THE SEMANTICS OF PLURAL INDEFINITE NOUN PHRASES IN SPANISH AND PORTUGUESE*

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Comments welcome!

In this paper I provide a decompositional analysis of three kinds of plural indefinites, in two related languages, European Spanish and Brazilian Portuguese. The three indefinites studied are bare plurals, the *unos* (Spanish)/*uns* (Portuguese) type, and the *algunos* (Spanish)/*alguns* (Portuguese) type. The paper concentrates on four properties: semantic plurality, positive polarity, partitivity and event distribution. The logic underlying the analysis is that of compositionality, applied also at the subword level: as items become bigger in their form (with the addition of morphemes), they also acquire more semantic properties. The paper proposes the "indefinite hierarchy", which establishes a set of components for languages to build up their indefinites with, in a particular order.

1 Introduction

Recently attention has been paid to the semantic and syntactic properties of the Spanish plural indefinites *unos* and *algunos* (see e.g. Alonso-Ovalle and Menéndez-Benito 2002, Gutiérrez-Rexach 2001, Villalta 1994). In this paper I provide an analysis of some of their properties that goes beyond this past work in several respects: it brings bare plurals into the picture, it compares these three indefinites with their B(razilian)Portuguese counterparts, and it aims at making predictions about indefiniteness cross-linguistically. The paper proposes a decompositional analysis and considers bare plurals to be the smallest ingredient in what I call the "indefinite hierarchy". Indefinite noun phrases can be progressively built upon with more ingredients (*un(o)s*, *alg-*). We will see that it is informative to compare Brazilian Portuguese with E(uropean)Spanish because the comparison provides us with

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information about the ingredients of the indefinite hierarchy and how they can be realized in different languages.

The paper has implications for a variety of different research topics in semantics. The most important of these has to do with the typology of indefinites: the paper proposes that in order to form an indefinite, a language is to make use of the ingredients afforded in the indefinite hierarchy, and in the order in which they come in that hierarchy. This makes predictions about the kinds of indefinites that can exist cross-linguistically. I will only be able to test some of those predictions here, but the implications for further study are clear.

The paper is concerned, then, with the properties of the indefinites in (1), from ESpanish, and (2), from BPortuguese:

(1) *ESpanish*
niños, *unos* niños, *algunos* niños
'children, *unos* children, *algunos* children'

(2) *BPortuguese*
meninos, *uns* meninos, *alguns* meninos
'children, *uns* children, *alguns* children'

Unos/*algunos* and *uns*/*alguns* have feminine versions, *unas*/*algunas* and *umas*/*algumas*, respectively, and nouns in the two languages also inflect for gender. The properties of interest here are summarized in Table 1, for ESpanish, and in Table 2, for BPortuguese:[1]

	BARE PLURALS	*UNOS*	*ALGUNOS*
semantic plurality	×	✓	✓
positive polarity item	×	✓	✓
event distribution	✓	×	✓
partitivity	×	×	✓
context sensitivity	×	×	✓
genericity	✓	×	×
existential import	✓	✓	✓

Table 1 ***ESpanish***

	BARE PLURALS[2]	*UNS*	*ALGUNS*
semantic plurality	✓	✓	✓
positive polarity item	×	✓	✓
event distribution	×	✓	✓
partitivity	×	×	✓
context sensitivity	×	×	×
genericity	✓	×	×
existential import	✓	✓	✓

Table 2 ***BPortuguese***

[1] E(uropean) Portuguese behaves in many respects more like ESpanish than like BPortuguese.
[2] Bare plurals in BPortuguese are more common in the written than in the spoken language, and hence some speakers might have problems giving judgments about them. The task, however, is not impossible (cf. Müller 2002).

The paper focuses on the first four properties in each table. The tables include three additional properties, context sensitivity, existential import and genericity, because I will occasionally make reference to them, even though I will not be discussing them in detail. I will also make reference to scope, but I will not embark on a systematic study of the scope properties of these items (see Martí, to appear, for detailed discussion on *algunos*).

How can we make sense of the fact that there is a scale (bare plural > *unos*/*uns* > *algunos*/*alguns*) where semantic properties are generally acquired as we go from left to right? This is the most important question addressed here, and the answer I adopt is quite straightforward: it is not an accident, since in their form, the items in the scale also get bigger and bigger. That is, I derive the properties listed in the tables from the very basic assumption of compositionality, applied also at the morpheme level.

The hypothesis has appeal when one considers properties such as polarity and partitivity, though it seems problematic when one looks at properties such as event distribution. Bare plurals in ESpanish event distribute, but *unos* noun phrases, which in their form are bigger than bare plurals, do not. Also, *unos* and *uns* should have similar properties, but only the latter can event distribute. One of the challenges addressed in the paper is how to maintain the compositionality hypothesis and at the same time solve the event distributivity problem (cf. Gutiérrez-Rexach 2001, 2004 on *unos*/*algunos* and event distributivity).

The common noun will be the locus of the difference in semantic plurality in the two languages, so I will propose that the lexical semantics of common nouns in ESpanish and BPortuguese is different (cf. Laca 1996 and Müller 2002 for discussion of this property). It will turn out that this property is related in an interesting way to the fact that bare plurals can event distribute in ESpanish but not in BPortuguese. This is a welcome result because this property of ESpanish bare plurals is problematic for the logic put forth in this paper: once a feature is acquired in the scale, it shouldn't be lost, but that is exactly what seems to happen in the case of bare plurals and *unos*/*algunos*.[3]

One intriguing consequence of the paper concerns the role ascribed to plural morphology. As we will see, the treatment of the plurality of these indefinites is not without its problems but one conclusion one can draw is that plural morphology entails the presence of plural individuals (somewhere) in the denotation of the item it attaches to. Other potential roles for plural morphology are not tenable: it is not true that plural morphology entails the absence of singular inviduals, for example.

A note about speaker variation is in order. There are speakers of both ESpanish and BPortuguese for whom the contrasts between *algun*(*o*)*s* and *un*(*o*)*s* are not as dramatic as reflected in Table 1 and Table 2. For these speakers, *un*(*o*)*s* has all the relevant properties *algun*(*o*)*s* has. So, for example, for them, *unos*, just like *algunos*, event distributes. While I will not be able to do justice to these speakers here, I would like to note the following important point: there are no speakers, as far as I know, for whom *un*(*o*)*s* has properties that *algun*(*o*)*s* does not have. That there are speakers for whom *algun*(*o*)*s* and *un*(*o*)*s* contrast less than is reflected in the tables is a problem for the hypothesis pursued in this paper in the sense that more form should equal more meaning. However, this may not be a problem overall when all the properties of these indefinites are considered (in fact, this is already the case when one considers all of the seven properties of *unos* in Table 1). The fact that for no

[3] Genericity also seems problematic from this perspective. I relate this property to the fact that bare plurals denote only sets of individuals in both languages (cf. McNally 2004 for ESpanish). They are either generic or have existential import because one can choose to use generic or existential operators later on in the derivation. This idea is of course not new.

speaker is it the case that *algun*(*o*)*s* is less semantically loaded than *un*(*o*)*s* is significant and speaks in favor of the hypothesis.

The organization of the paper is as follows. In section 2, I discuss the data that supports the descriptive generalizations. Section 3 provides the decompositional analysis. Section 4 is the conclusion.

2 The empirical generalizations

2.1 Semantic plurality

While ESpanish bare plurals are not semantically plural (Laca 1996: 243; Lois 1999: 210-1), BPortuguese bare plurals are semantically plural (Müller 2002: 293-5). *Un*(*o*)*s* and *algun*(*o*)*s* are semantically plural. Consider for example the data in (3) and (4). The examples are constructed on the basis of data in Laca (1996):[4]

(3) *ESpanish*

a. John: Betty says that she saw children playing in the garden, but I don't think that is true. ¿ Tú viste *niños* jugando en el patio?
you saw children playing in the garden
'Did you see children playing in the garden?'
Mary: Yes, I saw one/#No, I saw only one

b. John: ¿Viste a *unos/algunos* niños jugando en el patio?
'Did you see *unos*/*algunos* children playing in the garden?'
Mary: #Yes, I saw one/No, I saw only one

(4) *BPortuguese*

John: Você viu (*umas/algumas*) *crianças* brincando no jardim?
you saw children jumping in-the garden
'Did you see (*umas*/*algumas*) children jumping in the garden?'
Mary: #Yes, I saw one/No, I saw only one

(3a), with the ESpanish bare plural *niños* 'children', is a not a question about a semantic plurality. It can be answered positvely even though the speaker saw only one child, and it cannot be answered negatively in that same situation. The opposite is true for ESpanish *unos*/*algunos*, as shown in (3b), and for the three BPortuguese indefinites, as shown in (4).

The judgments regarding bare plurals in both languages can be delicate and hence I provide further data to exemplify the difference. As far as I know, there is no controversy with respect to *un(o)s* or *algun(o)s*—they are uncontroversially semantically plural. Notice that it is not the case that all the speakers of a given language will find the judgments for all of the examples equally clear; however, they should find at least some of them clear enough.

Consider the BPortuguese sentence in (5):

(5) *BPortuguese*

Unicórnios/ (Um) unicórnio têm/tem *chifres*
unicorns a unicorn have/has horns
'Unicorns have horns'

[4] A reviewer points out that (3a) sounds a bit strange without the preceding context.

Müller (2002: 294), from whom the example is taken, reports that (5) commits us to the belief that unicorns come with more than one horn each. There is a clear contrast between *chifres* 'horns' in (5) and *um chifre* 'a horn': with *um chifre* we are talking abour regular unicorns, but with *chifres* that is not the case. In ESpanish, on the other hand, matters are different. Consider the example in (6) (from http://www.alundain.com.ar/unicornio/elcuerno.htm):

(6) *ESpanish*

Algunos	unicornios	poseen	*cuernos*	*de*	*apariencia*	*metálica*
	unicorns	have	horns	of	appearance	metallic

'Some unicorns have horns of metallic apperance'

(6) doesn't have to be about special unicorns with more than one horn; in fact, the context in which the sentence comes and the pictures that accompany it suggest that it is about one-horned unicorns whose horns are of special appearance. The same contrast between the two languages holds for the examples in (7) and (8):[5]

(7) *BPortuguese*

a. Um leão tem *rabos*
   a lion has tails
'Lions have tails'

b. Um ser humano tem *corações*
   a being human has hearts
'Human beings have hearts'

(8) *ESpanish*

a. Los leones tienen *rabos*
   the lions have tails
'Lions have tails'

b. Los seres humanos tienen *corazones*
   the beings human have hearts
'Human beings have hearts'

Whereas the sentences in (7) commit the speaker to the belief that lions have more than one tail and human beings have more than one heart, this is not the case for the sentences in (8).

Consider also the data in (9):

(9) a. *ESpanish*

Jorge	come	*manzanas*	todos	los	días
	eats	apples	all	the	days

'Jorge eats apples everyday' (based on Lois 1996: 210-1)

b. *BPortuguese*

Jorge	normalmente	come	*maçãs*	de	sobremesa
	normally	eats	apples	of	dessert

'Jorge normally eats apples for dessert' (based on Müller 2002: 294)

[5] ESpanish does not easily allow bare plurals or bare singulars in subject position.

The ESpanish sentence in (9a) can be true in a situation in which Jorge eats one or more apples each day. That makes the BPortuguese sentence in (9b) false. It is not possible to satisfy (9b) in situations other than those in which Jorge normally eats two or more apples for dessert.[6]

Consider also what happens when bare plurals occur under negation:[7]

(10) a. *ESpanish*
Juan no tiene *hijos*
not have children
b. *BPortuguese*
O João não tem *filhos*
not tem children
'Juan/João does not have children'

If Juan has one or more sons, (10a) is false. In the BPortuguese sentence in (10b), João is allowed to have one son, though he cannot have more than one. (10b) operates on plural individuals (i.e., it is semantically plural) and hence it negates something about pluralities, whereas (10a) operates both on singular and plural individuals (i.e., it is <u>not</u> semantically plural) and hence it is a stronger statement than (10b).

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[6] Some speakers who have the judgment reported for (9a) find that for (i) to be true, Juan has to necessarily drink more than one beer a day:

(i) *ESpanish*
Juan bebe *cervezas* todos los días
drinks beers all the days
'Juan drinks beers everyday'

Likewise, the sentences in (ii) commit the speaker to the belief that lions have more than one tail and human beings have more than one heart (cf. (8)):

(ii) *ESpanish*
a. El león tiene *rabos*
the lion has tails
b. El ser humano tiene *corazones*
the being human has hearts

I don't know why this is so, but notice that (i) and (ii) are still consistent with the claim that ESpanish bare plurals are not semantically plural – this does not entail that they are semantically singular. In section 3, I will assume that bare nouns in ESpanish denote sets of singular and plural individuals; for (i) and (ii), then, I will say that there are contexts in which, for reasons as of yet poorly understood, it is the plural beer/tail/heart individuals that are chosen from the denotation of *cervezas*/*rabos*/*corazones*.

[7] Both ESpanish and BPortuguese have gender marking on nouns. *Hijos* and *filhos* can be either masculine or gender-neutral. To avoid confusion, speakers were asked about situations in which Juan/João's only child is male.

One might argue that in sentences such as (9b) in BPortuguese it is not possible to observe the real behavior of its bare plurals because a bare singular, widely used in this language, is possible in the same context:

(11) *BPortuguese*
Jorge normalmente come *maçã* de sobremesa
'Jorge normally eats apple for dessert'

That is, this argument says that bare plurals in BPortuguese *seem* semantically plural because there are alternative means for expressing 'less than two'. If there was no such alternative, then we would be able to see bare plurals in this language behaving like their ESpanish counterparts. That matters are more complicated than this can be seen from the fact that ESpanish, whose bare singulars have a more limited distribution, allows a bare singular in (9a) as well (though (12) may be slightly odd for some speakers):

(12) *ESpanish*
(?) Jorge come *manzana* todos los días
'Jorge eats apple every day'

Likewise, both ESpanish and BPortguese allow an indefinite singular in these contexts, and yet their bare plurals behave differently:

(13) a. *ESpanish*
Jorge come *una manzana* todos los días
'Jorge eats an apple every day'
b. *BPortuguese*
Jorge normalmente come *uma maçã* de sobremesa
'Jorge normally eats an apple for dessert'

Furthermore, there are cases in which bare singulars are not allowed in BPortuguese. For example, prenominal modification with certain adjectives is not possible with bare singulars:

(14) *BPortuguese*
*Jorge normalmente come *bela maçã* de sobremesa
'Jorge normally eats beautiful apples for dessert'

Yet, for (15) to be true, it still has to be the case that Jorge eats more than one beautiful apple each time:

(15) *BPortuguese*
Jorge normalmente come *belas maçãs* de sobremesa
'Jorge normally eats beautiful apples for dessert'

So, the existence of an alternative way to express 'less than two' in a given language does not entail anything about the semantic plurality of its bare plurals. Yet, it *is* the case that a ESpanish sentence with a bare plural is not the best description of a state of affairs in which only one individual is involved. For example, if Jorge eats exactly one apple a day, (13a) is preferred over (9a). What seems to be true is that the existence of an alternative way to

express 'less than two' in a given language entails that its bare plurals will not be its speakers' choice when they want to describe a state of affairs in which only a singularity is involved—either because the bare plural is dispreferred (ESpanish) or because the bare plural is just not an option in that case (BPortuguese). Notice that what is special about the ESpanish bare plural is their "one or more" contribution (vs. the "more than one" contribution of bare plurals in BPortuguese). If there are no grounds for justifiying "one or more" (e.g., because there is only one), then ESpanish speakers will disprefer the bare plural.[8]

The generalization about semantic plurality is displayed in Table 3:

	BARE PLURALS	*UNOS*/*UNS*	*ALGUNOS*/*ALGUNS*
ESpanish	✗	✓	✓
BPortuguese	✓	✓	✓

Table 3 Semantic plurality

2.2 Positive Polarity

Unos and *algunos*, like their BPortuguese counterparts, are positive polarity items. Bare plurals in either language are not. The argument for this position is that *un*(*o*)*s* and *algun*(*o*)*s* show sensitivity to the same kinds of contexts as the English positive polarity items *some*, *somebody* and *someone* (i.e., anti-additive contexts). I first go through some of the operators which English *some* cannot take scope under and show that in these same contexts the items under study are also impossible. I then show that the kinds of repairs one can invoke to rescue English *some*, *somebody* and *someone* can also be used to rescue *un(o)s* and *algun(o)s*.

Consider first the behavior of the three ESpanish indefinites in the scope of negation, an anti-morphic (and hence anti-additive) context. Let us start with the bare plural:[9]

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[8] As a reviewer points out, matters are more complicated if numerals are given an "at least" interpretation ((ia)), since then the meaning of the indefinite singular and the bare plural become harder to tease apart. (iib) exemplifies the "exactly" interpretation:

(i) *ESpanish*
a. [In a form to request social benefits; one must have at least three children to qualify]
Question: ¿Tiene *tres hijos*? Answer: Sí
'Do you have three children?' 'Yes' (in fact, he has four)
b. [Two friends]
John: ¿*Cuántos hijos* tienes? Mary: Tres
'How many children do you have?' 'Three' (she has exactly three)

I think that it is probably right to say that the "at least" component is part of the denotation of numerals, and that the "exactly" component is an implicature. I have no reason to suspect that this implicature is not upheld in normal utterances of sentences such as (13a) (i.e., I think there has to be a reason for cancelling the "exactly" implicature). With the implicature in place, the contribution of the singular indefinite can be teased apart from that of the bare plural more easily.

[9] A function f is anti-morphic iff: (i) $f(a \wedge b) = f(a) \vee f(b)$ and (ii) $f(a \vee b) = f(a) \wedge f(b)$. Sentential negation as in (16) is anti-morphic because (i) 'John didn't sing and dance' is equivalent to

(16) *ESpanish*

A	la	reunión	no	asistieron	*profesores*
to	the	meeting	not	come	teachers

'To the meeting there didn't come teachers'

The bare plural *profesores* can appear under the scope of negation. In fact, it always takes narrow scope with respect to it: (16) can never be true if there were some teachers that came to the meeting, but that is what we would predict if the sentence allowed a reading in which *profesores* scoped above negation. Bare plurals in ESpanish are not positive polarity items.

There is a contrast between (16) and the version of it with *unos*, in (17):

(17) *ESpanish*

A la reunión no asistieron *unos profesores* (*not > *unos*)

(17) has a 'specific', wide scope reading—in order for it to be true, there has to be this particular, specific group of teachers who did not come to the meeting (in this sense, *unos profesores* in (17) is equivalent to a demonstrative like *esos profesores* 'those teachers'). In addition, it may or may not be the case that other teachers came to the meeting.[10] This is a wide scope reading; we know that it is so because *unos* cannot normally scope under negation. It is not so easy to tease apart wide and narrow scope readings of indefinites with respect to negation but consider a situation in which the common noun denotation is empty; in such a case, the narrow scope reading is true, but the wide scope reading is false:

(18) a. wide scope reading: there is a group of teachers that didn't come to the meeting (this may be because none came or because some did and some didn't; either way, a group of teachers is required to exist)
b. narrow scope reading: it is not the case that a group of teachers came to the meeting (this could be because there exist teachers but none came or because teachers have ceased to exist and hence, they couldn't have come)

Consider (19) and (20) in this light:

(19) *ESpanish*

John: A la reunión no asistieron *profesores de CCOO*
'To the meeting there didn't come teachers from the CCOO union'
Mary: ¡Claro que no! Ya no quedan profesores en CCOO. Se han ido todos a la UGT
'Of course not! There are no teachers left in the CCOO union. They have all become members of the UGT union'

'John didn't sing or John didn't dance', and (ii) 'John didn't sing or dance' is equivalent to 'John didn't sing and John didn't dance'. If an item has property (i), it is anti-multiplicative. If it has property (ii), it is anti-additive. Negation is both anti-multiplicative and anti-additive.

[10] For some speakers, including myself, (17) is anomalous. For these speakers, it seems that the generalization about *unos* is that it is normally impossible in positions c-commanded by negation or other anti-additive operators.

(20) *ESpanish*
John: A la reunión no asistieron *unos profesores de CCOO*
'To the meeting there didn't come *unos* teachers from the CCOO union'
Mary: #¡Claro que no! Ya no quedan profesores en CCOO. Se han ido todos a la UGT
'Of course not! There are no teachers left in the CCOO union. They have all become UGT members'

Whereas (19), with a bare plural, is a natural dialog, (20), with *unos*, is not. The non-existence of teachers from the CCOO union forces scope below negation, because for the wide scope reading to be true, there must exist such teachers. If narrow scope readings for *unos* are normally impossible, then the specific and only reading of *unos* in (17) must be a wide scope reading. This, I claim, is the first piece of evidence that *unos* is a positive polarity item.

Algunos behaves like *unos* in not being able to scope under negation. (21) is as unnatural as (20):[11]

(21) *ESpanish*
A la reunion no asistieron *algunos profesores de CCOO* #porque no quedan profesores en CCOO, se han ido todos a la UGT
'To the meeting there didn't come *algunos* teachers from the CCOO union because there are no teachers left in that union, they have all become UGT members'

In addition, (22) suggests more strongly than (17) that, in addition to those teachers who didn't come to the meeting, there are teachers who did come:

(22) *ESpanish*
A la reunión no asistieron *algunos profesores* (*not > *algunos*)

I come back to this property of *algunos* in section 2.3.

In what follows, I will ignore specificity—the fact that (17) points to a particular, specific group of individuals. This is mainly because I don't know how to make sense of this property or how to build it into the semantics (in fact, I am not sure that any approach to specificity really can).

English *some* is not allowed to scope under negation either, as is well known:

(23) I didn't see *some students* (*not > *some*)

Negation is of course one of the contexts that licenses negative polarity items such as the ESpanish *decir ni pío* 'to say anything':

(24) *ESpanish*

a. Pepita	no	dijo	*ni*	*pío*
	not	say	not-even	chirp

'Pepita said nothing'
b. *Pepita dijo *ni pío*

[11] For the speakers of footnote 10, (22) is grammatical, and unambiguous in allowing only a wide scope reading of *algunos*.

The behavior of the ESpanish indefinites in (exclusively) anti-additive contexts further confirms the status of *unos* and *algunos* as positive polarity items:[12]

(25) *ESpanish*

a. Nadie compró (*unos*/*algunos*) *libros* (*nobody > (*alg*)*unos*)
nobody bought books
'Nobody bought (*unos*/*algunos*) books'

b. Noelia vino a la fiesta sin (*unas*/*algunas*) *botellas*
came to the party without bottles
'Noelia came to the party without (*unas*/*algunas*) bottles' (*without > (*alg*)*unas*)

c. Teresa se negó a besar a (*unos*/*algunos*) *estudiantes*
clitic refused to kiss to students
'Teresa refused to kiss (*unos*/*algunos*) students' (*refuse > (*alg*)*unos*)

The examples in (25) with *unos* or *algunos* allow only a wide scope reading with respect to the anti-additive operator (and, as before, those with bare plurals allow only a narrow scope reading; one can again use such examples to bring the contrast with *unos* and *algunos* more clearly). In (25a) with *unos*, for example, it cannot be that nobody bought books because books have ceased to exist (imagine antique books from a very limited collection that have all been mysteriously destroyed). The sentence can be true in a situation in which there were books that were bought and there were books that weren't. Or, (25b) with *algunos* strongly suggests that Noelia brought some bottles and left others. English *some* cannot occur under the scope of these operators either (data from Szabolcsi 2004):

(26) a. Nobody called *somebody* (*nobody > *somebody*)
b. John won without help from *someone* (*without > *someone*)
c. Mary refused to kiss *somebody* (*refuse > *somebody*)

Decir ni pío is licensed in the contexts that *unos* and *algunos* cannot scope under:

(27) *ESpanish*

a. Nadie dijo ni pío/*Alguien dijo *ni pío*
'Nobody said anything'/'Somebody said something'
b. Noelia vino a la fiesta sin decir *ni pío*/*diciendo *ni pío*
'Noelia came to the party without saying anything/saying anything'
c. Teresa se negó a decir *ni pío*/*insistió en decir *ni pío*
'Teresa refused to say anything/insisted on saying anything'

BPortuguese behaves similarly to ESpanish. The BPortuguese data is in (28)-(30):

[12] For example, *refuse* is anti-additive (see footnote 9) because 'John refused to eat or drink' is equivalent to 'John refused to eat and John refused to drink'. It is not, in addition, anti-morphic because 'John refused to eat and drink' is not equivalent to 'John refused to eat or John refused to drink'. 'John refused to eat and drink' means that he refused to do both things, but 'John refused to eat or John refused to drink' can be true in a situation in which he refuses to do only one of the two and does the other.

(28) *BPortuguese*

O	João	não	convidou (*umas*/*algumas*)	*mulheres*	para	a	sua	
the		not	invited	women	for	the	his	
festa	de	aniversário/	festa	de	aniversário	dele		
party	of	birthday	party	of	birthday	of.his		

'João did not invite (*umas*/*algumas*) women to his birthday party' (*not > (*alg*)*umas*)

As before, bare plurals can appear in the scope of negation,[13] but *uns* and *alguns* cannot. *Uns*, like *unos*, seems to give rise to a specific reading in (28), which I also put aside here. The versions of (28) with *umas* and *algumas* are inappropriate in contexts in which no (relevant) women exist, as in (29):

(29) {João and his friends are all students at a male boarding school. They live in this school seven days a week, eleven months a year. Whereas some of his friends usually get out of the school on Friday nights and meet women at a local pub, João is very shy and does not know any women whatsoever. He always stays at the school during the weekends. It was his birthday last weekend and he had a party. There were no women at this party; he couldn't have invited any because there are no women in his life}
#O João não convidou *umas*/*algumas mulheres* para a sua festa de aniversário

Let us consider other anti-additive contexts:

(30) *BPortuguese*

a. João veio para a festa sem (*umas*/*algumas*) *bebidas*[14]
came to the party without drinks
'John came to the party without (*umas*/*algumas*) drinks'
(*without > (*alg*)*umas*)

b. Joana recusou-se a beijar (*uns*/*alguns*) *estudantes*
refused-clitic to kiss students
'Joanna refused to kiss (*uns*/*alguns*) students' (*refuse > (*alg*)*uns*)

As before, the argument for the positive polarity item status of *uns* and *alguns* is that they are impossible in the scope of anti-additive operators, which are the kinds of operators that license negative polarity items.

The second argument in favor of treating *un*(*o*)*s* and *algun*(*o*)*s* as positive polarity items comes from the fact that there are well known rescuers for English *some*/*somebody*/*someone* that also improve the kinds of sentences we have discussed so far. I discuss four such rescuers here.

First, positive polarity items can occur under the scope of negation if negation is understood to have a denial or contrast role (Szabolcsi 2004, vanden Wyngaerd 1999; example (31b) is attributed to Roger Schwazrschild):

(31) a. John: He found something
Mary: Wrong! He DID NOT find *something* (✓not > *something*)

[13] Focus/contrast on *mulheres* might be necessary for some speakers.
[14] Some speakers might find this sentence odd.

b. If you push the red button, you will see something, but if you press the blue button, you WON'T see *something* (✓not > *something*)

We obtain the same kind of behavior with *un*(*o*)*s* and *algun*(*o*)*s*:

(32) *ESpanish*
a. John: Pedro ha conseguido *unas*/*algunas entradas para la ópera*
'Pedro has found *unas*/*algunas* tickets for the opera'
Mary: No! Pedro NO ha conseguido *unas*/*algunas entradas para la ópera*
'Pedro has NOT found *unas*/*algunas* entradas for the opera' (✓not > (*alg*)*unas*)
b. Si levantas esta persiana verás *unos*/*algunos niños* en la calle, pero si levantas esta otra, NO verás *unos*/*algunos niños* en la calle (✓not > (*alg*)*unos*)
'If you lift this blind, you will see *unos*/*algunos* children in the street, but if you lift this other one, you will NOT see *unos*/*algunos* children in the street'

(33) *BPortuguese*
John: Pedro encontrou *umas/algumas entradas para a ópera*
'Pedro found *umas*/*algumas* tickets for the opera'
Mary: Não! Pedro NÃO encontrou *umas/algumas entradas para a ópera*
'No! Pedro DID NOT find *umas*/*algumas* tickets for the opera' (✓not > (*alg*)*umas*)

Consider for example (32a) and (33). Mary can continue her utterance in both cases as in (34):

(34) He couldn't have done that because there are no tickets on sale for the performance you are talking about. That performance is only for the press

(34) forces a narrow scope reading of the indefinites under negation. The reason for Pedro not finding tickets for the opera is that there were no tickets to be bought—recall that this is compatible only with the narrow scope reading.

Second, as noted by Kroch (1979: 121-2), English *some*/*somebody*/*someone* is fine in the *non-inmediate* scope of an anti-additive operator:

(35) a. Not every student said *something* (✓not > every > *something*)
b. John doesn't always call *someone* (✓not > always > *someone*)
c. John didn't show every boy *something* (✓not > every > *something*)

The same behavior can be observed for *un*(*o*)*s* and *algun*(*o*)*s*. Consider (36) and (37):

(36) *ESpanish*
A estas reuniones no siempre asisten *unos*/*algunos profesores*
'To these meetings there don't always come *unos*/*algunos* teachers'
(✓not > always > (*alg*)*unos*)

(37) *BPortuguese*
João nem sempre convida *umas/algumas mulheres* para suas festas
'João not always invites *umas*/*algumas* women to his parties'
(✓not > always > (*alg*)*umas*)

(37), for example, can be true in a scenario in which João has mixed parties as well as parties attended only by men. And it is possible that these latter kinds of parties are attended by men only because there are no women to invite (imagine a situation in which João and his friends attend a mixed school but some weekends all the women are gone; when João throws a party during one of those weekends, there are no women to invite). In this reading, *umas* and *algumas* scope under negation and the adverb *sempre* 'always'.

Third, as noted by Ladusaw (1980: 84-5), English *some*/*somebody*/*someone* is fine in the scope of an extra-clausal anti-additive operator:

(38) a. I don't think [$_{CP}$ that John called *someone*] (✓not > *someone*)
b. John won without [$_{IP}$ *someone* helping him] (✓without > *someone*)

Again, we observe the same behavior with *un*(*o*)*s* and *algun*(*o*)*s*:

(39) *ESpanish*
a. No creo [$_{CP}$ que a esa reunión asistieran *unos*/*algunos profesores de CCOO*]
'I don't think that to that meeting there came *unos*/*algunos* teachers from CCOO'
(✓not > (*alg*)*unos*)
b. Noelia vino a la fiesta sin [$_{IP}$ traer *unas*/*algunas botellas*] (cf. (25b))
'Noelia came to the party without bringing *unas*/*algunas* botellas'
(✓without > (*alg*)*unas*)

(40) *BPortuguese*
João veio para a festa sem [$_{IP}$ trazer *umas*/*algumas bebidas*] (cf. (30a))
'João came to the party without bringing *umas*/*algumas* bottles'
(✓without > (*alg*)*umas*)

One can see this with (41) and (42), for example, which work better than (20) and (21), respectively:

(41) *ESpanish*
John: No creo que a la reunión asistieran *unos profesores de CCOO*
'I don't think that to the meeting there came *unos* teachers from the CCOO union'
Mary: ¡Claro que no lo crees! Ya no quedan profesores en CCOO. Se han ido todos a la UGT
'Of course you don't think so! There are no teachers left in the CCOO union. They have all become UGT members'

(42) *ESpanish*
No creo que a la reunion asistieran *algunos profesores de CCOO* porque no quedan profesores en CCOO, se han ido todos a la UGT
'I don't think that to the meeting there came *algunos* teachers from the CCOO union because there are no teachers left in that union, they have all become UGT members'

Fourth, as noted already by Jespersen (1909-1949) and discussed in Baker (1970) and Szabolcsi (2004), among others, an additional operator rescues the illicit configuration [not > *some*/*somebody*/*someone*] (example (43d) is from Anastasia Giannakidou):

(43) a. I don't think that John didn't call *someone* (✓not > not > *someone*)
b. Nobody thinks that John didn't call *someone* (✓ nobody > not > *someone*)
c. I am surprised that John didn't call *someone* (✓surprise > not > *someone*)
d. John cannot call *someone* (✓ can > not > *someone*)

The same operators rescue otherwise impossible combinations with *un*(*o*)*s* and *algun*(*o*)*s*:

(44) *ESpanish*
a. No creo que Juan no invitara a *unas*/*algunas mujeres*
'I don't think Juan didn't invite *unas*/*algunas* women' (✓not > not > (*alg*)*unas*)
b. Nadie cree que Juan no invitara a *unas*/*algunas mujeres*
'Nobody think Juan didn't invite *unas*/*algunas* women' (✓nobody > not > (*alg*)*unas*)
c. Me sorprende que Juan no invitara a *unas*/*algunas mujeres*
'I am surprised that Juan didn't invite *unas*/*algunas* women'
(✓surprise > not > (*alg*)*unas*)

(45) *BPortuguese*
Eu não acredito [$_{CP}$ que o João não convidou *umas*/*algumas mulheres* para festa]
'I don't believe that João didn't invite *umas*/*algumas* women to the party'
(✓not > not > (*alg*)*umas*)

(45), for example, means that I don't believe that João invited no women to the party; that is, I don't believe the narrow scope reading of *umas*/*algumas* with respect to negation.

The generalization about positive polarity is displayed in Table 4:

	BARE PLURALS	*UNOS*/*UNS*	*ALGUNOS*/*ALGUNS*
ESpanish	×	✓	✓
BPortuguese	×	✓	✓

Table 4 Positive polarity

2.3 Partitivity

Algunos and *alguns* induce a partitivity effect, *unos*, *uns* and bare plurals in the two languages do not. Consider (46):

(46) *ESpanish*
a. *Algunos alumnos míos de historia* vinieron ayer a verme al despacho
b. *Unos alumnos míos de historia* vinieron ayer a verme al despacho
c. *Alumnos míos de historia* vinieron ayer a verme al despacho
'(*Algunos*/*unos*) history students of mine came to the office to see me yesterday'

(47) *BPortuguese*
a. *Alguns alunos meus de História* vieram me ver ontem no meu gabinete
b. *Uns alunos meus de História* vieram me ver ontem no meu gabinete
'*Alguns*/*uns* history students of mine came to see me yesterday to the office'
c. Durante todo o dia de ontem *alunos meus de História* vieram me ver no meu gabinete
'All of yesterday history students of mine came to see me to the office'

Consider a partitive scenario in which I have a big history class, with thirty-five students. Five of them came to my office yesterday. And consider a non-partitive scenario in which I have a very small history class, with only five students. It is those five students who came to my office yesterday. (46a)/(47a), with *algun*(*o*)*s*, is most appropriate in the partitive scenario: there are history students who didn't come, in addition to those who came. (46b)/(47b), with *un*(*o*)*s*, and (46c)/(47c), with a bare plural, do not discriminate between the two scenarios. Given (46b)/(47b) and (46c)/(47c), either scenario could be the case. Speakers often report this by saying that, in sentences such as (46b)/(47b) and (46c)/(47c), whether there are other history students of mine who didn't come "is somehow not important".[15]

A few brief notes are in order before continuing. First, it is worth pointing out that Laca (1996: 248-251) claims that bare plurals in ESpanish induce a partitive effect. I think that the generalization provided here is the correct one, though, and that it is subtly different from what Laca claims: it is not that bare plurals are partitive, it is that they do not discriminate between partitive and non-partitive scenarios. She uses examples such as (48) to support her claim:

(48) *ESpanish*
a. La Mafia soborna a los políticos
the Mafia bribes to the politicians
'The Mafia bribes the politicians'
b. La Mafia soborna políticos
'The Mafia bribes politicians'

(48a) is claimed not to be partitive, and *los políticos* is claimed to refer to the totality of politicians. (48b) is claimed to be partitive and to necessarily refer to a subgroup of politicians. However, notice that (48b) is not false if the Mafia has actually managed to bribe all politicians.[16]

Second, as pointed out by Gutiérrez-Rexach (1999a,b; 2001) and a reviewer, both *algun*(*o*)*s* and *un*(*o*)*s* (not bare plurals) can be followed by *o*(*u*)*tros*, as shown in (49) and (50):

[15] Another aspect of the meaning of *algun*(*o*)*s* (and possibly *un*(*o*)*s*) is that a sentence of the form (*alg*)*un*(*o*)*s* N V suggests that not many N V. The implicature induced by *algun*(*o*)*s* is different from this "not many" component in that, if it is true that some teachers came and other teachers didn't come, it can still be the case that lots of teachers came. This would make something like *not many professors came* false. I leave further investigation of this additional meaning component for another paper.
[16] In fact, it is probably not even the case that (48a) must refer to the totality of politicians.

(49) *ESpanish*
Unos/*algunos alumnos* vinieron a verme, otros no
'*Unos*/*algunos* students came to see me, others didn't'

(50) *BPortuguese*
Uns/*alguns alunos meus* vieram me ver, outros ficaram em casa
'*Uns*/*alguns* students of mine came to see me, others stayed at home'

Shouldn't this be taken as evidence that *un*(*o*)*s* also induces a partitive effect? No, for two reasons. The first reason is that the *o*(*u*)*tros* continuation is not incompatible with the lack of partitivity I claim *un*(*o*)*s* has; the idea is that *un*(*o*)*s* does not make any claims regarding whether there were other students who came to see me or not. The second reason, which applies at least to ESpanish is that, as noted by Gutiérrez-Rexach, *unos...otros* has its own special set of properties anyway, different from *unos*, so it is possible that the fact that it patterns like *algunos...otros* here does not entail that *unos* and *algunos* behave alike with respect to partitivity.

The final and third note is that a reviewer and Gutiérrez-Rexach (2001: 118) point out that whereas *algunos* is possible in existential constructions, overt partitives are not:

(51) *ESpanish*
a. Hay *algunos libros* encima de la mesa
'There are *algunos* libros on the table'

b. *Hay *algunos*	*de*	*los*	*libros*	encima	de	la	mesa
there.are	of	the	books	on	of	the	table

Shouldn't this be taken as evidence against the claim that *algunos* induces a partititve effect? Not necessarily, I think. Perhaps what is wrong with (51b) is the presence of the definite article:

(52) *ESpanish*
*Hay *los libros* encima de la mesa

Now, we consider the issue of the status of the "not all" component of *algun*(*o*)*s*. Is it an implicature, an entailment, or a presupposition? It is neither an entailment nor a presupposition, because presuppositions ((53a)) and entailments ((53b)) cannot be cancelled. (53) contrasts with (54) and (55):

(53) a. Both girls have three A's. #In fact, there is only one girl
b. Both girls have three A's. #In fact, Mary, one of the girls, has two A's.

(54) *ESpanish*
Algunos estudiantes vinieron ayer a verme. De hecho, vinieron todos
'*Algunos* students came to see me yesterday. In fact, they all came'

(55) *BPortuguese*
Alguns alunos meus de História vierem me ver ontem no meu gabinete. Na verdade, todos vieram
'*Alguns* history students of mine came to see me yesterday to the office. In fact, they all came'

(53b) shows that entailments cannot be cancelled, (53a) shows that presuppositions cannot be cancelled either. From (54) and (55), it would seem that the "not all" component of *algun*(*o*)*s* can be cancelled and is therefore an implicature,

Unfortunately, we cannot use (54) and (55) to identify the "not all" meaning component of *algun*(*o*)*s* positively as an implicature, since the test does not discriminate between *algun*(*o*)*s* on the one hand and *un*(*o*)*s* and bare plurals on the other. The equivalent of *In fact, they all came* can be a follow up to any of the sentences in (46) and (47). I think that the reason why this is so is that follow ups with *In fact...* can be used in two different ways. On the one hand, they can be the usual markers of implicature denial, as in (56). On the other, they can be used to add information not present in any form in the previous sentence, as in (57):

(56) Both girls have three A's. In fact, Mary has four.
(57) By the time the DJ arrived all the guests were gone. In fact, he didn't even bring the right kind of music, so it wouldn't have helped if he had arrived on time.

So the fact that it is possible to follow up a sentence with *unos* like (46b) with *In fact, they all came* does not constitute evidence that there is a "not all" component with *unos*; the follow up could simply add information that was not there before. By the same token, (54) and (55) do not identify a "not all" component for *algun*(*o*)*s*. This fact is evidence for a weaker claim, namely, that that component, if it is there, cannot be an entailment or a presupposition. As suggested by a reviewer, however, cancellation via meta-linguistic negation gives better results, as shown for example in (58). Capitalization indicates stress:

(58) *ESpanish*
a. No están *ALGUNOS libros* encima de la mesa, están TODOS
not are books on of the table are all
'It's not that there are *ALGUNOS* books on the table, it's that they are ALL there'
b. *No están *UNOS libros* encima de la mesa, están TODOS

(58a) shows that it is possible to cancel the "not all" component of *algunos*, (58b) shows that this is not possible with *unos*. From this I conclude that this meaning component of *algunos* is an implicature, and that that meaning component is absent with *unos* (we cannot test with bare plurals, since we need an overt determiner to focus in order to run the test). The same data obtains for BPortuguese:

(59) *BPortuguese*
a. Não é verdade que *ALGUNS livros* estão encima da mesa, estão TODOS
'It's not true that there are *ALGUNS* books on the table, it's that they are ALL there'
b. ?? Não é verdade que *UNS livros* estão encima da mesa, estão TODOS

The results of this subsection are summarized in Table 5:

	BARE PLURALS	*UNOS*/*UNS*	*ALGUNOS*/*ALGUNS*
ESpanish	×	×	✓
BPortuguese	×	×	✓

Table 5 Partitivity

2.4 Event distribution

This is the property that is the most problematic from the perspective of the logic that underlies the analysis in this paper. *Algunos*, *alguns*, *uns* and ESpanish bare plurals event distribute, *unos* and BPortuguese bare plurals do not. Given our logic, the following questions arise. First, if as items become bigger in their form they also become more loaded semantically, why can ESpanish bare plurals event distribute, but *unos* cannot? *Unos* certainly counts as bigger in its form than the bare plural. And second, if *unos* and *uns* spell out the same level of decomposition, why can the latter, but not the former, event distribute? We come back to these questions in section 3.1.

Consider first the ESpanish sentences in (60):

(60) (*Algunos*/*unos*) *estudiantes* *míos de historia* vinieron ayer
students mine of history came yesterday
al despacho
to-the office
'(*Algunos*/*unos*) history students of mine came to the office yesterday

And consider two kinds of scenario. In the event distribution scenario, the students who came to the office yesterday did so one by one. In the non-event-distribution scenario, the students who came to the office yesterday arrived together. The sentence with *algunos* is possible in both scenarios, the sentence with *unos* is impossible in the event distribution scenario, and the sentence with the bare plural is possible in both scenarios. Gutiérrez-Rexach (2001, 2004) uses the *entre todos* 'together'/*cada uno* 'each' test to confirm these intuitions, though the test does not apply to bare plurals:

(61) a. *Algunos estudiantes míos de historia* se comieron una tarta
clitic ate a pie
entre todos/ cada uno
among all each one
b. *Unos estudiantes míos de historia* se comieron una tarta entre todos/*cada uno
c. **Estudiantes míos de historia* se comieron una tarta entre todos/cada uno
'(*Algunos*/*unos*) students from my history class ate a pie together/each'
(based on Gutiérrez-Rexach 2001: 133; 2004: 430)

(61a) and (61b) contrast in the expected direction: *entre todos* is possible with both *unos* and *algunos* because they both allow non-event-distribution readings, but *cada uno* is possible only with *algunos* because only *algunos* allows event distribution readings. The *todos juntos* 'all together'/*uno a uno* 'one by one' test does work with bare plurals:

(62) a. *Algunos estudiantes míos de historia* vinieron todos juntos/uno a uno ayer al despacho
b. *Unos estudiantes míos de historia* vinieron todos juntos/*uno a uno ayer al despacho
c. *Estudiantes míos de historia* vinieron todos juntos/uno a uno ayer al despacho

Before going on to the BPortuguese data, I would like to briefly discuss distributivity in the context of Gutiérrez-Rexach's (2001, 2004) and Villalta's (1994)[17] claim that *unos* can never combine with distributive predicates such as *ponerse los pantalones* 'put one's pants on' (cf. Martí 2006). This claim is based on examples such as (63):

(63) **Unos chicos* se pusieron los pantalones
boys clitic put the pants
'*Unos* boys put their pants on'

The right generalization concerning *unos* and distributivity, however, has to do with *event* distribution, as discussed above, and not with whether the predicate is distributive or collective. Consider (64):

(64) **Unos chicos* se reunieron
clitic met
'*Unos* boys met'

Whether the predicate is distributive, such as *ponerse los pantalones* 'to put one's pants on' or collective, such as *reunirse* 'to meet, to get together' seems to be irrelevant for *unos*; *unos* is ungrammatical in both cases. The syntactic position of the indefinite noun phrase seems to be relevant; compare (63) with (65), where the order subject-verb has been reversed and the sentence is grammatical (or, at the very least, better):

(65) (?) Se pusieron *unos chicos* los pantalones
'*Unos* boys put their pants on'

Adding material to the sentence also results in improvement:

(66) a. *Unos chicos* se pusieron los pantalones al llegar al gimnasio
at arrive to-the gym
'*Unos* boys put their pants on as soon as they arrived to the gym'
b. *Unos chicos* se reunieron en la oficina
in the office
'*Unos* boys met in the office'

At the moment I don't know why *unos* behaves in this way (and *algunos* doesn't). But the important point for us is that our semantics does not need to deal with the distributivity of predicates; the right property seems to be event distribution.

(67) and (68) exemplify event distributivity with BPortuguese:

[17] Which I haven't seen.

(67) *Alguns*/*uns* *meninos* *da* *minha* *aula de* *História* vieram
boys from my class of history came
me ver no meu gabinete ontem
clitic see to-the my office yesterday
'*Alguns*/*uns* boys from my history class came to see me to the office yesterday'

(68) Durante todo o dia de ontem *alunos meus de História*
during all the day of yesterday
vieram me ver no meu gabinete
'All of yesterday history students of mine came to see me to the office'

For the bare plural, it was necessary to add *durante todo o dia de ontem* 'all of yesterday, throughout yesterday', as in (68). The sentence with *alguns* is possible in both the event distribution and the non-event-distribution scenarios, the sentence with *uns* is also possible in both scenarios, and the sentence with the bare plural is impossible in the event distribution scenario (even though there were students popping by all day long, they have to have come in groups for (68) to be true; see section 3.3 for more on this).[18] We can use the same test we used above for ESpanish to confirm these intuitions:

(69) *Alguns*/*uns meninos da minha aula de História* comeram uma torta juntos/cada um
'*Alguns*/*uns* students from my history class ate a pie together/each'

The summary of these results is displayed in Table 6:

	BARE PLURALS	*UNOS*/*UNS*	*ALGUNOS*/*ALGUNS*
ESpanish	✓	×	✓
BPortuguese	×	✓	✓

Table 6 Event distribution

3 A decompositional analysis for plural indefinites

In this section I present a decompositional analysis of the six indefinites described in section 2.

There is good reason to suppose that indefinites should be analyzed in a decompositional fashion: in language after language, it is possible to see, more or less transparently, that indefinites are internally built up of pieces, which are sometimes other, simpler indefinites, and other times (very often, in fact) interrogative words. The data in (70), from Haspelmath (1997), is a representative sample (I have not attempted a translation of all forms):

[18] A reviewer reports that for at least some BPortuguese speakers, bare plurals can event distribute. My hypothesis for these speakers would be that their bare plurals are also not semantically plural. The semantic number of bare plurals and their (in)ability to event distribute are linked in the analysis in section 3.

(70) a. German (see also Dutch):

ein 'some', *irgend-ein*, *kein* 'no'	(determiner)
jemand 'somebody', *irgend-jemand*, *niemand* 'nobody'	(person)

b. Turkish:

bir 'some', *hiçbir* 'no'	(determiner)
biri 'somebody', *hiçbiri* 'nobody'	(person)
bir sey 'something', *hiç bir sey* 'nothing'	(thing)

c. Irish:

duine 'someone', *aon duine*, *duine ar bith*	(person)
rud 'something', *aon rud*, *rud ar bith*	(thing)

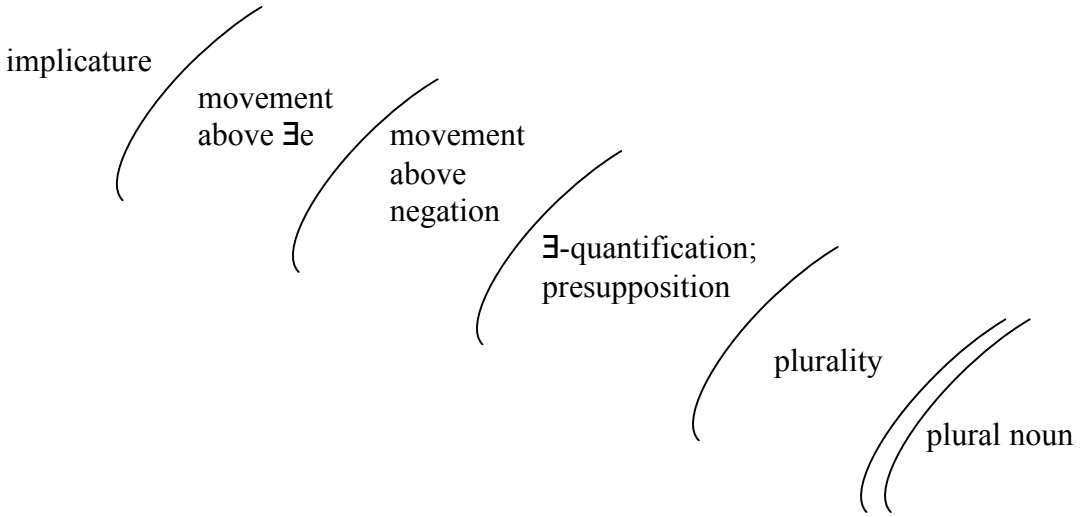
d. Swahili

mtu 'someone', *mtu ye yote*	(person)
mahali 'some place', *mahali po pote*	(place)
wakati 'some time', *wakati wo wote*	(time)

For example, in German ((70a)), there is an indefinite, *ein* (loosely translated as 'some') that is used as a building block for other indefinites, such as *irgend-ein* and *kein*. This pattern is similar for *jemand* 'somebody' and *etwas* 'something'. In Turkish ((70b)), *hiç* can be added to simpler indefinites to add a negative meaning. I do not discuss here the other pervasive pattern, which builds indefinites with the help of interrogative building blocks, but the fact that it exists is further support for a decompositional analysis of indefinites. In other words, the argument is that a non-decompositional theory of indefinites would have it that the pervasive patterns we observe cross-linguistically, exemplified in (70), are merely accidental.

The main proposal in this paper is the (plural) indefinite determiner hierarchy in (71):

(71)



At the bottom of the hierarchy we find bare plural nouns. All that is specified at this level is whether plural nouns are semantically plural or not. The reason why this happens at this level is the presence of the plural marker *–s* on nouns. There are several layers of composition on top of the noun; these are the layers of composition targeted by the different indefinite determiners we have looked at previously. To account for the properties from section 2, I will say that ESpanish *unos* spells out plurality (or, rather, its *–s* does), ∃-quantification+presupposition, and movement above negation. BPortuguese *uns* spells out that and in addition movement above ∃e (i.e., existential binding of event variables; this

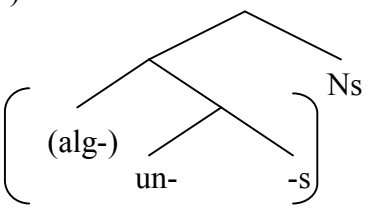
mechanism is part of my analysis of event distribution; see below). *Algun*(*o*)*s* spells out all of these and in addition implicature; i.e., *algun*(*o*)*s* spells out the complete hierarchy and is thus the most semantically loaded indefinite so far.[19]

The claim is that languages build indefinites by using these ingredients, in this order. Thus, the proposal predicts, for example, that no language will have an indefinite that introduces an implicature (e.g., the partitive implicature) without also introducing ∃-quantification and presupposition and being able to move above negation and ∃e. I.e., in the languages under investigation, *algun*(*o*)*s* could not have been insensitive to polarity and it could not lack event distribution readings. Another prediction is that bare plurals should introduce no implicature and no presupposition.

I take (71) as a working hypothesis for the time being, because obviously there is much work that remains to be done. For example, it is not yet clear how interrogative-based indefinites fit into the picture. Also, plurality cannot be an essential part of the hierarchy, because there are, of course, singular indefinites in the languages of the world, ESpanish and BPortuguese being no exception. Also concerning plurality, it is somewhat puzzling that plurality appears twice in the hierarchy, once for nouns and once for the quantifiers; the question to investigate is whether it would be possible to have plurality occur only once. Another issue to investigate is whether ∃-quantification and presupposition constitute their own independent layers.

I translate (71) into the syntax in (72) (optional material is in parenthesis; I ignore gender markers here):

(72)



The smallest piece in (72) is the bare plural noun.[20] To this plural noun it is possible to add *un*(*o*)*s*, and it is possible to add *alg*- to this The plural marker on the determiner is assumed to

[19] It seems that, whereas *algunos* is context sensitive (Martí 2006), *alguns* is not. I do not include the data that shows this here, but the analysis to be pursued is clear: whereas *algunos* spans implicature and context dependence, which can be added above implicature, *alguns* spans only up to implicature.

[20] A reviewer reminds me that there are claims in the literature that there is more than this to the syntax of bare plurals in Spanish. Contreras (1996: 150-1), for example, argues that, if there is hidden, partitive structure to bare nouns, one can explain (i) and (ii) together (in terms of intolerance to partitvity with verbs such as *terminar* or *odiar*):

(i)	a. *Juan	terminó	*café*
		finished	coffee
	b. *Juan	odia	*carne*
		hates	meat
(ii)	a. *Juan	terminó *algo*	*de café*
		finished some	of coffee

make its own contribution to the syntax and the semantics. In this section I provide the semantics for the pieces postulated in (72).

The section is organized as follows. In 3.1, I discuss semantic plurality and partitivity. In 3.2, I discuss polarity. In 3.3, I discuss event distribution and address the problems that this phenomenon poses for the indefinite hierarchy.

3.1 Semantic plurality and partitivity

We start with the semantics of plural nouns, since this is the first building block in our hierarchy. I assume the classification of individuals in Link (1983), where individuals can be atomic/singular or molecular/plural. The distinction between these two kinds of individuals is illustrated in (73):

(73) a. atomic/singular individuals: John, Peter, Sue, Steven...
b. molecular/plural individuals: John+Peter, Sue+John, Steven+Sue+John...

In other words, the individual John is an atomic or singular individual, and is not molecular or plural. On the other hand, the individual John+Peter is a molecular or plural individual, not an atomic or singular one. Molecular/plural individuals have atomic/singular subparts.

Following Müller (2002), I adopt the following denotation for BPortuguese bare plural nouns:

(74) [[**meninos**]] = {x: x is a molecular child individual}

Thus, *meninos* denotes a set of molecular individuals, which makes it semantically plural.[21] For ESpanish bare plural nouns, the semantics is slightly different:

(75) [[**niños**]] = {x: x is a child individual}

Bare plurals cannot be semantically plural in this language if we are to account for the differences reported in section 2.1. Hence, bare plurals are not semantically plural in this language, since (75) contains both molecules and atoms. The treatment in (74) and (75) suggests that the relationship between plural morphology and plural semantic import is weaker than it would seem at first sight. Plural morphology entails the presence of molecular individuals in the denotation of the item it attaches to. Other potential roles for plural

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b. *Juan odia *mucha carne*
hates a.lot.of meat

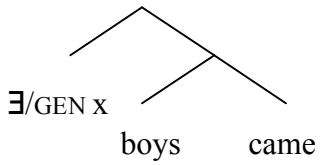
However, I have argued that bare plurals in ESpanish are not partitive. The strongest argument in Masullo (1996) seems to be that bare nouns in Spanish are not DPs, which is compatible with my proposal.

[21] In Müller (2002), the singular *menino* is not specified for number and contains both atomic and molecular individuals in its denotation. The plural marker *–s* on BPortuguese nouns is then a function that takes singular nouns as arguments and returns plural nouns. I ignore bare singular nouns in the analysis, since proposing a semantics for them raises issues that are too complex to address here.

morphology are not tenable: e.g., it is not true that plural morphology entails the absence of singular inviduals (i.e., it is not true that plural morphology entails semantic plurality).

I assume, like many others, that there is a default process of existential binding that takes care of the unsaturated variable provided by bare plurals. In generic sentences, we get binding by a generic operator instead of existential binding. Additionally, I assume that there is a rule of semantic composition that allows verbal predicates to combine with bare plurals in argument position:

(76)



I follow Chung and Ladusaw (2004) in that that operation is a generalized version of Predicate Modification, Restriction.

Because nothing else is built into their lexical semantics, ESPanish and BPortuguese bare plurals do not induce a partitive effect. This semantics allows sentences with bare plurals in the two languages to be true in both partitive and non-partitive scenarios, as desired. Also, they are not positive polarity items, since sensitivity to polarity is not built in. The fact that ESpanish bare plurals, and not their BPortuguese counterparts, give rise to event distribution readings is dealt with in section 3.3, but it is important to say now that this difference will be linked to the different lexical semantics proposed above. Notice that, given the indefinite hierarchy in (71), the explanation for this fact cannot be that ESpanish bare plurals spell out up to the layer of movement above ∃e, because that would entail that they have also an additional set of properties that they, in fact, don't have.

Unos spells out up to the layer of movement above negation, and *uns* spells out up to the next layer. We will see in more detail in section 3.2 how this allows *un*(*o*)*s* to circumvent their sensitivity to negation, giving them obligatory wide scope over it. *Unos* and *uns* have the same lexical semantics, given in (77): they are generalized existential quantifiers that manipulate only molecular individuals in their first argument. The plural *–s* on both of them is a function that takes quantifiers as its argument and returns quantifiers that operate on molecular individuals only ((79)):[22]

(77) [[[**uno**]-**s**]] = [[[**un**]-**s**]] = $\lambda P_{<et>}.\lambda Q_{<et>}.\exists x[Mol(x) \& P(x) \& Q(x)]$

(78) [[**un(o)**]] = $\lambda P_{<et>}.\lambda Q_{<et>}.\exists x[P(x) \& Q(x)]$

(79) [[**-s**]] = $\lambda R_{<et,<et,t>>}.\lambda P_{<et>}.\lambda Q_{<et>}.R(\lambda y.Mol(y) \& P(y))(Q)$[23]

I postpone discussion of how sensitivity to polarity is to be added to (77) until section 3.2. So far, we obtain the following result for *unos niños* and *uns meninos*:

[22] A distributivitty operator can be applied to the second argument of the relation in (77) to allow it to be predicated of each of the parts of the molecular individual it takes as its argument.

[23] Since plural morphology can also appear on nouns and is interpreted, at least in these languages, it follows that there have to be different denotations for it within the same language: one for the plural morpheme of quantifiers, another one for the plural morpheme of nouns. This is, of course, problematic, but is too difficult to solve this problem at this time.

(80) [[**unos niños**]] = [[**uns meninos**]] =
$\lambda Q_{<et>}.\exists x[Mol(x) \& [[\textbf{niños}/\textbf{meninos}]](x) \& Q(x)]$
= $\lambda Q_{<et>}.\exists x$ x is a molecular child individual & Q(x)

When *unos* combines with a noun like *niños*, the plural marker on *unos* allows *unos* to pick the molecular individuals in the denotation of *niños* and existentially quantify over them. BPortuguese bare nouns already provide the molecules, so the restriction to molecular individuals introduced by *uns* is vacuous; however, this strategy allows us to provide the same denotation for *unos* and *uns*.

Thus, both *unos* phrases and *uns* phrases are semantically plural, have existential import, are not generic (because the variable provided by the noun already gets bound existentially by *unos*/*uns*) and lack a partitive effect (because no partitive effect is built in). Notice how the lack of a partitive effect is achieved. The (simplified) truth-conditions that this analysis gives rise to for the (ESpanish and BPortuguese versions of the) sentence in (81) are as in (82):

(81) There arrived *unos*/*uns* children to the party
(82) [[**(81)**]] = 1 iff there is a molecular child individual x and x arrived to the party

All that (82) requires is that there exist a molecular individual who come to the party. It is left completely open whether there are other individuals who came to the party; (82) is true independently of whether that is the case. Hence, there is no partitive effect.

Algun(*o*)*s* spells out the complete indefinite hierarchy. *Alg*- is the part that spells out the implicature layer. The same denotation is provided for *alg*- in both languages:

(83) [[**alg**-]] = $\lambda R_{<et,<et,t>>.>>}.\lambda P_{<et>}.\lambda Q_{<et>}.R(P)(Q)$
Implicature: R(P)({x: Q(x) = 0})

Alg- attaches to *un*(*o*)*s* and hence inherits all of its properties. In addition, it adds an implicature. As a result, we obtain (84) for *algunos niños* and *alguns meninos*:

(84) [[**algunos niños**]] = [[**alguns meninos**]] =
$\lambda Q_{<et>}.\exists x[Mol(x) \& [[\textbf{niños}/\textbf{meninos}]](x) \& Q(x)]$
Implicature: $\exists x$ x is a molecular child individual & Q(x) = 0
= $\lambda Q_{<et>}.\exists x$ x is a molecular child individual & Q(x)
Implicature: $\exists x$ x is a molecular child individual & Q(x) = 0

That is, *alg*- has, in fact, no truth-conditional content. It simply provides two arguments to R, i.e., to *un*(*o*)*s*, which it takes as its argument. However, *alg*- induces the implicature that R(P)({x: Q(x)=0}. This is how we build in the partitive effect: there is an implicature that there are P individuals who are not in Q. In the case of a BPortuguese sentence like (85) (=(47a)), we obtain the (simplified) (86): [24, 25]

[24] It may be that the implicature as formulated here is too strong: it requires there to be molecular individuals for whom property Q does not hold, but it may be that in actual fact, the existence of one atomic individual without property Q is enough. I do not build in this weaker implicature here, but changing (83) so that it takes this into account is trivial.

(85) *Alguns alunos meus de História* vieram me ver ontem no meu gabinete (=(47a))
'*Alguns* history students of mine came to see me yesterday to the office'

(86) [[**(85)**]] = 1 iff there is a molecular individual x such that x is a history student of mine and x came to see me yesterday to the office
Implicature: there is a molecular individual x such that x is a history student of mine and x didn't come to see me yesterday to the office

The truth-conditions we obtain are like those we obtain for *uns*, but there is the added partitive implicature. Other properties of *algun*(*o*)*s* (∃-quantification, plurality, etc.) are inherited from *un*(*o*)*s*.

Notice that we want to associate the implicature with *alg*- in order to draw the difference between *algun*(*o*)*s* on the one hand (it has the implicature and it contains *alg*-) and *un*(*o*)*s* and bare plurals on the other (they don't have the implicature and they don't contain *alg*-). It may be that the implicature is to be derived by postulating that *algunos* is on a scale with quantifiers such as *many* and *all*. Or it may be that this is an implicature that is computed à la Chierchia (2004) (i.e., the computation of implicatures interspersed with the computation of truth-conditional meaning). I do not attempt to derive the implicature here; what is important for the logic behind the analysis is that, whatever its derivation, it must ultimately be associated with *alg*-.

3.2 Positive polarity

Recent treatments of polarity sensitivity have analyzed the phenomenon as presupposition failure (see Nilsen's (2004) analysis of positive polarity items like *possibly* and Chierchia's (2004) and Kadmon and Landman's (1993) analysis of negative polarity

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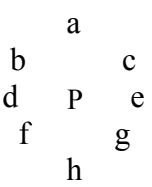
[25] A reviewer correctly points out that a sentence like (i) cannot be used in a situation in which there are only eight students and they form a circle around the teacher as in (ii):

(i) *ESpanish*
Algunos estudiantes formaron un círculo en torno al profesor
'*Algunos* students formed a circle around the teacher'

(ii)


Yet, the account in the text predicts that the sentence should be appropriate in this scenario, since there are many groups of students that do not form a circle around the teacher (a+b, h+a, h+g+e, etc.). I speculate that the reason for the inappropriateness of (i) may have to do with the fact that the same students are "counted" in the group that surrounds the teachers and in the groups that do not. That is, it may be that there is a restriction that, e.g., student a cannot be counted both as a member of the set of students who formed a circle around the teacher and as a member of a set of students (a+b, h+a, etc.) that did not.

items like *any*). In the same spirit, I propose to add the following presupposition to the denotation of *un*(*o*)*s* in (77):

(87) [[[**uno**]-**s**]] = [[[**un**]-**s**]] =
$\lambda P_{<et>}.\lambda Q_{<et>}.\exists x[Mol(x) \& P(x) \& Q(x)]$
Presupposition: $\forall G\ [G \subseteq P \rightarrow \exists x[G(x) \& Q(x)]] \rightarrow_{asymm} \exists x[P(x) \& Q(x)]$

What that presupposition tells us to do is to check certain entailments of the sentence. Suppose we had the (ESpanish/BPortuguese version of the) sentence in (88), which, notice, does not contain negation:

(88) there came *un*(*o*)*s* teachers to the meeting (recall (16), (28))
a. $\forall G\ [G \subseteq [[\textbf{teachers}]] \rightarrow \exists x[G(x) \& [[\textbf{come\_to\_the\_meeting}]](x)]] \rightarrow$
$\exists x[\ [[\textbf{teachers}]](x) \& [[\textbf{come\_to\_the\_meeting}]]\ (x)]$
≈ all subsets of [[teachers]] contain individuals that came to the meeting
→ [[teachers]] contains individuals that came to the meeting
b. $\forall G\ [G \subseteq [[\textbf{teachers}]] \rightarrow \exists x[G(x) \& [[\textbf{come\_to\_the\_meeting}]](x)]] \leftarrow$
$\exists x[\ [[\textbf{teachers}]](x) \& [[\textbf{come\_to\_the\_meeting}]]\ (x)]$
≈ all subsets of [[teachers]] contain individuals that came to the meeting
$\not\leftarrow$ [[teachers]] contains individuals that came to the meeting

(87) says that we have to look at all subsets of teachers. In (88a) we check the entailment in one direction: if all subsets of teachers contain individuals that came to the meeting, then it should follow that the big set of teachers also contain individuals that came to the meeting. This entailment indeed follows. (87) says more: in order to fully comply with the presupposition, it must be the case that the reverse entailment does NOT hold. We check the reverse entailment in (88b). If the big set of teachers contains individuals that came to the meeting, it does NOT follow that all subsets of teachers also contain such individuals. You could choose a subset in which all of the members are non-comers. So the presuppositions of a sentence with *uns* and without negation are met.

If we put in negation, the presupposition that the entailment be asymmetric is no longer met. (89) contains *un*(*o*)*s* and negation; negation scopes above the *un*(*o*)*s* phrase:

(89) there didn't come *un*(*o*)*s* teachers to the meeting (recall (16), (28))
a. $\forall G\ [G \subseteq [[\textbf{teachers}]] \rightarrow \neg\exists x[G(x) \& [[\textbf{come\_to\_the\_meeting}]](x)]] \rightarrow$
$\neg\exists x[\ [[\textbf{teachers}]](x) \& [[\textbf{come\_to\_the\_meeting}]]\ (x)]$
≈ all subsets of [[teachers]] lack individuals that came to the meeting
→ [[teachers]] lacks individuals that came to the meeting
b. $\forall G\ [G \subseteq [[\textbf{teachers}]] \rightarrow \neg\exists x[G(x) \& [[\textbf{come\_to\_the\_meeting}]](x)]] \leftarrow$
$\neg\exists x[\ [[\textbf{teachers}]](x) \& [[\textbf{come\_to\_the\_meeting}]]\ (x)]$
≈ all subsets of [[teachers]] lack individuals that came to the meeting
← [[teachers]] lacks individuals that came to the meeting

(89a) checks the entailment in one direction: if all the subsets of teachers lack individuals that came to the meeting, it follows that the big set of teachers lacks individuals that came to the meeting ("lack" being the negation of "contain"). (89b) checks the reverse entailment, which also holds in this case but shouldn't: if the big set of teachers lacks individuals who came to

the meeting, all subsets of teachers will also lack such individuals. The presuppositions of *un*(*o*)*s* are not met under negation; the polarity effect is thus derived as a presupposition failure. Because *algun*(*o*)*s* contains a positive polarity inside of it, it will also be a positive polarity item.

The harmful effects of negation are there as long as *algun*(*o*)*s* and *un*(*o*)*s* stay in the scope of negation. However, they don't have to stay there. All of these items spell out up to least the movement above negation layer of the indefinite hierarchy, so they all have the property that they can move above negation. We thus explain why, in normal circumstances, *algun*(*o*)*s* and *un*(*o*)*s* only give rise to wide scope readings with respect to negation.

This proposal is only partial. On the one hand, it only addresses the interaction of positive polarity items with negation, and not with anti-additive operators generally. On the other hand, it doesn't explain why narrow scope with respect to anti-additive operators is possible in the kinds of "rescue" contexts discussed in section 2.2. Addressing both shortcomings goes beyond the scope of this paper. For some insights into the second one, see Szabolcsi (2004).

The important feature of the presuppositional analysis is that sensitivity to anti-additive operators is built in as an additional requirement. Given the logic of the indefinite hierarchy, it could not be that sensitivity to positive polarity consists in lacking something. This is all that the logic requires; if the particular analysis of polarity proposed here turns out to be wrong, the indefinite hierarchy can still be maintained.

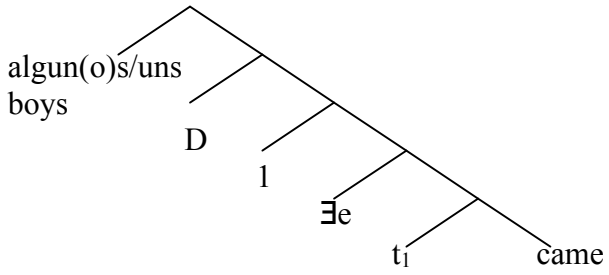
3.3 Event distribution

I suggest to treat event distribution as scope above a distributivity operator combined with the idea that verbal predicates such as *come* come with an event argument (cf. Landman 2000, Link 1983, Schwarzschild 1996, among others). A verb like *came* is not merely a set of individuals, because it also contains an event variable; its denotation is in (90a):

(90) a. $[[\textbf{came}]] = \lambda x.\lambda e.\ came\ (x)(e)$
b. $[[\textbf{D}]] = \lambda f_{<e,t>}.\lambda x.\forall y\ [y \text{ is atomic } \& \ y < x) \rightarrow\ f(y)]$

I assume that there is a default mechanism of existential binding, similar to the one I assumed above for bare plurals, that later on takes care of event variables. (90b) has the denotation of the D-operator that is assumed in much work on distributivity. It is an operator that attaches to a syntactic tree wherever it is compatible type-wise. What it does is collect into a set all of those individuals whose atomic parts are such that they apply to a predicate like *came*. Since *came* comes with an event variable, what it will do is collect into a set molecular individuals, and it will express that for each of their atomic parts, there is an event in which each atomic part came. This will give us event distribution. In the case of *algun*(*o*)*s* and *uns*, which, remember, did event distribute, we need an LF like that in (91), where the indefinite phrases have moved above D:

(91)

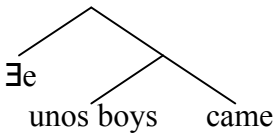


(92) [[***uns*/*algun*(*o*)*s* boys came**]] = 1 iff there is a molecular boy individual x and for all of its atomic subparts y, there is an event e such that y came in e

We get the (simplified) truth-conditions in (92). (92) says that the sentence is true iff there is a molecular boy individual x and for all of its atomic subparts there is an event e such that each of the atomic subparts came in e. Suppose we choose different events for each atomic subpart. We then get event distribution. Suppose we choose the same event: then we get non-event-distribution. This is as it should be, since these three indefinites allowed also non-event-distribution readings.

Unos does not event distribute. Given what I have said so far, this must be because it only spells out up to the layer of movement above negation. Crucially, this is how we draw the difference between *unos* and *uns* with respect to event distribution: *uns* can spell out one more layer of decomposition. The only possible LF for a *unos* sentence is (93), where *unos* hasn't moved above ∃e. This LF results in the denotation in (94). The requirement is that there be one single event for a whole collection of boy individuals, which is not met in the event distribution scenario:[26]

(93)



(94) [[***unos* boys came**]] = 1 iff there is a molecular boy individual x and an event e and all atomic subparts of x came in e

Interestingly, that *unos* does not move above certain operators finds independent confirmation with facts such as those in (95):

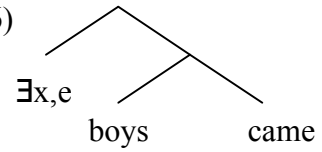
(95) *ESpanish*
a. Le/les dí un regalo a *dos estudiantes*
'I gave a present to two students'
b. Le/*les dí un regalo a *unos estudiantes*
'I gave a present to *unos* students' (from Gutiérrez-Rexach 2001: 147-8)

[26] It may be that in the account of event distributivity in general we need to restrict our attention to non-complex/minimal events. This is apparent in a case like (94): if the composite event $e_1+e_2+e_3$ counts, and one student came in e_1, a different one came in e_2, and yet a third one came in e_3, then *unos* is predicted to event distribute. Thanks to an anonymous reviewer for alerting me of this problem.

Consider (95a) first. With the indirect object clitic *le*, the only possible scope relation between *un regalo* 'a present' and *dos estudiantes* 'two students' is one in which the former scopes above the latter, so that there must be one single present for the two students. In other words, the presence of *le* forces the narrow scope of the indirect object with respect to the direct object. The same sentence with the indirect object clitic *les*, on the other hand, forces the wide scope of the indirect object: now there must be two presents, one for each student. If the movement possibilities of *unos* are restricted, then we can explain (95b). (95b) cannot have a reading in which *unos estudiantes* takes scope above *un regalo*; we can see this because it is not possible to use the clitic *les*, which forces such a reading.

So now we know why *unos* does not event distribute. But there was another side to the problem that event distribution raises for the indefinite hierarchy: how come ESpanish bare plurals *do* event distribute? *Unos* spells out only up to the layer of movement above negation, so it cannot event distribute. But bare plurals are even "smaller" than that, according to the hierarchy. Another question is: if ESpanish bare plurals can event distribute, how come BPortuguese bare plurals don't do so? I propose the following: that ESpanish bare plurals event distribute is an accidental consequence of the very weak lexical semantics in (75) (section 3.1). The lexical semantics of BPortuguese plural nouns is stronger, and this results in them not event distributing. Consider the LF in (96):

(96)



This LF together with the semantics for the bare noun in (75) gives rise to the truth-conditions in (97a) for ESpanish, and in (97b) for BPortuguese:

(97) a. *ESpanish*
[[*boys* came]] = 1 iff there is an event e and a boy individual x and x came in e
b. *BPortuguese*
[[*boys* came]] = 1 iff there is an event e and a molecular boy individual x and x came in e

The ESpanish sentence is true iff there is an event e and a boy individual x and x came in e. This is very weak: it is satisfied if there is one event with one boy individual coming; hence, the sentence is true in the event distribution scenario. The truth-conditions we obtain for BPortuguese, in (97b), are slightly stronger, because bare plurals in this language denote sets of molecular individuals. The BPortuguese sentence is true iff there is an event e and a molecular boy individual x and x came in e. This is false in the event distribution scenario, as desired.[27]

[27] The indefinite hierarchy predicts that bare plurals in both languages cannot move above ∃e. In order for them to be able to do so, they should also have other properties; e.g., they should be positive polarity items, contrary to fact. It turns out that this is crucial in order to derive the right truth-conditions for BPortuguese bare plurals: if they were able to move above ∃e, they would give rise to event distribution. That bare plurals in ESpanish always take narrow scope, with respect to all sorts of operators, has been claimed in Gutiérrez-Rexach 2001, McNally 2004, among others. Further research is necessary on BPortuguese to establish this.

So, to derive the behavior of bare plurals with respect to event distribution, we don't make use of the D-operator.[28] We get event distribution "for free" in the case of ESpanish bare plurals because of their very weak lexical semantics. And we get that BPortuguese bare plurals don't event distribute because of their slightly stronger lexical semantics. Hence, there is no property that is present with ESpanish bare plurals and that then gets lost in the next composition step with *unos*. The ability of ESpanish bare plurals to event distribute, together with the inability of *unos* to do so, does not pose a threat to the indefinite hierarchy.

One welcome consequence of deriving the behavior of bare plurals with respect to event distribution in this fashion is that we predict very easily that sentences with any of the indefinites we have studied here can be true in what I call the group event distribution scenario. The sentence in (98) (recall (68)) is true in the non-event-distribution scenario but it is also true in a group event distribution scenario in which several groups of history students of mine came to see me to the office; each group did so at a separate time. Hence, there is distribution over events, but it is not that there is an event per atomic individual (as in the regular event distribution reading), there is an event per molecular individual:

(98) Durante todo o dia de ontem *alunos meus de História* vieram me ver no meu gabinete
'All of yesterday history students of mine came to see me to the office'

This we easily get from (97b), since the truth-conditions there require there to be *at least* a molecular boy individual that came. This is compatible with more molecular boy individuals coming each at their own time. (97a) makes the ESpanish sentence true in the group event distribution scenario as well: if there are groups of students who, each at their own time, came to see me, then there is a molecular student who came to see me at a particular time. We obtain the same result with *un*(*o*)*s* and *algun*(*o*)*s*, for the same reason BPortuguese bare plurals do so. The situation is most dramatic with BPortuguese bare plurals and with ESpanish *unos* because they allow less readings (i.e., the plain event distribution reading) than *uns*, and *algun*(*o*)*s*.

4 Conclusion

I have pursued the hypothesis that there is a hierarchy of ingredients, the indefinite hierarchy, and that languages choose from this hierarchy in order to build their indefinites. I showed some of the workings of the hierarchy by analyzing the plural indefinites of BPortuguese and ESpanish. I showed how the hierarchy makes predictions about the kinds of indefinites that can exist in a given language (i.e., there can be no indefinite that has properties from the top of the hierarchy without also having properties from the bottom of the hierarchy), and how it limits the explanation space (because it is a rather constrained hypothesis about the relationship between (morpho-)syntax and semantics). Whether these are cross-linguistically valid results only further work on the syntax and semantics of indefinites in different languages can tell.

[28] As Sigrid Beck and Tanja Zybatow suggest, the reason why the *cada uno* 'each'/*entre todos* 'together' test doesn't work with bare plurals is ESpanish (recall (61c)) could have to do with the fact that no D-operator is involved with them, and that the test is sensitive to the presence of a D-operator.

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