

THE SEMANTICS OF FREE CHOICE ITEMS*

Kjell Johan Saeboe
University of Oslo
Germanistisk institutt, Boks 1004, N- 0315 Oslo
Tel. +4722855271, Fax +4722856887
email k.j.sabo@german.uio.no

ABSTRACT. I present an analysis of Free Choice Items (FCIs), based on Scandinavian, where such items are formed from question items, distinct from polarity sensitive items. FCIs are argued to be universals quantifying into overtly or covertly modal contexts. This property is modelled through a Free Choice Functor, denoting the identity function on propositions, adjoining to some node between the raised Free Choice Quantifier and its trace, thus invoking Intensional Functional Application and requiring some modal for interpretability. Facts concerning "essential connections" and "existential import" are accounted for by assuming that QR may affect just the FC determiner.

1. INTRODUCTION

Free Choice (FC) items like the English determiner *any* as it occurs in (1)–(5) have not been very widely studied, and a consensus on how they should be analyzed has not yet been reached. One question is whether they are existential (indefinite) or universal. Because *any* also functions as a Polarity Sensitive (PS) item and the PS *any* is clearly an indefinite, there has been a tendency to assimilate FC items to the indefinite article. Thus Kadmon and Landman (1993), echoing Davison (1980), argue that *any* is consistently an indefinite, attributing the universality of FC cases to genericity; Carlson (1981), on the other hand, considered this strategy but concluded that FC *any* is a universal determiner after all. Recently, Dayal (1998) has argued that FC *any* is a universal of a very special type, quantifying over pairs of individuals and situations.

- (1) You may bring in *any fox*, if you are only first.
- (2) Man the radarscope! Be ready for *any maneuver*!
- (3) Naturally, he won't be satisfied with just *any present*.
- (4) At 15.000 feet they'd gladly trade the yak for *any animal*.
- (5) I have invented this big machine that can answer *any question*.

* The paper is based on work in the NOS-H project *Comparative Semantics for Nordic Languages*. I have benefitted greatly from presentations to and discussions with my fellow researchers in the project, in Oslo, Gothenburg, and Copenhagen, and with Lauri Carlson, who reviewed the work in an earlier stage (Sæbø (1999)).

The other problem is the **restricted distribution** of Free Choice items. They typically occur in modal contexts, such as (1)–(5), in particular, in sentences with a possibility modal or in so-called elliptic conditionals, and they may occur in generic sentences; but they are often infelicitous in episodic sentences or with necessity modals, as in (6)–(8):

- (6) # She quit her job and decided to leave *anything*.
- (7) # You must retrieve *any of the 300 foxes you released*.
- (8) # When he was divorced, he lost *anything* – even his daughter.

Any theory of FC items must provide an answer to the question of why these sentences are infelicitous – ideally, it should be possible to derive the restrictions from semantic properties inherent in the items. Roughly, Kadmon and Landman (1993) answer that the sentences are too weak, weaker than they would be if *a* were to replace *any*, thus violating the **strengthening** constraint; while Dayal (1998) answers that they are in part too strong, in fact, effectively contradictory; in part they violate a constraint of contextual **vagueness**.

The different answers – too weak versus too strong – are correlated with the different quantificational force ascribed to FC items in the two theories: Kadmon and Landman treat them as special existentials, Dayal treats them as special universals. The view of *any* as a variant of *a* is in large part motivated by a desire to assimilate FC *any* to PS *any*, but it is also supported by many cases where the difference seems to consist in a difference in the **width** of the interpretation of the NP; or, according to Horn and Lee (1994), in an inherent **scalarity** in FC *any*.

The Scandinavian paradigm of FC items, based on *wh* expressions, is lexically distinct from the paradigm of PS items, so there is no *prima facie* reason to view the former as indefinites; in fact, in Norwegian, FC *any* may be translated by a determiner which is ostensibly a universal – *enhver*. Scandinavian facts would thus seem to favor an analysis in the spirit of Dayal (1998), who treats FC *any* as a universal determiner. As we shall see in Section 3.1, however, that analysis is very problematic, and the facts identified in Section 2 will lead us to adopt a simpler and weaker analysis, based on the notion of quantifying into a proposition.

In fact, Dayal's general claim that FC *any* is a modal determiner will basically be substantiated, but in a form totally different from her own. The shared intuitions are, first, FC does involve universal quantification, but second, this universal quantification is potentially stronger than the standard case insofar as the apparent domain of quantification may be an intensional domain of quantification, cutting across possible worlds.

One key observation is that with regard to a case like (9) below, first, the substitution of an indefinite for the FCI does not remotely preserve the meaning, and second, even the substitution of a standard universal determiner fails to preserve the meaning – indeed, to make much sense. The sentence says, roughly, that for every possible (say, US) President, if (s)he were President, (s)he would react the same way (as Bill Clinton).¹ With a standard universal determiner, say *every*, at least on any standard interpretation, the sentence would say that for every actual President, of which there is just one, he would react the same way as he actually does. We might take the domain to include past US Presidents or present ones of other states; but we would still be quantifying over *actual* Presidents.

(9) Any President would have reacted the same way.

Now while Dayal (1998) models these or similar intuitions by letting FC *any* quantify over pairs of situations (as partial worlds) and individuals, I assume that determiners like FC *any* are normal universal determiners but for the requirement that they quantify into some intensional context (like a condition) and a flexibility as to whether the restrictor undergoes Quantifier Raising along with them or stays in the intensional context, as on the reasonable reading of (9).

The analysis developed in Section 3 can be summed up thus:

- The FC determiner (FCD) is ambivalent as to whether only it or the whole FC phrase (FCP) undergoes Quantifier Raising
- The FCD or FCP is interpreted as a standard universal quantifier
- Some node between the FCD or FCP and its trace is required to denote a proposition

The third item says that FCIs must quantify into a type $\langle s,t \rangle$ expression. Such expressions can be formed from sentences through a composition principle called Intensional Functional Application, IFA. This principle can be invoked by some modal, denoting a function from propositions. But I will suggest that it can also be invoked by an FCI, more precisely, by a functor induced by the LF raising of an FCI, adjoining somewhere between the FCI and its trace. Interpretability will ensure that the site is directly below some modal expression.

¹ Possibly, standard universal determiners *can* have this meaning, at least in languages like German, where cases like (9) will be rendered with standard universal determiners; but in that case, their semantics must be modified to accommodate this.

FCIs can quantify into an argument of a modal in the narrow sense, as in (1), or an attitude, as in (2), or a conditional operator, as in (3)–(5), interacting with the semantical mechanism known as Semantic Partition. The first item above says that the expression that the FCI quantifies into may include the NP, as in (9), where only the determiner undergoes QR to quantify over, as it were, **possible** objects. The answer to the question why sentences like (6) or (8) are infelicitous is that because there is no relation for a proposition to enter into, the formation of a proposition results in a type conflict.

My analysis aims primarily at Scandinavian, Swedish and Norwegian, but it is also an analysis of FC *any* or *wh-ever* free relatives in English, at least to the extent that *any* can be translated by a Scandinavian FCI (for difficult borderline cases, see 2.3). Furthermore, it is intended to apply to much of what has been identified as FCIs in other languages – much, but not all: To the extent that items like the German *irgend-* are labelled FCIs, items that seem to have more in common with the English determiner *some* than with (FC) *any*, my analysis will not be applicable (for references to approaches to these more indefinite items see 2.2.3).

In Section 2, a family of facts are established. Section 2.2 includes a discussion of the theory of Kadmon and Landman (1993). In Section 3 I develop my own analysis. Section 3.1 is an assessment of the theory of Dayal (1998). Section 4 brings conclusions.

2. FACTS

Any good theory of Free Choice must account for a number of facts that have been noted in the literature on the English determiner *any*, notably by Vendler (1967). We may distinguish three generalizations, or rather, statements of semblances or tendencies:

- The distribution of FCIs is restricted; as it seems, to contexts that can be interpreted as intensional, that is, FCIs preferably cooccur with modals, in the general sense of propositional relations
- Not only do FCIs preferably cooccur with modals; they seem to regularly take scope over the modals they cooccur with
- FCIs seem able to quantify over possible entities, or entities with merely possible properties; the noun phrase, or restrictor, may be interpreted as a counterfactual antecedent

These statements are relatively uncontroversial, but of course very weak and vague. I devote successive subsections of this section to sharpening and strengthening them. I argue that

- The distribution is indeed restricted to intensional contexts, that is, the FCI has to cooccur with a modal in a wide sense
- The FCI has to have scope over the modal it cooccurs with
- The apparent restrictor may be in the intensional context

The emerging picture is that the FCI is a universal quantifier which has to quantify across a propositional relation, into a proposition, and, that the apparent restrictor may form part of that proposition. These two descriptive generalizations get a theoretical interpretation in Section 3.

2.1. The Restricted Distribution of FCIs

The thesis I want to defend in this subsection is that FCIs are restricted to modal contexts. They must cooccur with some expression denoting a relation where at least one of the arguments is a proposition; a modal in the narrow sense, a generic or conditional operator, or an attitude verb. A modal may be implicit, but it must be part of the interpretation.

Everybody agrees that FCIs have a limited distribution, but different scholars draw the lines differently. Thus Kadmon and Landman (1993) formulate a very strict condition, while Dayal (1998) is relatively liberal. The issue is often whether FCIs do require intensional contexts (Carlson 1981); the tendency, at any rate, is for them to occur in such contexts.

One problem with determining the limits to the distribution of FCIs is that *any* in English functions both as a PS and as an FC item, and it may be difficult to discriminate between the two. This is one point where it is useful to consult a language where FCIs are lexically distinct from PSIs. A survey of the contexts where Swedish and Norwegian *wh* based FCIs are in fact used, based on corpus studies, is presented in 2.1.1.

As noted by Dayal (1998), sometimes an FCI occurs in what may seem an extensional context. But on closer scrutiny, these cases turn out to involve a modal element after all, in particular, a conditional element, induced by other elements in the sentence, as argued in 2.1.2.

One strong argument for the thesis that FCIs require modal contexts is that they can bring out a conditional interpretation which is otherwise latent. This will be shown in 2.1.3.

2.1.1. The Distribution of Scandinavian FCIs in a Corpus

Let us get acquainted with what may be termed the default FC items in Mainland Scandinavian², those composed of a *wh* word, pronoun, determiner, or adverb, and the locution *som helst*.³ Any *wh* word except *why* can figure as an FC item if accompanied by *som helst*. As *wh- som helst* is the common component in a range of items, we have a paradigm:

Norwegian	Swedish	English <i>wh-</i>
<i>hva som helst</i> <i>hvem som helst</i> <i>e- hvilk- som helst N</i> <i>hvor som helst</i> <i>når som helst</i>	<i>vad som helst</i> <i>vem som helst</i> <i>vilk- N som helst</i> <i>var(t) som helst</i> <i>när som helst</i> <i>hur som helst</i> <i>hur A (N) som helst</i>	what who which where (to) when how how A (N)

The leftmost and middle column contain the Norwegian and Swedish paradigm of *wh* based FC items, respectively, and the rightmost column contains the English *wh* correlates – two pronouns, a determiner, three adverbs, and *how* as a degree adverb. We see that the Swedish column is more comprehensive than the Norwegian column. The five items that the two have in common correspond to the *any* expressions *anything*, *anybody*, *any*, *anywhere*, and *any time*.

What we find when sampling *wh som helst* items in corpora is that about a fourth of the tokens co-occur with the modal *kan* (*can, may*), and that more co-occur with *some* expression of possibility. Moreover, if counterfactual operators such as *skulle* (Swedish) or *ville* (Norwegian) ('would') and covert generic operators are counted as modals, an even larger portion of occurrences coincide with the occurrence of modals; many cases can be read as conditional or generic sentences. Still other contexts are arguably intensional, if only implicitly, in the sense that a word or construction can be seen to involve modality once its semantics is spelt out, in terms of a propositional attitude or a conditional.

² I focus on Norwegian, as my own mother tongue, and Swedish, as there are interesting differences between these two; the Danish system is very similar to the Norwegian

³ The locution *som helst* can be glossed by *as rathest*, that is, a conjunction or particle plus the superlative of an adverb which in the comparative translates as *rather*.

The below attempt at a classification and quantification is based on a sample of 1.000 cases from a general source corpus of either language. The examples come in pairs where the upper element is Swedish (S) and the lower is Norwegian (N). The inaccurate estimates do not just reflect confidence intervals but also the intrinsic vagueness of the categories.

Possibility (30-50%):

- (10) Naturligtvis går det att spela Bach på vilka instrument som helst.
naturally works it to play Bach on which instruments as rathest
 'Of course, Bach can be played on any instrument.'
- (11) Du kan ikke legge julegavene under en hvilken som helst gran.
you cannot lay Christmaspresents under a which as rathest fir
 'You cannot put your Christmas gifts under just any fir tree.'

Conditionals or Generics (15-25%):

- (12) Vem som helst skulle funnit sådana metoder djupt förkastliga.
who as rathest would found such methods deeply reprehensible
 'Anybody would find such methods deeply reprehensible.'
- (13) Det var alminnelig i SS å adlyde en hvilken som helst ordre.
it was customary in SS to obey a which as rathest order
 'In the SS, it was customary to obey any order.'

Propositional Attitudes, Synthetic Modality (15-25%):

- (14) Jag känner mig beredd att möta vilka händelser som helst.
I feel myself prepared to meet which events as rathest
 'I feel ready to face any event.'
- (15) Baugen blir en rampe som passer en hvilken som helst kai.
stern-the becomes a ramp that fits a which as rathest wharf
 'The stern becomes a ramp fitting any wharf.'

Comparative (or Equative) Constructions (10-15%):

- (16) Hon sköter gården bättre än vilken karl som helst.
she tends farm-the better than which man as rathest
 'She tends the farm better than any man.'
- (17) Vi ser på dem som en hvilken som helst motstander.
we see on them as a which as rathest opponent
 'We regard them as just any opponent.'

Thus by and large, the survey confirms that FCIs occur in contexts that are arguably intensional.⁴ A proportion remains where a modal element is difficult to discern: A class of negative (predicative) contexts and, in Swedish, a class of positive extensional contexts. In Sæbø (1999: 97f.) these contexts are argued to represent rhetorical and metaphorical uses.

Negative Constructions and Swedish Specialties (5-10%):

- (18) Rösterna i drömmen är inte vilka som helst.
voices-the in dream-the are not which as rathest
 'The voices in the dream are not just any voices.'
- (19) Det fanns hur många flickor som helst som ville tävla.
there were how many girls as rathest that would compete
 'Any number of girls wanted to compete.'

It is striking that necessity modality is absent as a separate category (though necessity modals do occur in conditional or generic structures). This accords with the observation made e.g. by Davison (1980: 12) that FC *any* tends to select possibility modals. This fact is discussed in Sæbø (1999: 83–86), arguing that cases like (7) represent contradictions.

2.1.2. Possible in Extensional Contexts?

Dayal (1995, 1998) holds that FC *any* can occur in extensional contexts if only the NP is postmodified. Citing LeGrand (1975), she calls this the effect of «subtriggering». She contrasts i.a. (20a) with (20b):

- (20) a. # Any woman contributed to the fund.
 b. Any woman who heard the news contributed to the fund.

Dayal notes that Vendler (1967) does not accept sentences like (20b). Be that as it may, there are many cases where a relative clause restores the felicity of a sentence with an FCI, also in Scandinavian, where cases like (20b) are marginal. Consider (the Norwegian) (21) and (22).

- (21) a. # Jeg har hva som helst.
 'I have anything.'

⁴ It would go beyond the scope of this paper to show how the lower two classes involve modality, but in 2.1.2 – 2.1.3 I discuss a few cases of inherent or implicit modality; a more thorough discussion can be found in Sæbø (1999: 91–96).

- (21) b. Jeg har hva som helst som du trenger.
I have what as rathest that you need
 'I have whatever you need.'
- (22) a. # Regjeringen vil senke et hvilket som helst skip
Government will sink a which as rathest ship
 b. ... som truer med å forurense kysten.
 ... *that threatens to pollute coast-the*

But it can be argued that the relative clause facilitates a reading of the sentence as a conditional through the interpretive mechanism known as Semantic Partition (Krifka 1995), where various sources of information (intonational, lexical, contextual) are assumed to conspire to partition a sentence into restrictor and nuclear scope of an overt or covert operator. We can argue that (21a) is deviant because the FC phrase *hva som helst* is itself too poor in descriptive content for an antecedent proposition to be constructed. Postmodification can provide more descriptive material. Thus with the relative clause, the FCP will contain sufficient information to form the proposition that you need *x*, so that a binary modal may be read into the sentence: 'for every *x*, if you need *x*, necessarily I have *x*'.

Thus it seems that adding descriptive material to the phrase makes it easier to accept the FCI by way of making it easier to read the sentence as an intensional context, typically a conditional or generic structure. It is not the case that «subtriggering» saves the extensional context, rather, it helps transform it into an intensional context.⁵ Davison (1980), noting that «many of the bad sentences...can be 'cured' with a relative clause», in fact suggests such an explanation, paraphrasing (23a) by (23b).

- (23) a. John kept any place he went a secret from us.
 b. If John went anywhere, he kept the place a secret from us.

Interpreting a postmodified NP as a conditional antecedent will be seen, in 2.3, to rely on not treating the entire DP as a quantifier.

But not only postmodification in the FCP can be conducive to the acceptability of sentences with FCIs through facilitating an intensional interpretation. The verb can be important as well, in that it can have a presupposition that can be accommodated into an antecedent, so the sentence can get an interpretation as a conditional structure.

⁵ Actually, Dayal's explanation of such contrasts rests on her assumption that FC *any* is inherently modal, quantifying over pairs of individuals and situations, so in her theory, «subtriggering» saves the statement, made intensional by the FCI, from being trivially false. For a discussion of the theoretical aspects of Dayal's account, see 3.1.

Thus when Carlson (1981: 11), who considers a characterization of the «licensing environments» for FC *any* as intensional contexts, takes sentences like (24a) to show the need for characterizing them as either intensional contexts or individual-level argument positions, there is an alternative explanation for this seemingly extensional context in terms of a conditional structure induced by (the FCI and) the verb. Compare (24b), where the verb does not carry a comparable presupposition, and the Norwegian pair in (25), parallel to (24) as far as presuppositions go.

- (24) a. Bob likes anyone.
 b. # Bob meets anyone.
- (25) a. På mine turer i leiren hilste jeg på en hvilken som helst fange.
on my walks in camp greeted I on a which as rathest prisoner
 'Walking round the camp, I greeted any internee.'
 b. # På mine turer i leiren traff jeg på en hvilken som helst fange.
on my walks in camp met I on a which as rathest prisoner

Many authentic Scandinavian sentences without an overt indication of a conditional structure can be described in this way. Consider (26), where the implicative verb lets us reconstruct the antecedent 'if I try to do *x*'; or (27), where the verb *sign* can be taken to presuppose that the subject is instructed or pressured to sign something.

- (26) Jeg mislykkes med hva som helst. (N)
I fail with what as rathest
 'I fail at anything.'
- (27) Jeg ville gjerne sett den som ikke
I would gladly seen that who not
 i løpet av et par dager vil undertegne hva som helst. (N)
in run-the of a couple days will sign what as rathest
 'I'd like to see the one that after a couple of days won't sign
 just anything.'

The indefiniteness of the NP may also influence the ease with which a conditional structure can be invoked, and thus the felicity of the FCD. Dayal (1998: 461), citing Krifka (p.c.), brings the pair in (28), taking it to corroborate her "Contextual Vagueness requirement":

- (28) a. Confiscate any liquor.
 b. # Confiscate any of this liquor.

This contrast can be explained by a uniform intensionality requirement, seeing that (28a) has an interpretation ‘for every quantity, if it is liquor and you come across it, confiscate it’, while (28b) cannot well have such an interpretation. But note that there is nothing intrinsically wrong with partitive NPs in this regard; (29), say, does have an interpretation ‘for every one of these (marked) salmons, if you catch it, please return it’:

(29) Please return any of these salmons.

In fact, it seems that any extensional context turns out, on closer scrutiny, to have a reading as an intensional context, be it that there is a word with a hidden modal element in its meaning, as in (30), or that an implicit modal operator can be posited, as in many of the examples above.

(30) Vi har bara en Jord och den *tål* inte vad som helst. (S)
we have only one Earth and it tolerates not what as rathest
 ‘We only have one Earth, and it won’t tolerate just anything.’

To sum up, sentences that cannot be interpreted as involving a modal are infelicitous with FCIs; but sentences are very flexible in this regard, as very many can be read as involving a generic / conditional operator. There are at least two ways to facilitate this. First, the verb may carry a presupposition which can be accommodated into the restrictor of the operator; second, a modified NP can provide material for a restrictor.

2.1.3. FCIs enforce a modal reading of a neutral sentence

One strong argument for the thesis that FCIs need intensional contexts is that they can force a conditional reading which may be available, but not prominent, with a universal or indefinite. While (31a) is ambiguous between a future and a conditional reading, (31b) seems only to mean that for every students’ association, if John is asked to join it, he will. (32) is an authentic Swedish example with the same semantic structure.

(31) a. John will join every students’ association.
 b. John will join any students’ association.

(32) De går med i vilken sekt som helst, bara någon pratar med dem.
they go with in which sect as rathest only someone talks to them
 ‘They’ll join any sect as long as someone talks to them.’

Vendler observed (1967: 85) that *any* can enforce conditional readings. To say (33a) «is to issue a blank warranty for conditional predictions». Vendler compares (33a) with (33b), noting that this sentence «may be taken as a simple forecast: he will tell me this whether I ask him or not». We may go on to consider (33c), with *every* instead of *any*:

- (33) a. Any doctor will tell you that Stopsneeze helps.
 b. Dr. Jones will tell you that Stopsneeze helps.
 c. Every doctor will tell you that Stopsneeze helps.

Although the favored interpretation of this sentence may be conditional, coinciding with (33a) ('for every doctor, if you ask her, she will tell you that Stopsneeze helps'), there is also a simple prediction reading, taking *will* as a future tense operator. This reading is not available with (33a); this sentence unambiguously has a conditional structure. This turns on interpreting the verb *tell* as presuppositional, in the sense of *answer*, and accommodating the presupposition, in terms of *ask*, into the antecedent.

Scandinavian data bear out the prediction that in cases where a word may or may not take a proposition as an argument, the choice of an FCI over a standard universal quantifier will favor the intensional reading.

- (34) Han varnade samtidigt regeringen för att inbilla sig att
he warned simultaneously government-the for to imagine that
 moderaterna stöder vilka besparingar som helst. (S)
conservatives support which spending cuts as rathest
 'At the same time, he warned the Government that it shouldn't
 assume that the Conservatives will support just any cuts.'
- (35) Du må betale for en hvilken som helst vare. (N)
you must pay for a which as rathest commodity
 'You must pay for any commodity.'

Substitution of the determiner *alla* in the Swedish example (34) results in a sentence that may mean that the Government should not suppose that the Conservatives support all the spending cuts actually proposed; by contrast, the *att* clause as it stands means that they will support every cut that may be proposed. Similarly with the Norwegian example (35): The determiner *alle* would allow the reading that you have to pay for all members of a contextually restricted set of commodities, while (35) as it stands clearly means that for every commodity (in such a contextually restricted set), if you want it you must pay for it.

To sum up, many sentences are neutral as to whether they constitute an ex- or intensional context. Simple sentences with a latent conditional operator are typical cases. Here, the FCI can invoke a conditional, hence intensional, structure. This seems to demonstrate in a decisive way that FCIs must cooccur with modals.

2.2. *FCIs take scope over the modals they cooccur with*

In this subsection I want to defend the thesis that FCIs must take scope over the modals they cooccur with. This entails that they are quantifiers, a not uncontroversial assumption. Thus Kadmon and Landman (1993) reject it (wrt. *any*), and the analysis proposed by Horn and Lee (1994) also excludes it. Therefore I will, in separate subsections, discuss these two approaches, then address some more positive evidence in 2.2.3.

2.2.1. *Kadmon and Landman (1993): Widening and Strengthening*

According to Kadmon and Landman (1993), FC *any* is, just like PS *any*, an indefinite (with additional semantic and or pragmatic characteristics), the universal interpretation being attributed to a generic quantification: «NPs with FC *any* are allowed in the same kind of environment where generic indefinites are allowed» (p. 357). One problem, noted by Dayal (1998), is that this is not correct. But there are also problems of a more theoretical nature, motivating a thorough survey.

The determiner *any* seems to have two different meanings; at any rate, it has two different functions: As a Polarity Sensitive item (PSI), as in (36a) or (36b), and as an FCI, as in (36b) or (36c):

- (36) a. She was a woman who had never been seduced by anybody.
 b. She was a woman who could not be seduced by anybody.
 c. She was a woman who could be seduced by anybody.

These two uses seem to be related, so from a semantic minimalist point of view, it is desirable that they be described as variants of one item, with one meaning. This will have to be the meaning of the indefinite article, for the PS variant is clearly indefinite (at least since Ladusaw 1979 this has been uncontroversial). It must *basically* be the meaning of the indefinite article – it may of course differ in some less essential respect, as is to be expected from the fact that *any*, as opposed to *a*, may be stressed.

But the problem is that FC *any* appears to have a universal meaning. Now there are of course cases where even the indefinite article acquires a universal interpretation: Generic or conditional structures, as in (37):

- (37) a. A soldier obeys an order.
 b. A soldier usually obeys an order.
 c. If a soldier gets an order, he obeys it.
 d. If a soldier gets an order, he usually obeys it.

In such cases, it is assumed that the variable introduced by the indefinite article gets bound by an overt or covert generic or conditional operator inducing an unselective (quasi) universal quantification over 'cases', an idea going back to Lewis (1975). The essence is that the quantification is not attributed to the indefinite but to the context it occurs in. The idea behind the theory of Kadmon and Landman (1993) (henceforth also: KL) is to generalize this pseudo universality of *a* to *any* to say that *any* is FC iff it occurs in a context inducing a quasi universal quantification.⁶

- (38) a. Any soldier obeys any order.
 b. Any soldier usually obeys any order.
 c. ? If any soldier gets any order, he obeys it.
 d. ? If any soldier gets any order, he usually obeys it.

We can agree that (38a), with two instances of FC *any* where (37a) has two instances of *a(n)*, is a felicitous sentence with a similar meaning. Intuitively, (38a) is somewhat stronger than (37a). (38b) is also felicitous, though more intricate semantically, and not as close to (37b); *usually* does not seem to quantify over soldiers and orders but over situations or occasions – this point is made by Dayal (1998: 449) in connection with the sentence #*any lion is majestic*. One explanation for the contrast is that *any* has a quantificational force on its own. (38c) and (38d) are, in fact, not readily interpretable, a fact that will also be significant for the argument that FCIs are quantifiers after all; cf. 2.2.3.

The analysis of KL has 3 ingredients: (A), (B), (C).

- (A) *any CN* = the corresponding indefinite NP *a CN*
 with additional semantic / pragmatic characteristics:

⁶ Davison (1980) had proposed this strategy, without being acknowledged by KL. This is all the more remarkable since KL, like Davison, use data from Hindi. Carlson (1981) discusses Davison's position but concludes that FC *any* is a universal after all.

(B) *Widening*

In an NP of the form *any CN*, *any* widens the interpretation of *CN* along a contextual dimension.

(C) *Strengthening*

Any is licensed only if the widening that it induces creates a stronger statement, i.e., only if the statement on the wide interpretation \Rightarrow the statement on the narrow interpretation

Note that these three rules apply to both the PS and the FC use of *any*. Both (B) and (C) make reference to the indefinite article and to the indefinite NP *a CN*, though in an implicit manner: When (B) says that *any* widens the interpretation of the common noun phrase, what is meant is of course that *any* makes the interpretation wider than *a* would make it. And when (C) says that this widening creates a stronger statement, what is meant is naturally that the statement is stronger than *a* would make it. Thus both (B) and (C) state relative properties of *any*, properties relative to *a*. We may think of *any* as a composite determiner: *a - ny*, where *-ny* induces a Widening and introduces a Strengthening constraint.

Let us consider one of KL's few examples of FC *any* to see how their analysis is able to account for what they regard as the core intuition, that it conveys a reduced tolerance of exceptions.

- (39) a. An owl hunts mice.
 b. Any owl hunts mice.

(39a) is a generic statement, about owls in general and what they will do in the right circumstances; and (39b) has a very similar interpretation. But while when interpreting (39a), with the indefinite article, we tend to focus on owls that are overall normal, when interpreting (39b) with *any*, we widen our focus to include owls that are in one way or other not so typical, standard, or normal. The way in which owls are not necessarily so normal is determined by the context, and this is what is meant by the formulation that *any* widens the interpretation of CN, here *owl*, along a contextual dimension. This is illustrated in dialogues like (39c):

- (39) c. – An owl hunts mice.
 – A healthy one, that is?
 – No, any owl.

Here, the dimension is identified as the health scale. With respect to this, *any* is universal in the sense that all degrees are to be represented in the owl domain. In this dimension, the tolerance of exceptions is reduced. And since we count more owls in the restrictor of the generic operator, (39b) is stronger than (39a).

With regard to such examples, the analysis of KL seems convincing. There are, however, a few counterarguments, empirical and theoretical.

The most conspicuous problem is that the analysis only makes sense in such cases where *any* can in fact be replaced by the indefinite article. The two characteristics are defined in terms of the substitution of *a*, and FC *any* is to correspond to generic indefinites. But even among KL's examples of FC *any*, there are cases that pose a problem, like (40a):

- (40) a. Any match I strike lights.
 b. ? A match I strike lights.

And there are numerous cases where the substitution of *a* for *any* is more problematic than in (40a). Notably contexts where *any* seems to rely on a possibility modal often turn odd when *any* is replaced by *a*.

- (41) a. ? The train may come a minute.
 b. The train may come any minute.
 (42) a. ? This could have happened a place.
 b. This could have happened anywhere.

Also cases with an implicit modality or conditionality are not invariably «environments where generic indefinites are allowed». In (43a)–(45a), the indefinite can hardly be interpreted in a generic sense.

- (43) a. ? He is stoic about a thing.
 b. He is stoic about anything.
 (44) a. ? I am prepared for an event.
 b. I am prepared for any event.
 (45) a. ? Some would do a thing to get a role.
 b. Some would do anything to get a role.

That the substitution of *a* for *any* does not invariably result in a generic interpretation is a *prima facie* problem which might be overcome by an argument that *any* favors a generic interpretation less available for *a*. But even so, there is a problem of a more theoretic nature connected to the environments where generic indefinites are not «allowed».

The problem arises from the ingredients (B) and (C) in conjunction: *Any* is to cause a widening, and the widening is to cause a strengthening. This predicts that *any* is only allowed in a Downward Entailing Context (DEC), as it is exactly in such a context that a widening can strengthen a statement. For Polarity Sensitive *any*, this is of course basically trivial – though even here there are contexts that are not uncontroversially DE. For FC *any*, however, the situation is critical, as in numerous cases, it is highly unconventional to claim that the context is a DEC. As it happens, most of these cases are such where FC *any* seems to depend on a modal of possibility, like (41b)–(42b) above: If in such cases a widening of the noun phrase denotation is to result in a strengthening of the statement, a context of possibility must count as a DEC, so (46a) will entail (46b):

- (46) a. You may take an apple.
 b. You may take a green apple.

There is no semantic analysis of modals like *may* that will make (46b) a logical consequence of (46a) – on the contrary, a standard analysis, like that of Kratzer (1981), will make (46a) a logical consequence of (46b). Actually, intuitions may not be so clear; in an ordinary communication situation a hearer of (46a) may well feel licensed to take a green apple, at least as long as nothing is said to the contrary. This dilemma seems closely related to the dilemma of Free Choice Disjunction (Kamp 1979; Zimmermann 1999), the intuition that (46c) implies (46a).

- (46) c. You may take an apple or a pear.

Possibly, the problem is related to the distinction made by von Wright (1971) between a ‘weak’ and a ‘strong’ *may*; in the strong sense, (46c) would have a paraphrase like (46d), and the issue would reduce to that of whether we may assume Strengthening the Antecedent (SA):

- (46) d. If you take an apple or a pear, you won’t be sanctioned.

However, SA is a controversial rule, not least regarding counterfactuals (cf. Lewis 1973), and this is directly relevant for *any*. We can agree that (47c), from KL, seems to entail (47b), but for this strengthening effect to come about through a widening effect, it must be assumed that a wider, thus weaker, antecedent leads to a stronger counterfactual, and thus that (47a) will in turn entail (47b). Although due to a scalar implicature this does not seem unreasonable here, in many other cases it does.

- (47) a. A dancer would be able to do it.
 b. A professional dancer would be able to do it.
 c. Any professional dancer would be able to do it.

And, finally, there are problems of a purely theoretic nature with the «semantic constraint» Strengthening. As pointed out by Krifka (1995a), this lexical property is intrinsically non-compositional, stating that the «statement» stand in a certain relation (stronger) to another «statement». And, «We may grant (C) the status of a descriptive generalization, but the next question should be: At which level is (C) checked, and what is responsible for this checking?» Indeed, it turns out that once we try to answer this in a precise way, the constraint proves circular and vacuous. Consider a sentence with an ambiguity between a PS and an FC reading:

- (48) a. She cannot be seduced by any musician.

That there may be an ambiguity like this is not in itself counterevidence against the analysis of KL; after all, a sentence with an indefinite may well exhibit an ambiguity between a referential, or quantificational, and a generic interpretation of the indefinite. The serious problem is that to check whether (C) is satisfied we must keep the two readings separate, to decide what is the relevant «statement». Consider the PS reading first:

- (48) b. She cannot be seduced by a musician.

(48a) is evidently intended to be stronger than (48b). So in this case the statement coincides with our example sentence. This is not necessarily the case, though. Consider the FC reading, unambiguously brought out by adding *just (any)* – in this case it is not (48b) but rather (48d) which must count as the comparable statement, comparable to (48c):

- (48) c. She can be seduced by any musician.
 d. She can be seduced by a musician.

On the FC reading, (48a) is actually a weakened version of (48b), due to the wide scope negation of course. Thus we have to discount a negation to check (C) with respect to the FCI, while we have to count a negation to check (C) with respect to the PSI. This argument shows either that PS and FC *any* are different – a result running counter to the core of KL's analysis – or that the third ingredient of that analysis, Strengthening (C), designed to explain the restricted distribution of *any*, is not tenable.

2.2.2. *Scalar Implicature as a General Interpretation Scheme*

Horn and Lee (1994) have argued for an analysis of FC *any* in terms of scalarity and scalar implicature, and the notion of scalarity has also been used for analyses of polarity sensitive items, like PS *any* (Krifka 1995a). Scalarity is, via scalar implicature, a source of universal quantification (Fauconnier 1979), so if scalarity can prove useful in the analysis of FC items it would account for the universal quantification associated with them without treating them as universal quantifiers; regarding English *any* this is of course desirable. In fact, many cases in the Scandinavian material lend themselves to a scalar interpretation. In addition, there is an element in the *wh som helst* FCI paradigm which suggests scalarity: The superlative form of the preferential adverb, *helst* (literally *rathest*). In this section, I shall examine the relevant evidence but conclude that the hypothesis that FCIs are inherently scalar is too strong and meets too many counterexamples for a general analysis to be based on it.⁷

As made precise by Horn and Lee (1994), the hypothesis that FCIs are inherently scalar, henceforth the scalar hypothesis, implies that any Free Choice DP can be paraphrased by, in English, the DP *a N, even the A-est*, that is, by the corresponding indefinite augmented by the definite description *the A-est (N)* for an adjective A and with the particle *even*. The choice of A will depend on the (intrasentential) context, primarily the verb in the sentence, in such a way that the superlative form of A will entail that the sentence frame is (not) true for every possible N.

To illustrate, consider the English sentences (49a) and (50a), from Fauconnier (1979), and the paraphrases with FC *any* (49b) and (50b):

- (49) a. John can hear the lowest sound.
 b. John can hear any sound.
 (50) a. The lowest sound will wake John.
 b. Any sound will wake John.

The canonical paraphrases of the (b) versions according to Horn & Lee (1994) are the (c) versions below:

- (49) c. ? John can hear a sound, even the lowest.
 (50) c. A sound, even the lowest, will wake John.

⁷ In Sæbø (1999: 18–22), I investigate the possibility of basing a general analysis on preferential paraphrases with verbs like *want*, suggested by the *rath-* element in FCIs, concluding that to the extent that *what you want* can replace *anything*, these phrases are themselves grammaticalized and have a nonliteral, free choice meaning.

We can agree that in these two cases, the difference in meaning between the FC version and either version with *the A-est* is negligible. However, the indefinite *a sound* seems superfluous or even slightly odd. Let us concentrate on a paraphrase of *any N* on the form *even the A-est N*.

And to be sure, there are many cases of *(e-) (h)vilke- (...) som helst* in the Swedish or Norwegian corpora that conform to this pattern, even if the choice of the adjective may sometimes be less straightforward and the adjective may have more dimensions to its meaning than does *low*. Here are two Swedish examples, paraphrased by English superlatives:

- (51) a. De lär kunna slå vilket lag som helst.
they seem can beat which team as rathest
 b. They seem to be able to beat even the best team.
- (52) a. Jag är beredd att ta vilket straff som helst utom dödsstraff.
I am prepared to take which penalty as rathest except death
 b. I am prepared to take even the hardest penalty except death.

However, there are plenty of cases where an appropriate adjective is difficult to identify, because the relevant entities are not ranked along a scale, even when contextual information is taken into account. We may choose one and try to force a ranking along the corresponding scale, but a scalar implicature will not be generated or if it is generated it will fail to bring about a universal interpretation. Consider (53) and (54):

- (53) a. Man kan faktiskt så i vilka krukor som helst bara de er rena.
one can factily sow in which jars as rathest only they are clean
 b. One can actually sow in even the smallest jar if it is only clean.
- (54) a. Man kan göra bordsdrycker av i princip vilken frukt som helst.
one can make table drinks of in principle which fruit as rathest
 b. One can make table drinks from even the hardest fruit.

The adjective chosen in the (b) versions is as good a candidate as any, but we can easily imagine alternatives, such as *thinnest* in (53) or *sourest* in (54). Regarding sowing or soft drink making, jars and fruits are not ordered according to just one but to several scales, and in consequence, the superlative fails to generate a scalar implicature which covers all the cases; from (53b) we can conclude that we can sow in a small jar but not that we can sow in a A jar for any other adjective. Size does not matter but another dimension may well matter.

Now (53)–(54) are cases where scalar paraphrases have some degree of plausibility; the larger context might supply sufficient information to narrow down the variation to one dimension. But in a majority of cases, the choice of an adjective seems completely arbitrary and a paraphrase with a superlative is a barely interpretable sentence, like (55b) or (56b):

- (55) a. Det känns som att vara ombord på vilket skepp som helst.
it feels as to be aboard on which ship som helst
 b. ? It feels like being aboard even the newest ship.
- (56) a. Det går att spela Bach på vilket instrument som helst.
it goes to play Bach on which instrument som helst
 b. ? Bach can be played on even the smallest instrument.

We could try to account for such cases by ranking the entities according to likelihood, a notion that has been used for a general analysis of *even* (Karttunen and Peters 1979), choosing a superlative like *most unlikely*. This may yield reasonably good paraphrases, but the problem is that the notion of likelihood is so vague as to render the analysis rather vacuous: The paraphrase would be designed to ensure a universal interpretation. Thus the scalar hypothesis must ultimately be abandoned.

2.2.3. Positive Evidence for FCIs as Wide Scope Quantifiers

Let me first clarify a few notions: In claiming that FCIs are quantifiers with *universal* force, I am not claiming that they are *ordinary* universals. But this often seems to be assumed in arguments against an analysis in terms of universal quantification. Thus Horn (1999) says that FC *any* is neither a universal nor an existential but an *indiscriminative* determiner. However, it is possible to read the facts that motivate this term as just the peculiarities of FC *any* as compared to the determiner *every*, so that \forall or its meaning can figure as a part of the formal analysis. – Further, I am not making a universal claim about all items that have been labelled Free Choice items in a language. In particular, reports about *cualquier* in Spanish (Quer 1999) or *opjodhipote* in Greek (Giannakidou 2000) show that these items, although they are termed Free Choice items, do not share in all the facts that this subsection is about. – Even regarding *any*, there may be borderline cases between the PS and the FC sense, in certain contexts where an analysis in terms of indefiniteness can be seen to constitute a bridge between the two senses, cf. 2.3.

Probably the strongest indication that FCIs like *any* or *wh- som helst* are a kind of universal quantifiers is provided by inferences like (57).

- (57) She may sing any hymn.
Abide with me is a hymn.

 She may sing *Abide with me*.

In this way, FC *any* patterns with *every* and FCIs pattern with (standard) universals. There is an asymmetry, however: Whereas *every* etc. can have wide or narrow scope wrt. an operator like *may*, FC *any* etc. must have wide scope. (58) is a valid inference on one reading of the first premiss, but (59) cannot be construed as a valid inference.

- (58) She may sing every hymn.
 There are exactly 800 hymns.

 may (she sings 800 hymns)
- (59) She may sing any hymn.
 There are exactly 800 hymns.

 may (she sings 800 hymns)

Vendler noted that (60b) has two readings: One claiming that no matter whom you select from among you I can beat him, and another claiming that I am able to make the proposition that I beat every one of you true; (60a), however, can only mean the former (1967: 78ff.).

- (60) a. I can beat any one of you.
 b. I can beat every one of you.

It has been repeatedly pointed out since Vendler (e.g. by Horn (1972)) that FC *any* – or *any* in general – seems to scope over (other) operators. For instance, in the Game Theoretical semantics of Hintikka (e.g. 1977), a central ordering principle says that the rule for *any* has a priority over the rules for *not*, modals, and *if*. While it may not be correct to *stipulate* that FCIs are wide scope universals, the descriptive generalization seems to hold that as compared with standard universal quantifiers, which may have wide or narrow scope in relation to modal operators, FC quantifiers (if quantifiers they are) can only take wide scope.

Consider (61a): This sentence means that for every good cause, if I had been asked to state my sympathy for it, I would have; (61b), on the other hand, has the additional reading that on some contextually specified condition I would have stated my sympathy for every good cause.

- (61) a. Jeg ville uttalt min sympati for en hvilken som helst god sak.
I would stated my sympathy for a which as rathest good cause
 'I would have stated my sympathy for any good cause.'
- b. Jeg ville uttalt min sympati for alle gode saker.
I would stated my sympathy for all good causes
 'I would have stated my sympathy for every good cause.'

On this extra reading, the quantifier has narrow scope in relation to the counterfactual. More generally, the substitution of a standard universal determiner for an FCI often results in a scope ambiguity; while the FCI unambiguously scopes over a modal relation, the standard universal can have a narrow-scope interpretation in regard to the modal relation.

While these observations as far as conditional relations are concerned may be compatible with a view of FCIs as a species of bound indefinites (cf. 2.2.1), we should note that not any occurrence of an indefinite in a conditional structure can be replaced by an FCI; the substitution fails if the structure is explicated in a complex sentence, as in (62a). Whereas the indefinite receives a bound, scopeless or widescope, interpretation, the FCI is unable to escape from the subordinate clause.

- (62) a. Om du vil ha en vare, må du betale for den.
if you will have a ware must you pay for it
 'If you want a commodity, you must pay for it.'
- b. # Om du vil ha en hvilken som helst vare, må du betale for den.
if you will have a which as rathest ware must you pay for it

Consider also the following two contrasts, where a nonfinite FCI phrase expressing a proposition alternates with a finite clause:

- (63) a. Vi blir glade for en hvilken som helst støtte.
we become glad for a which as rathest support
 'We welcome any show of support.'
- b. # Vi blir glade hvis vi får en hvilken som helst støtte.
we become glad if we get a which as rathest support
 'We are happy if we get just any show of support.'

- (64) De to benekter (#at de har hatt) en hvilken som helst
the two deny that they have had a which as ratherst
 befatning med ranet.
involvement with robbery-the
 'The two deny any involvement in the robbery.'

To the extent that an FCI does occur in a *that* or *if* clause, it normally scopes within it. If one wants to quantify universally into a *that* or an *if* clause, an FCP is often added as an epithet, as in (65). (Jennings (1994: 191) calls this the supplementary use of *any*).

- (65) Eddie knew that Hannah would never have called him and
 asked him for a ride if she'd had a boyfriend – *any* boyfriend.

All in all, this implies that FCIs are sensitive to quantificational scope islands. It also means that the conditional or generic structures that form a subset of the FCI contexts are only implicitly generic or conditional: Simple sentences where the restrictor of a (perhaps covert) operator is expressed in a DP or PP and where the semantic structure comes about through the mechanism known as Semantic Partition.

We should note, however, that the conditional clause scope islands do not seem quite as strict as with usual universals; cases with essentially the same semantic structure as (63b) do occur in a corpus.

Circumstantial evidence that FCIs like *any* are universal quantifiers of some kind is provided by the fact that in translations into German, many cases are rendered by an ordinary universal quantifier, cf. (66):

- (66) a. Ted would have hated *any* job.
 b. Ted hätte *jeden* Job gehasst.

More evidence of the same kind comes from Norwegian, where items from the *wh som helst* paradigm are not the only FCIs: As mentioned in Section 1, FC *any* can often be translated, and *which som helst* can often be replaced, by *enhver*, ostensibly a universal determiner.⁸ This item will play a prominent role in the next subsection, because those cases where *enhver* and *which som helst* are interchangeable provide evidence of a distinct sort of universal quantification, where we quantify not just over entities that actually possess the property that the noun phrase expresses but essentially over entities that potentially possess that property.

⁸ Morphologically, *enhver* (*ethvert*) is a composite of the indefinite article *en* (*et*) and the universal determiner *hver* (*hvert*) ('every' or 'each'); it will be glossed *an-every*.

2.3. Quantification over Possible Entities

An FCI may seem to quantify over possibilities; cf. the contrast in (67), where *every* quantifies over actual (future) wives (of John's) while *any* seems to quantify over individuals that may become John's wife.

- (67) a. ? John will be happy with every wife.
 b. John will be happy with any wife.

This difference was noted by Vendler in connection with (68) and (69).

- (68) Anybody trespassing on the premises will be prosecuted.
 (69) Any nation that conquers the moon can control the earth.

Vendler noted that (68) «will not be rendered false even if no one ever enters the premises», and that «even though we know that no nation has yet conquered the moon» we may accept (69) (1967: 87). «The blank warranty...for conditional...statements may contain such specifications in the antecedent that nothing actually does or...can qualify for it». This property he calls a «lack of existential import» in *any*. On the strength of (69) one may arrive at the conclusion (70):

- (70) If Russia were to conquer the moon she could control the earth.

We will see in 3.4 how the analysis of *any* can license such inferences.

It seems to be generally possible for FC determiners to quantify over entities that **may** have the property expressed in the NP. In Norwegian, this feature (though not uncommon for *which som helst*) is particularly characteristic of *enhver*. Often, we can observe that the apparent domain of quantification may be empty and is unlikely to have more than one element; yet we seem to be making a genuinely universal statement. In (71) and (72), this FCD combines with an event NP, and in both cases, there will in the actual world be at most one event of the relevant type:

- (71) Ethvert angrep på Syria vil bli betraktet som et angrep på Libya.
an-every attack on Syria will be regarded as an attack on Libya
 'Any attack on Syria will be considered an attack on Libya.'

- (72) Kommunestyret motsetter seg enhver utbygging av vassdraget.
county council opposes self an-every development of river-the
 'The county council opposes any development of the river.'

These cases present a challenge to any theory about quantification. Standard universal quantification is in a sense vacuous if the domain is regularly a singleton or the empty set. In fact, standard quantifiers are generally held to carry the presupposition that the domain is nonempty; and if the domain is construed as a singleton set, then we should expect the definite article instead of a universal determiner.

Below, the apparent restrictor of the FCD is a more standard NP:

- (73) Enhver (ny) regjering (i Russland) vil tape i popularitet.
an-every new government in Russia will lose in popularity
 'Any new Government in Russia will lose popular support.'
- (74) Regjeringen kan senke eller beslaglegge ethvert skip,
government-the may sink or seize an-every ship
 britisk eller utenlandsk, som truer med å forurense kysten.
British or foreign that threatens to pollute coast-the
 'The Government may sink or seize any ship, British
 or foreign, threatening to pollute the coast.'

Again, standard universal quantification risks vacuity, particularly as applied to (73), where the domain will contain exactly one element. The background is this: There will be exactly one new government in Russia, but which government that will be is an open question. (74) allows for a larger domain, but even here, the statement seems to be stronger than an ordinary universal quantifier would make it, as it will not be vacuously true or suffer from presupposition failure should the set be empty.

In fact, if these cases are seen in connection with the assumption that an FCI quantifies into a proposition denoting expression, here, the FCP itself seems to be such an expression; in (73) we seem to quantify into both the DP and the VP, expressing the antecedent and the consequent of a conditional: For every x , if x is the government, x will lose support. The apparent restrictor evidently expresses an argument for the modal in the scope of the quantifier. Consequently, the FCP is not a quantifier; the FCD is, the noun phrase belonging to the nuclear scope.

It is important to note that Free Choice determiners do not invariably quantify over possibilities in this way; many of the examples in the last subsection are not of this kind. But when the DP denotes a proposition, then mostly (but note (72)), the sentence is interpreted as a conditional where the NP forms the antecedent. The modal carrying the conditional relation and acting as the conditional operator can be one of a variety: *will, would, can, may, must*, etc.; or it may be covert.

2.4. Conclusions

I have tried to establish the following:

- The distribution is indeed restricted to intensional contexts, that is, the FCI has to cooccur with a modal in a wide sense (2.1).
- The FCI has to have scope over the modal it cooccurs with (2.2).
- The apparent restrictor may be in the intensional context (2.3).

In a more compact form:

- The FCI is a universal quantifier which has to quantify across a unary or binary propositional relation, into a proposition;
- the apparent restrictor may form one such proposition.

That is, we have one of these two schematic semantic representations:

$$\text{FC(R)} (\lambda x (\text{O} (\dots x \dots))) \quad \text{FC} (\lambda x (\text{O} (\dots \text{R}(x) \dots)))$$

where FC is an FC determiner or what corresponds to an FC determiner and can be reconstructed as such, R is the restrictor, the NP of the FC determiner, and O is some expression denoting a propositional relation.

3. THEORY

I aim in this section to show that the facts identified in the last section can all be accounted for by assuming that the FC determiner *or* phrase is a universal quantifier intensionalizing the type *t* phrase it raises from, DP or VP. The raising to $\langle s, t \rangle$ can be modelled in more than one way. The method that will be used is to posit a functor of type $\langle \langle s, t \rangle, \langle s, t \rangle \rangle$, denoting the identity function on propositions, somewhere between the raised FCI and its trace. General type match (interpretability) constraints will ensure that the functor adjoins just below some modal.

First, since the facts established in the last section are not necessarily inconsistent with the theory of Dayal (1998), it is useful to consider that theory. After identifying its problems, mainly stemming from ascribing an **inherent** modality to FC *any*, I develop an analysis that can explain the **interaction** between modality and Free Choice.

3.1. Dayal (1998): Quantifying over Objects and Situations

Dayal (1998) assumes that FC *any* is basically a universal determiner – an inherently modal universal determiner, quantifying not over objects but over pairs of objects and situations.

Her central pieces of evidence are sentence pairs like the following:

- (78) a. # Yesterday John talked to any woman.
 b. Yesterday John talked to any woman he saw.

Dayal observes that if *any* is replaced by the indefinite article in these sentences, an existential reading results, very different from the original. Substituting a universal determiner like *every*, on the other hand, we obtain sentences with a comparable semantics, but different in one regard: While (78d) is compatible with an ‘accidental’ reading of the modifier, (78b) requires an ‘essential’ reading, which is to say that the sentence expresses a connection between restrictor and scope of the determiner over and above mere set inclusion, which may be accidental.

- (78) c. Yesterday John talked to a woman he saw.
 d. Yesterday John talked to every woman he saw.

The distinction is illustrated by valid ((a)) vs. invalid ((b)) inferences:

- (79) a. Everybody in Mary’s class is writing a term paper on *any*.
 Everybody in John’s class is in Mary’s class.

 Everybody in John’s class is writing a term paper on *any*.
- b. Anybody in Mary’s class is writing a term paper on *any*.
 Everybody in John’s class is in Mary’s class.

 Anybody in John’s class is writing a term paper on *any*.

Dayal correlates the distinction between the essential and the accidental interpretation with Donnellan’s (1966) distinction between attributive and referential uses of definite descriptions. This distinction is also used by Giannakidou (1997) to characterize FCIs as ‘attributive indefinites’. The essential interpretation can be brought out by adding Free Relative adjuncts like *whoever she might be*. It should be clear that the facts that Dayal thus accentuates are the facts discussed in 2.3 above.

The analysis that Dayal proposes to account for these facts has one core element: She analyzes *any* as a quantifier, not over, as standardly assumed for *every*, objects (or events), but over objects and situations; that is, *any* expresses universal quantification over pairs of objects and situations. The situations are thought of as partial possible worlds:

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. [...]

I'm assuming here something like David Lewis' theory of possible worlds and trans-world identity, extended to accommodate the possibility of evaluating truth in situations as well as whole worlds, as in Kratzer (1989)... (Dayal 1998: 447)

Dayal does not provide a logical translation of the FC determiner *any*, but it is evident from the logical representations of complete sentences that she does offer that the FCP *any woman* can be represented as (80a) (C is a contextual parameter restricting the situations *s* to typical ones):

$$(80) \text{ a. } \lambda Q \forall s,x [woman(s,x) \wedge C(s)] Q(s,x)$$

Thus a noun like *woman* can denote a set of situation-and-object pairs. If the situations are small worlds or world-time pairs, generally semantic indices, this comes close to saying that the noun can denote a property; a function from indices to sets of objects. A representation of a sentence with the determiner *every* is not offered, but since the *s* variable is what makes *any* inherently modal, we must assume that *every* quantifies over just objects and that *every woman* has a representation like (80b) or (c), where in (c), *s* is a free variable standing for the 'actual situation':

$$(80) \text{ b. } \lambda Q \forall x [woman(x)] Q(x)$$

$$\text{ c. } \lambda Q \forall x [woman(s,x)] Q(s,x)$$

Dayal's is rather a strong theory. FC *any* differs from *every* in denoting a relation not between sets but between sets in intension. In fact, *any* is treated as creating an intensional context, rather like 'necessarily all'; or as *every* with a variably strict instead of a material implication.

It is interesting to see what this theory predicts about the contrasts in (78). The role played by the NP modifier in (78b) is to make it possible for the sentence to be true; without it, the sentence, (78a), is «doomed to be false» because it claims that every possible woman ever was talked to by John in a specific time span. (78b) is felicitous because the modifier relativizes every possible woman ever to the women John may have seen yesterday. The representations of (78a) and (b) are (78e) and (f):

- (78) e. $\forall s, x [woman(x, s) \wedge C(s)]$
 $\exists s' [s < s' \wedge yesterday(s') \wedge talk(j, x, s')]$
- f. $\forall s, x [woman(x, s) \wedge C(s) \wedge \exists s'' [s < s'' \wedge P(s'') \wedge see(j, x, s'')]]$
 $\exists s' [s < s' \wedge yesterday(s') \wedge talk(j, x, s')]$

(78e) «says that all possible woman situations extend into a situation located at a particular interval, namely yesterday. [...] There is something infelicitous in making a statement that is doomed to be false.» In (78f), on the other hand, quantification is restricted «to those possible woman-situations that extend into situations which fall within a given interval. That is, the assertion is about possible situations which are temporally bounded. And, of course, this restricted set may or may not extend into situations of John talking to women.» (p. 453f.)

Note that this account of the effect of 'subtriggering' (cf. 2.1.2, where an alternative explanation is offered) relies solely on the time aspect of the situation. As far as possible worlds are concerned, that is, modally, there is nothing wrong with (78a), and the reason for this asymmetry is that it is possible to localize a set of situations temporally by naming a time, like yesterday, while it is impossible to name a world.

Now there are some cases where the above argument fails to explain an infelicity, such as (81).

- (81) # John picked any of the flowers.

This statement is not «doomed to be false» because the partitive fixes the domain of quantification to a contextually given set – given flowers at a given time and location. The situation parameter is held constant. For cases like these Dayal provides a theory external licensing principle, a principle of 'contextual vagueness' (p. 459):

Contextual Vagueness:

Any (A) (Op B) is felicitous iff $A \cap B$ is not contextually salient in any relevant world ...

(Op may be some modal of necessity or possibility, or it may be zero.) (81) violates this condition because the set of flowers picked by John is contextually salient (p. 460).

It is debatable whether the principle of contextual vagueness offers precise predictions. At any rate, as a so-called licensing condition it is not very explanative. Moreover, it is intrinsically non-compositional.

But possibly the most problematic feature of Dayal's theory of *any* is the assumption that this word introduces a quantification over worlds. This is a property of modal operators. The question what happens when *any* meets modal operators is not seriously addressed in Dayal's paper. In the last section we saw that FCIs often occur in elliptic conditionals. In particular, we saw in 2.3 that often, the NP expresses an antecedent. Dayal's analysis, motivated by cases where *any* quantifies over possible entities and essential connections are conveyed, would seem to account for this aspect. In fact, it amounts to replacing the material implication in PL universal quantification by a stronger, a true conditional relation. But in reality, the conditional relation is always carried by some modal (which may be covert). In general, it is desirable that the analysis of FC *any* be compatible with a standard semantics for conditional operators. This, however, is doubtful: It seems that the quantification over worlds ascribed to *any* will superimpose on the truth conditions for modals.

- (82) a. Another club would build a team around this player.
 b. Any other club would build a team around this player.

According to a standard semantics for counterfactuals, eg. Lewis (1973) or Kratzer (1981), (82a) says that in every possible world satisfying a set of restrictions (such as closeness to the actual world or membership in many ordering source propositions) where this player is in another club, that club builds a team around him. Now this restricted universal quantification over worlds has to carry over to (82b), meaning that for every object and every (partial) world where the object is another club, in every world satisfying etc. – and it seems unrealistic to try to make sense of this duplication of possible world (or situation) quantification. In sum, it seems wrong to ascribe an *inherent* modality to *any*.

3.2. *Intended Semantic Representations and Truth Conditions*

The last subsection concluded that it seems wrong to ascribe an inherent modality to FC *any* in the sense of a quantification over possible worlds; this does not mean, however, that modality is irrelevant to the semantics of FCIs or that FCIs should be described without reference to modality. Section 2 concluded that FC determiners are universal quantifiers which have to quantify into modal contexts. In the remainder of this section, an analysis of FCIs, in Scandinavian and English, will be developed that can account for the felt interaction between modality and FCIs.

As a first step, it will be useful to try to specify the truth conditions and semantic representations for some select sentences containing FCIs.

Probably the simplest case is where an FC item interacts with a unary modal like *can* or *may* and functions as a standard universal quantifier, except that it only has a wide scope reading, as in (83a).

- (83) a. You may sing any song (in the songbook).
 b. You may sing every song (in the songbook).

I shall assume that (83a) and (83b) share the interpretation where the universal quantifier has scope over the possibility modal, and that this reading can reasonably be represented as (83c). (83b) has in addition a reading where the scope is reversed, to be represented as (83d).

- (83) c. $every(song) (\lambda x (may (you\ sing\ x)))$
 d. $may (every(song) (\lambda x (you\ sing\ x)))$

The semantics of the determiner and the generalized quantifier, as well as the semantics of the modal, is, I assume, in both cases standard. Thus for *every (song in the songbook)* I assume an interpretation as described by Barwise and Cooper (1981), and for *may* I assume an interpretation as described by Kratzer (1981). Below, I shall write \forall for *every*.

As the next case, consider a sentence where the FCI functions, again, as a standard universal quantifier but where it interacts with, not a unary, but a binary modal, as in (84a).

- (84) a. (Ruth resigned herself to the irony of reading a murder mystery; but, at the moment,) Ruth would have read *any* book (to escape her own imagination).

The sentence is simple, so the counterfactual structure comes about by Semantic Partition, and the antecedent is contextually constructed; the resulting interpretation can, I assume, be represented as (84b), where the *would* operator takes two arguments, the antecedent and the consequent:

- (84) b. $\forall (book) \lambda x (would ((available(x)), (read(ruth, x))))$

Because the binary modal is here overt and unambiguous the difference between *any* and *every* is again only scopal; but the sentence could be ambiguous between a modal and a nonmodal reading, and then there will be an additional contrast in that *any* will select the modal reading.

As a third case, consider a sentence where the FCI quantifies over, as it were, possible entities; where, as I interpret it, the apparent restrictor is in the modal context. In (85a), the FC noun phrase forms one of two arguments of an implicit conditional operator:

- (85) a. John will love any wife.
 b. $\forall (\text{entity}) \lambda x (\text{will} (\text{wife}^J(x), \text{love}(\text{John}, x)))$

The representations are still incomplete in one important respect. The arguments of the modals are not, as it would appear from the formulae as they stand, type t , but type $\langle s, t \rangle$ expressions, denoting propositions; the value of the complex expression does not only depend on the value of the argument expressions in the actual world but in possible worlds, on the assignment of values to worlds, that is, on the set of worlds with which the proposition can be identified.

To take care of this aspect of the interpretations, the representations could be extended by an intensionalizer, \wedge , forming from an expression α an expression denoting the intension, $\wedge\alpha$, or alternatively, by variables over worlds. For perspicuity, I shall adopt this second method, assuming as an interlingua a version of ‘two-sorted type theory’, as employed by e.g. Zimmermann (1993). So the complete representations are:

- (83) e. $\forall (\text{song}_v) \lambda x (\text{may}_v (\lambda w (\text{you sing}_w x)))$
 (84) c. $\forall (\text{book}_v) \lambda x (\text{would}_v (\lambda w (\text{available}_w(x)), \lambda w (\text{read}_w(\text{ruth}, x))))$
 (85) c. $\forall (\text{entity}_v) \lambda x (\text{will}_v (\lambda w (\text{wife}^J_w(x)), \lambda w (\text{love}_w(\text{John}, x))))$

The expression $\lambda w (\text{you sing}_w x)$ denotes the set of worlds w such that you sing x in w . The free variable v stands for the actual world.

As yet, these representations are *fais accomplis*; nothing has been said about how they come about. There are, in particular, two questions: First, as the sentences are simple but some representations are complex, something must be said about semantic partition at the syntax interface. Second, it must be determined how the world abstraction comes about. My thesis will be that it is introduced differently in *any* and *every* cases, more generally, the way it is introduced in cases with an FCI is different from the way it is introduced in cases without an FCI but with a modal. In the latter class of cases, the type shift from t to $\langle s, t \rangle$ can be taken to be effected through a composition rule invoked by the modal (cf. 3.3), but with an FCI, I will assume that it is this that invokes the relevant rule.

A sentence which is infelicitous on account of an FCI can typically, as the case is with (8), only be assigned a representation up to a point: In the absence of a modal, of type $\langle\langle s,t \rangle, a \rangle$ for some a , a proposition type expression will eventually need to combine with an $\langle\langle e,t \rangle, t \rangle$ type (or in fact, with a variable designed to form an abstract from a sentence; cf. **Predicate Abstraction** in 3.3) or other extensional type expression; these two parts, however, fail to form a meaningful whole. Thus the infelicity is attributed to a type conflict. This will be the general picture, which I will spell out in some more detail in the next subsection.

3.3. *Semantic Composition and the FC Quantifier*

In what follows I present an analysis which ensures that FCIs quantify into intensional contexts, across some modal, type $\langle\langle s,t \rangle, a \rangle$ expression. This requirement will not be modelled as a dependency between the FCI and a modal, but indirectly, as a consequence of the type of the context of the FCI trace, the type $\langle s,t \rangle$, which needs a type $\langle\langle s,t \rangle, a \rangle$ expression. In this way, it is not the FCI as such that depends on a modal expression, it is the environment of its trace. More specifically, this will be modelled in terms of a functor induced by the QR movement of the FC quantifier, adjoining at some point between the raised FCI and its trace, a functor denoting identity on sets of possible worlds, propositions.

I assume a framework of semantic composition where representations in an interlingua like ‘two-sorted type theory’, corresponding closely to denotations, are derived stepwise from representations of terminal node material in binary branching LF structures, with Quantifier Raising as a standard mechanism, in a type-driven fashion (Klein and Sag 1985), by some composition principles which apply freely, ie. wherever they can. One of these composition principles is ordinary functional application. Most functions have extensional arguments; in particular, (generalized) quantifiers have the type $\langle\langle e,t \rangle, t \rangle$. Intensions are introduced along the way, when there is a need for them. With Heim and Kratzer (1997: 308), I assume an exceptional principle of intensional functional application, saying that the composition of an expression of type $\langle\langle s,a \rangle, c \rangle$ with an expression of type $\langle a \rangle$ can be interpreted in the same way as that with the corresponding expression of type $\langle s,a \rangle$ ⁹.

⁹ Heim and Kratzer (1997: 308) formulate their Intensional Functional Application (IFA) principle at the semantic (metalanguage) level. My formulation is an adaptation to an interlingua. The essential contrast with e.g. Montague’s PTQ is that intensional functional application is not the standard but an alternative course.

Functional Application (FA)

$$\text{FA} \quad f_{\langle a, b \rangle} + \gamma_{\langle a \rangle} = f(\gamma)$$

Intensional Functional Application (IFA)

$$\text{IFA} \quad f_{\langle \langle s, a \rangle, b \rangle} + \gamma_{\langle a \rangle} = f(\lambda w \gamma [^w/v])$$

(Of course, $a = \langle s, t \rangle$ is a special case of FA. Recall that v is the index for the real world, borne by constants and to be replaced by the bound w .) Thus an expression denoting a function from functions from worlds to, for instance, truth values can, as it were, coerce an expression denoting a truth value into denoting such a function; more accurately, the semantic composition of two expressions can consist in applying one's extension to the other's intension – if necessary, i.e. in case the other's extension is not already the right type. For the case where $\langle s, t \rangle$ is the right type, IFA specifies that

$$f_{\langle \langle s, t \rangle, b \rangle} + \gamma_{\langle t \rangle} = f(\lambda w \gamma [^w/v])$$

and FA specifies that

$$f_{\langle \langle s, t \rangle, b \rangle} + \gamma_{\langle s, t \rangle} = f(\gamma).$$

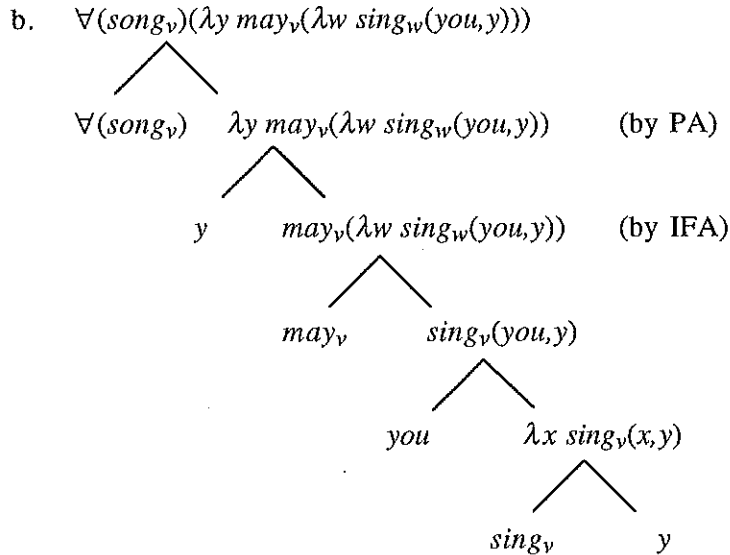
When a modal, of type $\langle \langle s, t \rangle, a \rangle$ for some a , denoting a function f , combines with a sentence of type t , the combination will, by IFA, denote the value of f at the proposition expressed by the sentence. But if, for some reason, it combines with a type $\langle s, t \rangle$ expression, denoting a proposition, the combination will, by FA, denote the value of f at that proposition.

I shall assume that one reason that this may be the case may be that IFA has already applied because an FCI has moved beyond the modal, leaving a functor mapping a proposition onto itself, thus invoking IFA. Thus the FCI has as one of its functions to force a shift from a type t to the corresponding $\langle s, t \rangle$ expression.

I assume a close relation between 'transparent' LFs, translations, and denotations, representing examples in 'translation trees' (TTs), where the semantics can be read off the nodes from bottom to top.

Consider first a case like (86a), with a standard universal quantifier, *every song*, and a possibility modal, *may*; and a simple translation tree like (86b), where we focus only on essentials:

(86) a. You may sing every song.



I assume, following Heim and Kratzer (1997), that Quantifier Raising is accompanied by an index corresponding to the trace adjoining just below the raised quantifier. In a simplification and adaptation of their Predicate Abstraction Rule (1997: 186), I assume a translation of this index as the trace variable and a composition principle like:

Predicate Abstraction (PA)

$$u_{\langle e \rangle} + \phi_{\langle t \rangle} = \lambda u \phi$$

Now considering (86c), where *any song* is substituted for *every song*, I assume that the intensionalization effected through IFA is not caused by the modal but one step lower, by the FCI. Specifically, I propose that FCQs differ from other universal quantifiers in that their QR movement induces not only the adjunction just below them of a variable (binder), but also the *adjunction somewhere below them of an element denoting the identity function on propositions*, somewhere between the FCQ and the trace. This element we may refer to as the functor FC.

- FC translates as $\lambda \phi_{\langle s, \triangleright \rangle} \phi$

This identity functor “presupposes” that its sister node is of type $\langle s,t \rangle$. If it is of type t , the general principle IFA will lift it to type $\langle s,t \rangle$. If it is already of type $\langle s,t \rangle$, nothing happens. Thus the adjoined functor does not really do anything, it does not itself execute an intensionalization. (This is the reason that it can be iterated, cf. 3.5.)

Let me give the (preliminary) definition of the FC quantifier.

The FC Quantifier (preliminary)

Assume that the FCQ consisting in an FC determiner and an NP Q undergoes QR to adjoin to an XP, leaving a trace t_i .

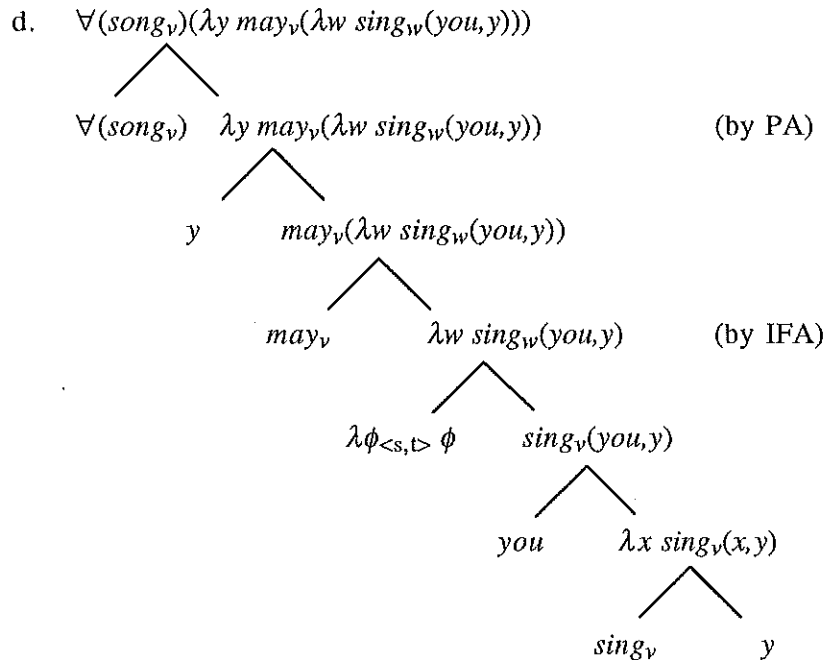
- It is translated as the quantifier $\forall(Q_v)$ and t_i is translated as x_i .
- The index i translated as x_i adjoins to XP right below the FCQ.
- The functor FC translated as $\lambda \phi_{\langle s,t \rangle} \phi$ adjoins to some XP between the FCQ and t_i .

The adjunction site is quite free. FC can attach to any phrase between the raised FC quantifier and its trace. But in practice, any adjunction site except in the immediate scope of a modal operator will result in a type mismatch, as only a modal is able to absorb an expression of type $\langle s,t \rangle$. The choice of the right site is driven by the interpretability requirement. Thus the descriptive generalization that an FCI quantifies into a modal context is accounted for by this apparently very weak mechanism.

The below translation tree (henceforth TT) for (86c) illustrates how the FC functor can apply to a type t expression and, by IFA, return the corresponding $\langle s,t \rangle$ expression, and how one and only one phrase node is an appropriate site of adjunction, the VP just below the modal *may*. The one alternative, the node just above the modal, is ruled out because, first, the composition of a variable with an $\langle s,t \rangle$ expression is undefined, and second, even if it were defined as yielding an $\langle e, \langle s,t \rangle \rangle$ expression, the type of the quantifier $\langle \langle e,t \rangle, t \rangle$ could not match with this.

(86a) has a second reading where the modal outscopes the quantifier. In (86b), the two would trade places. However, a corresponding reading of (86c), where in (86d) the modal would be above the quantifier, is not available, and for the same reason just given for the impossibility of attaching FC above the modal: A type conflict will ensue since no modal intervenes between the quantifier and the FC functor.

(86) c. You may sing any song.



Consider next a case where the FCI enters into a conditional structure.

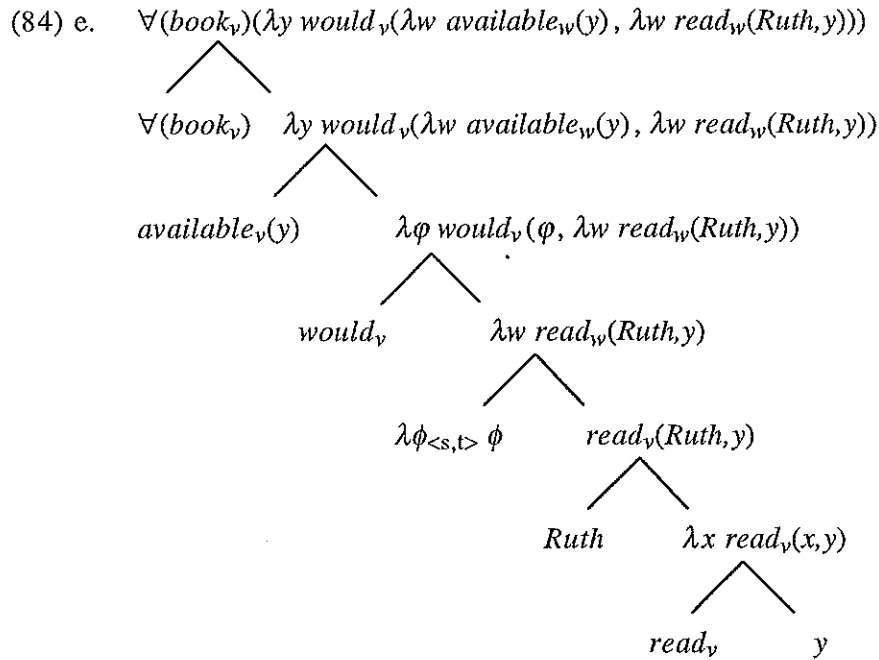
(84) a. Ruth would have read any book.

The sentence is syntactically simple but semantically complex: *would* is interpreted as a binary modal, a counterfactual operator, as in (86d).

(84) d. Ruth would have read a comic book.

In a “Kasper counterfactual” like this (cf. Kasper (1992)), the context supplies some extra information from which to construct a restrictor for the modal, a counterfactual antecedent proposition; this rearrangement is assumed to come about by Semantic Partition (SP) (cf. Krifka 1995) where various sources of information (lexical, contextual, intonational) conspire to partition a sentence into restrictor and scope of a (c)overt frequency, generic, or modal operator. The relation between SP and LF is not clear, but SP tends to be regarded as a rather semantic mechanism, coming into play at a relatively late stage in the interpretation process.

Thus it is problematic to treat it as a movement leaving a trace, like QR. Still, it is evident that somehow, the indefinite DP in the object position in (84d) and the trace in the object position in (84a) are transferred to the restrictor of *would* and a coreferent variable is left in that position. Cf. Krifka (1998) for a recent assessment of the relevant issues, arguing that generally, SP comes about by accommodating the presuppositions of the sentence into the restrictor. In (84a) or (84d), we can assume that the verb triggers the presupposition that the object is available. I will let the resulting structure be represented in a tree where the counterfactual antecedent is adjoined to the mother of the operator.¹⁰



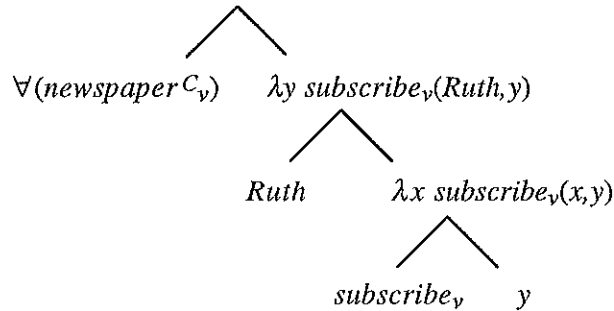
Let us look at a case where a conditional (generic) operator is covert, to see how the FCI forces the conditional (generic) interpretation.

- (87) a. Ruth subscribes to every newspaper.
 b. Ruth subscribes to any newspaper.

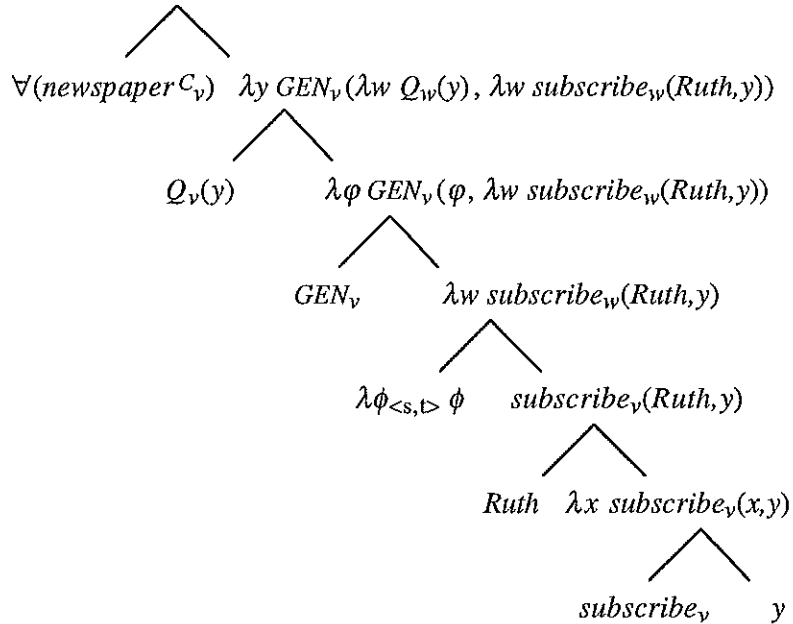
¹⁰ Henceforth I omit the adjunction of the index node and just prefix the abstraction to the sister to the quantifier.

(87a) can have an interpretation as a simple report of a state of affairs, as represented in (87c). For (87b), however, such an interpretation is unavailable because it does not provide an operator that can consume the output of the FC functor, some expression denoting a proposition. So the sentence is partitioned into an antecedent and a consequent for a generic operator, as in (87d), describing a disposition. The adjoined antecedent can be assumed to acquire its content by accommodating a presupposition triggered by the verb. In fact, the verb's aspect changes, as the presupposition turns on reading it as a reaction to a stimulus, such as being offered a subscription, here left unspecified as Q.

(87) c. $\forall(\text{newspaper}^{C_v})(\lambda y \text{subscribe}_v(\text{Ruth}, y))$



(87) d. $\forall(\text{newspaper}^{C_v})(\lambda y \text{GEN}_v(\lambda w Q_w(y), \lambda w \text{subscribe}_w(\text{Ruth}, y)))$



3.4. The Option of Quantification over "Possible Entities"

Let us now turn to the cases where we have the impression that the FCI quantifies over possible entities and where it seems to convey essential connections. These cases were, in 2.3, characterized as cases where what seems the restrictor of an FCD, a DP with a variable for the determiner, is a proposition denoting expression quantified into by the determiner. They normally have a conditional structure where the DP expresses the antecedent. This can be modelled by modifying the definition of the FC quantifier to open the option that *just the FC determiner undergoes QR*.

The necessary revision takes a simple form:

The FC Quantifier (final)

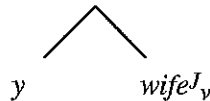
Assume that the FCQ consisting in an FCD and an NP Q or in an FCD undergoes QR to adjoin to an XP, leaving a trace t_i .

- It is translated as $\forall(Q_v)$ or $\forall(entity)$, depending on whether it includes an NP Q or not, and t_i is translated as x_i .
- The index i translated as x_i adjoins to XP right below the FCQ.
- The functor FC translated as $\lambda\phi_{\langle s,t \rangle} \phi$ adjoins to some XP between the FCQ and t_i .

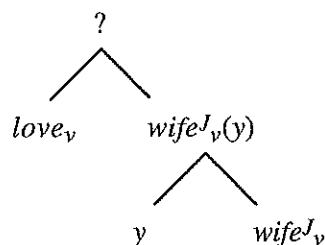
(By $\forall(entity)$ is meant the quantifier with the total domain of objects or events as its restriction.) Consider a semantic structure for (85a).

(85) a. John will love any wife.

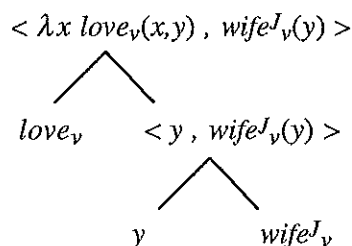
I assume that the FCQ consisting in the determiner *any* undergoes QR, leaving a trace variable y to combine with the predicate *wife* (of John):



Crucially, this must be interpreted in a special way for the combination with the verb *love* to be interpretable. A variable and a predicate yield a formula, and a formula cannot be combined with a binary relation:

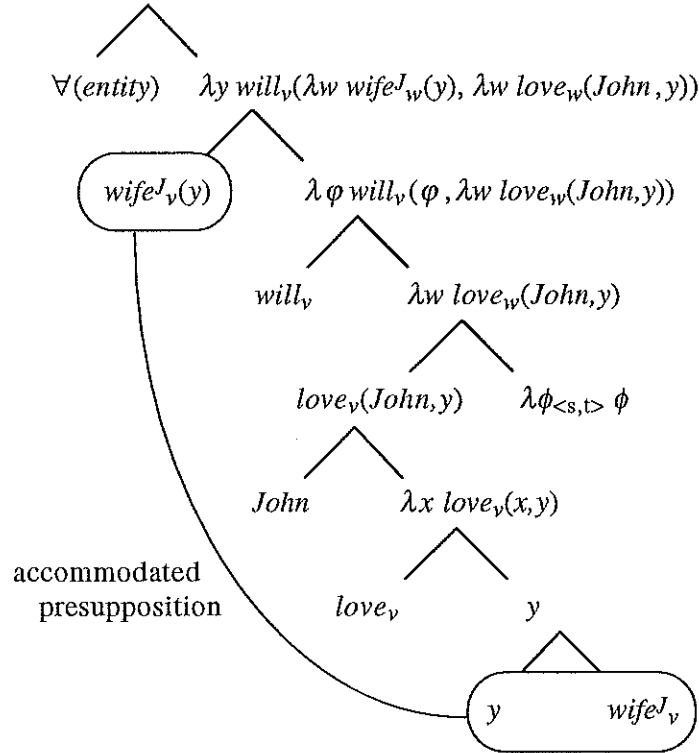


But it is possible to assume that this formula is read as a presupposition; more accurately, that the DP from which the FCD has undergone QR is here like a definite or a ‘non-novel’ indefinite DP in that it expresses a presupposition and contributes only a variable, say y , to the assertion, in agreement with the strategy proposed by Krifka (1998) for interpreting indefinites in adverbial quantification (or generally structures involving Semantic Partition). If we think in terms of two-dimensional semantic values, the DP could translate as the pair $\langle y, \text{wife}^{J_v}(y) \rangle$ where the first member is the assertion and the second member is the presupposition:



With Krifka (1998) and many others, we can take the presupposition to somehow be accommodated into the restrictor of the relevant operator. There are various ways to accomplish this. Above, in 3.3, I represented implicit restrictors as adjuncts in translation trees, like *if* clauses, and in (85d) below, the accommodated presupposition acting as a restrictor for the operator is again, for perspicuity, rendered as an adjunct. This is not necessarily the best way, though. Instead, the operator could be taken to operate directly on the pair of semantic values, using the presupposition as its restrictor and the assertion as its nuclear scope. This is essentially what Kasper (1992) does; the subjunctive operator takes two arguments, the assertion DRS and the presupposition DRS. Or, the presupposition could be referred to in the representation of a basically unary operator, the presupposition of its argument acting as the first semantic argument. This is essentially what Krifka (1998) does. But to keep matters simple, in (85d) the accommodation is depicted as a quasi syntactic operation.

(85) d. $\forall(\text{entity}) \lambda y \text{ will}_v(\lambda w \text{ wife}_w^J(y), \lambda w \text{ love}_w(\text{John}, y))$



It should be clear how an analysis like this, where the FC determiner quantifies into a conditional antecedent expressed by the noun phrase, enables us to show that the type of inference noted by Vendler (cf. 2.3) in connection with (69) and (70), such as from (85a) to (85e), is valid: If we take the liberty to represent (85e) as (85g), we see that although we may in principle be sceptical about the instantiation of a constant in an intensional context, the entailment relation between (85c) and (85g) is close enough to account for the intuition.

(85) e. If John marries Mary he will love her.
 g. $\text{will}_v(\lambda w \text{ wife}_w^J(m), \lambda w \text{ love}_w(\text{John}, m))$

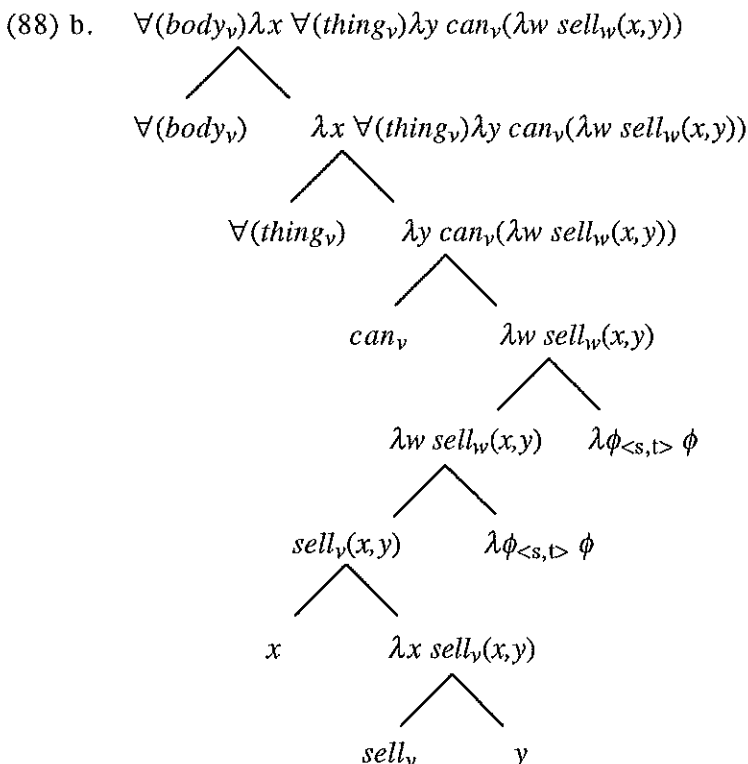
Note that it would not be correct to suppose that raising just the FCD generally causes the DP to be read as a presupposition: In (64) or (72), the DP is the object of an attitude verb and constitutes the expression to which the FC functor should apply, in a straightforward way.

3.5. Multiple Free Choice, and a Comparison with Questions

FCIs can be iterated, as shown in the Norwegian sentence (88a). This is a potential problem for analyses, like Dayal's (1998) or Sæbø's (1999), on which an FCI *creates* an intensionality. There may be more than one FCI quantifying into one and the same proposition denoting expression, but a shift to intensions can only occur once. But note how my analysis evades this problem: The FC functor only invokes a shift *if necessary*.

- (88) a. Vinteren 1992 kunngjorde Jeltsin at hvem som helst kunne
winter 1992 announced Yeltsin that who som helst could
 selge hva som helst hvor som helst til hvilken som helst pris.
sell what som helst where som helst at which som helst price

Let us see how FC functions in a sentence with two FCIs. In (88b), there are two occurrences of the FC functor due to two FCIs. The lower one (by IFA) transforms the sentence to a proposition denoting expression, while the upper one preserves that proposition denoting expression.



The fact that multiple occurrences are a challenge to a good analysis is reminiscent of the semantics of **questions**. Questions seem relevant to Free Choice for another reason too: *wh* words are at the lexical basis of FCIs in many languages, notably Scandinavian (cf. 2.1.1) (and English as far as Free Relatives are concerned). This does not seem accidental; indeed, as shown in Sæbø (1999: 26–28), very many FCI cases have a natural paraphrase with an indirect question and some word expressing sameness, corresponding to English words like *regardless*, *irrespectively*, *(no) matter*, etc., as in (89).

- (89) a. Han går med en sender så han kan spores hvor som helst.
he walks with a transmitter so he can trace-S where as rathest
 b. Han går med en sender så han kan spores samme hvor han er.
he walks with a transmitter so he can trace-S same where he is
 ‘He carries a transmitter so he can be traced wherever he is.’

And in fact, my analysis of FCIs bears a strong resemblance to analyses of questions, especially along the lines of Karttunen (1977) and Heim (1999), where questions denote sets of propositions and iterations of *wh* words are accommodated by positing a Q-morpheme (interrogativizer), a functor forming a ‘proto question’, in my notation,

- ? translates as $\lambda\varphi_{\langle s,t \rangle} \lambda\psi \psi = \varphi$

When combined with the question nucleus, this functor will invoke IFA to apply to the proposition φ , returning the singleton set containing it. Of course, the meaning of FC is not equal to the meaning of questions. For one thing, *wh* words are on the theory under consideration analyzed in terms of existential quantifiers. But then, FCIs are not just *wh* words; in Scandinavian, they are *wh* words with *som helst* (and in English, Free Relatives are *wh* words with *ever*). And it does not seem unreasonable to assume that these extra words convey the equivalent of the sameness, or indiscrimination, among the members of a questions’s denotation that we see in (89b), effectively a universal quantification over propositions. In fact, in a case like (86c), my analysis can be seen to be equivalent to one where we quantify over the members of the extension of a question: Every member of [[*which song you sing*]] is a member of [[*may*]].

In other cases, notably when Semantic Partition plays a role, it may be difficult to actually base analyses of FC on a semantics of questions. But the similarity does seem close enough to suggest a motivation for the common lexical denominator between the two semantic categories.

4. CONCLUSIONS

Based on corpus studies of Swedish and Norwegian Free Choice items, a theory has been developed according to which such items are universal quantifiers with two special properties: The NP that normally forms the restrictor of the determiner may instead form part of its nuclear scope; and the determiner (or DP) must quantify into a propositional context. In a sense, the second property counteracts the first, as in practice, it will often imply that the scope of the FCI is partitioned into an antecedent and a consequent, so that the apparent restrictor of the FC determiner is the restrictor of a conditional operator instead.

These two essential features of the analysis encode two differences between FCIs and ordinary universals, and these two differences provide a justification for the existence of FCIs. There are three good reasons why there should be such items in a language, and all can be subsumed under **disambiguation**:

- The requirement that the FCI quantify into a propositional context serves to resolve possible scope ambiguities vis-à-vis modals.
- Due to the same requirement, contexts that are only latently modal are unambiguously assigned a modal interpretation.
- Because the FC NP can be read as a proposition, other universals can more safely be taken to quantify over actual sets.

All three items correspond to observations made by Vendler (1967).

The particular theory that models the two special properties of FCIs as compared to other universals consists in two assumptions:

- QR of the FC quantifier entails the adjunction of an item denoting the identity function on propositions somewhere along its path (the site is determined by interpretability);
- the FC quantifier is either (as standardly) the entire FCP or it is just the determiner.

This analysis may seem simplistic or even naïve, but I have tried to show that it has some subtle consequences for the contexts where FCIs occur. Their distribution is constrained by logical type constraints; but it is also predicted that the confines are flexible, as, in particular, many sentences can be read as conditionals, typically by accommodating antecedents.

The option of raising only the FC determiner, interpreting the NP as a proposition, adds conditional interpretations and causes ambiguities in connection with basically unary modals; so-called subtriggering is seen to favor this option by supplying material to form a proposition from. Observations of differences between FCIs and standard universals have been taken to indicate that FCIs are indefinites, or something different altogether (cf. e.g. Horn 1999); the theory shows that the differences are fully compatible with a basically universal meaning.

The theory must be considered a *weak* one, inasmuch as it ascribes a minimum of semantic characteristics to the items themselves, leaving a maximum to other, independent mechanisms, such as Semantic Partition or covert or composite propositional relations with which the items are assumed to interact, or generally the search for a possible interpretation. In particular, it is different from the theory proposed by Dayal (1998), according to which Free Choice items quantify over intensional entities; on my theory, Free Choice items quantify over extensional entities but in intensional contexts for other expressions to operate on. In this way, the analysis is not simultaneously an analysis of other items which must be described anyway but can be integrated into such descriptions, and the expressions they combine with can retain their usual meaning.

The analysis has been devised for Scandinavian FCIs, particularly the *wh som helst* class, and more or less, it has been taken for granted that it carries over to the FC use of the English determiner *any* or to whatever has been identified as an FCI in other languages. This is not necessarily the case, though; related to the double function of *any* as PS and FC, there may be ways of using *any*, while not unequivocally in a PS sense, that differ slightly from the ways that FCIs are used in Scandinavian, as discussed in 2.3, where implicit conditionals were argued to provide a bridge between the two uses of *any*. It is also an open question how far the analysis extends to items that have been labelled Free Choice items in yet other languages; it is only to be expected that the term is applied, across languages, to a large family of elements that have something, but not everything in common (cf. Haspelmath (1997) for a cross-linguistic survey of indefinites and an assessment of the locus of Free Choice in a larger frame of functions). I leave the possibility open, therefore, that a purported Free Choice item in a language should rather be analyzed as a (nonspecific, indiscriminative) indefinite than as a universal.

For (more) loose ends, such as the behavior of Free Choice items in necessity contexts (where, as I believe, they can be assumed to give rise to contradictions), in object position of opaque verbs or in comparative or equative constructions, the reader is referred to Sæbø (1999: 83–93).

REFERENCES

- Barwise, Jon and Robin Cooper (1981)** «Generalized Quantifiers and Natural Language», in *Linguistics and Philosophy* 4, 159–219.
- Carlson, Greg (1981)** «Distribution of Free-Choice *any*», in *Papers from the 17th Regional Meeting of the CLS*, 8–23.
- Davison, Alice (1980)** «*Any* as universal or existential?», in van der Auwera (ed.) *The Semantics of Determiners*, London, 11–40.
- Dayal, Veneeta (1995)** «Licensing *any* in Non-Negative/Non-Modal Contexts», in *Proceedings from SALT V*, 72–93.
- Dayal, Veneeta (1998)** «*Any* as Inherently Modal», in *Linguistics and Philosophy* 21#5, 433–476.
- Donnellan, Keith (1966)** «Reference and Definite Descriptions», in *The Philosophical Review* 75, 281–304.
- Fauconnier, Gilles (1979)** «Implication Reversal in a Natural Language», in Guenther and Schmidt (eds.) *Formal Semantics and Pragmatics for Natural Languages*, Dordrecht, 289–301.
- Giannakidou, Anastasia (1997)** «Linking sensitivity to limited distribution», in *Proceedings of the 11th Amsterdam Colloquium*, 139–144.
- Giannakidou, Anastasia (2000)** «The Meaning of Free Choice». Ms., University of Groningen.
- Haspelmath, Martin (1997)** *Indefinite Pronouns*. Oxford.
- Heim, Irene (1999)** «Notes on Interrogative Semantics». Ms., MIT.
- Heim, Irene and Angelika Kratzer (1997)** *Semantics in Generative Grammar*. Oxford.
- Hintikka, Jaakko (1977)** «Quantifiers in Natural Languages», in *Linguistics and Philosophy* 1, 153–172.
- Horn, Larry (1972)** *On the Semantic Properties of Logical Operators in English*. UCLA dissertation.
- Horn, Larry (1999)** «*any* and (-)ever: Free choice and free relatives», to appear in Wyner (ed.) *Proceedings of the Israeli Association for Theoretical Linguistics* 15.
- Horn, Larry & Yung-Suk Lee (1994)** «*Any* as an indefinite plus *even*». Ms., Yale University.
- Jennings, R.E. (1997)** *The Genealogy of Disjunction*. Oxford.
- Jacobson, Pauline (1995)** «On the Quantificational Force of English Free Relatives», in Bach et al. (eds.) *Quantification in Natural Languages*, Dordrecht, 451–486.
- Kadmon, Nirit & Fred Landman (1993)** «*Any*», in *Linguistics and Philosophy* 16, 353–422.
- Kamp, Hans (1979)** «Semantics versus Pragmatics», in Guenther and Schmidt (eds.) *Formal Semantics and Pragmatics for Natural Languages*, Dordrecht, 255–287.

- Karttunen, Lauri (1977)** «Syntax and Semantics of Questions», in *Linguistics and Philosophy* 1, 3–44.
- Karttunen, Lauri & Stanley Peters (1979)** «Conventional Implicature», in *Syntax and Semantics* 11, 1–55.
- Kasper, Walter (1992)** «Presupposition, Composition, and Simple Subjunctives», in *Journal of Semantics* 9, 307–331.
- Klein, Ewan and Ivan Sag (1985)** «Type Driven Translation», in *Linguistics and Philosophy* 8, 163–201.
- Kratzer, Angelika (1981)** «The Notional Category of Modality», in Eikmeyer and Rieser (eds.) *Words, Worlds, and Contexts*, Berlin, 38–74.
- Kratzer, Angelika (1989)** «An Investigation of the Lumps of Thought», in *Linguistics and Philosophy* 12, 607–653.
- Krifka, Manfred (1995)** «Focus and the Interpretation of Generic Sentences», in Carlson and Pelletier (eds.) *The Generic Book*, Chicago, 238–264.
- Krifka, Manfred (1995a)** «The Semantics and Pragmatics of Polarity Items», in *Linguistic Analysis* 25, 209–257.
- Krifka, Manfred (1998)** «Non-Novel Indefinites in Adverbial Quantification». Ms., Univ. of Texas at Austin. Downloaded from uts.cc.utexas.edu/~krifka/.
- Ladusaw, Bill (1979)** *Polarity Sensitivity as Inherent Scope Relations*. University of Texas at Austin dissertation.
- LeGrand, Jean (1975)** *Or and Any: The Semantics and Syntax of Two Logical Operators*. University of Chicago dissertation.
- Lewis, David (1973)** *Counterfactuals*. Oxford.
- Lewis, David (1975)** «Adverbs of Quantification», in Keenan (ed.) *Formal Semantics of Natural Language*, Cambridge, 3–15.
- Quer, Josep (1999)** «The quantificational force of free choice items», paper presented at the Colloque de Syntaxe et Semantique de Paris.
- Sæbø, Kjell Johan (1999)** *Free Choice Items in Scandinavian*. NORDSEM Report 4, Univ. of Gothenburg. Available at www.ling.gu.se/research/projects/nordsem/.
- Tovena, Lucia Maria & Jacques Jayez (1997)** «Any as a Finian quantifier», in *Proceedings of the 11th Amsterdam Colloquium*, 295–300.
- Vendler, Zeno (1967)** «Each and Every, Any and All», in *Linguistics in Philosophy*, Ithaca, 70–96.
- Wright, Georg Henrik von (1971)** «Deontic Logic and the Theory of Conditions», in Hilpinen (ed.) *Deontic Logic*, Dordrecht, 159–177.
- Zimmermann, Ede (1993)** «On the Proper Treatment of Opacity in Certain Verbs», in *Natural Language Semantics* 1, 149–179.
- Zimmermann, Ede (1999)** «Disjunction and Free Choice», in *Proceedings from SALTIX*.
- Zwarts, Frans (1995)** «Nonveridical contexts», in *Linguistic Analysis* 25, 286–312.