^0 level, while post-nominal modification is phrasal. If we make the assumption that all predicates in the extended projection of the head nominal must share the same situation variable, the crucial narrowing down of possible situations that makes an episodic *any* statement acceptable will be limited to phrasal categories outside the extended projection of the head. To see this, consider (44a) and (45a) both of which involve the stage-level property *be angry*:²⁷

(44)a. *Mary talked to any angry student.

- b. $\forall s, x$ [student(x, s) & angry(x, s) & C(s)]
 $\exists s'[s < s' \text{ \& talk}(m, x, s')]$

(45)a. Mary talked to any student who was angry.

- b. $\forall s, x$ [student(x, s) & C(s) & $\exists s''[s < s'' \text{ \& P}(s'')$
 $\text{\& angry}(x, s'')]] \exists s'[s < s' \text{ \& talk}(m, x, s')]$

(44a) instantiates the by now familiar clash of presuppositions between the domain of quantification and the assertion. All possible angry-student situations cannot extend into situations that fall within the interval denoted

²⁷ Jason Stanley (p.c.) pointed out to me that a prenominal modifier like *actual* does not redeem *any*:

- (i) *Mary talked to any actual student.

Note that this is a problem only if we take the adjective *actual* to restrict the meaning in the relevant way. As shown by Cresswell (1990), however, the adjective is not synonymous with the phrase *in the actual world*.

by the main predicate. In (45b), however, the relative clause introduces a new situation variable that can be temporally anchored. Quantification is now over possible student situations that fall within an interval in the past and the sentence becomes acceptable.

What we have captured here is a way of deriving the generalization that postnominal modification is sufficient to license *any*. However, as mentioned earlier, prenominal modifiers (or even occasionally unmodified nouns) are sometimes able to license *any*. We had noted that when they did so, it was on the basis of contextual clues. Though the conditions under which these clues become available remain unclear, the present approach allows for that possibility. What is crucially needed to make an *any* phrase acceptable in episodic statements is some way of ensuring that the set of possible situations under consideration is restricted to those that fall within an interval. Postnominal modifiers, being phrasal, are sufficient but not necessary for this purpose. Thus the approach to subtriggered *any* being pursued here accounts for both properties that we had identified as criterial of subtriggered *any*, the essential nature of the modifier and its structural position.

2.3. 'Any' in Modal Contexts

2.3.1. *Permission vs. Command*

Let us turn now to modal contexts and explore why commands and certain necessity operators appear to be incompatible with FC *any*. To begin with the permission-command pair in (46), we might represent their content as in (47):²⁸

- (46)a. You may pick any flower.
 b. *You must pick any flower.
- (47)a. $\forall s, x$ [flower(x, s)] ![pick(you, x, s)]
 b. $\forall s, x$ [flower(x, s)] ;[pick(you, x, s)]

The symbols ! and ; are borrowed from Lewis (1979) and represent permission and command respectively. For Lewis, permissions involve the expansion of the set of permissible worlds to include at least one in which the content of the permission holds while commands involve the elimination of all those worlds in which the content of the command does not hold. The explanation I would like to give for the contrast between (46a) and

²⁸ As we will see below, commands improve with implicit restrictions. Further constraints on implicit restrictions are discussed in section 3.1.

(46b) is compatible with Lewis's approach as well as with the view in Kamp (1973) that permissions involve the lifting up of a prohibition against the content of the permission. In the case of (47a), the speaker lifts the prohibition against picking one or more flowers by lifting the prohibition against all possible flowers. Or to put it another way, a situation s' that extends s where the hearer picks the flower is no longer banned.

Now, we know that there will be many flower-situations that could not be so extended but we might say that as far as the speaker is concerned the permission is unconditional though she may know that in many cases the hearer could not exercise the option. In the case of a command, on the other hand, the speaker requires of the hearer to pick every possible flower. The fact that there are many flower-situations that cannot be extended to situations in which the hearer picks the flower results in a command that cannot be fulfilled. We might say that such a command is doomed to be infelicitous. This approach predicts that subtriggering will redeem the unacceptability of (46b). As (48) shows, this is indeed the case:

- (48)a. You must pick any flower you see.
 b. $\forall s, x$ [flower(x, s) & $\exists s''$ [F(s'') & see(you, x, s'')]]
 ;[pick(you, x, s)]

We see, then, that there is nothing in the nature of the command operator *per se* that rules out the possibility of FC *any*. What is responsible is, in fact, the interaction of its semantics with that of FC *any* construed as a generic universal.

2.3.2. Epistemic Necessity

Let us examine now the contrast between epistemic necessity and possibility with respect to licensing of FC *any*. The key contrast here is between cases like (49a)–(49b). Note further that subtriggering has no effect in this case. This suggests that a different explanation for the incompatibility of epistemic necessity with FC *any* may be required:

- (49)a. Any pilot could be flying this plane.
 b. *Any pilot must be flying this plane.
- (50)a. Any pilot on duty today could be flying this plane.
 b. *Any pilot on duty today must be flying this plane.

At first glance, it appears that this resistance to *any* is a feature specific

to epistemic necessity, since deontic necessity readily licenses *any*, as shown in (51):

- (51)a. Any student must work hard.
- b. Any soldier should be prepared to die for her country.

A possible line to take here would be to say that epistemic necessity, unlike deontic necessity, is not an operator that can bind variables, as suggested by Kratzer (1995). But we have already seen in section 1.2.2 that this would not explain how epistemic possibility allows FC *any* without yielding the relevant generic interpretation for ordinary indefinites. Moreover, it is not true that epistemic necessity is always incompatible with *any*. The following is completely acceptable:

- (52) Any pilot must be out flying planes today.

This surprising array of facts can, in fact, be explained on the basis of the proposed semantics for *any* and the modal. The following are the logical representations for the relevant cases, with *any* having scope over the modal, a move that we have already seen gives the right results in the case of permission vs. command:

- (53)a. Any pilot could be flying this plane.
- b. $\forall s, x$ [pilot(x, s) & C(s)] $\exists s'[s < s' \ \& \ \diamond \text{fly}(x, p_i, s')]$
- (54)a. *Any pilot must be flying this plane.
- b. $\forall s, x$ [pilot(x, s) & C(s)] $\exists s'[s < s' \ \& \ \square \text{fly}(x, p_i, s')]$
- (55)a. Any pilot must be out flying planes today.
- b. $\forall s, x$ [pilot(x, s) & C(s)] $\exists s'[s < s' \ \& \ \square \exists y[\text{plane}(y) \ \& \ \text{fly}(x, y, s')]]$

$\exists s'[\diamond \phi(s')]$ is to be read as *there is an s' which is part of some accessible world & ϕ holds at s'* , and $\exists s'[\square \phi(s')]$ as *there is an s' which is part of every accessible world & ϕ holds at s'* . (53) says that all possible pilot-situations are such that there exists a possible extension where the pilot is the one flying this plane. This will be true if there are no clues indicating that one person or another is the pilot. (54), on the other hand, says that for all possible pilot-situations, there is an extension in every world of the modal base, where that pilot is the one flying the plane. This entails that all possible pilots are claimed to be the pilot of the same plane. But note that among the facts determining the modal base is the real world knowledge that only one pilot (or maybe two) flies any given plane. This, then, is the source of the clash between the epistemic modal and the *any* phrase in such cases. It should now be clear why (55) which has a bare plural in

object position is not a problem. Taking the relevant background to be something like *in view of the fact that the weather is ideal for flying*, there is predicted to be no clash between every pilot being engaged in the activity of flying and the modal base.²⁹

Once again, we see that there is nothing in the nature of a particular operator that rules out FC *any*. It is the complex interaction between epistemic necessity, universal generics and the modal base that gives rise to the judgements under discussion.

3. LICENSING ANY

3.1. Licensing FC 'Any'

3.1.1. The Case of Partitives

In earlier accounts such as Hintikka (1977, 1980) and Kadmon and Landman (1993) a formal licensing relation is posited between FC *any* and the modal/generic operators that seem to provide its most congenial environments.³⁰ For Hintikka, *any* must be distinguished from *every* in taking scope over an operator. When there is no such operator, *any* is ruled out as equivalent to *every*. For Kadmon and Landman, it is the modal/generic operator that gives quantificational force to *any*, making it a generic indefinite. Our discussion here has led us to depart from this well-established

²⁹ The practice of giving *any* scope over the modal is fairly well-established on empirical grounds but relatively little theoretical motivation has been presented for it. Eisner (1994) relates this to the fact that the universal quantifies over possible individuals and Dayal (1995a) to undesirable entailments that arise with narrow scope in relation to negation. The issue is a complex one and I cannot do justice to it here but I would like to note two things that are relevant: one, the propensity of *any* phrases for wide scope may be related to the fact that generics tend to take wide scope in general, as was shown in Carlson (1977); two, it is not true that *any* phrases can never take narrow scope. (i) from Dayal (1995a) is a case in point:

- (i) Every student_i read [any book on giraffes he_i found].
 (ii) $\exists s[\forall x [\text{student}(x, s)]$
 $[\forall s', y [\text{book-on-giraffes}(y, s')] \ \& \ \exists s''[s' < s'' \ \& \ \text{found}(x, y, s'')]]$
 $[s' < s \ \& \ \text{read}(x, y, s)]]]$

Such bound variable readings for *any* phrases are also possible in the context of overt modals. A careful study of those cases is obviously needed to determine the relation between scope and modality but I must leave that for another occasion.

³⁰ Hintikka (1977) states the *Any*-Thesis in the following way: The word 'any' is acceptable (grammatical) in a given context *X-any Y-Z* iff an exchange of 'any' for 'every' results in a grammatical expression which is not identical in meaning with *X-any Y-Z*. Ordering principles give the rule for *any* priority over the rules for negation, conditionals and modals. In contrast, the ordering principle governing *every* says that the rule for it does not enjoy comparable privileges.

lished conclusion. We have seen that the presence of such operators is neither necessary nor sufficient for a licit occurrence of FC *any*. Since the unacceptability of FC *any* in non-subtriggered episodic statements and in certain command/necessity contexts can be given independent explanations, based on general principles of interpretation, one might say that there are no *a priori* restrictions on FC *any*. However, we will see in this section that though FC *any* is not licensed by modal/generic operators, there are constraints on its occurrence. The goal of this section is to make precise the nature of those constraints and propose a licensing principle to capture the generalizations.

To get a sense of the nature of these constraints, let us begin by taking a closer look at commands that are made acceptable under subtriggering. (48a) is repeated below as (56a). This can be compared to (56b) which also has a modifier but is unacceptable:

- (56)a. You must pick any flower you see.
- b. *You must pick any flower in this bed.

The only difference between (56a) and (56b) is that the set of flowers to be picked are not contextually determined in the first case since the speaker has no idea which flowers will be seen by the hearer. In the second case, the command is about a contextually determined set and the speaker knows in advance the flowers that will be picked in any world where the command is fulfilled. The sentence can be ruled out as a violation of *contextual vagueness*, proposed in Dayal (1995a) and repeated below as (57a). (57b) involves a small revision:³¹

- (57)a. *Contextual Vagueness*: *any* is only appropriate in contexts where the speaker cannot identify the individual or individuals who verify *p*.
- b. *Revised Vagueness Requirement*: Any (A) (Op B) is felicitous iff $A \cap B$ is not contextually salient in any relevant world; where Op may be \diamond , \square , $!$, j or null.

The chief difference between the two versions is that the latter makes reference not only to the first argument of the determiner but to the intersection of the two arguments at a given world. This, as we shall see, is crucial in explaining the case of partitives. It is also worth pointing out that since we are treating *any* phrases as inherently generic here, the

³¹ With this revision, there is no longer a need to appeal to *non-existence* to explain the problem with necessity contexts and *any*, as done in Dayal (1995a).

vagueness requirement has a natural explanation. It is a property of generic statements that they not be about a contextually given set.

Let us now consider the case of partitives. These are problematic for theories such as Kadmon and Landman (1993) since the definite NP inside the partitive fixes the domain of quantification, making it impossible for *any* to effect *widening*. Under the present account, however, we are not tied to vagueness in the first argument alone:

- (58) a. You may pick any of the flowers.
 $\forall s, x$ [Part-of($x, \iota y$ [flower(y)], s)] ! [pick(you, x, s)]
 b. *You must pick any of the flowers.
 $\forall s, x$ [Part-of($x, \iota y$ [flower(y)], s)] ! [pick(you, x, s)]
 c. *Mary picked any of the flowers.
 $\forall s, x$ [Part-of($x, \iota y$ [flower(y)], s)] $\exists s'$ [$s < s'$ & pick(m, x, s')]

In the case of (58a), it is left up to the hearer whether zero, one or any number up to the total number of flowers are picked.³² Thus for any world in which the permission holds, the set of flowers picked is not known to the speaker. In (58b), on the other hand, given the nature of commands, the universal force of *any* and the fixed domain of the partitive, it can be predicted for any world in which the command holds which flowers will be picked, namely all of them. *Any* is ruled out because *vagueness* cannot be satisfied. By parallel reasoning we can see that (58c), an episodic statement about a fixed domain, also violates *vagueness*.³³

³² It has sometimes been claimed that a permission like (58a) does not give permission to pick all the flowers (Vendler 1967). It seems to me that if the speaker, having uttered (58a), finds out later that the hearer had exercised all his options and picked all the flowers, she cannot complain. Of course, this does not make it equivalent to a permission with the regular universal in (i) where it is required that all flowers be picked. They contrast with respect to the possible continuation in (ii). Under standard views this is captured by giving the permission operator scope over the ordinary universal but under *any* (see Kamp 1973, for example):

- (i) You may pick every flower.
 (ii) You may pick any/*every flower, but leave a few for Mary.

An upper limit on size is also placed in cases like the following:

- (iii) You may pick any five flowers.

I assume that semantically it gives permission *en masse* to all the relevant five-membered groups of flowers possible in the context. However, in this case, I assume Gricean implicatures restrict the total picking to one group of five.

³³ Note that with the negative in (i) none of the flowers are picked. Since the empty set cannot be contextually salient, *vagueness* is satisfied even in the episodic case:

- (i) Mary didn't pick any of the flowers.

It is also worth noting here that it has sometimes been thought that FC *any* cannot occur in the syntactic scope of negation. The primary motivation for this is the unacceptability of

Similar considerations apply to imperatives. As pointed out by Manfred Krifka (p.c.), imperatives like (59a) seem to have the force of a permission while those like (59b) have the force of a command:³⁴

- (59)a. Pick any flower.
- b. Confiscate any liquor.
- (60)a. Pick any of these flowers.
- b. *Confiscate any of this liquor.

Note that the permission has an acceptable variant with a partitive but the command does not. This is as expected. (59a) can be uttered while standing in front of a garden and pointing to the flowers because it cannot be predicted which flowers will be picked. There is no problem with *vagueness*. (59b), on the other hand, cannot be uttered while standing in front of a set of objects and pointing to the liquor. The most plausible scenario for it is one in which the search for contraband items has not been completed and the command includes an implicit clause such as *that you find*. It is only with this covert restriction that the imperative with *any* can be accepted as a command applying to all the liquor.

3.1.2. *The Role of Contextual Vagueness*

The significance of contextual vagueness is also revealed by making close comparisons between ordinary universals and *any* in episodic statements. Under the present proposal, the difference between the two is that the situation index of the first is either indexical or bound by the matrix predicate while that of the latter is obligatorily bound from within. Differences in existential import and counterfactual inferences, I have suggested, are due to this. It can be further shown that there are contexts of use where *vagueness* dictates the choice between the two quantifiers. This is so even in those cases where they end up being extensionally equivalent.³⁵

Consider the pair in (61), discussed in section 1.3.2. Because this is an

modification by *almost* (Partee 1986). Note though that such modification is not possible with regular universals in that position either:

- (ii) *Mary didn't see almost any/every flower.

I take the fact that partitives are possible to show that there is no general ban on FC *any* in that position.

³⁴ See Tovena and Jayez (1997) for discussion of imperatives that bear on the points addressed here.

³⁵ Thanks to John Bowers and Beom-mo Kang for bringing up examples that bear on this question.

episodic statement with an episodic relative clause, we know that the same set of students will verify the truth of both statements. In spite of this, not every context of use will support each equally. The *any* statement is appropriate only if the speaker is not fully aware of the identity of the relevant set:

- (61)a. Every student in Mary's class is working on negative polarity.
- b. Any student in Mary's class is working on negative polarity.

Further evidence that the two are not in free variation comes from their interaction with discourse referents. If the domain of the universal quantifier has been introduced explicitly *every* is acceptable but *any* is not (Dayal 1995a):

- (62)a. There were twenty students at the lecture and every student who was there said it was inspiring.
- (62)b. *There were twenty students at the lecture and any student who was there said it was inspiring.
- (63)a. We have many graduate students but this year the graduate director met with every student in the graduate program individually to discuss their progress.
- b. *We have many graduate students but this year the graduate director met with any student in the graduate program individually to discuss their progress.

There is also a difference between them in their ability to support discourse anaphora. The following examples clearly show that *every* can do so but *any* cannot:

- (64)a. Susan found every book she had been looking for at Borders. And what's more, they were on sale!
- b. *Susan found any book she had been looking for at Borders. And what's more, they were on sale!
- (65)a. Paul has interviewed every student who was at the scene of the crime and Kate has interviewed them too.
- b. *Paul has interviewed any student who was at the scene of the crime and Kate has interviewed them too.

The first set of examples shows that *any* cannot have a discourse antecedent, or to put it another way, the domain of quantification for *any* cannot be contextually specified. The second set supports the same conclusion. As Kamp and Reyle (1993) explicate, plural discourse anaphora is dependent on a process of abstraction, which essentially collects every individual

who satisfies the conditions in the complex NP and forms a set of those individuals. This set then becomes available for subsequent discourse anaphora. Abstraction presupposes that a finite, specifiable set of such individuals exists. The fact that abstraction is not possible in the case of a statement with *any* tells us that its domain crucially differs in not being contextually specifiable.

Two other pieces of evidence pointing in the same direction come from questions and there-insertion contexts. It is well established that universal quantifiers allow functional answers as well as answers that list appropriate values for each member of the set denoted by the common noun. As pointed out in Dayal (1996), questions with *any* allow functional answers but they do not allow list answers. This shows, again, that the members of the set cannot be contextually specified:

- (66)a. Which student would any professor support?
 b. His or her advisee.
 c. *Prof. Smith would support Sue and Prof Jones Bill.

There-insertion contexts also differentiate between the two quantifiers. Though universal quantifiers are generally disfavored, except under a list interpretation, their acceptability seems to improve with postnominal modification. But this is so only for ordinary universals. (67a) and (67b) are acceptable with *every* but not with *any*. This is presumably because the relevant set is made contextually salient in there-insertion contexts, something to which I claim *any* is resistant:³⁶

- (67)a. There is every/*any book by Chomsky in this library.
 b. There's everything/*anything Mary had asked for in this store.

The fact that *any* and *every* are not in free variation is, of course, an old observation. Hintikka's (1977, 1980) *any-thesis*, for example, uses a functional distinction with *every* as the licensing principle for *any*. The preceding discussion can be seen as making a claim about the nature of this distinction. While the status of *contextual vagueness* as a licensing principle was first proposed in Dayal (1995a), the intuition itself dates

³⁶ An appropriate modal improves acceptability. The assertion, however, has a hyperbolic quality and does not introduce a discourse referent, as shown by the impossibility of anaphora:

- (i) There is any book you could imagine in this library.
 *They are all listed in that catalogue.
 (ii) There's anything Mary could desire in this store.
 *They are quite reasonably priced too.

back to Vendler (1967) and can be related to Kadmon and Landman's (1993) idea of *any* as domain widener and Tovená and Jayez's (1997) or Lee's (1996) notion of arbitrariness. The particular formulation proposed here is intended to cover some rather subtle facts about subtrigging, modals and partitives that I think has been left unaddressed in other theories.

3.1.3. *Iterability of Eventuality Described*

Before concluding this section, I'd like to briefly note another observation relevant to the distinction between *every* and *any* statements made in Dayal (1995a). It was noted there that *any* statements favor iterability of the eventuality described. As we will see, this is so because such iteration lends itself most naturally to *contextual vagueness*. Consider (68) where matrix and embedded verbs are both non-stative:

- (68)a. That evening John misbehaved with everybody/anybody he talked to.
- b. John talked to everybody/anybody who came up to him at the party.

Though both terms are acceptable, the statement with *any* suggests that there were several events of the relevant kind, while the statement with *every* is neutral in this regard. This difference can be better seen in (69). In (69a), which is about one event of offering, speakers generally consider *any* to be awkward, but in (69b), which is compatible with several such events, *any* is fully acceptable.³⁷

- (69)a. Bill offered Mary everything/*anything he had cooked for dinner.
- b. Those days Bill offered Mary everything/anything he cooked.

Both terms allow a matrix verb to be non-stative and the embedded verb to be stative, with the expected difference in interpretation between the two. Consider (70):

- (70)a. John made a fool of himself in front of everyone/anyone who was there.

³⁷ The contrast is admittedly subtle. For those speakers who do not rule out *any* completely, a comparison with the free relative *whatever he had cooked for dinner* might be useful (for FC readings of free relatives, see Dayal (1997)). They will notice a marked improvement. As will become clear shortly, I am not proposing that *any* be ruled out if the context does not support iterability.

- b. Mary sang for everyone/anyone who wanted to hear her.

(70a) with *any* seems to suggest that there were several instances of John making a fool of himself while with *every* he need only have behaved foolishly once. Similarly, (70b) with *any* leads us to expect that Mary sang several times but not so with *every*. This is further confirmed by examples like (71) where iteration of the event denoted by the main clause verb seems implausible and the acceptability of *any* is reduced:

- (71)a. John slipped in front of everyone/*anyone who was there.
 b. At 4 p.m. I saw John lecturing to everyone/*anyone who was near him.

Next consider the combination of a stative in the matrix and a non-stative in the embedded clause. In (72a) *any* is acceptable under an interpretation for *know*, where with each encounter it became evident that John possessed that knowledge. Similarly, in (72b) *any* calls for several events of objects being placed in front of John and him expressing his liking for it. This is not so with *every*:

- (72)a. John knew every/any language that we encountered on our trip.
 b. John liked everything/anything that was placed before him.

What seems to be happening is that though the matrix verb is non-iterative, it is able to ride piggy back on the iterability of the embedded predicate.

It is important to note, however, that there is only a tendency for the eventuality described to be interpreted as iterative, not a requirement. Many of the examples discussed in sections 1 and 2 do not have iterative readings. (27a), for example, could be prefaced to ensure that there is a single event of thanking. The statement would be acceptable in a context such as a radio broadcast where the relevant group is not contextually salient:

- (73) At the end of his speech, the president thanked any soldier who had fought in the gulf war.

We can therefore conclude that it is *vagueness* rather than iterability that is required for the felicitous utterance of an *any* statement. The question that arises, of course, is why iterability plays the prominent role it does. The answer is straightforward though, given the significance of *vagueness*. Iterations of events allows us to arrive at generalizations or regularities that focus on the properties that are criterial rather than on

the individuals who are the bearers of such properties. They are, for example, the basis of generic statements of the kind discussed by Carlson (1989).

To conclude our discussion of FC *any* so far, I have argued that it is a generic universal and shown how its meaning interacts with characterizing, episodic and modal statements. In the present account there is no formal licensing relation between modal/generic operators and FC *any*. Instead, its felicitous use is regulated by a requirement of *contextual vagueness*, which I have suggested is due to the generic nature of the quantifier. The basic idea is that *any* being a generic NP, can only be used in statements that are property-loaded as opposed to individual-loaded. In this sense it encodes epistemic modality.

3.2. PS 'Any'

I have focused so far on instances of FC *any* that pass standard tests for universals such as modification by *almost* and *absolutely* and the ability to allow exception phrases. A question that invariably comes up in discussions of FC or PS *any* is whether an analysis for one has any relevance for the other. Univocal accounts have the appeal of explaining why the same lexical item in unrelated languages such as Hindi, Korean or Japanese, to name a few, should show the same variations as English *any*. However, it is not a trivial matter to give a single meaning for *any* that would explain its chameleonic character. As we saw in section 1, Kadmon and Landman's move to treat both FC and PS *any* as indefinites runs into empirical problems. Other univocal accounts, such as Quine (1960), Vendler (1967), Lasnik (1972), Kroch (1974), LeGrand (1975) and Eisner (1994), treated them both as universals. These too have been challenged on empirical grounds. Since the present account of FC *any* as universal is somewhat different from the earlier versions it does not suffer from some of the problems that have been pointed out for them. However, I will still argue on the basis of language internal and crosslinguistic evidence that FC and PS *any* are distinct lexical items. I will, however, attempt to tie the two together by means of a common core of meaning. Such a quasi-univocal account would explain why a single lexical item in unrelated languages can have the same range of meanings as English *any*.

A standard way of incorporating PS uses of *any* with its FC uses is to treat it as a wide scope universal. Under the present account, a sentence like (74a) which is standardly taken to involve PS *any*, would then be interpreted as (74b):

- (74)a. John didn't talk to any woman.
 b. $\forall s, x$ [woman(x, s)] $\neg \exists s'$ [$s < s'$ & $P(s')$ & talk(j, x, s')]

The assertion can be verified on the basis of situations involving John at the relevant time in the past. That is, if we are confident on the basis of our observation of John that he did not talk to a woman, we might say something like (74a), making a statement not only about the contextually relevant set of women but about any possible woman. This is the well-known intuition about an *any* statement being stronger than a statement with the regular quantifier.³⁸

Though plausible enough, there are several considerations that argue against pursuing this line. The most immediate problem I see has to do with the fact that structures which give wide scope to FC *any* over negation in the syntax are ruled out. (2c), repeated below as (75a), has FC *any* in subject position. Its logical representation would have the same schematic form as the one that would have to be posited for (74a) under a univocal account:³⁹

- (75)a. *Any man didn't eat dinner.
 b. $\forall s, x$ [man(x, s)] $\neg \exists s'$ [$s < s'$ & $P(s')$ & eat-dinner(x, s')]

The difference in acceptability between (74a) and (75a), however, is not surprising if *any* here is recognized as FC and its acceptability contingent on the presupposition that the situations in the restriction be a potential subset of the situations in the nuclear scope. The *any* in (74a) would be a polarity item with distinct licensing conditions.

³⁸ Note that this extension would not be open to the criticism levelled by Carlson (1980) against earlier attempts to treat PS *any* as a wide scope universal. Carlson points to examples like (i) which have only a *de dicto* reading. He argues that if *any* were a universal that must take scope over negation, an unambiguously *de re* reading would be predicted, as in (ii). Carlson, of course, is operating under the assumption that the only thing special about *any* is its propensity for wide scope, in every other way it is a universal quantifier of the familiar kind. Under the present approach, however, there is an additional parameter which affects interpretation. The interpretations in (iii) or (iv) do not seem to me to suggest unambiguously *de re* readings. (iii) would be the representation if *any* takes extra wide scope, (iv) if negation is interpreted in the embedded clause and *any* has local wide scope:

- (i) Bob does not think that there is anyone from Greece in his basement.
 (ii) $\forall x$ [from-Greece(x) $\rightarrow \neg$ think(b , in-his-basement(x))]
 (iii) $\forall s, x$ [from-Greece(x, s)] $\neg \exists s'$ [$s < s'$ & NOW(s') & think(b , in-his-basement(x, s'), s')]
 (iv) think(b , $\forall s', x$ [from-Greece(x, s')] $\neg \exists s''$ [$s' < s''$ & NOW(s'') & in-his-basement(x, s''), s)]

³⁹ I will discuss shortly the reason why an alternative derivation for (75a) where the universal takes scope under negation is ruled out.

Another argument against collapsing FC and PS *any* comes from conditionals (LeGrand 1975, Ladusaw 1979). On one reading of (76a), for example, the implicature is that Bill is not particularly smart, on the other the implicature is that Bill is the smartest individual. The first reading follows straightforwardly in an analysis where *any* has universal force and takes scope over the modal but still inside the antecedent. This is shown in (76b). The other reading is the interesting one. *A priori* it can be derived in two ways. LeGrand suggests that this reading comes about because *any* is a universal that can take scope outside the conditional (cf. (76c)). But note that it can also be derived if *any* is an indefinite whose situation variable is bound by the modality inherent in the conditional, as shown in (76d):

- (76)a. If anyone can solve this problem, Bill can.
- b. $(\forall s, x[\text{person}(x, s)][\diamond\text{solve}(x, p_i, s)])(\exists s'[s < s'$
 $\& \diamond\text{solve}(b, p_i, s')])$ narrow \forall
 “If it is the case that any (every) person can solve this problem, then it follows that Bill can.”
- c. $\forall s, x[\text{person}(x, s)][(\diamond\text{solve}(x, p, s))(\exists s'[s < s'$
 $\& \diamond\text{solve}(b, p_i, s')])]$ wide \forall
 “For any (every) person x , if it is the case that x can solve this problem then Bill can.”
- d. $\forall s(\exists x[\text{person}(x, s) \& \diamond\text{solve}(x, p_i, s)])(\exists s'[s < s'$
 $\& \diamond\text{solve}(b, p_i, s')])$ narrow \exists
 “If it is the case that there is any (some) person who can solve this person, then Bill can.”

The question we must ask is whether there is a way of choosing between (76c) and (76d) for the challenging reading. One might argue against (76c) since it involves violation of syntactic islands, but this argument could be countered by the fact that the ability to violate islands may be one of the things that sets *any* apart from other quantifiers. I believe though that there is another reason to reject this derivation. Note that if *any* is modified by *almost/absolutely* or exception phrases only the first reading survives but there is no reason why FC *any*, in taking extra wide scope, should lose those properties that such modification is sensitive to. The conclusion we come to is that this reading must be due to the existence of a distinct PS *any*, as argued previously by Horn (1972), Ladusaw (1979) and Carlson (1980).

Similar conclusions can be drawn from questions with modals. The following from Ladusaw is illustrative:⁴⁰

- (77)a. Can anyone pledge ATO?
 b. Is it possible for everyone to to pledge ATO?
 c. Is there someone who can pledge ATO?

The existence of an indefinite *any* is also supported by its ability to support donkey anaphora. This was first noted for conditionals by LeGrand (1975). Lee and Horn (1994) also attribute this observation to Sabine Iatridou. Note once again that this is not possible if we use the modifications that are compatible with FC *any*:

- (78)a. If anybody_i comes, he_i rings the doorbell.
 b. Every student who wins any trophy_i displays it_i in a prominent place.

There is striking corroborating evidence from Spanish for the division between FC and PS *any* that we have arrived at on the basis of evidence internal to English. Briefly, Spanish has three distinct lexical items that are used in places where English uses *any*, namely *cualquiera*, *niguno* and *alguien*. The particular clustering of environments in which these three items are found is quite telling. *Cualquiera* occurs in precisely those cases where we have identified English *any* as FC. They are acceptable in characterizing sentences, in modal contexts including partitives and with subtrigging in affirmative episodic contexts. In each of these cases, the overall generalizations about their distribution and interpretation are as discussed here. *Alguien* occurs with or without a modal in the antecedent of conditionals and in the restriction of operators like *every* and *only*. Unlike English *any*, it does not need to be in the scope of negation and is considered an indefinite. *Niguno* is used in the scope of negation proper.

Of course, many questions arise in relation to the three-way separation between *cualquiera*, *alguien* and *niguno* that are of interest from a cross-linguistic perspective but the goal in bringing in Spanish into the discussion here is a modest one. We have looked at English questions and conditionals and noted that a universal interpretation for *any* with normal wide scope accounts for one set of readings. The other set of readings could be explained either by giving a universal extra wide scope or by

⁴⁰ Also, there are well-known syntactic constraints discussed by Linebarger (1987), for example, that may or may not be incorporable into a univocal account. Krifka (1990, 1994, 1995) has suggested that locality considerations may have a semantic correlate under his approach. I have not explored ways of doing so because I find the evidence against the univocal account independently convincing.

interpreting an indefinite locally. The division between *cualquiera* and *alguien* in conditionals and questions mirrors this division and supports the conclusions reached on the basis of English. For example, in the Spanish counterpart of a conditional like (76a), *cualquiera* in the antecedent gives rise to the implicature that Bill is not so smart while *alguien* implicates that he must be the smartest. This suggests that the second set of readings is not due to an extra wide scope universal but an instance of a normal indefinite. The Spanish facts show that the various occurrences of *any* may fall into distinct natural classes and thus provide additional evidence that our analysis of English *any* as lexically distinct is on the right track.

3.3. *The Common Core*

As mentioned earlier, one of the less appealing consequences of the conclusion that there is a universal and an indefinite *any* is that it leaves unexplained the fact that English is not the only language in which a single item shows the same chameleonic behavior. From a typological perspective, it would clearly be desirable if a systematic relation between the two items could be established. In this concluding section I would like to suggest that there is indeed a way of looking at the contexts in which PS *any* occurs which connects quite naturally with properties of FC *any* that we have isolated here.

The basic generalization about PS *any*, dating back to Ladusaw (1979), is that it occurs in downward entailing contexts. The core facts are illustrated in (79) and (80):

- (79)a. *John saw anything.
- b. John didn't see anything.

- (80)a. *Some/every/no student who read anything passed.
- b. *Some/*every/no student answered any question.

Since then, a lot of attention has centered on PS *any* and it is well-known that Ladusaw's generalization in its simplest form is not quite accurate (see Linebarger (1987) and Jackson (1995), among others). Instead of reviewing the literature here, I will simply note that in spite of the many counterexamples, the fundamental idea has endured. Heim (1984), for example, has shown that some contexts that appear to be counterexamples can in fact be accommodated into Ladusaw's generalization if some contextual premises are taken into account. There are also alternative accounts, originally due to Fauconnier (1975a, 1975b), and developed

more recently by Krifka (1990, 1994, 1995), Lee and Horn (1994) or Lahiri (1995), that treat the contribution of *any* as invoking a set of scalar alternatives of which PS *any* marks an extreme endpoint. The generalization about distribution is then related to the pragmatics of assertion. The point I would like to make here is equally compatible with either approach.

Since downward entailing contexts are those where $\exists x[\phi(x)][\psi(x)]$ entails $\forall x[\phi(x)][\psi(x)]$, we might say that PS *any* is licensed in contexts where ψ holds not only of one member of the set denoted by ϕ but of every member. To demonstrate it in the simplest case, *John saw \exists -anything* implicates that there are things John did not see. It is a particular statement about one member of a class, not a general statement about the class of objects. On the other hand, *John didn't see \exists -anything* entails for all things that John did not see them. This essentially makes it a general statement, akin to statements with \forall -*any*.⁴¹ This fact can also be demonstrated with PS *any* in the scope of *every*:

- (81)a. Every student who read something passed \Rightarrow Every student who read everything passed.
 b. Every student answered something \nRightarrow Every student answered everything.

In fact, \forall -*any* overtly displays this aspect of its personality in relation to negation. Davison (1980) notes that a sentence like (82a) does not have an interpretation where negation has scope over the universal. That is, the property of liking (or not) liking mice cannot distinguish among cats. When the ordinary universal is used, as in (82b), it can be understood to mean that some cats like mice and some cats don't:⁴²

- (82)a. Any cat doesn't like mice.
 b. Every cat doesn't like mice.

In a recent analysis, Büring (1997) picks up on the well-known observation

⁴¹ Jackson (1995) proposes that *any* occurs in general statements that verify what he calls the *negative witnessing* condition. This condition says, in essence, that variation in the membership of the relevant set should not affect the truth of an *any* statement, and has obvious similarities with my proposal about PS licensing. Jackson uses *negative witnessing* to explain intervention effects and the possibility of licensing PS *any* in the scope of quantifiers like *most* that are not downward entailing. I have not had time to explore the relationship between his proposal and mine any further but I hope that my proposal can also be extended to the more complex cases of PS licensing. I should perhaps point out that he, however, takes *any* to be unambiguously indefinite.

⁴² There are cases such as *John wouldn't talk to just anybody* noted by LeGrand (1975) which clearly allow for John's talking to some members of the relevant set and not others. An account of such cases would require us to incorporate the scalar account of PS *any* into the general approach outlined here, something I have not done at this point.

that the scope inverted reading under discussion, $\neg\forall\phi\psi$, is only possible if there is a sentence final rise in intonation. This, he says, indicates that the universal in subject position bears topic marking and negation is focused. His analysis proposes interpretation at three levels, the simple assertion, which in the case of (82b) would be represented as (83a), a set of focus-induced alternatives in the sense of Rooth (1985) shown here in (83b) and a set of questions representing the topic value, given in (83c). The basic idea is that there is an implicature that the assertion should leave undetermined the truth value of at least one member of the topic set. In the present case, for example, the truth values of the first two options are fixed by the assertion but those of the other statements remain open. The implicature is satisfied:

- (83)a. $\neg(\text{every}(\text{cat})(\text{like mice}))$
 b. $\{\text{every}(\text{cat})(\text{like mice}), \neg\text{every}(\text{cat})(\text{like mice})\}$
 c. $\{\text{every}(\text{cat})(\text{like mice}), \neg\text{every}(\text{cat})(\text{like mice})$
 $\text{most}(\text{cat})(\text{like mice}), \neg\text{most}(\text{cat})(\text{like mice})$
 $\text{some}(\text{cat})(\text{like mice}), \neg\text{some}(\text{cat})(\text{don't like mice}) \dots\}$

Büring goes on to discuss further interactions between intonation and logical representations but since it does not concern us here, I will not present that discussion. We are interested here in knowing why the schema in (83) does not work for the *any* statement in (82a). The reason this is so, I claim, is that it makes salient the possibility that some members of the domain set have the relevant property and some do not. This is antithetical to the very nature of an *any* statement.⁴³

I should note that there certainly are cases where an *any* statement does not apply to every member in the domain. This is so, for example, when \forall -*any* is modified by *almost*. I would like to point out though that there is a crucial difference between $\neg\forall\phi\psi$ and *almost* $\forall\phi\psi$ that makes *any* compatible with the latter. The following contrast suggests that it does not bring into focus $\exists x[\phi(x)][\neg\psi(x)]$ in the way the scope inverted reading does:

- (84)a. Every cat doesn't like mice. For example/*but Felix doesn't.
 b. Almost every cat likes mice. *For example/but Felix doesn't.

Going back to the general typological question, I have claimed that an *any* statement, whether it involves the universal or the indefinite variant,

⁴³ Alternatively, *any* being a modal determiner does not enter into comparison with regular determiners such as *most*, *few*, *some* etc. Under this view, only the *any* proposition and its negation would be in the topic set and no proposition would remain open.

must be a property-loaded statement that applies to the whole class, not to particular members of that class. But if this is so, it is no longer surprising that diverse languages should lexicalize in a single item noun phrases with distinct quantificational force but a common modal dimension. This conclusion is also supported by the diachronic analysis of indefinite pronouns (such as *any*) in Haspelmath (1997). The study highlights their dual ties to regular universal and indefinite quantifiers and identifies as central, those aspects of their meaning that I have characterized here as their property-oriented character.⁴⁴

4. CONCLUSION

To sum up, I have argued that English has two distinct but related lexical items, a FC *any* which is a universal and a PS *any* which is an indefinite. In spite of having distinct quantificational force the two items are similar in that they express generalizations about a class of entities rather than about particular members of the class. In that sense, they both encode a kind of inherent epistemic modality internal to the noun phrase. In fleshing out a particular implementation of this idea for FC *any*, I hope to have brought into public discussion a range of facts that calls for a reassessment of generalizations about the contexts which support it. The licensing principle of *vagueness* proposed to account for these generalizations is a natural extension of fundamental aspects of the meaning of FC *any*, as is the well-known observation that statements with FC *any* do not involve existential commitments and that they support counterfactual inferences. In extending the analysis to PS *any* I have again tried to relate the standard generalizations about its distribution to its meaning. The resulting generality, I have suggested, is what relates it to FC uses of the item. This quasi-univocal account of the phenomenon, I hope, provides a way of resolving the longstanding problem of whether English has one *any* or two.

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⁴⁴ The term *indefinite* does not involve a commitment about quantificational force for Haspelmath. That is, I do not see him as advocating a univocal account of such items. I thank Manfred Krifka for pointing out the relevance of Haspelmath's work to me.

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