

The Meaning of Free Choice

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Abstract

In this paper, I discuss the distribution and interpretation of free choice items (FCIs) in Greek, a language exhibiting a lexical paradigm of such items distinct from that of negative polarity items. Greek differs in this respect from English which uniformly employs *any*. FCIs are grammatical only in certain contexts that can be characterized as nonveridical (Giannakidou 1998, 1999), and although they yield universal-like interpretations in certain structures, they are not, I argue, universal quantifiers. Evidence will be provided that FCIs are indefinites; the quasi-universal effect is shown to be the result of binding by an operator with universal force. Additionally, the limited distribution of FCIs in nonveridical contexts can be accounted for by analyzing them as indefinites which must always be interpreted in an intensional type. The difference between “regular” indefinites and FCIs, therefore, is reduced to a type difference which captures the fact that only the latter exhibit limited distribution: because of their intensional type, FCIs will be grammatical only in contexts providing alternatives (worlds or situations), and nonveridical contexts do exactly this. By contrast, FCIs are excluded from veridical and episodic contexts because these provide no alternatives and hence do not satisfy the lexical semantic requirement of FCIs. The proposed analysis is supported by data from other languages as well (Spanish, Catalan, French) and has important consequences regarding the analysis of English *any*. If FCIs are not universal quantifiers but indefinites, then the usual ambiguity thesis (free choice *any* being universal, negative polarity *any* an existential) can no longer be maintained, at least not as one in terms of quantificational force.

1 The problem of free choice

Consider a language like English which possesses the notorious item *any* and employs it in the two cases below:

- (1) a Did Ariadne talk to anybody?
- b Anybody can solve this problem.

In the first sentence *anybody* seems to contribute an existential quantifier, a likely paraphrase of

(1a) being *Is there an x, such that x is a person and Ariadne talked to x?*. In this instance, *anybody* has been characterized as ‘negative’ polarity item.¹ In the second sentence, on the other hand, *anybody* seems to be interpreted as the universal quantifier: *Every person x is such that x can solve this problem*. In this second use *any* has been characterized as a *free choice item* (FCI).

Consider now (2), with the FC *any* in an imperative:

(2) Press any key to continue.

A likely paraphrase of this sentence renders FC *any* equivalent to an existential quantifier: *You must press some key; it doesn't matter which one*. You certainly don't have to press every key on your keyboard for the program to continue executing. If free choice can be taken to contribute a universal quantifier in some cases and an existential in others, how do we decide what it means?

Trying to provide an answer to this question by concentrating on a language like English, where there is a real possibility that FC *any* might be mistaken for its API congener, is a complicated, tricky, and dangerous business. It is akin to undertaking a study of the semantic differences between definiteness and indefiniteness on the basis of a language like Russian, which fails to lexicalize these distinctions in articles, or to providing a semantics for distinguishing simple and progressive aspects by concentrating only on German, which lacks a morphological distinction between these, or indeed to elucidating the nature of case by examining only the English pronominal system. While these are not impossible undertakings in the abstract, they are Sisyphean tasks indeed, and any analyst would be wise to concentrate their efforts instead on a language where the relevant distinctions might be discerned more easily, and judgments made more reliable, by the morphological resources of the language in question. Of course, simply having a lexical distinction that seems on brief inspection to encode some theoretically significant category is no guarantee of success, but it does have numerous obvious advantages as an empirical strategy. For the case at hand, I would like to suggest that we concentrate initially on a language that does seem to lexicalize the distinction between FCIs and APIs, as giving us a better chance of reaching a reliable picture of what free choice *sensu stricto* means. One such language is Greek.

Greek has a paradigm of items that I will call free choice items (FCIs) and which are morphologically distinct from that of affective polarity items (APIs) such as *kanenas* and *tipota*

¹ Or more appropriately, 'affective' polarity item (API), following the terminology of Giannakidou 1998, 1999. APIs are polarity items (PIs) which are grammatical in 'affective' contexts (a term coined in Klima 1964), questions and negation being among such contexts. The term 'negative polarity item' (NPI) is more appropriately reserved to single out PIs which are only licensed in negative contexts.

(Giannakidou 1997, 1998, 1999). The basic paradigm of FCIs is illustrated in (3), which I gloss with ‘FC’ and translate varyingly as *any(one)*, *wh-ever* for convenience:

(3)	opjosdhipote	FC-person; anyone, anybody, whoever
	otidhipote	FC-thing; anything, whatever
	opotedhipote	FC-time; any time, whenever
	opudhipote	FC-place; any place, wherever

Morphologically, the FCIs can be decomposed into three parts: *opjos*, a wh-determiner used also in forming free relatives (distinct from, though closely related to, the interrogative and headed relative wh-elements), *dhi* “indeed” (an undeclinable emphatic particle from ancient Greek), and *pote* “ever” (cf. the English *-ever* paradigm).² Employing a wh-paradigm and some kind of modal marking seems to be a common strategy for FCI formation crosslinguistically: most of the FCI-paradigms identified in the literature involve constituency parallel to the one we observe in Greek FCIs; see Haspelmath 1997 for an overview, Bosque 1996, Quer 1998, 1999 for Spanish and Catalan, Rullmann 1995 for Dutch, Vikner 1999 for Danish; Sæbø (this issue) for Norwegian and Swedish, and Dayal 1997 for Hindi. Sometimes *concessive* markers are also used (e.g. in Korean, Lee 1997), which seem to reflect the presence of scalarity in the free choice meaning.

In (4a) we see that FCIs and APIs are both ungrammatical in positive sentences, while differing in their distribution under negation as the contrast between (4b) and (4c) indicates.

(4)	a	*Idha	{kanenan/ opjondhipote}.
		<i>saw.perf.1sg</i>	<i>API-person / FC-person</i>
		‘*I saw anybody.’	
	b	Dhen idha	kanenan.
		<i>not saw.perf.1sg</i>	<i>API-person</i>
		‘I didn’t see anybody.’	
	c	*Dhen idha	opjondhipote.
		<i>not saw.perf.1sg</i>	<i>FC-person</i>
		‘(I didn’t see anybody.)’	

Sentences like the ones in (4) with verbs in the past and with perfective aspect are about exactly one event, and can be taken to involve an abstract logical structure like that in (5):

² *Opjosdhipote* can be used either as an independent DP constituent, or as a determiner, and like all nominal constituents in Greek is declined for case, number and gender: nom.sg.masc. *opjosdhipote*; acc.sg.masc. *opjondhipote*; gen.sg.masc. *opjudhipote*; etc. I will use these alternations in the examples below.

(5) le (e)

I follow the standard practice in calling sentences with this logical structure *episodic*. The fact that both APIs and FCIs are excluded from affirmative episodic sentences qualifies them both for PI-status. On the other hand, (4c) indicates that, unlike APIs, FCIs are excluded from negative sentences as well, at least when negation combines with an episodic structure. We will see in section 4.3 that it is the extensionality of such structures that makes them incompatible with FCIs.

The anti-episodicity restriction also seems to hold for other languages with lexically distinct FCIs such as Spanish and Catalan. I illustrate here with data from Quer (1998, 1999):

- (6) a *Expulsaron del partido a cualquier disidente. (Spanish; Quer 1999: (21))
expel.3pl from-the party ACC FC dissident
(*‘They expelled any dissident from the party.’)
- b * Non expulsaron del partido a cualquier disidente.
(not expel.3pl from-the party ACC FC dissident
(*‘They didn’t expel any dissident from the party.’)
- (7) a *Li va comprar qualsevol ram. (Catalan; Quer 1998: 220)
her/him aux.3sg to.buy FC bouquet
(*‘S/he bought him/her any bouquet.’)
- b *No li va explicar qualsevol conte de por. (Quer 1998: 220)
not him aux.3sg to.tell FC tale of horror
(*‘S/he did not tell him any horror tale.’)

The anti-episodicity constraint seems to be at work also in the case of questions with perfective aspect; an effect found again not only in Greek but in Spanish and Catalan as well.

- (8) * Su sistisan opjondhipote thavmasti?
you introduced.perf.3pl FC admirer
(*‘Did they introduce any admirer to you?’)
- (9) * Et van presentar qualsevol admirador? (Catalan; Quer 1998: 220)
to-you aux.3pl introduced FC admirer
(*‘Did they introduce any admirer to you?’)
- (10) *Te presentó a cualquier admirador? (Spanish)
you introduced.3pl ACC FC admirer
(*‘Did they introduce any admirer to you?’)

Some parallel data illustrating the same pattern in French are discussed in section 2, where it is

shown that it is not negation or questions per se that exclude FCIs but episodicity; if the episodic structure with negation and in questions is embedded under a habitual or generic operator (with imperfective aspect) or a modal operator, FCIs become fine.

FCIs typically occur in nonveridical contexts, such as intensional, habitual, generic, and modal sentences. We see here an occurrence of a FCI in a sentence with the ability modal:

- (11) Opjosdhipote fititis bori na lisi afto to provlima.
FC- student can SUBJ solve.3sg this the problem
 ‘Any student can solve this problem.’

Sentences with FCIs, like (11), have a clear flavor of arbitrariness and indicate that identity is not so important: whichever student one considers, it doesn’t matter who the student might be, will have the ability to solve this problem.

The licensing conditions and the interpretation of FCIs have not featured prominently in the literature (with the notable recent exceptions mentioned above); instead, *any* has been the main focus of attention, and inevitably the observations about *any* will be taken as the point of departure. Given that *any* as an API is arguably interpreted inside the scope of negation as in (12), the question is how *any* in (11) is interpreted. Since (11) seems to express a generality about students, it is tempting to consider (13) as a plausible logical representation:

- (12) $\neg x$ [**person** (x) **saw** (I,x)]
 (13) x [**student** (x) C **solve** (x, this problem)]

In (13), *any* is translated as a universal quantifier which scopes over the modal verb; the sentence in (11) is thus rendered equivalent to “every student can solve this problem”. This is the view adopted, with varying executions, by a number of scholars, among others, Reichenbach (1947), Quine (1960), Horn (1972, chapter 3), and recently Dayal (1998), and Sæbø to appear--the *wide scope universalists* in Horn’s 1999 terminology. As a consequence of the universalist analysis, *any* can no longer be treated as one item, but must be analyzed as quantificationally ambiguous: under negation, *any* contributes an existential quantifier, but in free choice construals *any* is a universal quantifier.

Two facts appear mysterious in this approach: first, unlike “regular” universals, *any* and FCIs are unable to contribute universal quantifiers in isolation; an external operator is always necessary, e.g. a modal verb as in (11).

- (14) a {Every student/all the students/each of the students} solved this problem.
 b *Opjosdhipote fititis elise to provlima.

*Any student solved this problem.

If *any* were a true universal, why can't it contribute in the absence of modality? The presumed universal force of *any*, as well as its very occurrence, seem to be dependent on the availability of some external operator. If such an operator is absent, as in (14b), so is *any*'s universality and grammaticality. Why this is so remains a mystery in the universalist approach.

A universalist, of course, could try to bypass this question by saying that *any* is a special kind of universal, which, for some reason, unlike *every* comes with a requirement that an external intensional/modal operator be present (see especially Sæbø to appear). While this correctly *describes* (one part of) the constraint on the distribution of *any*, in its FC use, it does little in the way of advancing our understanding of the source of this constraint, or of explaining this distribution. And even if we tried to establish the link between the source of the constraint and the limited distribution by postulating, as in Dayal (1998), inherent modality as the special feature of *any*, it is impossible to explain why this inherent modality needs another external modality for *any* to be admissible. If *any* contributed modal alternatives on its own, it should be able to do so in isolation without requiring the co-occurrence of some other modal operator with universal force.

Second, the assessment that *any*, FCIs and universal quantifiers are interchangeable when construed with *can* does not seem to be entirely correct. In the sentence below, for example, they are not:

- (15) I epitropi bori na dosi ti thesi se opjondhipote ipopsifio
the committee can subj offer.3sg the position to FC candidate
The committee can offer this job to any candidate.
The committee can offer this job to every candidate.

Unlike (11), where *can* is interpreted as an ability modal, *can* here is used as an (epistemic or permissive) possibility modal. The difference seems to affect the interpretation of *any* and FCIs. Recall also that *any* was interpreted existentially in the imperative example in (2). This varying interpretation is unexpected if *any* were simply a universal quantifier.

An alternative to the wide-scope-universal idea can be constructed if we assume that *any* is a Heimian indefinite. In this view, *any* doesn't have quantificational force of its own. It contributes merely a predicate and a variable to be bound by an intensional Q(quantificational) operator, binding also a situation or a world variable, and which must be present in the structure higher up. The semantic representation of (11) in this account would be as in (16):

- (16) Q-OPERATOR[w, x] [...*any*-NP (x,w) ...]

If the binding operator has existential force, as permissive and epistemic *can* above, *any* will be interpreted existentially; but if the operator is universal or other (e.g. generic, a Q-adverb like *always*, *rarely*, *usually*, etc., a universal modal verb, the maximality operator in comparatives) *any* will receive the corresponding Q- force. Many authors (*the existentialists* in Horn's terminology) have argued for variants of this idea: Bolinger 1960, 1977, Davison 1980, Haspelmath 1997, Kadmon and Landman 1993, Lee and Horn 1994, Dayal 1995, Giannakidou 1998, and Tovená and Jayez 1997. A welcome consequence of such an analysis is that, unlike the wide-scope-universal analysis, it preserves the integrity of *any*; additionally, it provides a way to capture the fact that *any* occurs only in environments where a Q-operator is present, and that its quantificational force is "parasitic" on that of the Q-operator.

Languages with FCIs lexically distinct from APIs have an important contribution to make in the *any*-debate. If it can be shown that in these languages FCIs are indeed universal quantifiers, then a strong argument for the wide-scope universalist approach can be given. But if it turns out that FCIs are not universal quantifiers, the wide-scope universalist position and the ensuing quantificational divide of *any* will be deprived of support from the quarter where it would be most likely to be found crosslinguistically. The discussion in this paper should be seen precisely in this light. We will see that the some version of the second possibility is realized: FCIs are not universal quantifiers but indefinites.

Of course, FCIs are not only interesting because they are relevant for deciphering the semantics of a single lexical item in a West Germanic language; they are even more interesting from the perspective of the general theory of polarity. Perhaps more strikingly than in any other PI-paradigm, the study of FCIs can make a clear case that the limited distribution is derived from the lexical semantics of the item in question. This will be the driving force of my proposal. The basic idea will be that FCIs are intensional indefinites that can be interpreted in a sentence only if the sentence provides possible worlds which can serve as identity alternatives inducing variation. Nonveridical sentences (modal, generic, habitual, etc.) are such cases. Veridical and episodic sentences, on the other hand, do not provide the kind of alternatives needed for the interpretation of FCIs, hence FCIs are ruled out.

Once evidence is produced that FCIs are not universals, the view of FC-*any* as a universal loses much of its appeal, unless independent evidence can be adduced, specific to this item, which suggests otherwise. As we will see, however, the literature on this question offers no such evidence -- the most popular diagnostics employed in support of the universalist position are either flawed, or diagnose plurality and high scalar values rather than universality. In addition, there are a number of asymmetries between universal quantifiers and FCIs/*any* which make assimilating the latter to the former even more problematic.

Before proceeding, let me outline the organization of the discussion. As the title

indicates, the main focus of this paper is free choice, and the goal is to provide a concrete semantics for FCIs. Since most discussion of the alleged universal force associated with free choice stems from the analysis of *any*, *any* will inevitably be included in the discussion as a secondary focus: partly as a comparison item, and partly again when we consider the consequences of the proposed analysis and contrast it with the revival of the universalist position presented in Dayal (1998). We will see in section 5 that it is indeed possible to give an analysis of *any* as a unitary item in the approach pursued in this paper.

Moreover, although the discussion of free choice can naturally be embedded into the more general discussion of indifference and ignorance markers used crosslinguistically with *wh*-items, e.g. the *-ever* paradigm in English *whoever*, *whatever*, and also *who the hell*, offering a precise semantics of these English expressions is kept beyond the scope of the paper. In fact, since Greek FCIs are morphologically identical to the *-ever* paradigm, the obvious next step is to assume that the core part of the proposed analysis-- i.e. the requirements for nonveridicality and variation-- will hold for these items too. Although I will not undertake the task of showing that this is the case, there are a number of recent works (Quer 1998, 1999, 2000, Horn 1999, 2000, von Stechow 2000, den Dikken and Giannakidou 2001) which seem compatible with such a conclusion.

A final note on the crosslinguistic extensions of the analysis: though recent work on Spanish and Catalan indicates clearly that the analysis of FCIs proposed here can be directly extended to account for the relevant paradigms in these languages, I will not attempt a detailed examination of these facts, since they have been thoroughly discussed in other studies (Bosque 1996, Quer 1998, 1999, 2000). Most importantly, the conclusion in these studies is that FCIs are indeed indefinites subject to nonveridicality and episodicity constraints (see especially Quer). Relevant data from Spanish and Catalan will be considered, of course, along the way. I will further consider data from French: the *n'importe qui* paradigm can be shown to conform to the Greek/Spanish/Catalan pattern. More detailed crosslinguistic comparisons must be eschewed for lack of space, but also because the relevant data are as yet mostly undocumented, so it is difficult to obtain a clear picture.³ My goal is to provide a semantics for free choice

³ The data reported in Sæbø this issue, for instance, where it is claimed that Scandinavian FCIs differ from Greek, Spanish and Catalan FCIs in being universal quantifiers, are insufficient to substantiate such a claim. For one thing, no contrastive examination of FCIs, universals, and indefinites is provided, of the detail pursued in this paper, as a motivation for this claim-- rather, Sæbø's position that FCIs are universals is part of his assumptions. Moreover, the presented data are insufficient to support the claim for the whole language family; although some data from Norwegian are presented, and to a lesser extent from Swedish, there is no discussion of Danish or Icelandic. The Danish data presented in Vikner (1999) may be taken to suggest that Danish FCIs exhibit a pattern close to the Greek one. Finally, the data provided for Norwegian and Swedish are restricted to a limited class of environments: of the 21 environments given here in section 2.2, Sæbø gives the Norwegian facts only for five-- modals, conditionals, generics, stative verbs, and comparatives; some data including predicative uses of FCIs in Swedish are also included, but constitute a problem for the universalist position, since universals cannot be used as predicates (cf. our discussion in 3.2.1). It is difficult to conduct a

precise enough to serve as a reliable testing ground crosslinguistically on a larger scale.

The discussion is organized as follows. In section 2 the distribution of Greek FCIs is presented. It is shown that these expressions are only grammatical in nonveridical contexts, with an additional constraint that the nonveridical context be non-episodic (which derives the distributional differences between FCIs and APIs). In section 3, I review the arguments in favor of the universal analysis of FCIs and show them to be problematic. Next, a number of asymmetries are pointed out between universal quantifiers and FCIs which suggest that the two do not belong to the same semantic class. Finally, arguments are given for an indefinite analysis of FCIs including their existential readings in many environments (imperatives, conditionals, modals, free-relatives) and the possibility of donkey-anaphora and predicative uses. In section 4 I propose an intensional semantics for FCIs which successfully derives their quasi-universal readings and limitation to nonveridical, nonepisodic contexts. In section 5 I explore a possible extension of this analysis to subtriggering, and consider its overall consequences for *any*. The analysis is compared to Dayal's (1998) recent account, which is shown to be problematic; an alternative for a uniform indefinite *any* is proposed instead.

2 FCIs and their licensing conditions

In this section, I examine the licensing conditions of FCIs. It will be shown that FCIs are PIs proper: they are admitted in a proper subset of the contexts I have characterized elsewhere (Giannakidou 1998, 1999) as nonveridical, and are excluded from contexts which are veridical. It will also be shown that FC distribution is further constrained by episodicity. The two constraints are related in a way that will be made precise in section 4.

2.1 Nonveridicality and polarity

Polarity raises the issue of semantic well-formedness in a model of the grammar like the one in (17), from Ladusaw (1986: (1)):

$$(17) \text{ grammatical } () =_{\text{def}} \text{Syn } () \ \& \ \text{Sem } (),$$

where **Syn** is syntactic well-formedness, and **Sem** is semantic well-formedness

According to (17), grammaticality is a conjunction of syntactic and semantic well-formedness, and sentences in a language can be ruled out as ungrammatical for semantic as well as syntactic reasons. In the standard case where syntactic well-formedness entails semantic well-formedness, i.e. when syntax gives structures that can be assigned a truth value, semantic interpretation

comparison, or make any general claims based on such partial, and to a certain extent conflicting, data.

proceeds unobstructedly. But if syntax gives structures that are not semantically well-formed, i.e. they cannot be assigned a truth value, then these structures will be filtered out by the semantics.⁴ The type of ill-formedness that arises with ungrammatical PIs exemplifies precisely this case. PIs are sensitive expressions, that is, expressions with a lexical semantic ‘deficit’. For a sentence containing a PI to be assigned a truth value, the lexical semantic requirement of the PI, relating to this deficit, must be satisfied. If this requirement is not satisfied, the sentence containing the PI cannot be interpreted and will therefore be ruled out as ungrammatical (for more general discussion, see Ladusaw 1996).

In Giannakidou (1997, 1998, 1999) I further argued that the notion of (non)veridicality is central. PIs are defined as expressions whose distribution is restricted by this property:

(18) **DEFINITION 1** (Polarity item).

A linguistic expression α is a polarity item iff:

- (i) The distribution of α is limited by sensitivity to some semantic property β of the context of appearance; *and*
- (ii) β is (non)veridicality, or a subproperty thereof: {veridicality, nonveridicality, antiveridicality, modality, intensionality, extensionality, episodicity, downward entailingness}

Simplifying somewhat, the set of properties subsumed under (non)veridicality is presented as a closed set in (ii) in order to cover the PI-paradigms that have thus far been identified in the literature. Let it be noted, however, that other properties can be added, e.g. upward entailingness, anticipating the identification of PIs that might be sensitive to just this property (no such PIs have yet been identified). Multiple sensitivities are also allowed in this system.

Sensitivity is a form of semantic dependency between a PI and (non)veridicality. This dependency can be positive or negative. A positive dependency to nonveridicality means that a PI must be in the scope of a nonveridical operator for the sentence containing the PI to be grammatical. A negative dependency to veridicality means that a PI must *not* be in the scope of a *veridical* operator in order to be grammatical. The former gives rise to a licensing condition, the latter to an anti-licensing condition. The abstract format of either case is illustrated below⁵:

⁴ I talk here in terms of truth values, but of course something analogous can be said in this model about non-declarative sentences where interpretation is cast in terms of fulfillment conditions (imperatives) or answerhood conditions (interrogatives).

⁵ I give here very general schemata, without addressing the details of how licensing and anti-licensing translate into scope conditions. The mapping of licensing onto scope is not as straightforward as one might be inclined to believe. For some PIs, for instance, the relevant scope is the local scope of a nonveridical expression β , for others it is the global scope of β (with veridical expressions potentially intervening, like in *John didn't say that he was glad that he saw anybody*); for some other PIs licensing corresponds to an escape-the-scope-of condition

(19) *Licensing by nonveridicality*

A polarity item α will be grammatical in a sentence S iff α is in the scope of a nonveridical operator β in S .

(20) *Anti-licensing by veridicality*

A polarity item α will not be grammatical in a sentence S if α is in the scope of a veridical operator β in S .

Licensing expresses a *must* condition, and it makes a positive prediction as to where the PI can occur. Anti-licensing, on the other hand, expresses a *must not* condition and it makes a predication as to where the PIs *cannot* occur (see also Ladusaw 1979, Progovac 1994). Naturally, from knowing that a PI will be ungrammatical in the scope of a veridical operator, we expect that this PI will be fine in the scope of a nonveridical one, but note that this is a likely state of affairs rather than a necessary one. Given the kinds of dependencies involved, we expect empirical differences to arise between items sanctioned through licensing and those sanctioned through anti-licensing: in section 5.2 we see that the differences between Greek FCIs and *any* reflect exactly this difference (see also Giannakidou 1999).

The first mention of veridicality we find in Montague 1969, where it is understood in terms of existence; see also Dayal 1995 and Lin 1996 for postulating *nonexistence* as a notion crucial to PI-licensing. In Giannakidou (1997, 1998, 1999) and Zwarts (1995) veridicality and nonveridicality are defined in terms of truth as in (21)⁶:

(21) **DEFINITION 2** (Relativized (non)veridicality for propositional operators)

[Giannakidou 1999: 388]

Let $c = \langle cg(c), W(c), M, s, h, w_0, f, \dots \rangle$ be a context.

i. A propositional operator Op is *veridical* iff $[[Op\ p]]_c = 1 \quad [[p]] = 1$ in some epistemic model $M_E(x) \ c$; otherwise Op is nonveridical.

ii. A nonveridical operator Op is *antiveridical* iff $[[Op\ p]]_c = 1 \quad [[p]] = 0$ in some epistemic model $M_E(x) \ c$.

(an admittedly more marginal option, for details see Giannakidou 1998, 2000). The type of syntax we need for licensing (or anti-licensing) will be almost exclusively determined by the specific semantics of the PIs involved. Since FCIs are intensional, as I argue, it is expected that for them licensing indeed translates into a be-in-the-scope-of the licenser condition.

⁶ (Non)veridicality is also defined for determiners but I omit consideration of such cases, as they are not crucial for the present discussion. Let me also caution that nonveridicality is not identical to intensionality or opacity. There are extensional operators that are nonveridical, for instance, negation which is nonveridical and also non-opaque. On the other hand, as shown in Giannakidou 1999, strong (alethic) and epistemic modalities like *believe*, though intensional, are nevertheless veridical. As indicated in definition 1, intensionality is just a subcase of (non)veridicality.

(Non)veridicality is defined as a property of propositional operators in terms of truth entailment. A propositional operator is veridical iff the truth of $Op\ p$ in c requires that p be true in some individual x 's epistemic model $M_E(x)$ in c . If the truth of $Op\ p$ in c does not require that p be true in some such model in c , Op is nonveridical. A nonveridical operator Op is furthermore antiveridical iff the truth of $Op\ p$ in c requires that p be false in some epistemic model $M_E(x)$ in c . Antiveridical operators are essentially negative operators and they form a proper subset of the nonveridical.

Relativization of (non)veridicality to epistemic models is motivated by the need to deal with the veridicality properties of propositional attitudes (which are treated as propositional operators, a treatment originating in Hintikka 1962). Epistemic models are construed as sets of worlds anchored to an individual (the *individual anchor* in Farkas 1992) representing worlds compatible with what the individual believes, as in the philosophical tradition where belief and knowledge states are modeled as sets of possible worlds in terms of accessibility functions relative to individuals. An epistemic model corresponds to a *doxastic* function:

(22) **DEFINITION 3** (Epistemic model).

- (i) A model $M_E(x)$ is a set of worlds associated with an individual x , representing worlds compatible with what x believes.
- (ii) $M_E(s)(w) = \{w' : p [s \text{ believes } p(w) \rightarrow p(w')]\}$,
where w is a world of evaluation, and s is the speaker .

In unembedded sentences, of course, the only relevant epistemic agent is the speaker and this is the only model we consider. But with embedding under propositional attitudes, the model of the attitude subject is also relevant and can play a decisive role.

Adverbs like *yesterday*, and the assertion operator in positive sentences are typical examples of veridical operators; as I stated, the relevant model is the speaker's but I will not indicate it here as no other model is relevant.

- | | | | |
|------|---|------------------------------|-------------------|
| (23) | a | Yesterday, Paul saw a snake. | Paul saw a snake. |
| | b | ASSERT Paul hit Frank. | Paul hit Frank. |

The veridicality of *yesterday* relates to the fact that it anchors an episodic past event. Logical conjunction is also veridical, in both arguments positions (see Zwarts 1995 for discussion). PIs crosslinguistically are ungrammatical in the scope of veridical operators.

The question operator and modal verbs are typical examples of nonveridical operators:

- (24) a Did Paul see a snake? -/ Paul saw a snake.
 b Paul may have seen a snake. -/ Paul saw a snake.

PIs are fine in questions and in construction with modal verbs. Negation and *without*, on the other hand, are typical antiveridical operators, and PIs are admitted in their scope as well:

- (25) a Paul did not see a snake. It is not the case that Paul saw a snake.
 b without Paul seeing a snake. It is not the case that Paul saw a snake.

Downward entailing operators also form a proper subset of the nonveridical (see especially Zwarts 1995), but, with the exception of negation and negative quantifiers, the licensing of PIs in the scope of other downward entailing operators is not that straightforward.⁷ Moreover, a set of PIs sanctioned exclusively by downward entailingness has not yet been identified; such a paradigm would have to be grammatical for instance in the scope of quantifiers meaning *few*, *no* and negation, but it should be unacceptable in questions (which are at most non-monotone; Groenendijk and Stokhof 1984), the protasis of conditionals and the other intensional and modal environments we see in Table 1 in the next subsection.

Regarding propositional attitudes, the basic observation in Giannakidou 1998, 1999 is that PIs, *any* included, are admitted in the scope of directives like *want*, *insist*, *suggest*, etc. but are excluded from the scope of predicates like *believe*, *dream* and *say*, which I will refer to, simplifying a bit, as *epistemics*. The argument was built based on the Greek facts, but data from other languages support it (see Haspelmath 1997 for a general crosslinguistic picture; also Quer 1998 for Catalan, and Dahl 1999: 673 specifically for the Russian *kto-nibud*). The contrast correlates with mood choice (directives select the subjunctive but epistemics require indicative complements), and seems to be confirmed also by the FCI data. Compare the sentences below, which are fine, to the ungrammatical sentences in (28):

- (26) I Ariadne epemine na afiso opjondhipote na perasi mesa.

⁷ FCIs, for instance, are not sanctioned in the scope of downward entailing quantifiers in an episodic context:

- (i) ??Elaxisti fitites ipan otidhipote.
 ‘Very few students said anything.’

In Giannakidou (1998) occurrences of APIs in the scope of Greek quantifiers meaning *few* and *very few* are reported as acceptable, though they are never impeccable. In the approach I formulate here, the ungrammaticality of (i) follows from episodicity (see section 4.4). Note that the habitual version of (i), given in (ii) with the imperfective *lene* replacing the perfective *ipan*, is fine; the habitual allows for PIs:

- (ii) Elaxisti fitites lene otidhipote sto mathima. ‘Few students (usually) say anything in class’.

- the Ariadne insisted.3sg subj let.1sg FC-person subj come.3sg in*
 ‘Ariadne insisted that I allow anyone in.’
- (27) I Ariadni mas zitise na tis agorasume {kanena/opjodhipote} vivlio ja ta genethlia tis.
the Ariadne us asked,3sg subj her buy.1pl API/ FCI book for the birthday hers
 Ariadne asked us to buy her any (of these books) books for her birthday.
- (28) a * O Pavlos pistevi oti akuse {kanenan/opjondhipote} thorivo.
the Paul believe.3sg that .ind heard.3sg API/ FCI noise
 * Paul believes that he heard any noise.
 a' (Paul said that he heard a noise.)
 b * Onireftika oti irthe {kanenas/opjosdhipote} idravlikos.
dreamt.1sg that .ind came.3sg API / FCI plumber
 * I dreamt that any plumber came in.
 b' (I dreamt that a plumber came in.)
 c *I Ariadne ipe oti akuse {kanenan/opjondhipote} thorivo.
the Ariadne said.3sg that .indicative heard.3sg API/ FCI noise
 * Ariadne said that she heard any noise.
 c' (Ariadne said that she heard a noise.)

This contrast provides one of the strongest arguments for taking nonveridicality to be the notion regulating the distribution of PIs. The more narrow alternatives of downward entailingness and negation are silent on these facts.

Any, as we see, is also inadmissible in the scope of epistemic attitudes, but is fine with directives. The following examples make the contrast with directives even more clear (*told* in (30b) is used as equivalent to *suggest*, or *ask* in this context):

- (29) a John would like us to buy any book on this list for his birthday.
 b John told us to buy any book on this list for his birthday.
 c * John believes that we bought any book on this list for his birthday.
 d * John dreamt that we bought any book on this list for his birthday.

Likewise, Quer (1998, 1999) confirms the contrast for Spanish and Catalan FCIs. The mood contrast is also confirmed, to illustrate (see also Quer 1998:179):

- (30) a * La Paola creu que desapareix qualsevol llengua minoritària. (Catalan)
 b *Paola cree que desaparece cualquier lengua minoritaria. (Spanish)
Paola believe.3sg that disappear.ind.3sg FC language minority
 *Paola believes that any minority language is disappearing.

- (31) a La Paola vol evitar que desaparegui qualsevol llengua minoritària. (Catalan)
 b Paola quiere evitar que desaparezca cualquier lengua minoritaria. (Spanish)
Paola want.3sg avoid disappear.subj.3sg FC language minority
 Paola wants to prevent any minority language from disappearing.

Epistemic attitudes are veridical according to definition 2: the truth entailment holds in the believer's, dreamer's or sayer's epistemic model M_E (subject). Directive attitudes, on the other hand, do not give rise to a truth implication with respect to either the speaker or the embedded subject, and are thus nonveridical. I will not give further details here, but see Giannakidou (1998, 1999) for extensive discussion. The crucial fact is that the licensing of FCIs in propositional attitudes follows the pattern observed for other PIs; *any* appears no different in this respect.

The fact that veridical attitudes are incompatible with FCIs has an important consequence regarding the role of intensionality in licensing FCIs. Approaches that take this notion to be central (Sæbø this issue, and less explicitly so Dayal 1998) would expect FCIs to be grammatical with both epistemic and directive attitudes since in both cases we are dealing with intensional domains. The contrast just observed indicates that the crucial factor is nonveridicality rather than intensionality.

2.2 The distribution of FCIs: nonveridicality and episodicity

In this section I illustrate the distribution of FCIs. FCIs are generally fine in nonveridical contexts, but are excluded from veridical ones. Episodicity is shown to further constrain the set of nonveridical environments that allow for FCIs. This observation, as we noted at the outset, holds for Greek as well as Spanish, Catalan, and as we shall see here, French.

An overview of the distribution is given in Table 1. The table summarizes the Greek data contrastively with APIs and *any*. All PI paradigms are excluded from veridical contexts (the five bottom rows). But the distribution of FCIs, though overlapping with that of *any* and APIs for the most part, is not identical to these. The differences between APIs and FCIs are discussed elsewhere (Giannakidou 1997b, 1998) and since they are not directly relevant for our purposes here, I omit consideration. The differences with *any* will receive an explanation in section 5.2. Below, some examples are given as an illustration of successful occurrences of FCIs:

Table 1 Contrastive distribution of *any*, FCIs, and APIs

<i>Environments</i>	<i>any</i>	<i>FCIs</i>	<i>APIs</i>
1. Episodic negation	OK	*	OK
2. Episodic questions	OK	*	OK
3. Conditionals	OK	OK	OK
4. Restriction of universal	OK	OK	OK
5. Future particle/will	OK	OK	OK
6. Modal verbs	OK	OK	OK
7. Directive intensional verbs	%	OK	OK
8. Imperatives	OK	OK	OK
9. Habituals	OK	OK	OK
10. Disjunctions	*	OK	OK
11. <i>isos/perhaps</i>	*	OK	OK
12. Stative verbs	OK	OK	*
13. Generics	OK	OK	*
14. NP-comparatives	OK	OK	*
15. <i>monon/only</i>	OK	*	*
16. Negative factives	OK	*	*
17. Affirmative episodic sentences	*	*	*
18. Existential constructions	*	*	*
19. Epistemic intensional verbs	*	*	*
20. Progressives	*	*	*
21. Factive verbs	*	*	*

Protasis of conditionals

- (32) An kimithis me opjondhipote, tha se skotoso.
if sleep.2sg with FC-person fut you kill.1sg
 If you sleep with anybody, I'll kill you.

Directive intensional verbs (selecting subjunctive)

- (33) I Ariadne epemine na afiso opjondhipote na perasi mesa.
the Ariadne insisted.3sg subj let.1sg FC-person subj come.3sg in
 'Ariadne insisted that I allow anyone in.'

Modal verbs

- (34) Bori na bike opjosdhipote mesa.
can.3sg subj entered.3sg FC-person in
 'Anyone may have come in.'
- (35) Boris na dhanistis opjodhipote vivlio.
can. 2sg subj borrow.2sg FC book
 'You may borrow any book.'

- (36) Opjosdhipote fititis bori na lisi afto to provlima.
FC student can.3sg subj solve.3sg this the problem
 ‘Any student can solve this problem.’

Implicit permission modals

- (37) Opjosdhipote ine kalodhexumenos sti sinantisi apopse.
FC-person be.3sg welcome in-the meeting tonight
 ‘Anyone is welcome at the meeting tonight.’

Imperatives

- (38) Pare opjodhipote milo.
take.2sg FC apple
 ‘Take any apple.’

Future

- (39) I Maria tha paralavi opjondhipote proskleklimeno omiliti apo to aerodromio.
the Maria will pick.3sg FC invited speaker from the airport
 Maria will pick up any invited speaker from the airport.

Habituals

- (40) Sinithos dhiavaze opjodhipote vivlio me megali prosoxi.
usually read.3sg FC book with great attention
 ‘S/he usually read any book very carefully.’

Comparatives (phrasal and clausal)

- (41) a I Ana trexi grigorotera apo opjondhipote stin taksi tis.
the Ann run.3sg faster than FC-person in-the class hers
 ‘Ann runs faster than anybody in her class.’
 b I Ana egrapse kalitera apoti perimene opjosdhipote apo mas.
the Ann wrote.3sg better than expcted.3sg FC-person from us
 ‘Ann did better (in the exam) than any of us had expected.’

Generic sentences

- (42) Opjadhipote ghata kinigai pondikia.
FC cat hunt.3sg mice
 ‘Any cat hunts mice.’

FCIs are ungrammatical in veridical sentences, e.g. positive episodic sentences like (43) and existential sentences. Though I give examples with singular FCIs, the ungrammatical data presented here can be reproduced with plural FCIs; I stick to the singular for simplicity. (Recall the data from section 1 indicating that Spanish and Catalan FCIs behave on a par). French FCIs exhibit the same pattern, as we see below:

Affirmative episodic

- (43) * Xthes to apojevma, idha opjondhipote ston kipo.
yesterday the afetrnoon saw.perf.1sg FC-person in-the garden
 (*Yesterday afternoon I saw anybody in the yard)
- (44) *Marie a vu n'importe qui cet après-midi. (French)
Mary has seen FC-person this afternoon
 (*Mary saw anybody this afternoon).

Existential sentences

- (45) *Ipirxe opjodhipote vivlio pano sto trapezi.
 (*There was any book on the table.)
- (46) * Il y a n'importe quel livre sur la table. (French)
it was FC- book on the table
 (*There was any book on the table.)

It should be noted, then, that veridicality rules out FCIs and *any* from existential constructions, and it is not necessary to invoke contextual vagueness (as in Dayal 1998:463). If the existential construction contains an operator of the appropriate kind, e.g. a modal, FCIs can be improved, as indicated in the following example from Catalan; note also the improvement with *any*:

- (47) Aquí podria haber cualquiera de tus colegas. (Spanish; Quer 1999: (6))
here could to-have FC of your colleagues
 There could be any of your colleagues there.

Admittedly, existential constructions, even with modal verbs, are still resistant environments for FCIs because it can be assumed that existence scopes over modality, hence allowing the veridical inference to survive. Although the example above is fine for English, it is not always the case that by inserting a modal operator we have improvement of *any*-- e.g. **There could be any books on the table* is still bad, and one can think of many similar examples. The point to note here is that, to the extent that *any*/FCIs are admissible in existential constructions with modals, they contrast with true universals which are consistently ungrammatical in parallel

structures, regardless of whether we have a modal or not:

- (48) * Aquí podría haber todos de tus colegas. (Spanish)
here could to-have all of your colleagues
* There could be {all/every one of} your colleagues there.
* There are {all/every one of} your colleagues there.

So we are witnessing a relatively clear contrast between universal quantifiers and FCIs; more asymmetries between universal quantifiers and FCIs are discussed in section 3.2.

FCIs are also excluded from *only* and factive domains, just like the items of the API paradigm. Again, the crucial factor is that factives and *only* give rise to veridical entailments:

- (49) * Monon i Theodora idhe {opjondhipote/kanenan} fititi.
only the Theodora saw.3sg FC/ API student
'Only Theodora saw any students.'
- (50) a * Ekplisome pu exi {opjondhipote/kanenan} filo.
be-surprised.1sg that has FC / API friend
'I'm surprised she has any friends.'
- b *Xerome pu exi {opjondhipote/kanenan} filo.
be-glad.1sg that has FC / API friend
'*I'm glad she has any friends.'

FCIs thus differ from *any* which may occasionally be accepted with *only*, and in the complement of a negative factive, as we see. Grammaticality in these cases can arguably be accounted for by invoking a weaker condition based on negative implicature (Linebarger 1980; cf. what I referred to as "indirect licensing" in Giannakidou 1999). Dayal (1998: 442) presents *any* in negative factives as a criticism against nonveridicality, but it should be clear from the above examples that nonveridicality is indeed respected by FCIs and APIs besides *any*. Given that comparable PIs in other languages are also uniformly excluded from factives (e.g. Catalan, Quer 1998, and Haspelmath 1997), it seems fair to say that *any* exemplifies the marginal case rather than the typical one.⁸

⁸ Von Stechow 1999 proposes a semantic alternative of why *any* is admitted in the scope of negative factives by analyzing negative factives as downward entailing (and thus positive factives as upward entailing). A problem with this approach is that the notion of entailment employed for factives is non-standard in being dependent on satisfying certain presuppositions, and at any rate different from classical entailment, which used to derive monotonicity patterns. But even if downward entailment could somehow be made to be part of the meaning of a negative factive, the problem remains that crosslinguistically the scope of a factive (negative or positive) is disfavored as a PI-environment. If downward entailment is relevant at all for PI-licensing, the marginality of PIs

In addition, as we see in (51)-(54), FCIs are not grammatical with progressives (though they are fine with habituais as in (40); see also Vikner 1999: 34-35 for a parallel with Danish PIs). This is expected under the analysis of the progressive as veridical in Giannakidou and Zwarts (1999). Note that *any* is also ungrammatical:

Progressives

- (51) *Egrafa olo to proi opjodhipote grama.
wrote.imperf.1sg all the morning FC letter
 ‘*I was writing any letter all morning.’
- (52) * El David està escoltant qualsevol disc. (Catalan; Quer 1998:221)
the David be.3sg listening-to FC record
 *David is listening to any record.
- (53) Está hablando con cualquiera de sus empleados. (Spanish; Quer 1999: (22))
be.3sg speaking with FC of his employees
 *S/he is talking to any of his employees.

Crucially, FCIs are ungrammatical in certain nonveridical contexts, namely negation and interrogatives, when these are episodic. *Any* is apparently not sensitive to this distinction. Spanish and Catalan FCIs behave on a par with Greek (recall the data in section 1).

- (54) * I Roxani dhen idhe otidhipote.
the Roxanne not saw.3sg FC-thing
 ‘Roxanne didn’t see anything.’
- (55) * Aghorases opjodhipote vivlio?
bought.2sg FC book
 Did you buy any book?

In French, although the FCI is not ungrammatical, it is accepted only with a special reading equivalent to English ‘just anybody’. This reading has been characterized as ‘indiscriminative’ in Horn (2000).

with negative factives is not expected. Rather, the blocking effect of factivity *is* expected under the assumption that it yields veridicality. The negative implicature account, then, as formulated in Giannakidou 1999, seems the preferable option because it is most compatible with the marginality of PI-occurrences with negative factives.

(56) Marie n'a pas parlé a n'importe qui cet après midi. (French)

Mary not has talked to FC person this afternoon

Mary didn't talk to just anybody this afternoon.

This sentence does not mean that Mary didn't talk to anybody, but the opposite: it is stated that Mary did talk to somebody, and additionally, it is implicated that the person she talked to was not just some random person. Similar uses of FCIs are observed in the other languages under consideration, to be discussed later on. In these uses, which typically occur with negation, *any* and the FCIs have an interpretation like “an arbitrary individual” which seems like a natural extension of the FC meaning “any individual, it doesn't matter which one”. Indiscriminative uses are marked in English with *just*, and in Greek with the indefinite article as we note in 3.2, but this marking is not obligatory; French, as we see, does not mark this special use in a particular way.

Likewise, *n'importe qui* is ungrammatical in episodic questions:

(57) * Est-ce que Marie a parlé avec n'importe qui cet après midi?

is it that Mary has talked with FC-person this afternoon

Did Mary talk to anybody this afternoon?

Hence the French FCI *n'importe qui* mostly patterns with its Greek, Catalan and Spanish counterparts regarding episodicity.⁹

It is not a general incompatibility between FCIs and negation or questions that rules out FCIs in the sentences above; rather, it is episodicity that must be held accountable. Notice that in the following examples with the imperfective, FCIs are fine (similar results obtain in

⁹ A reviewer presents the grammaticality of *qui que ce soit* under negation as a case of a FCI which does not conform to the episodicity generalization:

(i) Marie n' a pas parlé a qui que ce soit cet après midi.

Mary didn't talk to anybody this afternoon.

However, it is not obvious that *qui que ce soit* is a FCI. Rather, *qui que ce soit* appears in traditional negative polarity items environments, which suggests a characterization as 'NPI' (or more generally 'API') rather than FCI (see also Haspelmath 1997). Cases like (i) therefore have no bearing on the anti-episodicity constraint for FCIs.

Qui que ce soit may also appear as a relative clause modifier in non-negative environment, as in (ii):

(ii) Qui que ce soit qui t'ait dit ça, il a eu tort.

who that it be that to-you said that, he was wrong

{Whoever/Anyone who} said that to you was wrong.

This is an instance of subtrigging, to be discussed in section 5.1. If *qui que ce soit* is indeed possible in such construals, then, at most, it resembles *any* which has both API and FCI uses. Just like *any*, then, it shows no sensitivity to episodicity. I am most thankful to Danièle Godard for her assistance with the French data.

Spanish, Catalan and French).

- (58) Tin epoxi ekini, miluse i Ariadne me opjondipote fititi?
the time that talked.impf.3sg the Ariadne with FC student
‘At that time, did Ariadne use to talk to any students?’
- (59) Sinithos dhen milai me opjondipote fititi.
usually not talked.impf.3sg with FC student
‘Usually, she doesn’t talk to any students.’

The following, then, seem secure conclusions:

(a) FCIs are polarity items (PIs) in the sense of Giannakidou 1998, 1999: they are admitted in nonveridical contexts but are excluded from veridical ones.

(b) Conclusion (a) holds for *any* too, with the exception of *only* and negative factives which allow *any* despite being veridical, due to the option of indirect licensing by a negative implicature that is available in these cases (but not in Greek).

(c) In addition to veridicality, FCIs appear to be allergic to episodicity: they are not acceptable in episodic sentences, but they become licit if we insert an operator inducing plurality of events or situations. Unlike FCIs, *any* is not sensitive to episodicity.

Based on these conclusions, we can posit (60) as the distributional constraint on FCIs:

(60) *Licensing condition on FCIs*

A FCI is grammatical in a sentence S iff:

- (i) is in the scope of a nonveridical operator ; and
- (ii) S is not episodic.

As I said at the outset, postulating a licensing condition is only doing half the job, and, unless we address the issue of why it is that the PI is subject to the condition it is, a licensing condition is merely a filter stipulating that a PI must occur in some context as a derivation external global constraint. We don't want PIs to be “special” items in this way. So we have to address the *sensitivity* question (see especially Israel 1996, Giannakidou 1998 and Tovena 1999): why are FCIs subject to the conditions in (60)? I will be concerned with this question in the remainder of the paper and will try to derive (60) from the semantics of free choice.

3 Free choice is not universal quantification

The first step in understanding the lexical semantics of FCIs is to settle the issue of their quantificational force. In this section I consider potential evidence in favor of the universal analysis and show it to be unconvincing. Instead, a number of facts are presented in sections

3.2. and 3.3. which can be explained only if we assume that FCIs are indefinites.

3.1 Two apparent arguments that FC may be universal quantification

Let us consider first two cases which suggest that FCIs may be universal quantifiers. These have been extensively discussed in the literature on *any*; for recent discussion see Dayal (1998).

3.1.1 *Almost/absolutely* modification

Universal quantifiers, but not existentials like *some*, admit modifiers like *almost* and *absolutely* (for the original observation see Dahl 1970 and Horn 1972). The examples below show that FCIs can indeed be modified by *sxedhon* ‘almost’ on a par with universals:

(61) *Sxedhon opjosdhipote fititis bori na lisi afto to provlima.*

almost FC student can subj solve.3sg this the problem

‘Almost any student can solve this problem.’

(62) a *Irthe sxedhon kathe fititis.*

came.3sg almost every student

Almost every student came.

b * *Irthe sxedhon kapjos fititis.*

came.3sg almost some student

* Almost some student came.

It has been pointed out numerous times in the literature, however, that the results of this test do not necessarily guarantee universality (see among others McCawley 1981, Horn and Lee (1995), Horn (1999), and Giannakidou 2000). For one thing, *almost* can modify predicates:

(63) *Ine sxedhon ilithios.*

is.3sg almost idiot

‘He is almost an idiot.’

Furthermore, *almost* can modify high value cardinals like *two thousand students*, or even low-value ones, as long as they can be contextually interpreted as denoting high values:

(64) Almost two thousand students participated at the demonstration.

(65) A local phone call from the hotel room costs almost one dollar!

The sentence in (65) has the neutral mathematical interpretation of ‘rounding up’ the amount of money to one dollar, and additionally, it licenses an inference (probably an implicature) that one dollar is a lot to pay for a local phone call. This inference suggests that *almost* associates with

high values (Horn and Lee 1995), and it further indicates that even low values can be interpreted as high if the context allows it. (This, of course, is expected because scales are pragmatic constructs.) Likewise, when *almost* modifies a predicate, e.g. (63), it associates with a value close to the supremum of the predicate's lattice structure.

Hence, sentences like the above suggest that the prerequisite for *almost* modification is some kind of implicated plurality rather than universality. This conclusion of course does not constitute an account of how *almost* modification exactly works, but providing such an account is not a task to be undertaken in this paper. For our purposes, it merely suffices to see that the fact that FCIs are modifiable by *almost* is not necessarily indicative of universal force, but rather, it may be taken to support the observation that FCIs are somehow pluralized.¹⁰

As further evidence against the validity of the *almost/absolutely* test as a diagnostic for universality, consider that, despite the parallelism between FCIs and universals in sentences like (61), it is not always the case that *almost/absolutely* modify FCIs. We see below that the Greek *apolitos* 'absolutely' consistently fails to modify FCIs:

- (66) a Absolutely every student student can solve this problem.
 b * *Apolitos opjodipote fititis bori na lisi afto to provlima.*
 ? Absolutely any student can solve this problem.

There are also instances where *almost* modification fails, as indicated in the examples below from Spanish (Quer 1999: (7b)) and Greek:

- (67) **Si lees casi cualquier periódico extranjero, estás mejor informado.*
if read.2SG almost FC newspaper foreign be.2SG better informed
 '?? If you read almost any foreign newspaper, you are better informed.'
 (68) **An dhiavasis sxedhon opjadhipe kseni efimeridha, tha ise kalitera enimeromenos.*
 ?? If you read almost any foreign newspaper, you are better informed.'

(Since *almost* modification is pragmatically regulated, it would seem more appropriate to mark the modification failures with '#' rather than '*', but I will not insist on this here.) In

¹⁰ In a way that regular indefinites are not, since they are consistently ungrammatical with *almost*:

- (i) **Almost students know the answer.*
 (No Greek equivalent because bare plurals cannot be used generically in subject position.)
 (ii) **Sxedhon enas fititis bori na lisi afto to provlima.*
almost a student can subj solve.3sg this the problem
 *Almost a student can solve this problem.

The plurality of FCIs, absent with regular indefinites, has to do with the fact that they make us consider alternatives and is captured in the notion of identity alternatives in section 4.

conditionals, both existential and universal readings arise with FCIs and *any*, as we note in section 3.3.2. One can say, then, that *almost* modification fails in the above examples because the FCIs are interpreted existentially, which in itself argues against the assimilation of FCIs with true universals. In support of this, witness that *almost* modification fails consistently in other contexts licensing existential readings, e.g. imperatives:

- (69) ?? Patiste sxedhon opjodhipote pliktro ja na sinexisete.
press.2pl almost FC key for subj continue.2pl
 ?? Press almost any key to continue.

Consider, finally, examples like the following, from Horn (2000: (42) and (44)):

- (70) a If you eat absolutely any meat, you are not a vegetarian. (API-any)
 b If you eat absolutely any meat, you are not a kosher Jew. (FC-any)
- (71) a If you go to bed with almost anyone, you should use a condom. (API-any)
 b If you go to bed with almost anyone, you better use two. (FC-any).

In these examples we see that both existential (API-*any*) and universal (FCI-*any*) readings are modifiable by *almost* and *absolutely*. If this is so, then it is hard to see what *almost/absolutely* modification actually diagnoses, and almost impossible to maintain that it is universality.

3.1.2 Exceptive phrases

Exceptive phrases are known to only be associated only with universal quantifiers (see von Stechow 1994 and references therein). FC-*any* is claimed to be universal because it can be associated successfully with an exceptive phrase (Dayal 1998). FCIs behave on a par:

- (72) To provlima ine toso efkolo, oste opjosdhipote fititi bori na to lisi, ektos-apo to Jani.
the problem is so easy that FC student can subj it solve.3sg but the John
 'The problem is so easy that any student but John can solve it.'
- (73) Milisa me kathe fititi ektos-apo to Jani.
talked.1sg with every student but the John
 I talked to every student but John.

Singular existentials, as we see below, cannot be construed with *ektos-apo* 'but/except':

- (74) * Milisa me kapjon fititi ektos-apo to Jani.
talked.1sg with some student but the John
 I talked to some student {but/except} John.

Von Stechow (1994) proposes a semantics for *but* that derives the distributional restriction on universal associates (von Stechow 1994: 108) in the following way:

(75) Det A [[*but*]] R P D (A-R) (P) S (D (A-S) (P) R S)

The above is intended to capture the two main features of *but*: its domain subtraction (the first conjunct), and a uniqueness condition ensuring that there will be a unique exception set (the second conjunct). The argument goes that since only universal determiners guarantee the existence of a unique exception set, we expect that only these will be compatible with *but*.

Yet the generalization that *but* and exceptive phrases associate with universal determiners does not seem entirely secure. For one thing, there are universal determiners that are incompatible with *but*. Cases in point are *both*, *neither*, and *each*:

- (76) a *Bill talked to both students but John.
- b *Bill talked to neither student but John.
- c *Bill talked to each student but John.

Likewise, plural definites do not admit *but*-phrases despite the fact that they have unique exception sets, just like universal quantifiers:

(77) * The students but John and Bill attended the meeting.

On the other hand, Hoeksema (1990) and Horn (1999, 2000) report cases of *but* modifying non-universal quantifiers like the mass *little*:

- (78) a We had little choice but to comply.
- b Landowners could do little but accept their fate. (Horn 1999: (23))
- c We are achieving little but increased and forced evacuation of the ethnic Albanians. (Horn 1999: (23))

Horn (1999, 2000) also presents cases of *but* phrases modifying a wh-word.

(79) Who but Tipper could be excited by Al?

In this case, an implicature is licensed that Al is so boring that nobody other than Tipper, his wife, would be excited by him. Similar examples can be reproduced for Greek:

- (80) Pjos ektos-apo to Jani tha boruse na pi kati tetjo?
who but the John fut could subj say.3sg something such
 ‘Who but John could say anything like this?’

Again, we have the implicature that nobody but John could say something like this. On the basis of such examples, Horn hypothesizes that a proposition with *but* is felicitous only if its nonexceptive counterpart is conventionally used to express a universal proposition (Horn 1999). If this hypothesis is correct, then *but* can no longer be used as a diagnostic of asserted universal force; this is fully compatible with the analysis of free choice I will propose here, since universality comes in the requirement that we exhaust all i-alternatives, and this requirement is a presupposition rather than an assertion (section 4.1).

More deviances from the generalization that exceptive phrases only associate with universals are encountered when we move across languages. The Greek *ektos-apo*, for instance, is quite successful with non-universal quantifiers meaning *most*, *almost every*:

- (81) a Milisa me tus perissoterus fitites ektos-apo to Jani.
 ‘? I talked to most (of the) students {but/except} John.’
 b Milisa me olus sxedhon tous fitites ektos-apo to Jani.
 ‘I talked to almost all the students {but/except} John.’

As we see, *ektos apo* is glossed as *but/except* because the lexical distinction does not exist in Greek, and this perhaps is to be held accountable for the judgments above. Note, in this connection, that there are also empirical differences between *but* and *except* in English. I will gloss over these differences because they are not crucial in making the general point I want to make here. It is also not crucial to propose an explanation of how exactly exemptive phrases work, but assume that some version of Horn’s hypothesis is correct. Once again, then, the compatibility of FCIs with exceptive phrases suggests that we are dealing with a plural value, yet not necessarily at the level of assertion.

We may conclude, then, that although we have confirmed our original observation that FCIs have pluralized interpretations, the facts presented here do not actually provide evidence that FCIs are universal quantifiers. To this conclusion, let me add one more argument.

FCIs crosslinguistically involve a wh-paradigm; yet it is not immediately obvious what the connection may be between wh-words and universal quantifiers. In fact, many scholars argue against such a connection (see especially Jacobson 1995 for arguments against the universal analysis of free relative wh-words, which is the paradigm that Greek and other languages (cf. English *-ever* free relatives) specifically employ for FC-formation). On the other hand, there have been numerous attempts to link wh-words to existential quantifiers and

indefinites (Karttunen 1977, Berman 1991). If FCIs are indeed universals, then it seems quite peculiar, and certainly not compositional, that natural languages systematically employ a paradigm for FCIs that is linked to indefiniteness instead of universality. But if FCIs are indefinites, this strategy seems more expected.

Next, I discuss some asymmetries between universal quantifiers and FCIs which allow the stronger conclusion that FCIs are not universals but indefinites.

3.2 Further asymmetries between universal quantifiers and FCIs

We have already noted in 2.2. an asymmetry between universal quantifiers and FCIs regarding existential constructions: FCIs but not universals occur happily in these constructions, provided that a nonveridical operator is present. Three additional asymmetries will be presented here: (a) unlike universal quantifiers, FCIs can be used as predicate nominals; (b) FCIs but not universal quantifiers can bind pronouns in donkey-anaphora; (c) FCIs, unlike universal quantifiers, cannot take inverse scope over quantifiers that c-command them at s-structure.

3.2.1 Use as predicate nominals

It is well known that universal quantifiers with *every* cannot be used as predicate nominals:

(82) Frank is {a/*every} friend of mine.

Partee 1987 discusses restrictions on the availability of type-shifting to predicative (type $\langle e, t \rangle$) interpretations. She argues that type lowering from the generalized quantifier (GQ) type $\langle \langle e, t \rangle, t \rangle$ to $\langle e, t \rangle$ is not allowed in the case of universals. The reason has to do with the workings of the relevant lowering operation BE:

(83) Type lowering (Partee 1987)
 $[[\text{BE} (\text{GQ})]] = \{x \mid \{x\} \quad [[\text{GQ}]]\}$

BE picks out all the singletons from a GQ and collects their elements in a set. When we apply BE to the GQ denoted by a singular indefinite like *a student*, the result is fine because the extension of *student* consists of singletons containing one student. But when we apply BE to the GQ denoted by *every NP* the result will be the empty set in case the extension of the NP consists of two or more individuals, since in this case the GQ contains no singletons.

Unlike with *every*, BE seems to work with FCIs, which can indeed be used in predicative positions. This indicates that the GQ denoted by a FCI contains singleton sets. Most interestingly, in such uses FCIs must be construed with the indefinite article *enas* ‘a/one’ (the *kathe opjodhipote* ‘every any’ string is unattested):

- (84) Dhen ine enas opjosdhipote daskalos. (Ine o kaliteros!)
not be.3sg a FC teacher is the best
 'He is not just any teacher. He is the best teacher!'
- (85) Dhen ime enas opjoshipote ego ja na mou ferese etsi! (Ime o aderfos su!)
not be.1sg a FC I for subj me treat.2sg so am the brother yours
 'I am not just anybody to be treated this way. I am your brother!'

Such predicative uses are also possible with *any*, as we see. Quer 1999 reports a similar observation about Spanish FCIs: they can be used predicatively, and can only be construed with the indefinite determiner (Quer 1999: (4)):

- (86) No está {una/*la/*toda/*cada} revista cualquiera.
not is a the all each magazine FC
 'This is not just any magazine.'

The predicate uses we are considering here are indiscriminative uses; as we saw in 2.2., such uses are observed with FCIs crosslinguistically (cf. the French data in (56)). Indiscriminative uses are not necessarily predicative, e.g. *Don't buy just any book, but a good one.*

If FCIs were universals, we wouldn't expect to find them as predicates; we also wouldn't expect to find them with the indefinite determiner. The behavior of FCIs regarding these facts makes it natural to pair them with indefinites rather than universals.

3.2.2 Donkey anaphora

Universal quantifiers are static and do not license donkey anaphora, but existentials are dynamic: they can bind variables outside their scope. The difference is illustrated below:

- (87) * I fitites pu aghorasan kathe vivlio₁, na mu to₁ diksun amesos.
the students that bought.3pl every book, subj me it show.3pl immediately
 (* The students that bought every book₁ should show it₁ to me immediately.)
- (88) I fitites pu aghorasan ena vivlio₁, na mu to₁ diksun amesos.
the students that bought.3pl a book, subj me it show.3pl immediately
 The students that bought a book₁ should show it₁ to me immediately.

FCIs, and similarly *any*, pattern with existentials rather than with universals; Quer 1999, 2000 presents similar examples from Spanish and Catalan which support this point (Quer 1999: (5)):

- (89) I fitites pu aghorasan opjodhipote vivlio₁, na mu to₁ diksun amesos.
the students that bought.3pl FC book, subj me it show.3pl immediately
 'The students that bought any book₁ should show it₁ to me immediately.'
- (90) Si llama cualquier cliente₂, le₂ diré que no estás. (Spanish)
if call.3sg FC client him tell fut.1sg that not be.2sg
 'If any client calls, I will tell him that you are not here.'

In the same spirit, Lee and Horn (1994) present data showing that *any* can be unselectively bound by an operator just like regular indefinites, and unlike universals:

- (91) a If a farmer₁ owns a donkey, he₁ beats it.
 b If any farmer₁ owns a donkey, he₁ beats it.
 c *If every farmer₁ owns a donkey, he₁ beats it.

If FCIs and *any* were universal quantifiers we would not expect them to exhibit these distinctive features of indefinites.¹¹

Note that the nonveridicality requirement is obeyed in the examples above, because the restrictions of plural definites (and *every* for that matter) are nonveridical (Giannakidou 1999:396-404). Hence it is not known in the context that students that bought any books exist: *The students that bought any book should show it to me immediately, but I doubt whether there will be any such students* is a non-contradictory sentence.

3.2.3 The possibility of taking inverse scope over the licensing operator

Universal quantifiers can generally scope over c-commanding quantifiers or other operators in the same clause, a possibility known as *inverse scope*. Sentence (92) has the two readings in

(93);

(93b) represents the inverse scope reading, where students vary with professors:

¹¹ A reviewer notes that when *any* is modified by *almost* or an exceptive phrase, donkey anaphora is blocked:

- (i) a ??If Sue can buy almost any book, she will buy it.
 b ??If Sue can buy any book except *War and Peace*, she will buy it.

Though I will not provide an explanation, note that this fact cannot necessarily be taken as an indication for universality; we see below that singular indefinites exhibit the same effect:

- (ii) ??If Sue can buy a book, but not *War and Peace*, she will buy it.

(92) Kapjos fititis tha paralavi kathe proskeklimeno omiliti apo to aerodromio.
some student fut receive.3sg every invited speaker from the airport
 Some student will pick up every invited speaker from the airport.

(93) a x [student(x) FUT y [invited-speaker(y) pick-up(x,y)]]
 b y [invited-speaker(y) FUT x [student(x) pick-up(x,y)]]

To derive the surface reading, I assume that the highest quantifier has been QRed to an IP-adjoined position at LF; the second quantifier is adjoined to VP, thus lower than the future tense operator, as in (94) (for recent arguments as to why we need VP as a possible adjunction site for polarity items see Merchant 2000). In the inverse scope reading, *kathe proskeklimeno omiliti* is QRed and adjoined to IP, and the subject *kapjos fititis* (95) is also adjoined to IP in a lower position. (The verb moves to I⁰ in both cases).

(94) surface scope
 [_{IP} kapjos fititis₁ [_{IP} tha paralavi [_{VP} kathe proskeklimeno omiliti₂ [_{VP} t₁ t_v t₂ ...]]]]
 (95) inverse scope
 [_{IP} kathe proskeklimeno omiliti₂ [_{IP} kapjos fititis₁ [_{IP} tha paralavi [_{VP} t₁ t_v t₂ ...]]]]

There are certain contexts where in fact only the inverse scope reading makes sense. One such case is illustrated with the sentence below:

(96) Ja tin pirosvestiki askisi stis 4 i ora,
for the fire exercise at 4 o'clock
 tha topothetisume enan paratiriti brosta se kathe eksodo.
fut put.1pl an observer in-front-of every exit
 'For the fire drill at 4 o'clock, we will station an observer in front of every exit.

(97) a # x [observer(x) FUT y [exit(y) station(we, x, y)]]
 b y [exit(y) FUT x [observer(x) station(we, x, y)]]

On the surface reading, there is one particular observer who will be stationed in front of every single exit, which is absurd given that one individual cannot be in more than one place at a time. On the inverse reading, the sentence says that a different observer will be put in each exit. This is the only reasonable reading, and indeed the only reading (96) has.

Consider now what happens if we replace the *every*-argument with a FC-argument.

- (98) Kapjos fititis tha paralavi opjondhipote proskeklimeno omiliti apo to aerodromio.
Some student will pick up any invited speaker from the airport.

Unlike (92), the sentence above does not have the wide scope universal reading in (93b). Rather, it has an interpretation in which some student picks up a invited speaker in all situations that we may consider. This reading is not necessarily the one in (93a), but it can be taken to correspond to (99) below, where the FCI is represented as an indefinite inside the scope of the future operator and bound by it. The future contributes a universal quantifier over possible worlds, and the FCI ends up being interpreted universally. *Kapjos* 'some student', on the other hand, is interpreted outside the scope of the future as referring to a particular student.¹²

- (99) x [**student** (x) \wedge w, y [**invited-speaker**(y, w) **pick-up**(x, y, w)]]

Consider now an example parallel to (96).

- (100) Ja tin pirosvestiki askisi stis 4 i ora,
for the fire exercise at 4 o'clock
tha topothetisume enan paratiriti brosta se opjadhipe eksodo.
fut put.1pl an observer in-front-of FC exit
'? For the fire drill at 4 o'clock, we will station an observer in front of any exit.

Again, a wide scope universal reading of the FCI and *any* is missing, and the FCI can be taken to have a bound reading. In this case, *enan paratiriti* 'an observer' is also bound by the future:

- (101) w, x, y [[x **student** (x, w) **invited-speaker**(y, w) **pick-up**(x, y, w)]]

The facts discussed here are compatible with an indefinite analysis of FCIs. They are also important because they directly threaten the wide-scope-universal analysis: if FCIs and *any* are universals that can scope over a modal like *can*, as was originally motivated, then why can't they raise above the future or other quantifiers in (98) and (100)? The impossibility of this scoping makes it plausible to argue that in fact FCIs do not scope over *can* in the original example (11) after all (see also Dayal 1998:458, footnote 29, for an observation that narrow scope readings are possible with *any*).

In the theory of polarity I am arguing for, FCIs are *expected* not to scope over the

¹² Note that indefinite NPs like *some* generally do not admit bound interpretations, e.g. they are unacceptable

nonveridical element that licenses them. It is thus correctly predicted that wide scope readings will not be possible if they force FCIs to cross the future and therefore end up outside the scope of their licenser.

3.3 Existential interpretations and quantificational variability of FCIs

As an additional piece of evidence against the universal analysis of FCIs, I review here a number of constructions where FCIs are interpreted existentially. I illustrate by presenting mostly Greek examples, but recall again that Spanish and Catalan FCIs behave identically. This quantificational variability of FCIs, also observed with Q-adverbs, can be explained only if we assume that FCIs are indefinites.

3.3.1 Imperatives, permissions, and modals:

Permissive imperatives are typical cases where FCIs are interpreted existentially:

- (102) a Dhialekse opjodhipote forema.
 ‘Pick any dress.’
 b # Dhialekse kathe forema.
 ‘Pick every dress.’
 c Dhialekse kapjo forema; dhen exi simasia pjo.
 ‘Pick some dress; it doesn’t matter which one.’
 d ! $w, x [\mathbf{dress} (x, w) \wedge \mathbf{pick} (you, x, w)]$

- (103) Spanish (Quer 1999: (3))
 Pon cualquier excusa.
 put.imper.2sg FC excuse
 Give any excuse. (= Give some excuse).

Sentence (102a) is clearly not synonymous to (102b). (102b) is compatible with a situation where you are asked to pick every dress in a given context, but (102a) is not compatible with such a situation. Instead, (102a) appears to be synonymous to (102c), inviting us to pick one dress in a given context-- although it certainly allows us to consider all choices. The same observation has been made in the literature about *any* (Horn 1999, 2000); FCIs conform to this pattern generally, as seen in the Spanish example. The imperatives here are permissive, and hence can be analyzed as involving an existential modal operator (see discussion in section 4.3); the examples would then have the reading in (102d). The fact that, unlike with the case of future just discussed, the FCI sentence here is interpreted existentially confirms the idea that the

with the generic operator: **Some cat hunts mice* is not possible with a generic interpretation.

quantificational force of the FCI is dependent on the force of the operator that binds it.¹³

Likewise, FCIs obtain existential readings when construed with permissive and epistemic modals with the meaning of ‘may’:

- (104) Boris na dhialeksis opjodhipote forema.
You may pick any dress.
You may pick every dress.
- (105) (Afisame to fos anameno, ke) Bori na bike mesa opjosdhipote.
(We left the light on, and) Anybody may have come in.
Everybody may have come in.

Here, again, the FCI-sentences contrast with universals and are interpreted existentially. This should be attributed to the fact that we have a permission modal, on a par with the permission imperative. In (105), we have an epistemic possibility modal, *may*, hence the resulting sentence again has existential force.

Deontic necessity modals also allow for FCIs; but because the modal operator is a universal quantifier, FCIs will receive universal interpretations:

- (106) a Any minors should be accompanied by their parents.
b w, x [**minor** (x,w) y [**parent-of** (y, x,w) \wedge **accompany** (y,x,w)]]

Likewise, epistemic necessity also induces universal readings, as we see in the following example from Dayal (1998:457):

- (107) a Any pilot must be out flying planes today.
b w, x [[**pilot** (x,w) \wedge **plane** (y, w)] **fly** (x,y,w)]

Commands or instructions also allow for FCIs though, admittedly, the relevant examples are harder to construct. Here is one example:

¹³ Universal readings are also allowed in imperatives:

(i) Take any textbook in semantics; you will find a mention of Montague in it.

Sentences like the above do not involve permissive imperatives, but can be argued to reflect an underlying conditional structure, where the imperative clause provides the antecedent. The universal reading is then the result of binding the FC-variable by the universal quantifier corresponding to the conditional operator. Hence the existence of universal readings in imperatives of this kind further confirms the observation that the quantificational force of the FCI and *any* is parasitic on that of the binding quantifier.

- (108) Context: I am playing a game with a child. I instruct her how to win the game:
Exo kripsi 10 avga se diafora meri. Ja na kerdhisis prepi na vris ena opjodhipote avgo--
dhen exi simasia pjo-- ke na to valis sto kalathi.
'?I have hidden 10 eggs in various places. Here is how you win: you must find any egg--
it doesn't really matter which one-- and put it in the basket.'

Opjodhipote and *any* are fine in the above situation. (Note that *opjodhipote avgo* is modified by the indefinite article). Crucially, what we did was relax the identity requirement and make the arbitrariness characteristic of free choice a part of the deontic statement itself. Once this is done, FCIs become licit. A similar example following the same strategy is given below (thanks to Gregory Ward for judgments and suggestions on constructing such examples):

- (109) The hotel manager to a candidate cleaning lady who has just asked him which room to clean in order to get the job:
'Dhen exi simasia, to mono pu thelo na dho ine an kseris na katharizis. Pijene tora, ke katharise opjodhipote dhomatio!'
'?It doesn't really matter, all I want to see is whether you know how to clean. Go now and clean any room (= some room, it doesn't matter which one)!'

Again, arbitrariness is part of the command and FCIs/*any* are fine; moreover, they are interpreted existentially.¹⁴ The examples presented here, then, contradict Dayal (1998) who argues that *any* is incompatible with commands. In the approach I take here, deontic modals and commands should in principle allow for FCIs since they are nonveridical, and the fact that we can find good examples like the ones above is expected.

The fact that it is difficult to find such examples has to do with the additional pragmatic conditions associated with commands, conditions which may not be entirely compatible with the semantic content of free choice. For instance, commands seem to depend on precision, hence quantity and identity may be important, but in FC statements these are precisely the ingredients that are *not* important. Likewise, in a potential deontic statement like **You must see any doctor*, it matters whether you must see one doctor or every one (of the contextually relevant ones), and indeed, it also matters what kind of doctor you see-- if you have a heart problem, for instance, a

¹⁴ Additionally, examples can be produced with *oposhipote* 'anyhow':

- (i) Prepi na ton dhi oposhipote enas jatros.
Literally: A doctor must see him anyhow.
(Meaning: One way or another, a doctor must see him).

This use of *oposhipote* actually seems to necessitate the presence of a deontic modal; a possibility modal is not

gynaecologist wouldn't be an appropriate choice. For a speaker following the Gricean principles of co-operative conversation, FCIs do not seem to provide the most appropriate means for occasions where identity may be important. In the case of commands and deontic modals, then, the occasional unacceptability of FCIs and *any* presents a genuine case of infelicity, since the appropriate context can render these felicitous.

3.3.2 Conditionals

In conditionals both universal and existential readings arise and can be clearly distinguished. Horn 1999, 2000 provides extensive discussion which I will not repeat here. I merely illustrate that Horn's facts hold for Greek FCIs as well:

- (110) a An kimithis me opjondipote, tha se skotoso.
 If you sleep with anybody, I'll kill you.
 b An exi lisi opjodhipote provlima, tote tha exi lisi ki afto.
 If he has solved any problem, then he has probably also solved this one.

See also Quer 1998, 1999 for the relevant data in in Spanish and Catalan.

3.3.3 Relative clauses

FC-readings of *any* in relative clause construals ('subtriggering' in LeGrand 1975) are claimed to always be universal. For subtriggering, Greek employs a free relative (FR), as *opjosdhipote*-items contain a *wh*-component:

- (111) I' ll talk to any student I want to {= to whichever student I want to}.
 Tha miliso me opjondipote fititi thelo ego!

Essentially, the Greek FC construction corresponds to the *wh-ever* paradigm in English, discussed in this context in Horn 1999, 2000. Horn (1999: 26-31) shows that existential readings are possible with *wh-ever*. I reconstruct his examples here for Greek, where it is also obvious that the FCI cannot be interpreted as a universal quantifier:

- (112) a Tha pandrefto opjondhipote thelo ego!
 'I'll marry whoever I want to!
 b # I'll marry every person I want to.
 c I'll marry the person I want to.

so good: #*bori na ton dhi oposhipote enas jatros*. 'A doctor may see him anyhow.'

The fact that *wh-ever* FRs allow for existential readings is also observed in Jacobson 1995. We revisit subtriggering in section 5.

3.3.4 Quantificational variability with Q-adverbs

FCIs exemplify quantificational variability characteristic of indefinites when construed with Q-adverbs (see Quer 1998 and 1999: (41)-(43) for illustrating this point in Catalan and Spanish). The Q-adverb may be of varying Q-force and the FCI is interpreted accordingly, as the following examples demonstrate. Q-adverbs are taken to quantify over situations in tripartite structures of the form below, following Krifka et al. 1995:

- (113) a Sinithos dhiavaze i Ariadne opjodhipote vivlio me megali prosoxi.
usually read.3sg the Ariadne FC book with great attention
 ‘Ariadne usually read any book very carefully.’
 b USUALLY_{s,x} [**book** (x,s) **read** (Ariadne, x,s); **read-very-carefully** (Ariadne,x,s)]
- (114) a Spania dhiavaze i Ariadne opjodhipote vivlio me megali prosoxi.
rarely read.3sg the Ariadne FC book with great attention
 ‘Rarely did Ariadne read any book very carefully.’
 b RARELY_{s,x} [**book** (x,s) **read** (Ariadne, x,s); **read-very-carefully** (Ariadne,x,s)]
- (115) a I Ariadne dhiavaze panda opjodhipote vivlio me megali prosoxi.
the Ariadne read.3sg always FC book with great attention
 ‘Ariadne always read any book very carefully.’
 b _{s,x} [**book** (x,s) **read** (Ariadne, x,s); **reads-very-carefully** (Ariadne,x,s)]

In (113) *opjodhipote vivlio* is bound by *usually* and is interpreted as *most books*, in (114) it is bound by *rarely* and is interpreted as *few books*, and (115) expresses a generalization about all the books Ariadne read.

Note that generic FCIs in subject position can also be construed with Q-adverbs, just like regular indefinites:

- (116) Opjodhipote pagoni ine sinithos megaloprepes; sigekrimena otan aploni tin oura tu.
 Any peacock is usually magnificent; specifically, when it spreads its tail.

- (117) Ena pagoni ine sinithos megaloprepes; sigekrimena otan aploni tin oura tu.
A peacock is usually magnificent; specifically, when it spreads its tail.

Dayal (1998: 438) claims that *any*, unlike regular existentials cannot be construed with Q-adverbs in generic contexts, but the examples above show that this is not true of FCIs, or of *any*, for that matter. (The bad examples in Dayal do not contain restrictions for the Q-adverbs, and this apparently plays a role.). To be fair, the interpretation of FCIs and *any* in generic contexts of this type differs from that of regular indefinites in one particular respect: an example like (116) seems to convey a generalization about *all* peacocks, whereas the sentence with a regular indefinite seems to be about *most* peacocks. This difference is another manifestation of the plurality associated with FCIs, and we will see in 4.4. that it follows from the fact that FCIs, but not regular indefinites, force us to exhaust all possible values in epistemic alternatives.

The facts presented in this section are not compatible with the idea that FCIs or *any* are universal quantifiers. Instead, they follow naturally if we take it that FCIs are indefinites. This conclusion carries over to *any*.

4 The semantics of free choice

We have reached the conclusion that FCIs are indefinites; the question now is: how do FC indefinites differ from “regular” indefinites?

4.1 The inherent plurality of FCIs: intensionality and variation

Consider the ungrammatical occurrence of a FCI in an affirmative episodic sentence and contrast it with a grammatical sentence containing a singular indefinite. I assume here following Heim (1982) that in this case, the variable contributed by the indefinite undergoes text level existential closure, and is thus bound by a default existential quantifier:

- (118) * Opjosdhipote fititis efije.
FC student left.3sg
‘*Any student left.’
- (119) Enas fititis efije.
a student left
‘A student left.’

- (120) a [[a student]] = **student**(x)
b x [**student**(x) **left**(x)]

The truth of (119) is evaluated in the standard way, i.e. it is true iff there is at least one individual $d \in D$ such that d is the value of x under g , and d is a student and d left. The ungrammaticality of *opjosdhipote* suggests that *opjosdhipote* cannot be interpreted according to this standard procedure. It is in this sense that a FC indefinite is ‘sensitive’.

A FCI is inherently intensional; its intensionality is marked by the presence of FC morphology: *-dhipote*. We can capture this inherent intensionality by postulating that the FC determiner must combine with an intensional noun phrase (NP) and not an extensional one. This means that in the standard case the FC determiner must be treated as a type-shifter of type $\langle\langle e,t \rangle, \langle s, \langle e,t \rangle \rangle\rangle$, which, when applied to a property such as the NP denotation, returns an intensionalized property as its output.

$$(121) \quad [[\text{DET}_{\text{FC}}]] = P_{\langle e,t \rangle} \cdot \lambda w. \lambda x[P(x)(w)]$$

This way the NP argument is intensionalized, and the FC-phrase, after λ -conversion, ends up denoting an intensional indefinite which contributes a predicate with two variables instead of one: one is the regular individual variable that indefinites come with, and the other is a world variable.

$$(122) \quad [[\textit{opjosdhipote fititis}]] = \mathbf{student}(x)(w)$$

I use a world variable here, ignoring the differences between worlds and situations (though there may be reasons that make it preferable to appeal to situations, see footnote 17). I will continue talking about worlds as a cover term here with this proviso.

In the event that the NP which the FC determiner combines with is already intensionalized no type-shifting is necessary. This is the case, for instance, with an NP containing an intensional adjective meaning ‘alleged’: *opjosdhipote ipotithemenos sinergatis ton Germanon* ‘any alleged collaborator with the Germans’. In this case the FC determiner does not alter the type of the NP, since the NP is already intensional. Rather, the FC determiner functions as a filter passing on the intensional reading to the whole FC-phrase. The type-shifting possibility we are talking about here, and its optional application, should be understood as part of the family of type-shifting mechanisms explored in Partee 1987 and related works for the more familiar class of singular indefinites, bare singulars, and bare plurals.

The difference between “regular” existential indefinites and FC indefinites is thus reduced to a type difference. Crucially, the world and individual variables of an intensional indefinite must be bound by an operator that has the ability to bind such variables (a Q-operator, i.e. a generic, habitual, modal, intensional operator). It is then expected that the text-level

existential quantifier cannot bind the individual variable of such an indefinite since it is not a Q-operator. For the same reason, the world variable of a FCI cannot be bound by a default existential quantifier over worlds (which would have to assign to the FCI the value of w_0 , the actual world). FCIs can be interpreted only if there is some Q-operator in the sentence that can bind their world variable. In affirmative episodic sentence a FCI is ungrammatical because no such operator is present, so the world variable of the FCI remains unbound rendering the FCI uninterpretable and thus ungrammatical.¹⁵

Apart from intensionality, another important lexical semantic feature of FCIs is variation. The FCI variable must be assigned distinct values in each world or situation we consider. We can formulate this using the notion of an i(dentity)-alternative, following Dayal 1997 (see also Giannakidou 1997b):

(123) *i-alternatives*

A world w_1 is an i-alternative wrt α iff there exists some w_2 such that $[[\]]^{w_1} \neq [[\]]^{w_2}$

Two i-alternatives are worlds w_1 and w_2 agreeing on everything but the value assigned to the FCI α . I-alternatives are epistemic alternatives in an obvious way, and naturally, the worlds that the nonveridical Q operator quantifies over will serve as i-alternatives. In some cases, i-alternatives may include the totality of the worlds in some individual's epistemic model $M_E(x)$ (w)-- recall that this model corresponds to the doxastic function $f(x)(w) = \{w' : p[s \text{ believes } p(w) \rightarrow p(w')]\}$, which contains the set of worlds compatible with what x believes in w . This option explains the readings we get with generic FCIs that we observed in 3.3.4.

(123) gives the criterion for what counts as a valid alternative for FCIs: only worlds with differing values for the FCI count as i-alternatives. This is an important difference between FCI variables and regular variables: though the values assigned to the latter *may* vary from world to world (but there may be worlds where the value is the same), the values assigned to the former *must* vary in each world. To illustrate:

- (124) a {A/Some} student may be in danger.
 b Opjosdhipote fititis bori na vriskete se kindhino.
 Any student may be in danger.

(125) $[[\text{POSSIBLY } x]]^{w,g} = 1$ iff there is at least one world w' accessible from w (wRw'), such that there is an individual $d \in D$ in w' such that $[[\]]^{w',g[d/x]} = 1$.

¹⁵ Regarding this idea of a world variable that must be bound, it may be instructive to observe the parallel with bound variables in the pronominal system, i.e. reflexives, and traces under some conceptions.

(I return to on the contribution of the modals in section 4.2; for now I just want to consider the difference between regular indefinites and FCIs.) In interpreting an existential modal statement like (124a), we consider a set of worlds accessible from w and check whether the existential statement holds in at least one of these worlds under some value d assigned to x by our assignment function g . In a model containing three worlds $W = \{w_1, w_2, w_3\}$ and three individuals $D = \{\text{Roxanne, Ariadne, Frank}\}$ the statement with *a student* can be true in the following state of affairs:

- (126) a. w_1 : $g(x) = \text{Roxanne}$
 $[[\text{student}(x) \text{ solve}(x, \text{this problem})]]^{w_1, g} = 1$
 b. w_2 : $g(x) = \text{Roxanne}$
 $[[\text{student}(x) \text{ solve}(x, \text{this problem})]]^{w_2, g} = 0$
 c. w_3 : $g(x) = \text{Ariadne}$
 $[[\text{student}(x) \text{ solve}(x, \text{this problem})]]^{w_3, g} = 0$

The assignment function may pick the same individual in more than one world, as in the case of w_1 and w_2 . And there is no requirement that the available values be exhausted: we see that although D contains a third individual, Frank, this individual is not assigned to x in any world. A statement with a FCI such as (124b) cannot be evaluated in this situation-- with FCIs, g must assign a different individual to x in each world, and the available values must be exhausted.

The requirement on exhaustive variation can be treated as a presupposition, and it explains the quasi-universal readings: as we move from one i -alternative to the other, and as we consider all alternatives, we exhaust the possible values for the FCI.¹⁶ This is encoded in the definition below:

(127) *Free choice item*

Let W_i be a non-empty set of possible worlds. A sentence with a free choice item $[[\text{OP} \text{DET}_{\text{FC}} (\text{P}, \text{Q})]]$ is true in w_0 with respect to W_i iff:

(where OP is a nonveridical operator; P is the descriptive content of the FC-phrase; Q is the nucleus of the tripartite structure; w_0 is the actual world):

- a. Presupposition: $w_1, w_2 \in W_i$: $[[\text{P}]]^{w_1} \wedge [[\text{Q}]]^{w_2}$, where P is the free choice phrase.

¹⁶ Note that this differs from von Stechow 2000's analysis of ignorance *whatever*, which posits *the existence* of i -alternatives as a presupposition. In my definition of FCIs, the existence of possible worlds for the evaluation of the FCI is a semantic requirement that FCIs be interpreted on an intensional type. Exhaustive variation further restricts the kinds of worlds that count as appropriate for the evaluation.

b.Assertion: $[[\text{OP}_{w,x} [P(x,w); Q(x,w)]]] = 1$ where x,w are the variables contributed by .

We may additionally incorporate a scalarity requirement: that we consider all relevant i -alternatives, no matter how remote they may be from what counts as “normal” (cf. Kadmon and Landman’s *widening*). Strictly speaking, the operator binds either a situation variable s (e.g. the habitual operator, Q -adverb, etc), or a world variable w (e.g. the conditional operator, modal and intensional operators), but we ignore the difference here.

It should be clear in this analysis what the difference is between universal quantifiers and FCIs. A universal quantifier like *every* exhausts the values that can be assigned to its variable in one world. With a FC quantifier, however, the quasi-universal effect is delivered because we are forced to consider a value in each i -alternatives, and not because we consider all values in a single alternative. In the assertive component, the FC is bound by the relevant operator and obtains the quantificational force contributed by that operator.

Let us see now how the proposal works in the core cases we have identified.

4.2 The ambiguity of CAN and the interpretation of FCIs

Recall our original example where *any* and FCIs seem to be interpreted as universals. Next to this, consider the other example with *can* discussed in section 1, where the quasi-universal reading was not available:

(128) Opjosdhipote fititis bori na lisi afto to provlima. (ability *can*)
FC-person student can.3sg subj solve.3sg this the problem
 ‘Any student can solve this problem.’

(129) I epitropi bori na dosi ti thesi se opjondhipote ipopsifio. (possibility *can*)
 The committee can offer this job to any candidate.
 The committee can offer this job to every candidate.

Modal verbs are quantifiers over possible worlds, hence in modal statements alternatives can be invoked, and the FCI can be interpreted. The modal alternatives include the modal base which is a function K specifying the worlds the modal quantifies over (Kratzer 1981, Krifka et al. 1995), and it is these worlds that serve as i -alternatives. But how do the two different interpretations of the FCI come about?

The quantificational variability of the FCI reflects the quantificational ambiguity of the modal *can*. Ability *can*, I will argue, is a universal quantifier, but epistemic and permissive *can* is an existential quantifier, just like *may*. I understand that this may seem an unusual move at first glance,

but I believe it is justified (see also Chierchia and McConnell-Ginet 1992: 238, for an explicit claim that the analysis of *can* as a possibility modal is “certainly not right”; cf. Geurts 1999 for a different view). I give below a first attempt to define the ability *can*, following the definition of necessity modals of Krifka et al. (1995:51); note that at this first approximation the modal base *K* includes all possible worlds accessible from *w*.

(130) *Ability CAN* (first approximation)

can p is true in a world *w* with respect to a modal base *K* and an ordering source \leq_w ("be at least as normal as") iff:

For all worlds *w'* in *K*, there is a world *w''* in *K* such that $w'' \leq_w w'$, and for every other world $w''' \leq_w w''$ in *K*, *p* is true in w''' .

Under this definition, we expect that in every possible world we consider, *p* will be true in this possible world. Hence, for an example like *John can swim*, for each world *w* we consider, John will have the ability to swim in that world. Though this definition seems to work fine in worlds where John knows indeed how to swim (and he knows that he knows that), due to training or natural talent, in worlds where John didn't learn how to swim, or hasn't discovered his natural talent yet, *p* is clearly not true. Note that the sentence (128) mirrors this objection: students that didn't have the proper math training or haven't discovered their math talent cannot actually solve this (math) problem, even if the problem is a very easy one.

The problem here is that our modal base is unconstrained: it includes all possible worlds. What we need to do is *restrict* it so that it includes only those worlds in which people have abilities to do things (because of proper training, natural talents, or whatever other reason), and where people are aware of these abilities. Let us call these worlds the *ability*-modal base, and let's think of it as a function from *w* to worlds *w'*, at least as normal as *w*, compatible with what an agent *x* is capable of doing at *w* (cf. the parallel to the epistemic models):

(131) $K_{\text{ability}}(x)(w) = \{w' : p [x \text{ is capable of } p(w) \quad p(w')]\}$

Restricting modal bases this way is not unheard of: Kratzer 1981 postulates epistemic and deontic modal bases in order to specify the worlds epistemic and deontic modals quantify over, and to derive the lexical differences between the two. It may be possible that we do not need a distinct modal base for abilities, and that the ability modal base I posit here can be reduced to an epistemic modal base, but deciding this is not crucial for the purposes of the present discussion; what counts is that the ability modal can be analyzed as a universal quantifier. I reformulate (130) in terms of the restricted ability modal base:

(132) *Ability CAN*

can p is true in a world w with respect to an ability modal base $K_{\text{ability}}(x)(w)$ and an ordering source $<_w$ ("be at least as normal as") iff:

For all worlds w' in K_{ability} , there is a world w'' in K_{ability} such that $w'' <_w w'$, and for every other world $w''' <_w w''$ in K_{ability} , p is true in w''' .

Once we restrict the worlds ability *can* quantifies over to worlds where agents have abilities, for the interpretation of FCIs, we must additionally allow extension of this base to include alternatives corresponding to less "normal" cases, i.e., even less usual talents and abilities. We need this extension to get the widening scalarity effect (see also Quer 1998).

Going back to our examples, the assertion of (128) is given below, with the universal quantifier corresponding to *can* binding the FCI. The sentence is being interpreted according to the steps we see in (134):

(133) w, x $[[w \ K_{\text{ability}} \ \mathbf{student}(x, w)] \ \mathbf{solve}(x, \text{this problem}, w)]$

(134) i. $[[\text{Any student can solve this problem}]]$ $^{w_0, g, K_{\text{ability}}} = 1$ iff $w' \ K_{\text{ability}}(x)(w)$,

$[[\text{A student solve this problem}]]$ $^{w', g} = 1$.

ii. $[[\text{A student solves this problem}]]$ $^{w', g} = 1$ iff there is at least one individual $d \in D$ such that

$[[\mathbf{student}(x) \ \mathbf{solve}(x, \text{this problem})]]$ $^{w', g[d/x]} = 1$.

iii. Values in i-alternatives

a. i-alt1: $g(x) = \text{Roxanne}$

$[[\mathbf{student}(x) \ \mathbf{solve}(x, \text{this problem})]]$ $^{w_1, g} = 1$

b. i-alt2: $g(x) = \text{Frank}$

$[[\mathbf{student}(x) \ \mathbf{solve}(x, \text{this problem})]]$ $^{w_2, g} = 1$

c. i-alt3: $g(x) = \text{Ariadne}$

$[[\mathbf{student}(x) \ \mathbf{solve}(x, \text{this problem})]]$ $^{w_3, g} = 1$

In the calculation of i-alternatives, the value of the FCI varies from world to world. As we move from one world to the other, the requirement is that the value assigned to *opjodhipote fititis* 'any student' will verify $\mathbf{student}(x) \ \mathbf{solve}(x, \text{this problem})$ in each world. Since we pick up distinct students in each world, and since we consider all worlds included in the extended modal base, the sentence gives the exhaustive interpretation. It should be clear that this interpretation is

the result of exhausting all i-alternatives and of assigning distinct values to the FCIs in each alternative. Additionally, because we treated the modal *can* as a universal quantifier over worlds, the FCI in (128) is interpreted universally too.¹⁷

Epistemic and permissive *can*, on the other hand, are interpreted as existential possibility modals, and license an existential reading for the FCI. I give here the definition of *can* as synonymous to *may* based on Krifka et al. 1995:51; I abstract away from the differences between *may* and *might* (but we may conjecture that, with *might*, the worlds included in the epistemic modal base must be restricted to those worlds which are further away from the ones that count as “normal”):

(135) *Possibility CAN (= may)*

can p is true in a world w with respect to an {epistemic/permissive} modal base K and an ordering source $<_w$ ("be at least as normal as") iff it is not the case that **must not-p** is true in w with respect to $K_w <_w$.

The relevant modal base is referred to as {epistemic/permissive} here, and for the analysis of permission see Kamp (1978). For our purposes, just the fact that we are dealing with an existential quantifier in these cases suffices. The interpretation of (129), proceeds as follows:

(136) w, x [[w K_{ability} **candidate** (x, w)] **offer-the-job** (the committee, x, w)]

(137) i. [[The committee can offer the job to any candidate]] ^{w^0, g, K} = 1 iff $w' \in K$, where K is the extended epistemic or permissive modal base,

[[The committee offers the job to a candidate]] ^{w', g} = 1.

ii. [[The committee offers the job to a candidate]] ^{w', g} = 1 iff there is at least one individual $d \in D$ such that [[**candidate** (x) **offer-the-job** (the committee, x)]] ^{$w', g[d/x]$} = 1.

(138) Values in i-alternatives

a. i-alt₁: $g(x) = \text{Ariadne}$

[[**candidate** (x) **offer-the-job** (the committee x)]] ^{w^1, g} = 0

b. i-alt₂: $g(x) = \text{Roxanne}$

[[**candidate** (x) **offer-the-job** (the committee, x)]] ^{w^2, g} = 0

¹⁷ Sandro Zucchi indicates a complication here, which points to the direction that we may want to reformulate i-alternatives as situations rather than worlds. The problem is the following. Imagine a world where there are, say, 30 students, and one of them solves this problem, and the other 29 do not. The FCI statement should be true despite the fact that 29 students do not solve the problem. But this is clearly a result that we want to exclude. If i-alternatives are chunks of worlds, i.e. situations, rather than worlds, then the problem disappears as we will not have to consider what happens in the rest of the world containing the 29 students who do not solve the problem. Alternatively, the problem is rectified by quantifying over pairs of worlds and individuals, rather than just

c. $i\text{-alt}_3: g(x) = \text{Frank}$

$$[[\text{candidate } (x) \quad \text{offer-the-job } (\text{the committee}, x)]]^{w^3, g} = 1$$

Again we see in the calculation of i -alternatives that the value of the FCI varies from world to world, and again the condition is to consider all alternatives. If the relevant alternatives are the ones we see in c , then the job will go to either Ariadne, Roxanne, or Frank. This is consistent with the idea (Kamp 1978) that permissions involve underlying disjunctions of propositions containing individual terms (or existential quantifiers).

The FCI with the permissive *can* below is interpreted in a parallel manner (note that Greek doesn't have a lexical difference between *may* and *can*, and the same verb *boro* is used in all cases, as well as for ability). Sentences like the one below say something like: "consider the books that *any book* can be assigned as its value in each relevant i -alternative; you are free to borrow one of those books".

(139) Boris na danistis opjodhipote vivlio.

may.2sg subj borrow.2sg FC book

'You may borrow any book.'

(140) ! w, x [[w K **book** (x, w)] **borrow** (you, x, w)]

(141) i. [[You may borrow any book]] $^{w^0, g, K} = 1$ iff $w' \in K$, where K is the extended permissive modal base, [[You borrow a book]] $^{w', g} = 1$.

ii. [[You borrow a book]] $^{w'} = 1$ iff there is at least one individual $d \in D$ such that

$$[[\text{book}(x) \quad \text{borrow} (\text{you}, x)]]^{w', g[d/x]} = 1.$$

iii. Values in i -alternatives

a. $i\text{-alt}_1: g(x) = \text{War and Peace}$

$$[[\text{book}(x) \quad \text{borrow} (\text{you}, x)]]^{w^1, g} = 0$$

b. $i\text{-alt}_2: g(x) = \text{the Iliad}$

$$[[\text{book}(x) \quad \text{borrow} (\text{you}, x)]]^{w^2, g} = 0$$

c. $i\text{-alt}_3: g(x) = \text{Oedipus Rex}$

$$[[\text{book}(x) \quad \text{borrow} (\text{you}, x)]]^{w^3, g} = 1$$

Again we see in the calculation of i -alternatives that the value of the FCI varies from world to world, and again the condition is to consider all alternatives. Yet the sentence is a permission to borrow one book and not all, and a situation like the above, where only *Oedipus Rex* is borrowed in $i\text{-alt}_3$ describes correctly the conditions under which a permissive with a FCI can be

worlds, which is essentially what we do.

used appropriately.

A similar analysis can be invoked for the interpretation of FCIs in imperatives:

- (142) Dialekse opjodhipote filo; opjo thelis.
pick.imp.2sg FC card; whichever want.2sg
'Pick any card; whichever you want.'
- (143) IMP w, x [[w $K_{\text{permissive}}$ **card** (x, w)] **pick** (you, x, w)]
- (144) a. $i\text{-alt}_1$: $g(x) = \text{ace of spades}$
IMP [**pick** ($\text{you}, \text{ace of spades}$)]
b. $i\text{-alt}_2$: $g(x) = \text{queen of hearts}$
IMP [**pick** ($\text{you}, \text{queen of hearts}$)]
c. $i\text{-alt}_3$: $g(x) = \text{king of diamonds}$
IMP [**pick** ($\text{you}, \text{king of diamonds}$)]

Dialekse opjodhipote filo "Pick any card" is an invitation to take some card, be it the ace of spades, the queen of hearts, or the king of diamonds, etc. but not all of them. The quantificational force of a permissive imperative can thus be understood as equivalent to that of permissive modals.

4.3 Episodicity

How does intensionality and exhaustive variation rule out FCIs from affirmative episodic, negative and interrogative sentences? The common feature of these sentences is that they involve a single event in an extensional context:

- (145) *Idha opjondipote ston kipo.
not saw.1sg anybody in-the garden
- (146) *Dhen idha opjondipote ston kipo.
not saw.1sg anybody in-the garden
- (147) *Idhes opjondhipote ston kipo?
saw.2sg anybody in-the garden?
- (148) $!e$ x [**person** (x) **saw** (I, x, e) **in-the-garden** (e)] [affirmative episodic]
- (149) \neg $!e$ x [**person** (x) **saw** (I, x, e) **in-the-garden** (e)] [negation]
- (150) ? $!e$ x [**person** (x) **saw** (you, x, e) **in-the-garden** (e)] [interrogative]

This means that the second clause of our licensing condition (60) is not obeyed. Recall:

(151) *Licensing condition on FCIs*

A FCI is grammatical in a sentence S iff:

- (i) is in the scope of a nonveridical operator ; and
- (ii) S is not episodic.

But now that we have established intensionality and variation as the lexical semantic ingredients of FC, we can predict directly that episodic past will always block the possibility of invoking i-alternatives: since we are dealing with one event, the identity of the participants is fixed and cannot vary. And, of course, episodic sentences of this type are extensional and thus provide no worlds that can serve as i-alternatives-- unlike intensional episodic sentences which do so. So we can actually dispense with both conditions above because we made them derivable from the intensional and variational semantics of FCIs.

For the sake of completeness, let us consider two more cases. As expected under the present analysis, FCIs are fine with individual-level predicates (where *e* is assumed to be bound inherently by GEN as in Chierchia 1995, or absent altogether as in Kratzer 1995):

- (152) I Ariadne gnorizi opjondipote sto tmima.
the Ariadne knows FC-person in-the department
Ariadne knows anybody in the department.

(153) $[[\text{know}]] = x_1 x_2 \text{GENs} (\text{in } (x_1, x_2, s)) [\text{know}(x_1, x_2, s)]$ (Chierchia 1995)

If i-level predication allows us to invoke alternatives, like the ones below, then sentence (152) tells us that Ariadne stands in the inherently pluralized generic relation **know** to individuals that can be assigned as values to the FCI in each of the relevant situations we consider.

- (154) a. i-alt₁: g(x)= Roxanne
 $[[\text{person}(x) \text{ know}(\text{Ariadne}, x)]]$ ^{w¹,g} = 1
b. i-alt₂: g(x)= Ariadne
 $[[\text{person}(x) \text{ know}(\text{Ariadne}, x)]]$ ^{w²,g} = 1
c. i-alt₃:g(x)= Frank
 $[[\text{person}(x) \text{ know}(\text{Ariadne}, x)]]$ ^{w³,g} = 1

Finally, let us consider the ungrammaticality of FCIs in the scope of veridical attitudes, i.e. epistemic, dream, and factive attitudes. Since propositional attitudes do provide worlds that could serve as i-alternatives, how come epistemic attitudes are incompatible with FCIs? The

answer to this question lies in the fact that in these cases, although we do have intensionality, the variation requirement is not satisfied. Consider the case of a factive first:

- (155) * I Ariadne metaniose pu idhe opjondipote filo tis.
 ‘Ariadne regrets that she saw any friend of hers.’

The factive complement is veridical episodic. This means that the FCI will be forced to receive the same value in all relevant i-alternatives, and as a result, it will be ruled out. (There are two possible sets of alternatives here, the speaker’s or Ariadne’s epistemic model, but I consider here only the former):

- (156) [[I Ariadne metaniose pu idhe opjondipote filo tis]]^{ME(s)} = 1
 !e x [**friend** (x) **saw** (Ariadne, x, e)], thus
 w, w' M_E(s), [[opjondipote filo tis]]^w = [[opjondipote filo tis]]^{w'}

Exactly the same thing can be said for sentences under epistemic, dream/fiction verbs, and the rest of the directive intensional class (with adjustments regarding the model of evaluation, see Giannakidou 1999). I illustrate here the epistemic and dream/fiction case; the relevant alternatives are the worlds corresponding to Ariadne’s epistemic model:

- (157) a * I Ariadne pistepse oti idhe opjondipote filo tis.
 ‘*Ariadne believed that she saw any friend of hers.’
 b [[I Ariadne pistepse oti idhe opjondipote filo tis]]^{ME(Ariadne)} = 1
 !e x [**friend** (x) **saw** (Ariadne, x, e)], thus
 w, w' M_E(Ariadne), [[opjondipote filo tis]]^w = [[opjondipote filo tis]]^{w'}
- (158) a * I Ariadne onireftike oti idhe opjondipote filo tis.
 ‘* Ariadne dreamt that she saw any friend of hers.’
 b [[I Ariadne onireftike oti idhe opjondipote filo tis]]^{ME(Ariadne)} = 1
 !e x [**friend** (x) **saw** (Ariadne, x, e)], thus
 w, w' M_E(Ariadne), [[opjondipote filo tis]]^w = [[opjondipote filo tis]]^{w'}

Recall that Greek FCIs are not unique in ruling out FCIs in the scope of veridical attitudes; Spanish and Catalan FCIs behave on a par, as we saw in 2.2, and likewise *any*.

4.4 Generic FCIs and Q-adverbs

Recall now the examples in 3.3.4 which illustrated that FCIs are interpreted in a different way

from regular indefinites when occurring as generic subjects. I provide here two new examples.

(159) Opjodhipote fititis tu Yale meleta sinithos Shakespeare to proto etos.

Any Yalie usually studies Shakespeare in the first year.

(160) Enas fititis tu Yale meleta sinithos Shakespeare to proto etos.

A Yalie usually studies Shakespeare in the first year.

We said that the interpretation of FCIs and *any* in generic contexts of this type differs from that of regular indefinites in that the FCI statement seems to convey a generalization about *all* Yalies. The generic sentence with a regular indefinite does not seem to have this reading.

In our terms, the 'consider all' reading arises because FCIs carry the presupposition that we consider all alternatives. Singular indefinites simply do not carry this presupposition. I illustrate here the interpretation of the FCI sentence; the meaning of the sentence with the regular indefinite is only the component in b, hence *a Yalie* is interpreted as *most Yalies*.

(161) [[(159)]] is true in w_0 iff:

a. w_1, w_2 M_E (speaker): [[**Yalie** (x)]]^{w₁} [[**Yalie** (x)]]^{w₂} (presupposition)

b. USUALLY_{s,x} [**Yalie** (x, s) **be-first-year** (x, s); **study** (x, Skakespeare, s)]
(assertion)

Crucially, i-alternatives are drawn from the speaker's epistemic model, which includes of course the worlds the Q-operator ranges over, while the *any*/FCI variable is bound by the Q-operator. This allows us to consider all values for *any Yalie* but actually assert a generalization about most of Yalies.

Both sentences differ from the one below, with the universal quantifier, which just picks the extension of Yalies in the actual world:

(162) a Every Yalie usually studies Shakespeare in his first year.

b [[(162a)]] is true in w_0 iff:

x [[**Yalie** (x, w_0) **be-first-year** (x)] USUALLY_s [**study** (x, Shakespeare, s)]

A similar contrast presented in Dayal (1998: (9c,d)) as an argument in favor of a universal analysis of *any*, has the same explanation:

(163) a Opjodhipote filosofos kani lathos kamia fora.

Any philosopher is sometimes wrong.

- b Kathe filosofos kani lathos kamia fora.
 Every philosopher is sometimes wrong.

The universal statement has the logical structure we see in (164) and can be interpreted as true or false in the actual world w_0 . But the statement with the FC is evaluated against the presupposition and the assertion in (165), and in order for it to be true or false, we have to consider all *i*-alternatives. The two are clearly not equivalent.

(164) [[(163b)]] is true in w_0 iff:

x [**philosopher** (x, w_0)] s [**be-wrong** (x, s)]

(165) [[(163a)]] is true in w_0 iff:

a. w_1, w_2 $M_E(\text{speaker}):$ [[**philosopher** (x)]] ^{w_1} [[**philosopher** (x)]] ^{w_2}

(presupposition)

s, x [**philosopher** (x, s)] **be-wrong** (x, s) (assertion)

Hence, just like in the previous example, the quasi-universal effect is a by-product of the fact that *i*-alternatives include not only the situations contributed by the existential operator binding the FCI, but the totality of the epistemic alternatives of the speaker.

To sum up, I proposed in this section a semantics for FCIs which straightforwardly derives the universal-like readings and the limited distribution of FCIs in nonveridical and nonepisodic contexts from their lexical semantic properties of intensionality and exhaustive variation. Most importantly, this semantics makes it unnecessary to postulate additional licensing conditions. The incompatibility with extensional veridical episodic contexts was shown to arise simply as a clash between the lexical semantics of FCIs and the context of occurrence resulting in uninterpretability. No recourse to universal quantification was necessary; in fact we saw that appealing to universality would give us the wrong results in many cases. In the next section, I consider the issue of subtrigging and show that there is no need to appeal to universality for this case either. Finally, we consider the consequences of this analysis for *any*.

5 Revisiting *any*

We are now in a position to return to one of the questions we set out to answer at the beginning: if we can show that FCIs are not universal quantifiers but indefinites, what implications does this have for the analysis of *any*?

Dayal (1998) presents a recent revival of the two *anys* view. She assumes that there are two *anys*, a FC one and a polarity sensitive (PS) one. The latter is an existential licensed in

downward entailing contexts, an assumption known to be problematic (Giannakidou 1997, 1998, 1999, Zwarts 1995; see also discussion in Ladusaw 1996)-- though, since "PS" any will not be a concern here, I will not review the arguments against it. FC-*any* is an intensional universal quantifier whose distribution is additionally regulated by *contextual vagueness*. (Note that the adopted opposition "PS" vs. FC is misleading: under the more fine-grained approach to polarity phenomena I am pursuing, FC *is* an instance of polarity.).

Since I have been at pains to show that there is no evidence that FCIs are universals, the view of FC-*any* as a universal can no longer be maintained, unless there is strong independent evidence supporting it. The relevant literature, however, presents no such evidence-- we saw that the most popular arguments for universality, namely *almost/absolutely* modification and exceptive phrases, are unreliable and have alternative explanations compatible with the idea that FCIs are indefinites. Dayal (1998) suggests that *subtriggering* can indeed be taken as evidence that *any is* a universal. I consider this issue here and argue, following Quer 1998, 2000, that what we see as universality is in fact the result of an underlying conditional structure where the *any* variable is bound by the universal quantifier contributed by an implicit conditional operator. The idea that subtriggered structures involve underlying conditionals actually goes back to LeGrand's (1975) original analysis of subtriggering.

If subtriggering does not require universality, the split between two *anys*, one existential and one universal, seems at least redundant. The only remaining issue, then, is whether we need additionally contextual vagueness in order to account for the distribution of *any*. We see that we do not. The alleged workings of contextual vagueness can all be attributed to nonveridicality and variation.

5.1 Subtriggering

The term 'subtriggering' is used to refer to cases where *any* and by extension FCIs appear grammatically followed by a relative clause, giving rise to universal-like readings. Such construals appear in contexts where *any* and FCIs would be grammatical anyway, e.g. under the generic/habitual operator and i-level predicates with imperfective aspect, or in an otherwise hostile environment, e.g. episodic perfective past.

(166) FCI-friendly environment

- a Ekino to vradi, o Janis miluse me opjandhipote jineka (epidi itan poli monos).
that the night, the John talked.impf.3sg with FC woman
That night John talked to any woman (because he was lonely).
- b Opjosdhipote su to ipe afto ine trelos.
FC-person you it said.pf.3sg this is isane
Whoever told you this is insane.

(167) FCI-hostile environment

a *John talked to any woman.

b Ekino to vradi, o Janis milise me opja(?dhipote) jineka ton plisiase.
that the night, the John talked.perf.3sg with FC woman him approached.perf.3sg
That night John talked to any woman who came up to him.

c John talked to whoever came up to him.

(168) Opjos(?dhipote) anakalipse miga sti supa tu, dhen efaje.

FC-person discovered.perf.3sg fly in-the soup his, not ate.perf.3sg

Whoever discovered a fly in his soup didn't have dinner.

In FCI-hostile contexts, the relative clause seems to 'save' an otherwise ungrammatical sentence. Similar constructions are possible with FC free relatives in Spanish and Catalan (see Quer 1998, 1999, 2000 for detailed descriptions). In Greek, as we see, we also have a free relative construction, comparable to the English *whoever*. We also see that in FCI-hostile environments, the FC option is slightly degraded compared to the regular free relative *opjos*. Degradation may amount to complete ungrammaticality in certain cases, as we see below:

(169) *Opjosdhipote su to ipe afto pethane.

FC-person you this said.perf.3sg died.perf.3sg

* Whoever told you this died.

(166b) with the stative i-level predicate *is insane* and (167b), (168) with potentially iterative predicates, contrast minimally with (169) which contains the once-only predicate *died*. The contrast obtains in English as well-- the * indicates the unacceptability of (169) with the quasi-universal subtriggered reading; Quer 1998, 1999 reports similar contrasts in Catalan and Spanish. The English translation of (169) may indeed be acceptable as an identity statement, but with an existential reading: *The person who told you this died*. This reading, labelled in Tredinnick 1996 the 'don't know' reading, is clearly not an option with FCIs in Greek, Catalan, and Spanish.

In the examples above, *any* and FCIs seem to be interpreted universally, which motivated Dayal's (1998) account of *any* as a universal quantifier. Yet we saw in section 3.3.3 that it is possible to have subtriggered FCIs with existential readings. The data are repeated here:

(170) a Tha pandreftho opjondhipote thelo ego!

'I'll marry whoever I want!

b # I'll marry every person I want.

c I'll marry the person I want.

So at least for FCIs and *-ever* we cannot maintain that subtriggered construals are always equivalent to universal readings. But the universal-like readings are indeed a reality in the majority of cases, and the presence of the relative clause is crucial in licensing them. Let us consider now Dayal's explanation.

5.1.1 Dayal (1998)

To see how subtriggering is explained, consider first the simple paradigmatic case. Dayal proposes that *any* is a universal quantifier "whose domain of quantification is the set of possible individuals of the relevant kind, rather than a set of particular individuals" (Dayal 1998: 447).¹⁸ This is represented by the universal quantifier binding the situation index on the description of the *any*-phrase. In a simple case with *any* construed with the generic operator, we would have the following structure (Dayal 1998:448):

- (171) a Any owl hunts mice.
 b s, x [**owl** (x, s) C(s)]
 GEN s' [$s < s'$ C'(s')] y (**mice** (y, s') **hunt** (x, y, s')]

Here both the universal quantifier *any* and the generic operator contribute tripartite structures and genericity comes from two sources: (a) from *any* itself since it introduces a situation variable, and (b) from the matrix predicate, as usually assumed for generic VPs. The formula says that all situations s that have an owl in them generally extend to situations in which an owl hunts mice. C(s) represents a condition that we exclude non-normal cases of owls, e.g. sickly owls, newborn owls, etc. which would constitute exceptions to the generalization expressed by the generic sentence.

An immediate problem is why the genericity inherent to *any* does not suffice to make *any* grammatical in the absence of VP genericity, as is the case with episodic past:

¹⁸ Dayal (1998: 442-445) also claims that *any* is necessarily construed with essential properties, but this is not entirely accurate:

- (i) Opjoshipote fititis stin taksi tis Marias etixe na psifisi to sindiritiko koma.
 'Any student who was in in Mary's class happened to vote for the conservative party.'
 (ii) I Maria diavase opjodhipote grama etixe na vriskete pano sto grafio tis.
 'Mary read any book which happened to be on her desk.'
 (iii) a. I {will/promise to} read any book which happens to be on my desk.
 b. I'll eat any food you {happen to/decide to} cook for me.

The Greek examples here are parallel to the ones given in Dayal. FCIs are fine with *etixe na* 'happened to',

- (172) a *Yesterday, *any* owl hunted mice.
 b Yesterday, every owl hunted mice.

In order to rule out these cases, Dayal resorts to a pragmatic explanation which I criticize in detail in 5.3. The idea is that in episodic sentences we have no way to restrict the *any*-quantification, because we quantify over all possible situations containing owls. Consider now the subtriggered example (167b). This sentence has the logical form below (Dayal 1998: 452):

- (173) s, x [**woman** (x,s) C(s) s" [s<s" P(s") (**came-up** (x,j,s"))]] s' [s<s'
that-night (s') **talk** (j,x,s')]

The common noun together with the relative clause restrict quantification to possible woman situations which are temporally anchored to the interval provided by the relative clause. It is this property of temporal anchoring that makes *any* acceptable with a relative clause.

5.1.2 Subtriggering as an underlying conditional

In the indefinite approach that I am pursuing here there is an alternative account that can explain the subtriggered facts just as well. Quer 1998, 2000 proposes an analysis of subtriggering as an underlying conditional structure, where the content of the relative clause functions as the restriction of the implicit conditional operator. In this account, a sentence like (167b) will have the structure schematized in (174):

- (174) w, x [[**woman** (x, w) **came-up** (x,j,w)] **talk-to** (j,x,w)]

The only universal quantifier here is provided by the postulated conditional operator; the *any* phrase is an indefinite bound by that operator. As a result, subtriggered *any* phrases are interpreted universally. In this account, the presence of a relative clause is crucial in that it provides the restriction of the conditional.

This analysis carries over directly to the FC-cases under consideration. Crucially, the availability of a conditional structure hinges on whether the sentence containing FCIs will provide possible worlds or situations that can function as *i*-alternatives. When the sentence provides such alternatives, as is the case with generic/habitual and stative sentences with imperfective aspect, then the conditional structure is licensed. But in the absence of genericity, the worlds have to come from somewhere else: from the iterativity of the predicates (especially the matrix), a point also emphasized in Dayal. Iterative predicates allow the creation of the

which forces a non-essential property reading; *any* is fine too. The examples in (iii) are from Horn (1999:10).

conditional structure, as we witness in (167b), (168); once-only predicates like *die*, on the other hand, cannot feed conditional structures and FCIs are thus ruled out. I won't go into further details here, for discussion see Quer 1998, 2000.¹⁹ Nonveridicality is satisfied in these cases because the protasis of conditionals, where *any*/FCIs occur, is nonveridical (Giannakidou 1997).

5.2 Any and (non)veridicality

Recall the data discussed so far and summarized in Table 1. Just like FCIs and APIs, *any* is ruled out from veridical contexts. But there are two differences. First, unlike APIs and FCIs, *any* may be licensed also in a negative factive complement:

- (175) a Lucy regrets that she talked to anybody.
 b *Lucy is glad that she talked to anybody.

Any in this case is licensed by a negative implicature (Linebarger 1980). The Greek PIs, which are licensed by nonveridicality, cannot be grammatical in a veridical context such as the complement of a factive verb, as we saw in section 2.

Second, *any* is ungrammatical in some nonveridical contexts: *perhaps* clauses, disjunctions, and partially in the scope of strong intensional predicates, as illustrated below:

- (176) a Isos o Pavlos na milise me {opjondhipote/kanenan}.
perhaps the Paul subj talked.3sg with FCI/ API
 ‘*Perhaps Paul talked to anybody.’
 b I bike {opjosdhipote/kanenas} mesa i afisame to fos anameno.
or entered.3sg FCI/ API in or left.1pl the light lit
 ‘*Either anyone came in or we left the light on.’
- (177) a ‘*I want you to buy any book.’
 b ‘I insist you allow anyone in.’

The contrast we observe here suggests that *any* and the Greek PIs, though related, they arguably form distinct paradigms. So what is the correct distributional constraint for *any*? I will argue, adopting Giannakidou 1999, that unlike APIs and FCIs, *any* is anti-licensed by veridicality. Anti-licensing is the weaker form of semantic dependency corresponding to a negative relation between PIs and veridicality. It says that in order to be grammatical a PI must *not* be in the

¹⁹ Quer actually tries to reduce *all* cases of subtrigging, even the ones in episodic contexts, to genericity. His goal is motivated by the observation that subjunctive free relatives, which are the counterpart of subtrigged FC in Catalan and Spanish, require imperfective aspect in all cases. This doesn't hold for Greek, as we see in the examples discussed here, so a reduction of subtrigging to genericity would be unnecessary, at least for Greek.

scope of a veridical operator (recall the discussion in section 2). The theory of polarity I assume here allows for this option, and *any* looks like a pretty good candidate for using it. The negative dependency of *any* does not allow the strong prediction that it appear in all nonveridical environments, although it surely raises the expectation that it will appear in most of these. But it is quite feasible that there will be some nonveridical contexts in which *any* will not be licit, as is the case.

We can then formulate the following condition for *any*:

(178) *Condition regulating the distribution of any*

- i. *Any* will not be grammatical in a sentence S if *any* is interpreted in the scope of a veridical expression β in S.
- ii. In certain cases, clause i can be voided if S gives rise to a negative implicature.

If the veridical expression is embedded under a nonveridical operator, then *any* is located in the global scope of the nonveridical operator and will therefore be grammatical, as in *John didn't say that he talked to anybody* (recall also fn.5). Intervention effects with quantifiers (for which Linebarger's (1987) immediate scope constraint is invoked) further pose constraints of a different kind, but I will not discuss them here for reasons of space.

As with FCIs, ultimately, we would like to derive the constraint in (178) from the lexical semantics of *any*. Although space prevents a detailed analysis here, we can address the obvious question: can we treat the *any* phrase as an intensional indefinite just like FCIs? If we want to treat *any* as a unitary item, which is the desired option since we have no evidence from English to the contrary, the answer must be negative.

We saw that *any* is fine in extensional contexts with episodic negation and in questions simply because these are not veridical contexts. This suggests that intensionality and variation are not encoded in the semantics of *any* the way they are in the semantics of FCIs. We can still argue, however, that *any* is an indefinite. Additionally, because *any* is ungrammatical in an extensional context in the absence of negation, we can assume that, just like FCIs, *any* cannot have its variable bound by a default existential quantifier provided by the context. This is *any*'s lexical 'deficit', so to speak, responsible for restricting its distribution. *Any* is not alone in having this deficit; in Giannakidou (1998) I identified other members of this class of *dependent* indefinites-- the nonemphatic APIs *kanenas*, *tipota*, etc. were shown to be dependent in this way too. Dependent indefinites cannot assert existence like regular indefinites do: they cannot undergo existential closure at the top text-level. In a negative episodic sentence, however, or in a question, existential closure can apply because there is some nonveridical operator above the existential at the top level, i.e. negation and the question operator, thus suspending the possibility of asserting existence. Dependent indefinites and *any* are therefore fine under

negation, the question operator and other nonveridical operators because of this reason.

We can summarize the lexical characteristics of *any* in the following:

(179) *Any*

- a. *Any P* is an extensional indefinite of the form $P(x)$, where x is an individual variable.
- b. The x variable is dependent: it cannot be bound by a default existential, unless there is another nonveridical operator above the existential. If the nonveridical operator is a Q-operator, then the Q-operator binds the x variable, as is standardly the case with indefinites.
- c. It is conversationally implicated that there are *i*-alternatives such that:
 $w_1, w_2 \models \llbracket \cdot \rrbracket^{w_1} \llbracket \cdot \rrbracket^{w_2}$, where \cdot is the *any P*.

(As with FCIs, we can augment (179) with scalarity: we consider all relevant *i*-alternatives, no matter how remote they may be from what counts as “normal”, cf. Kadmon and Landman’s *widening*, and Lee and Horn’s 1994 analysis of *any* as an indefinite plus *even*.) Here we postulate exhaustive variation as a weaker requirement on *any*, i.e. as a conversational implicature instead of presupposition as we did for FCIs, and it is responsible for the FC readings of *any* in nonepisodic contexts. In extensional contexts, e.g. with episodic negation and questions, there are no worlds that can serve as *i*-alternatives, and the implicature is cancelled. The implicature of exhaustive variation is not part of the lexical semantics of the API-indefinites *kanenas*, *tipota*, etc. which is why these never give rise to free choice readings.

The discussion here is certainly far from being a detailed analysis of *any*, but, given the facts presented in this paper, it seems fair to say that it can serve as a relatively solid basis for such an analysis. The important finding is that a treatment of *any* as a dependent indefinite provides a viable way to explain its distribution without making it necessary to appeal to two *anys*.

I consider next the issue of contextual vagueness.

5.3 Against contextual vagueness

Let us consider now Contextual Vagueness (Dayal 1998: (57)):

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

Note that the revised vagueness requirement in *b* appeals to modality, suggesting that contextual vagueness alone cannot be used as a licensing principle for *any*. Dayal explicitly rejects the relevance of notions like *nonexistence* (a notion which Dayal, erroneously, uses as equivalent to nonveridicality) in licensing *any* (Dayal 1998:442).

However, the contextual vagueness condition cannot afford the empirical coverage of the (non)veridicality based (178). We can confirm this by examining first cases that (180) is supposed to rule out: we see that the exclusion of *any* in these cases can have an alternative explanation in terms of veridicality. Then we will consider cases where (180) seems to make wrong predictions. It will be shown that contextual vagueness wrongly predicts that *any* would be fine under *believe*, *dream*, etc, since (180) is satisfied in these contexts, contrary to fact. It is also predicted that whenever identity is unknown or irrelevant *any* will be acceptable, again contrary to fact. The obvious conclusion will be that (180) cannot be neither a necessary nor a sufficient condition for the licensing of *any*.

5.3.1 Affirmative veridical sentences

The first indication towards this conclusion comes, surprisingly, from Dayal herself. Consider the ungrammaticality of *any* in veridical affirmative sentences:

(181) *Yesterday, John talked to any woman.

Crucially, Dayal does not use contextual vagueness to rule out *any* in this core case. This is so because in affirmative veridical sentences contextual vagueness may indeed be satisfied: a speaker may utter (181) without knowing the identity of the particular woman or women that John talked to. In fact, we can modify (181) as (181'), by adding a clause establishing that we don't know the identity of the women, but this addition does not affect the grammaticality of *any*:

(181') *Yesterday, John talked to any woman, but I have no idea {who they were/who it was}.

Contextual vagueness (and comparable notions like Tovená and Jayez's 1997 arbitrariness) actually makes the prediction that in contexts like the above, where it is made explicit that identity is unknown, *any* should be grammatical, but this prediction clearly fails.

Since contextual vagueness won't help, Dayal appeals to a more radical pragmatic explanation for the ungrammaticality of (181). It is claimed that "there will be many situations that will render this statement false, for example all the those women situations that do not overlap with John's existence", and "there is something infelicitous in making a statement that is doomed to be false" (Dayal 1998: 453). So a sentence like (181) is ungrammatical due to "a

presupposition failure: in using an *any* phrase the speaker chooses explicitly to talk about all possible situations but in making an assertion about a bounded time interval, she must focus on a restricted set of situations" (ibid.).

There are two flaws in the reasoning here. First, how come presupposition failure leads to ungrammaticality? We know of other cases of presupposition failure which do *not* cause ungrammaticality: if I say "bring me the red dress" in the absence of a unique dress, I am just making an infelicitous utterance, but I am not producing an ungrammatical sentence.

Moreover, one can still utter the sentence below, which indeed invites us to consider all possible woman situations, but the sentence is by no means ungrammatical; it just leads us to assume that the speaker is ignorant of some basic physical properties of the universe "doomed to falsehood"-- to use Dayal's phrasing-- in the (actual) world, where women have lived before John's birth:

(182) Yesterday, John talked to every woman you can possibly imagine.

Why is (182) grammatical? The reasoning applied to *any* should apply to this sentence too, and we would expect to get exactly the same presupposition clash we presumably get for *any*. Yet the sentence is not ungrammatical, and the speakers are able to apply some contextual restriction and interpret *every woman*. Why can't this be done in the case of *any*?

Second, how come a statement doomed to be false is ungrammatical? One can imagine lots of situations where one knows that what one says is probably doomed to be false, but this doesn't affect the grammaticality of the produced sentence. Lying is a prototypical case where we say something we actually know is false, but a liar's sentence is not ungrammatical, it is not even infelicitous. It is simply false.

Note, finally, that if we tried to fix the context in such a way so as to guarantee that we consider only women whose existence overlaps with John (thus satisfying the requirement on temporal anchoring), the crucial sentence would still be ungrammatical:

(183) (John is participating in a contest)

*There were rumors that 10 women would participate in the contest and that they would stay at the same hotel with John. By 10 pm yesterday, John kissed any of them.

By Dayal's explanation, we would expect an improvement in this sentence, since (a) now we exclude the woman situations which do not overlap with John's existence and we only consider the woman situations which overlap with John's participation in the contest; and (b) contextual vagueness is obeyed: we have no idea who the women were, or if they indeed arrived at the hotel. The occurrence of *any*, however, is still not good.

What we are witnessing here is the failure of excluding PIs on purely pragmatic grounds, and this failure plagues not only Dayal, but any approach that would treat polarity phenomena as part of the discourse grammar alone. The general problem is that licensing failures result to ungrammaticality and cannot be fixed by the context, as we would expect if the source were pragmatic.²⁰ This conclusion, of course, is not meant to imply that pragmatic conditions will not play a role; in fact, we did allow pragmatic factors to bear weight in our discussion (recall the case of deontic modals and commands (3.3.1), as well as the presupposition of exhaustive variation). But leaving room for pragmatic factors in addition to the semantics ones is very different from reducing polarity to felicity. There is enough evidence crosslinguistically to ensure that such a reduction does not do justice to the empirical data.

5.3.2 Arguments for contextual vagueness which are arguments for (non)veridicality

We see now that occurrences of *any* that Dayal rules out by contextual vagueness are also excluded by veridicality.

(i) *Contrast between every and any.*

Dayal presents examples showing that *every*, but not *any*, will be OK if the set referred to by the

²⁰ A reviewer suggests examples like the following as indications that *any* may be fixed by the context and appear felicitously even in episodic sentences:

- (i) Context: There was a lot of food at our party last night but we have nothing left. People ate a lot. They also took food home.
 - (a) And any left-overs were thrown out.

Note, though, that sentence (ib), unlike (ia) above, is still ungrammatical in this context:

- (b) *And any chips were thrown out.

(ib) differs minimally from (ia) in that the *any* phrase does not contain a deverbal noun: *left-overs* in (ia) but *chips* in (ib). The deverbal noun can provide a clausal structure, and the acceptability of (ia) relies crucially on this, a fact indicating that we are dealing with subtriggering. The availability of clausal structure may sanction *any* even in the absence of a deverbal noun, as in the sentences below, brought to my attention by Larry Horn:

- (i) c And any crumbs were vacuumed away.
- (ii) We straightened out the lawn furniture and cut down the saplings. And any {weeds/*tulips} were mowed down.

In both cases, the *any*-phrase seems to be interpreted in a clausal structure of the form 'any remaining crumbs' and 'any remaining weeds'. Why this clausal structure is licensed with *crumbs* and *weeds* but not with *chips* and *tulips* must probably be attributed to the fact that the existence of crumbs and weeds is predictable in the respective contexts, but that of tulips and chips is not, and this allows for the clausal interpretation of *any*. At any rate, the grammatical cases under consideration here can be understood as cases of subtriggering and provide no argument that the context alone can affect the grammaticality of *any*. The context, or a deverbal noun can enable clausal interpretations for *any*, but in the absence of clausal structure internal to the *any*-phrase, *any* remains ungrammatical.

quantifier has been previously introduced in the discourse:

- (184) There were twenty students at the lecture and {every/*any} student who was there said it was inspiring.

In a context like (184), there were indeed students at the lecture, which makes the sentence veridical and hence rules out *any*. Similar examples with *every* are discussed in Giannakidou 1999. Likewise, the following sentence (Dayal's (64)) is also ruled out by veridicality, since Susan found the books she was looking for:

- (185) * Susan found any book she had been looking for at Borders. And what's more, they were on sale! ²¹

(ii) *Existential constructions*

As we saw in 2.1, *any* is ungrammatical in existential constructions:

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

Dayal argues that “in *there*-insertion contexts the relevant set is made contextually salient”, but this is too weak. We can utter for instance the sentence below, satisfying vagueness, but the sentence is still ungrammatical with *any*:

- (187) There was {everything/*anything} Mary had asked for in this store, but I have no idea what that was.

For veridicality the explanation seems straightforward: existential contexts are veridical and hence inappropriate environments for PIs.

5.3.3 Propositional attitudes

Dayal's account predicts that *any* should be sanctioned with all propositional attitudes, contrary to fact:

- (188) a John would like us to buy any book on this list for his birthday.
b John told us to buy any book on this list for his birthday.

²¹ Note that **Susan found any book she had been looking for at Borders* is also ungrammatical because of veridicality. Subtrigging cannot work in this case because a predicate like *look for* is not iterative or inherently generic, hence it cannot create the necessary conditional structure for subtrigging.

- c * John believes that we bought any book on this list for his birthday.
- d * John dreamt that we bought any book on this list for his birthday.

Recall from section 2 that FCIs crosslinguistically exhibit this contrast. In propositional attitude contexts contextual vagueness is satisfied: there is an intensional operator as required by Dayal's (180), and neither the speaker or the hearer have any idea what book(s) will be bought or have been bought, if any. There is a clear contrast, however, between the sentences in *a,b*, with nonveridical attitudes which allow for *any*, and those in *c,d* with veridical verbs which rule out *any*. The ungrammaticality suggests that, for *any*, just any kind of modality is not enough. In a theory based on nonveridicality the contrast is expected: as with other PI-paradigms, veridical modalities are not compatible with *any*.

Contextual vagueness, then, does not seem to be a necessary or sufficient condition for *any*. What can be misleadingly read off as workings of contextual vagueness are in fact results of nonveridicality. To be sure, there is a connection between nonveridicality and vagueness, in the sense that the former guarantees the latter due to suspension of truth and existence. But if vagueness is satisfied in a veridical context, as in the cases of veridical intensional attitudes, it is nonveridicality that matters for licensing *any* and not contextual vagueness.

6 Conclusions

The primary goal of this paper has been to link the constraints on the distribution of free choice items to their semantics, as part of the more general argument that it is lexical sensitivity that determines limited distribution in polarity items. The sensitivity of free choice items was treated as a type difference between “regular” indefinites, which do not exhibit limited distribution, and free choice indefinites, which are only admitted in nonveridical and nonepisodic contexts. Unlike regular indefinites, free choice items are intensional: they come with a world variable that must be bound by some operator that has the ability to bind such a variable; if such an operator is not present, the world variable remains unbound, rendering the free choice item uninterpretable and thus ungrammatical. Additionally, the value assigned to a free choice item must differ in each alternative (world or situation) we consider. These lexical semantic features of free choice items are responsible for restricting their distribution to nonveridical and nonepisodic contexts: only in such contexts are both features satisfied.

This analysis has two important consequences. First, it supports the idea that limited distribution phenomena covered by the term “polarity” involve, one way or another, sensitivity to veridicality and nonveridicality or subproperties thereof. Second, by deriving the restrictions on their distribution from the lexical semantics of free choice items, we have established that at

least some of what are traditionally known as polarity constraints are not that “special”, i.e. they need not be encoded in a specific polarity module in the grammar-- a welcome result, as it makes polarity less anomalous. This point is worth emphasizing, because it has been ignored in most of the downward-entailingness based literature, which tacitly assumed the existence of such a module, like e.g. the Binding Theory module, which applied as global filters on LFs or semantic representations. Admitting such a module is highly unsatisfactory since it in effect just stipulates licensing conditions as composition-external global constraints. Ultimately we would like to be able to derive the distribution of a given polarity item from the tools and principles that are independently needed in the grammar, and dispense entirely with polarity-specific filters of the traditional kind.

Finally, since free choice is not equivalent to universal quantification, we can no longer maintain the ambiguity thesis for English *any* as one in terms of quantificational force. I have provided an alternative for a uniform indefinite *any* within the (non)veridicality hypothesis which I hope to have shown to fare better than accounts which postulate two quantificationally distinct *anys*. Based on the fact that the distinction between free choice items and affective polarity items is indeed lexicalized crosslinguistically, one can of course still argue that there are two indefinite *anys*, one free choice item and one affective polarity item. This option is not excluded by the analysis offered here, but whether to adopt it or not seems to have been reduced to a relatively harmless, and perhaps even trivial, terminological question.

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