IS THERE *ANY* NEGATIVE POLARITY IN ROMANIAN?

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Abstract: I discuss the distribution and interpretation of the Romanian determiner *vreun* and analyze it as a special polarity item. I put forth the generalizations that capture its peculiar distribution: on the one hand, *vreun* has the behavior of a typical negative polarity item, and on the other hand, it occurs in positive (epistemic modal) contexts. Adopting the framework in Chierchia (2006), I argue it can be integrated in a system of polarity-sensitive items under the label NPI/existential FC. The alternatives this lexical item triggers give rise to a domain widening implicature in negative polarity contexts and to an anti-exhaustiveness implicature in existential modal ones.

Keywords: negative polarity, existential free-choice, implicature calculation, domain widening

1. Introduction

When asked to provide the equivalent of the sentence in (1), a Romanian speaker has two options for the use of the negative polarity item *any*[1]: the n-word *niciun* illustrated in (2) and the determiner *vreun* in (3).

(1) I don't have ***any*** dream that has come true.
(2) *Nu* am ***niciun*** vis care să se fi împlinit.
NEG have.1sg no dream which SUBJ REFL be fulfilled
(3) *Nu* am ***vreun*** vis care să se fi împlinit.
NEG have.1sg vreun dream which SUBJ REFL be fulfilled

Although both of them have a meaning equivalent to *any* in these sentences, none of them is a good candidate for a negative polarity item (NPI), as I will show in the following sections. On the one hand, the sentence in (2) illustrates the phenomenon of negative concord, which I have argued elsewhere (Fălăuş 2008) to be different from NPI-licensing. On the other hand, the special determiner *vreun* has a restricted distribution and interpretation that make it difficult to classify in one of the traditional classes of dependent elements. Simplifying at this point, its distribution covers that of both *any* and *some* in English. The semantic and syntactic properties of this item will constitute the main focus of this paper.

A detailed examination of its contexts of occurrence reveals that *vreun* has the properties of a typical negative polarity item, but is also used in some positive, non-polarity contexts. Once we establish the empirical generalizations capturing its distribution, I argue against Farkas' (2005) ambiguity approach to *vreun* and present a unitary analysis in terms of negative polarity. More precisely, adopting the framework in Chierchia (2006), I argue that *vreun* can be integrated in a system of polarity-sensitive items under the label NPI/FC existential item. Under this account, *vreun* is no longer a strange indefinite, but rather a member of the broader class of 'epistemic' (Haspelmath 1997) or 'modalized' indefinites (Alonso-Ovalle and Menendez-Benito 2008).

2. Negative concord is not NPI-licensing

Before getting into the details of the semantics of *vreun*, let me just briefly show one of the main reasons to assume that negative concord is different from typical NPI-licensing. It is

[1] For ease of exposition, I set aside the free-choice use of *any* and take *any* to be a typical NPI, as is often the case in the literature on negative polarity.

well-known that Romanian is a strict negative concord language, i.e. the class of morphologically negative items, so-called *n-words*, need to co-occur with clause-mate sentential negation, regardless of their position in the sentence (4):

(4) a. ***Nimeni*** *nu* ştie cu cine să voteze.
nobody NEG know.3sg with who SUBJ vote
'Nodody knows who to vote for.'
b. *Nu* am citit ***niciun*** articol despre alegeri.
NEG have.1sg read no article about elections
'I haven't read any paper on the elections.'

This restricted distribution has constituted the basis of a popular view in the literature on negative concord where n-words are analyzed as non-negative NPIs (Laka 1990, Ladusaw 1992, Giannakidou 1997). However, there are several important differences between n-words and NPIs (see, a.o., Zeijlstra 2004, Fălăuş 2008). The one that is relevant for the purposes of this paper is the ambiguity of a sentence containing two n-words arguments of the same predicate, illustrated in (5):

(5) ***Nimeni*** *nu* are ***niciun*** vis implinit.
a. Nobody has any dream come true [Negative concord]
b. Nobody has no dream come true – Everybody has (at least) a dream come true.
[Double negation]

The sentence is ambiguous between a negative concord reading meaning 'nobody has any dream come true', and the double negation reading under which it can be interpreted as 'everybody has at least one dream come true'. The double negation reading is (cross-linguistically) pragmatically marked and thus dependent on context and intonation. The crucial point for the argument made here is that this reading can never occur in sentences with two or more (typical) NPIs, where only the one-negation reading is possible, as illustrated by the sentence in (6):

(6) I'm not sure that anyone has any dream come true.

Without getting into further differences between n-words and NPIs, I take n-words to be negative quantifiers and thus argue that negative concord is different from NPI-licensing[2].

3. *Vreun* as a negative polarity item

Having ruled out the n-word *niciun* as a good candidate for an NPI in Romanian, we are now left with one more option in our search for the equivalent of NPI *any*, namely *vreun*. The special determiner *vreun* (masculine)/*vreo* (feminine) is a complex variant of the standard

[2] The generalization underlying the distribution of the double negation reading in Romanian is that it only occurs with two n-words, never in a sentence with only one n-word and sentential negation. I put forth this generalization in 2004, in my master's thesis, and later discovered that Isac (2004) independently made the same point, just like Iordăchioaia (2005). For a more detailed discussion of the arguments to analyze n-words as negative quantifiers, see, a.o., Fălăuş (2008).

indefinite article *un* (masculine)/*o* (feminine) that occurs with singular countable nouns[3] and has a restricted distribution as illustrated below:

Contexts	***Vreun*-indefinites**
Questions	T
If-antecedents	T
Restrictor of a universal	T
Before-clauses	T
Scope of without	T
Scope of negative predicates	T
Possibility operators	T
Hypotheticals	T
Habituals/Frequentative imperfectives	T
Affirmative sentences	*
If-consequents	*
Scope of universal quantifier	*
Generics	*
Imperatives	*
Scope of intensional predicates	*

The properties of this determiner have only been discussed in Farkas[4] (2002, 2005), who puts forth the following three generalizations capturing its distribution and interpretation:
(a) *Vreun*-indefinites are 'extremely non-specific'; more precisely, they are incompatible with an interpretation which imposes the existence of a specific choice among the elements of the value set. In other words, *vreun* can only be used in contexts involving alternatives. The occurrence of *vreun* in simple affirmative sentences is thus ruled out:

(7) *Am scris *vreo* carte despre hipnoză.[5]
have.1sg written v-a book about hypnosis
'I have written a book on hypnosis'

(b) *Vreun*-indefinites introduce variables that need to be in the scope of an existential operator. Consequently, they cannot be bound by a generic operator, as illustrated by the ungrammaticality of the sentence in (8):

(8) **Vreun* lup mănîncă carne.
v−a wolf eats meat
'A wolf eats meat'.

(c) *Vreun*-indefinites mark weak existential commitment. As such, they are ruled out from contexts where the existence of a verifying value is either asserted or presupposed, as is the case in the *wh*-question illustrated in (9b), where the existence of a train leaving for Paris is presupposed:

[3] In this paper, I restrict the discussion to DPs introduced by *vreun*, but there is another morphologically related item *vreodată* (v-once) 'ever' to which the analysis developed here can be extended.
[4] I am aware of three other papers where *vreun* is considered/mentioned as an NPI: Isac (2004), Iordăchioaia (2005) and Sava (2006). However, none of them addresses the whole range of distribution of *vreun* and thus do not actually provide (counter)arguments for the hypothesis that it is an NPI, unlike Farkas.
[5] The examples in this paper are taken from Farkas (2002) and Romanian literary works. A more detailed discussion of the distribution of *vreun*, including contexts where there is speaker variation, can be found in Fălăuş (in preparation)

(9) a. Pleacă *vreun* tren spre Paris azi?
leaves v-a train to Paris today
'Is there a train leaving for Paris today?'
b. *Cînd pleacă *vreun* tren spre Paris?
when leaves v-a train to Paris
'When is a train leaving to Paris?'

According to Farkas, the fact that *vreun* DPs have to satisfy these three (related) constraints is responsible for their restricted distribution. However, a closer look at the distribution of *vreun* summarized in table 1 reveals that this item occurs both in typical polarity contexts (questions, antecendent of conditionals), but also in 'positive', non-polarity contexts, like possibility modals or hypotheticals. In view of this intricate pattern, Farkas (2005) assumes that there are two different *vreun*-items in Romanian: one called *an undifferentiated choice existential* and another one, *a random choice existential*.[6] Without going into the details of the analysis put forth in Farkas (2002) and (2005), I argue that the three generalizations above can be subsumed under the following hypothesis:

(i) Hypothesis: *Vreun* is a negative polarity item (NPI)

In the following section, I present the arguments supporting the hypothesis in (i).

4. NPI-properties of *vreun*

In this section, I show that the constraints governing the distribution of *vreun* are those that apply to typical polarity items, such as English NPI *any*, thus providing important arguments in favor of an analysis in terms of negative polarity.

4.1 Polarity contexts

Vreun occurs in all the contexts where the canonical NPI *any* is licensed, such as questions (9), antecedent of a conditional (10), restrictor of a universal quantifier, or scope of negative operators (11-12):

(9) *Questions*
Ai ***vreun*** vis neîmplinit?
have.2sg v-a dream unaccomplished
'Do you have any unaccomplish dreams?'

(10) *Antecedent of a conditional*
Dacă găseşti ***vreo*** carte despre asta, cumpără−mi−o.
if find.2sg. V−a book about this, buy−for me − it
'If you find any book about this, buy it for me.'

(11) *Scope of downward entailing operator*
Rar îmi dă ***vreo*** explicaţie în legătură cu ceea ce face.
'Rarely does he give me any explanation on what he is doing'.

[6] In addition to the NPI-approach that I will defend in this paper, Farkas rejects several possible analyses for *vreun*, and shows that this item differs from typical free-choice items (Dayal 1998) or nonveridical items (Giannakidou 1999, 2008). For reasons of space, I cannot address these analyses here, but I would like to mention that although nonveridicality might seem a useful notion for capturing the distribution of *vreun* in both negative and positive contexts, when considered carefully, this option is in fact not tenable, as it predicts a distribution wider that the actual one (for more details, see Fălăuş (in preparation)).

(12) *Scope of negative predicates*
Dansa cu el *refuzînd* să-i adreseze ***vreun*** cuvînt.
dance.3sg with him refusing sbj-clitic 3sg address *vreun* word
'She danced with him refusing to address him any word.'

These examples show that *vreun* is licensed in negative polarity contexts. Once we adopt (i) as a working hypothesis, i.e. that *vreun* is an NPI, its distribution in the above examples follows naturally. Nothing more needs to be added to account for its non-occurrence in simple affirmative sentences, as in (7) above.

4.2 No occurrence in preverbal position of a negated clause

Another property that makes *vreun* similar to an NPI like *any* is its exclusion from the preverbal position of a simple negated clause (13a), where the n-word *niciun* has to be used instead (13b):

(13) a. * ***Vreun*** student *nu* a venit la examen.
'*Any student didn't come to the exam.'
b. ***Niciun*** student *nu* a venit la examen.
'No student came to the exam'
c. *Nu* mă aştept ca ***vreun*** student să participe la conferință.
'I don't expect that any student would attend the conference'

As pointed out by Farkas, the empirical generalization capturing the distribution of *vreun* in preverbal position is that *vreun* is used only when the n-word *niciun* cannot, as in the case of long-distance licensing illustrated in (13c), an option which is excluded for n-words. As the interaction with sentential negation in section 5.1 will be addressed in more details in the following section, the only point relevant at this stage of our analysis is the fact that the distribution of *vreun* patterns with that of other NPIs.

4.3 Intervention effects

A further argument in favor of the analysis of *vreun* as a negative polarity item is the fact that the relation between *vreun* and its licenser is subject to familiar intervention effects (Linebarger 1987, Guerzoni 2006), as shown by the contrast between the sentences below. When a quantifier such as *every* intervenes between the polarity item *vreun* and its licenser, the matrix sentential negation, the sentence is ruled out (14b).

(14) a. *Nu* mă aştept ca ***vreun*** student să participe la conferință.
'I don't expect that any student would attend the conference'
b. **Nu* mă aştept ca ***fiecare*** student să cunoască ***vreun*** participant la conferință.
'I don't expect that every student knows any/some participant at the conference

On the basis of the properties discussed above, I conclude that the distribution of *vreun* is governed by the usual syntactic constraints on NPIs. These facts provide important arguments in favor of the view advocated here, namely that *vreun* is an NPI.

5. Possible counter-arguments to an NPI-hypothesis?

At this stage of our study, we have seen that Romanian *vreun* has the exact same distribution as a well-behaved NPI and thus seems to add nothing new to our knowledge of

polarity-sensitive items. However, things are not that simple. There are two important properties of *vreun* that could be seen as potential counter-arguments to the hypothesis I have defended so far and that deserve some further investigation.

5.1 Sentential negation

One important context where the distribution of *vreun* is more complex than that of typical NPIs is in the scope of sentential negation. Recall the sentence in (3) where *vreun* is licensed in the scope of sentential negation, just like the n-word *niciun.* The difference between *vreun* and *any* in simple negative sentences is that *vreun* doesn't easily occur in this context. More specifically, being a negative concord language, Romanian will typically resort to negative concord in this case, as shown in (15):

(15) *Nu* am scris ***vreun**/**niciun*** articol
Neg have.1sg written v-a/no article
'I haven't written any paper.'

On the basis of the interaction with sentential negation, Farkas (2002) explicitly rejects an analysis of *vreun* in terms of negative polarity. However, I argue that this does not constitute a valid counter-argument against the position defended so far. A closer look at NPI-behavior cross-linguistically shows that this situation, where an NPI is used in all weak negative contexts (downward-entailing), but not in the strong negative context, namely sentential negation, is a common pattern across languages that have both NPIs and n-words (or equivalents thereof), such as Slavic languages, Dutch or Japanese. Pereltsvaig (2004) dubs this situation 'the Bagel problem': sentential negation seems to be the 'missing hole' in the set of polarity contexts. She develops an analysis in terms of morphological blocking (as in the Distributed Morphology framework of Halle and Marantz 1993): when the requirements of two lexical items are satisfied in a certain context, it is the item whose lexical entry is more fully specified (whose features are specified for a licenser more closely) that gets inserted. N-words being 'specialized' for negative contexts, they will always be the default option. An account of this 'Bagel problem' in terms of morphological blocking also leaves open the possibility that *vreun* occur in the scope of sentential negation. This prediction is borne out, as there are indeed contexts where *vreun* can win the competition with n-words. This happens in two situations: to induce a certain pragmatic effect or to avoid lexical ambiguity.

First, when confronted with the choice between the n-word *niciun* and *vreun*, the speaker typically resorts to the latter whenever she wants to introduce a domain widening effect (cf. section 6), with a meaning equivalent to 'not even the least'. The English glosses of the sentences in (16) reflect the same possible difference in meaning between the (pragmatically enriched) *any* and the plain negative *no*:

(16) a. *(*Nu*) am ***vreo*** speranță că s-ar schimba ceva.
'I don't have any hope that anything might change.'
b. *(*Nu*) am ***nicio*** speranță că s-ar schimba ceva.
'I have no hope that anything might change.'

Furthermore, a quick look at attested examples shows that the other situation where v*reun* easily co-occurs with sentential negation is when there is an n-word in the sentence, as in (17):

(17) ***Nimeni*** *nu* a avut ***vreo*** informație despre cele întîmplate.
'Nobody had any information about what had happened'

Remember from the discussion in section 1 that a sentence with two n-words is ambiguous between a negative concord reading (one negation) and a double negation reading (where the two negations cancel each other out). Consequently, in order to avoid this ambiguity, *vreun* is used in situations like (17), which yields only the reading associated with negative concord.

To conclude, I argue that the interaction between *vreun* and sentential negation can be explained on independent assumptions (competition, pragmatic), determined by the fact that Romanian is a negative concord language, and thus does not constitute a valid counter-argument to the hypothesis that *vreun* is an NPI.

5.2 Positive contexts

Besides the negative polarity contexts discussed so far, there are some other licensing contexts which seem incompatible with the hypothesis that *vreun* is an NPI:

(18) *Hypotheticals*
Imediat am simțit un miros proaspăt…***vreun*** parfum scump.
'I immediately felt a fresh scent, **some** expensive perfume.'

(19) *Modals*
a. Poate ai făcut ***vreo*** greşeală.
'Maybe you've made **some** mistake.'
b. Cu numele lui, trebuie să fie ***vreun*** aristocrat.
'Given his name, he must be **some** aristocrate.'

(20) *Habituals and frequentative imperfectives*
a. Ori de cîte ori făcea ***vreo*** greşeală, suferea cumplit.
'Anytime he made **some** mistake, he suffered terribly.'
b. Din cînd în cînd trenul se oprea în ***vreo*** haltă şi cîte un navetist deschidea un ochi
'From time to time the train would stop in **some** station and a commuter would open an eye.'

(21) *Disjunctions*
In primele clipe, mi-am imaginat o tragedie familială sau **vreun** dezastru financiar.
'In the first moments, I imagined a family tragedy or **some** financial disaster'

Clearly, these contexts are not negative polarity contexts. This situation seems really incompatible with the NPI-approach advocated so far. The positive (non-polarity) contexts where *vreun* occurs are illustrated in (18-21) and include hypotheticals, habituals and crucially disjunctions and certain modals. If we want to provide a full account of the interpretation of *vreun*, we first need to establish what is the semantic property that is common to these contexts and that is relevant for its distribution. I argue that the generalization that captures its distribution in positive contexts is the one in (ii):

(ii) The non-polarity contexts where *vreun* occurs are all epistemic modal contexts[7].

I will not provide a detailed discussion of the notion of 'epistemic', but notice that the interpretation of all these contexts can be viewed as containing a modal akin to English *might*,

[7] Although these contexts do not all straightforwardly behave like epistemic modal contexts, I believe they can all be argued to contain such a (possibly covert) modal, roughly equivalent to English *might*. Interestingly enough, the only case where judgements tend to vary is in the scope of necessity modals like *must*. The speakers reject sentences where *vreun* is in the scope of a deontic modal and accept the sentence only when the context makes it clear that the epistemic reading of the modal is the intended one. A similar conclusion might hold for (some) imperatives, but more investigation is needed at this point (see Fălăuş (in preparation)).

introducing possible options for the relevant variable: (18) can be taken to mean it might be an expensive perfume. The sentence with the habitual in (20b) can be paraphrased as 'whenever the train would stop in some (possible) station'. In all these contexts, the speaker seems to make a hypothesis on the basis of the available evidence over a possible value in the domain of quantification. I argue this is best captured by the notion of *epistemic modality*, which I take to be responsible for the distribution of *vreun* in so-called positive contexts. A quick look at attested examples shows that *vreun*'s favorite positive occurrence context illustrated in (21) involves disjunction, which has been analyzed in terms of epistemic possibility (Zimmerman 2000). I therefore take epistemic modality to be the property that makes *vreun* compatible with these contexts, although in this paper I do not provide a formal definition of this notion.

Once we have established what is the property that allows the occurrence of *vreun* in non-polarity contexts, the most obvious question that arises is what is the connection between polarity contexts and (epistemic) modals that is relevant for the distribution of *vreun*? In the following section, I argue that the peculiar distribution of *vreun* is fully predicted once we adopt the view of polarity items put forth in Chierchia (2006).

6. 'What's in an NPI?' - Chierchia 2006

The main intuition underlying Farkas' analysis is that *vreun* is an alternative-introducing element. I argue this can be implemented in the framework developed in Chierchia (2006),[8] where ***domain widening*** is taken as the basic property that allows a unified semantics of polarity-sensitive items. More specifically, adopting Chierchia's framework, I argue that *vreun* can be integrated in a system of polarity-sensitive items under the label NPI/existential free-choice (FC) item. In its lexical entry, *vreun* is a polarity-sensitive item, i.e. an existential that introduces alternatives that are always active and whose requirements need to be satisfied. I argue that the types of alternatives *vreun* introduces and the way they interact with the rest of the sentence only make it compatible with polarity and epistemic modal contexts.

6.1 Exploiting domain widening – strengthening – polarity contexts

Following a popular view in the literature on polarity items (Kadmon and Landman 1993, Krifka 1995), Chierchia takes an NPI like *any* to be an existential, which activates domain-alternatives. The "domain widening" property of NPIs has the effect that their domain of quantification includes items that fall outside the domain that would be naturally considered for other existential quantifiers like *sometimes* or *something*. The extension of the domain of quantification results in the largest set of alternatives among the reasonable domain-alternatives in the context. Crucially, these alternatives need to be exhaustified, i.e. they always trigger the insertion of an exhaustification operator, defined in (22). This operator applies to a proposition *p* and the set of its alternatives (ALT(p)) and leads to elimination of stronger alternatives (every proposition q which is a Non-Weaker alternative to p is false), thus yielding an enriched (also called exhaustified) meaning (22):

[8] The discussion that follows is based on a simplified version of the account developed in Chierchia (2006), but also imports insights in Chierchia (2008). Although the underlying intuition is the same, the two implementations differ in important aspects, especially in the way the derivation proceeds, an issue that I cannot address within the limits of this paper. The derivations I use here are closer to the published version of the paper (2006), but can be successfully recast in the more syntactic version of Chierchia's theory (2008), as shown in (Fălăuş (in preparation))

(22) Op (p,ALT(p)) = p ∧ ∀q [q∈ Non-Weaker (p, ALT(p)) → ¬q]

(23) Lexical entry for 'any'[9] [Chierchia 2006: 558]

a. [[any$_D$]]= λPλQ [∃x∈D(P(x) ∧ Q(x)]

b. ALT([[any $_D$]]) = {λPλQ [∃x∈D' (P(x) ∧ Q(x))]: D' ⊆D ∧ D' is large]}

c. "any" has an uninterpretable [+Op] (triggers the insertion of the exhaustification operator)

In this line of thinking, the domain widening property NPIs are associated with make them appropriate only in negative (downward entailing) contexts, where it leads to a gain of informativity, i.e. to a stronger statement.

Let us see more precisely how this basic idea is implemented. For ease of exposition, I use examples with *any,* but I assume that in these contexts *vreun* behaves in exactly the same way.

In an affirmative sentence like the one in (24), the assertion is equivalent to a sentence with a basic indefinite (existentially-closed), as in (24a) with the additional requirement that D is large (for this example, let us assume that D contains three individuals, abbreviated as {f1, f2, f3}). The sentence asserts that there is an individual x, chosen among the members of D, such that I talked to x. As a result of the presence of a polarity item like *any* (or *vreun*), we generate the set of D-alternatives, all possible subsets of D, given in (24b). Next, on the basis of these, we generate the set of propositions ALT, which only differ from the original assertion 'I met a friend in D' with respect to the choice of the domain alternatives. For example, I could have said that this assertion holds for a smaller domain, one containing only two individuals {f1,f2}. This alternative is stronger, more informative that the original assertion, and the same applies to any smaller subdomain, thus yielding the possible alternatives in (24c). Following Chierchia's notation, I will represent the set of alternatives to the original assertion using disjunction of propositions a, b and c, where 'a' stands for talk(I,f1), 'b' stands for talk (I,f2), 'c' stands for talk(I,f3). The propositional alternatives are given in (24c) and schematized in (24d):

(24) * I talked to *any* friend

a. Op [I met any friend]
∃x ∈D [friend (x) ∧ talk(I,x)] = ∃x ∈{f1, f2, f3}[friend (x) ∧ talk(I,x)]

b. D-alternatives – all possible subsets of D
D = {f1,f2,f3}
{f1,f2}, {f1, f3}, {f2,f3}
{f1}{f2}{f3}

c. from D-alternatives, we get the following set of propositions :
1. ∃x ∈{f1, f2,f3}[friend (x) ∧ talk(I,x)] 2. ∃x ∈{f1, f2}[friend (x) ∧ talk(I,x)]
3. ∃x ∈{f1, f3}[friend(x) ∧ talk (I,x)] 4. ∃x ∈{f2, f3}[friend(x) ∧ talk(I,x)]
5. ∃x ∈{f1}[friend(x) ∧ talk (I,x)] 6. ∃x ∈{f2}[friend(x) ∧ talk(I,x)]
7. ∃x ∈{f3}[friend(x) talk (I,x)]

d. a∨b∨c (ALT)
a∨b a∨c b∨c
a b c

[9] For ease of exposition, I ignore world or time variables in the discussion of negative polarity items.

To this set of alternatives, we apply the exhaustification operator, which amounts to negating all stronger alternatives and adding them to the initial assertion. The (simplified) result is given in (25):

(25) Op (a∨b∨c, ALT(a∨b∨c)) = ∃x ∈{f1, f2, f3}[friend (x) ∧ talk(I,x)] ∧
∧ ¬ (∃x ∈{f1}[friend (x) ∧ talk(I,x)])
∧ ¬ (∃x ∈{f2}[friend (x) ∧ talk(I,x)])
∧ ¬(∃x ∈{f3}[friend (x) ∧ talk(I,x)])

The resulting meaning says that the initial assertion holds for the large domain D (*I talked to friend1*, *I talked to friend2* or *I talked to friend3*), and is false for any subdomain (*It is not the case that I talked to friend1, It is not the case I talked to friend2* and *It is not the case I talked to friend3*). Clearly, this is contradictory: the implicatures derived on the basis of the alternatives contradict the assertion. To put it differently, the presence of an NPI triggers the insertion of the exhaustification operator, but although there are stronger alternatives to the assertion, in the end this operator cannot lead to an enriched meaning without running into inconsistency, a state of affairs that results in ungrammaticality.

Things are different in negative contexts, where the use of an NPI in negative contexts results in a 'strengthened' meaning (26).

(26) I didn't talk to any friend
a. Op¬ [I talked any doctor]
b. Op (¬∃x ∈D [friend (x) ə talk (I, x)])
c. ¬(a ∨ b ∨ c) (ALT)
¬(a∨b) ¬(b∨c) ¬(a∨c)
¬a ¬b ¬c

As illustrated by the simplified derivation in (26), here exhaustification applies to a negative sentence. Consequently, the assertion logically entails each alternative: if it is not the case that I talked to a friend belonging to the set {f1, f2, f3}, then it in also necessarily true that the propositions *I didn't talk to f1, I didn't talk to f2* and *I didn't talk to f3* hold. Consequently, there is no stronger alternative to the assertion, whose exclusion could lead to a strengthened meaning. Recall that the requirement associated with the exhaustification operator is to eliminate all stronger alternatives. In the case of the positive sentence, the problem came from activation of alternatives (all of which were stronger than the assertion) without leading to exclusion. Here, this problem simply doesn't arise, as there is no *stronger* alternative to the assertion. The same conclusion holds for all (and only) downward-entailing contexts, where the assertion entails all the alternatives.

This approach thus derives the semantic dependency of polarity items on the basis of their meaning, which only makes them compatible with polarity, i.e. downward-entailing contexts. Without insisting on the details of this way of implementing domain widening in negative contexts, let us see how to extend Chierchia's account to the positive contexts where *vreun* occurs.

6.2 Exploiting domain widening – antiexhaustiveness - positive contexts

Recall that *vreun* is also allowed in epistemic modal contexts, that is, contexts involving possible values for a certain variable. I have argued that the core part of the semantics of

vreun is that it is an existential which leads to domain widening, i.e. extends the domain of quantification. Moreover, I assume an additional component of the meaning of *vreun*, exploited in positive contexts, where, in addition to domain alternatives, the existential *vreun* also triggers a *scalar* 'uniqueness' implicature (associated with the indefinite article morphologically incorporated in *vreun*). Setting details aside, what this scalar implicature adds to the meaning of an existential item is something we could paraphrase as a 'uniqueness' implicature: the assertion holds of a single individual. Intuitively, a sentence like *I met a student* triggers the implicature *It is not the case I met two (or three, etc.) students*. To put it differently, the strengthened meaning of *I met a student* is something like *I met a single student*.

Under this assumption, *vreun* is therefore associated with both domain-alternatives and scalar alternatives. Furthermore, recall that its crucial property is domain widening, only compatible with negative polarity contexts. However, there is an additional way to exploit domain widening, which has been argued to be at work in modal contexts. Intuitively, some types of domain widening items are used when the speaker does not want to exhaustify the domain of quantification, by not ruling out *any possible alternative* that could satisfy the restriction. The implicature triggered in these cases is called *anti-exhaustiveness*, and is typically associated to so-called existential free-choice items (Kratzer and Shimoyama 2002, Chierchia 2006), illustrated in (27):

(27) Mary musste *irgendeinen* Mann heiraten. (Kratzer and Shimoyama 2002:10)
Mary had-to irgend-one man marry.
'Mary had to marry a man whatsoever/some man or other.'

On the reading that is relevant for the analysis developed here, the existential polarity item *irgendein* has a *free-choice* interpretation equivalent to 'Mary had to marry a man, any man was a permitted marriage option for her.' In uttering a sentence like (27), the speaker conveys that for all she knows, any individual in the domain of men is a possible option that could satisfy the assertion, none of the alternatives gets excluded. As long as there is an individual in the domain satisfying the assertion, the actual choice is 'free'.

Drawing on the basic insights in Kratzer and Shimoyama (2002), and Chierchia (2006), I argue that *vreun* can be integrated in the system of polarity items developed by Chierchia under the label NPI/existential free-choice item[10]. The core part of its lexical meaning is that it is a domain widening existential: when this property is exploited in downward entailing contexts, *vreun* behaves just like typical NPIs, whereas in modal contexts, it triggers an *anti-exhaustiveness* meaning, in a way similar to free-choice existential items. The reason for this dual nature, I assume, is the co-occurrence of domain and scalar alternatives, the former associated with typical free-choice items and the latter with the indefinite article morphologically present. Both types of alternatives need to be exhaustified, by using the exhaustification operator Op. At an intuitive level, an existential free-choice of this kind can occur in contexts where both the (universal) free-choice implicature (saying that if the assertion holds of one alternative, it holds of all) and the (existential) scalar implicature (the assertion holds for exactly one alternative) are satisfied. When the items is not in a

[10] An important advantage of Chierchia's account, not reflected in the analysis sketched here, is it can derive the connections between a polarity items like *vreun* and other dependent elements in, e.g. pure NPIs, free-choice items like Romanian *orice,* Italian *qualsiasi*, or existential free-choice like *un N oarecare* in Romanian. In this unified system, the syntactic and semantic differences between these classes of polarity items are the result of the way exhaustification works and the sets of alternatives to which it applies.

downward-entailing context, these two (contradictory) implicatures are only consistent in (epistemic) modal contexts.

Following the type of formal semantics developed in Chierchia (2006), let me briefly illustrate how this works in the scope of a possibility modal like 'might':

(28) *Poate* mă mărit cu ***vreun*** doctor.
'Maybe I'll marry **some** doctor.'

a. *Assertion*: $\Diamond_w [\exists x \in D_w(\text{doctor}_w(x) \wedge \text{marry}_w(I, x)]$[11]
= There are permitted worlds w, such that I marry in w a doctor that is in D (w)
b. *Enriched meaning*:

$\Diamond_w [\exists!x \in D_w(\text{doctor}_w(x) \wedge \text{marry}_w(I, x)] \wedge \forall D' [\Diamond_w [\exists!x \in D'_w(\text{doctor}_w(x) \wedge \text{marry}_w(I, x)]] \wedge \neg \Box_w [\exists!x \in D_w(\text{doctor}_w(x) \wedge \text{marry}_w(I, x)]$
= for every subdomain D' containing a doctor, there is a world in which I marry him; any possible doctor is an option; and it is not necessary that I marry a doctor in all worlds (there might be worlds (containing doctors) where I marry no doctor) [12]

The sentence in (28) asserts something we could paraphrase as 'There is an accessible world w, in which I marry a doctor'. Next, we derive the implicatures. Assume the same individuals are doctors in our world and all permitted worlds and the domain of quantification (D) under consideration can be the same in all worlds. We have two alternative-introducing elements - the modal *might* whose stronger alternative is the necessity modal *must* and the polarity item *vreun*, which, just like a simple indefinite, triggers the so-called 'uniqueness implicature', which means the existential gets translated as 'there is exactly one (or a single) doctor' in the relevant domain of quantification D. Once we combine these two implicatures, we get something roughly meaning 'I might marry a single doctor in D and (negating any stronger alternatives on the relevant scales) I don't necessarily marry a doctor in D, and this holds for any subdomain D', which is equivalent to 'I might marry a (single) doctor in D and I might not marry a doctor in D' (28b). The assertion and the implicatures are consistent and yield a meaning that says that for every subdomain D' containing a doctor, there is an accessible world where I marry him[13]. This means any doctor is a possible option and this is exactly what the sentence conveys. Crucially for the meaning of *vreun*, the sentence is also compatible with contexts where there are no verifying values, that is, where I marry no doctor. This is precisely the intuition behind the notion of epistemic modality to which *vreun* is sensitive. Although there are details that still need to be worked out, the basic idea should be clear.

[11] In the following representations, $\Diamond_w$ stands for $\exists w\, R\, (w_0, w) \wedge \phi_w$, and $\Box_w$for $\forall w\, R\, (w_0, w) \rightarrow \phi_w$, and $\exists!x$ for 'there is a unique individual'. Although I use very simplified versions of the actual implementation developed in Chierchia (2006), especially with respect to the proper handling of world variables, this way of setting aside (important) formal details does not affect the analysis of *vreun*. The reader should bear in mind, however, that the resulting enriched meaning is derived by exhaustification of alternatives, as defined in (22) above.

[12] The 'might not' part of the enriched meaning is due to the equivalence to 'it is not necessary that' $\neg\forall w \Leftrightarrow \exists w \neg$.

[13] Gennaro Chierchia (p.c.) suggests an alternative way to derive the restriction to existential modals, namely to assume that *vreun* has as part of its semantics the requirement that one of the alternatives be false ($\exists p \in \text{ALT} \Diamond \neg p$). If this move turns out to be necessary, we'll need to independently motivate it. For now, the derivations based on the implicature associated with the two scalar items seem to yield the right results, so I will stick to this way of implementing the basic idea.

Now that we have seen how *vreun* is licensed in existential modal contexts, what still needs to be shown is why *vreun* is ruled out from other positive contexts. The sentence in (29) illustrates the ungrammaticality of *vreun* in the scope of a necessity modal (with readings other than epistemic).

(29) **Trebuie* să mă mărit cu ***vreun*** doctor.
'I must marry v-a doctor.'

a. $\Box_w$ [$\exists x \in D_w$(doctor$_w$(x) $\wedge$ marry$_w$(I, x))]

b. $\Box_w$ [$\exists!x \in D_w$(doctor$_w$(x) $\wedge$ marry$_w$(I, x)] $\wedge$ $\forall$D' [$\Box_w$ [$\exists!x \in D'_w$(doctor$_w$(x) $\wedge$ marry$_w$(I, x]]
= for any subdomain D' containing doctors, I marry a single doctor in D' in all permitted worlds

The assertion states something meaning 'In all permitted worlds, I marry a doctor'. As far as implicatures are concerned, the necessity modal doesn't have any stronger alternative and thus we only compute the alternatives associated with *vreun*. Setting aside details, we get something like 'for every subdomain D' containing a doctor, I marry him in all permitted worlds'. This leads to inconsistency: on the one hand, (29b) requires that I marry all the doctors in a given world and on the other hand, the uniqueness implicature imposes the constraint that I marry (exactly) one in all permitted worlds. The only way to make this consistent would be to assume distribution of individuals over worlds, i.e. worlds contain only one doctor and for every world there is a (unique) distinct doctor that I marry, (the so-called) 'distribution over worlds' requirement (cf. Giannakidou 1999, a.o.). I argue that this 'distributivity' requirement is not part of the semantics of *vreun*. In using *vreun*, however, a speaker does not convey the meaning that the individual satisfying the existential claim must be different in each possible world. This is the crucial requirement that makes *vreun* different from a free-choice item, be it universal or existential (German *irgendein*, Italian *un N qualsiasi*, Romanian *un N oarecare*). This is precisely what constitutes its peculiarity with respect to other polarity items. Once we go through the relevant derivations for other positive contexts, it can be shown that its semantics only makes it compatible with existential modal contexts and thus no further assumptions are needed in order to derive its distribution. The existence of polarity-sensitive item like *vreun* is thus fully predicted and accounted for in this framework. This is a welcome consequence not only in order to derive the distribution of *vreun*, but also because the same pattern of distribution is attested in the diachronic evolution of notorious polarity items such as *any* and *enig* 'any' (Hoeksema 2007), so this is a pattern that we need to accommodate in our theory of polarity items.

Another welcome feature of the system is that it also predicts that once we integrate the distributivity requirement in the semantics of such an item, we will get a double worker, that is, an item that is both an NPI and a universal free-choice item. This is exactly the case for *any*.

7. Conclusions and further issues

To conclude, in this paper I have established the empirical generalizations underlying the distribution of *vreun* and I have shown that despite apparent resistance to classification in traditional polarity items typology, *vreun* can be analyzed as an NPI/ existential FC. As an alternative-introducing element, it can only be successfully used in negative contexts where it

leads to a strengthened meaning. Furthermore, its semantic requirements only make it compatible with epistemic modal contexts, where it triggers an anti-exhaustiveness implicature. I have argued that the distribution of *vreun* provides strong support for a 'pragmatic' view to polarity-sensitivity, such as the one in Chierchia (2006). No other approach present in the literature can account for the peculiar distribution of *vreun*, unless making the unnecessary and unmotivated assumption there are two different items in negative and positive contexts (Farkas 2005), or making wrong empirical predictions (Giannakidou's nonveridicality approach).

In the research program developed by Chierchia, there are important details that still need to be worked out. Restricting the discussion to further issues related to *vreun*, I see two important points that need further scrutiny. First, modality - the current way of thinking is based on the distinction between universal and existential quantification over worlds. I believe this is a useful but not sufficient partition when it comes to implementing the notion of 'epistemic modality'. And importantly, the analysis needs to implement syntactic details related to the insertion of the exhaustification operator Op. More precisely, we need to account for intervention effects, exclusion from subject position and interactions with other polarity-sensitive items. Although these issues still need to be worked out, I believe the approach adopted here can be successfully extended to the rest of semantically dependent items, both in Romanian and cross-linguistically.

The discussion of the properties of *vreun* thus provides both empirical and conceptual support for an alternative-based approach to polarity-sensitive items. The specific implementation developed by Chierchia has the advantage of offering an account for the wide range of variation associated with polarity items (in diachrony, within one language or cross-linguistically), a far from trivial task.

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