

Referential vagueness, plurality, and discourse dependence

The case of Greek kapjos/kapjoi and Spanish algún/algunos

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Abstract

Referentially vague (or ‘ignorance’) indefinites are known to exhibit apparently conflicting behavior: in the singular, they are referentially vague (Giannakidou and Quer 2013, Alonso-Ovalle and Menéndez-Benito 2010, 2011, 2013), but in the plural they appear to depend on a discourse given set. The phenomenon is typically discussed in the context of Spanish *algún/algunos* (Gutiérrez-Rexach 2001, 2010, Martí 2008, 2009); but in this paper we offer extensive novel data from the Greek indefinites *kapjos/kapjoi* exhibiting the same asymmetry between the singular and the plural. The apparent conflict between the two variants, we propose, is just that—apparent: the indefinites remain referentially vague in both uses. Referential vagueness is not at odds with discourse familiarity, and the apparent differences between the singular and the plural follow from NP-ellipsis, the potential topicality of the indefinite, and the way vagueness interacts with plurality.

Keywords

anti-specificity – referential vagueness – plurality – discourse dependence – indefinites

1 Anti-specificity, referential vagueness and singular vs. plural

Several decades of research on indefinites has demonstrated that not all indefinites are created equal. The indefinite article is the unmarked vehicle of indefiniteness; but next to it, we observe paradigms of ‘marked’ (Aloni and Port 2013) indefinite determiners, ‘marked’ meaning that these determiners have constraints on their use. Speakers choose to use a marked determiner because they want to convey something more than mere indefiniteness.

The class of so called ‘ignorance’ indefinites is a case in point. Ignorance indefinites convey referential indeterminacy, and can be used only in case the speaker has ‘no specific value in mind’. Haspelmath (1997) calls these indefinites ‘extremely non-specific’, and Giannakidou and Quer (2013), and Giannakidou and Yoon (2016) call them *anti-specific*, a label that we will use here.¹ Anti-specificity has two incarnations: *referential vagueness*, which is the basic case, and *free choice*. A referentially vague determiner conveys referential indeterminacy in that it cannot be used when the speaker has a single, unique value in mind, *and nothing else*.

1.1 The singular

The Spanish indefinite *algún* is often cited as an example of a referentially vague indefinite. As we see below, *algún* cannot be used if the indefinite has a specific value and the speaker knows what this value is:

- (1) #*Estoy casado con algún profesor americano.*
 be.loc married with some professor american
 ‘#I am married to some American professor.’

Unless the speaker is confused or suffers from split personality disorder, they typically know who they are married to, and *algún*, as can be seen, is impossible in this context. English native speakers confirm that *some* is odd too. The article *un* is the right vehicle in this situation:

- (2) *Estoy casado con un profesor americano.*
 be.loc married with a professor american
 ‘I am married to an American professor.’

¹ The label ‘epistemic indefinites’ has also been used by Fălăuş (2014); but Giannakidou and Yoon (2016) point out that specific indefinites are also epistemic since they rely on what the speaker knows; hence the term ‘epistemic’ does not allow us to make the proper distinction.

Greek exhibits exactly the same contrast with the determiner *kapjos*, *kapja*, *kapjo* (gendered forms for masculine, feminine, neuter respectively), and the indefinite article *enas*, *mia*, *ena*:²

- (3) *#Ime pandremeni me kapjon Amerikano kathijiti.*
 am married with some.acc American.acc professor.acc
 ‘#I am married to some American professor.’

Just like in Spanish and English, under normal circumstances the speaker would have no doubt or uncertainty about who she is married to, and *kapjon Amerikano kathijiti* is infelicitous. The indefinite article *enas* is the preferred form:

- (4) *Ime pandremeni me enan Amerikano kathijiti.*
 am married with some.acc American.acc professor.acc
 ‘I am married to an American professor.’

The distribution of the indefinite article in all three languages is not constrained and is therefore the ‘unmarked’ choice. An early discussion of *kapjos* is found in Veloudis (1996), who describes the determiner as *vague* and non-referential. The contrast between *enas* and *kapjos* has not been discussed much in the literature, with the exception of Giannakidou and Quer (2013), and Giannakidou et al. (2011) who present two experiments confirming that the distribution of *kapjos* favors contexts where it can receive narrow scope, an observation consistent with its referentially indeterminate nature. From what we see above, the *kapjos* phrase is incompatible with contexts of speaker certainty, i.e., where the value of the indefinite is known to the speaker, and we will follow Giannakidou and Quer (2013) in calling the determiners *kapjos*, *algún* “referentially vague”.

Referential vagueness is observed in intensional contexts too, as can be seen in the well-known examples below (based on examples from Giannakidou and Quer 2013, examples (77–79, 88–90); see also Alonso-Ovalle and Menéndez-Benito 2010, 2011). We give first the Spanish examples (5–7) and then the Greek ones (8–10). Here we see that the *algún/kapjos* cannot be used with continuations suggesting that the speaker has a specific value in mind.

2 Greek *kapjos/enas* follow the paradigm of other determiners in Greek and inflects for gender, number, and case, so they appear in various forms.

- (5) *Tengo que quedar con algún profesor. #Es aquel señor de allí.*
 have comp meet with some professor is that guy of there
 'I have to meet with some professor (or other). #It's that guy over there.'
- (6) *Tengo que quedar con algún profesor. #Se llama Bob.*
 have comp meet with some professor se call Bob
 'I have to meet with some professor (or other). #His name is Bob.'
- (7) *Tengo que quedar con algún profesor. #Es el director del Departamento de Filosofía.*
 have comp meet with some professor is the director of-the
Departamento de Filosofía.
 Department of Philosophy
 'I have to meet with some professor (or other). #He is the head of the Philosophy Department.'
- (8) *Thelo na miliso me kapjon kathijti. #Ine aftos o kirios eki.*
 want.1sg comp talk.1sg with some professor is this the guy
eki.
 there
 'I want to meet with some professor (or other). #It's that guy over there.'
- (9) *Thelo na miliso me kapjon kathijiti. #To onoma tu ine Yannis.*
 want.1sg comp talk.1sg with some professor the name his is
Yannis.
 Yannis
 'I want to meet with some professor (or other). #His name is Yannis.'
- (10) *Thelo na miliso me kapjon kathijiti. #Ine o proedros tu tmimatos filosofias.*
 want.1sg comp talk.1sg with some professor is the director
tu tmimatos filosofias.
 of-the Department Philosophy
 'I want to meet with some professor (or other). #He is the head of the Philosophy Department.'

In these examples, *algún/kapjos* are fine in the scope of intensional volition and obligation verbs. Yet, because the second sentence implies that the speaker does have a specific value in mind (by ostension in the case of "it's that guy over there", or familiar naming in the case of "Bob", or by describing the referent; see Aloni and Port 2013 on these tests), *algún/kapjos* become odd. The infelicity suggests, as in the core cases presented earlier, that a pragmatic (rather

than a grammaticality) constraint is being violated. It appears that resistance to a known value cannot be cancelled or accommodated—suggesting that anti-specificity cannot be a mere implicature.³

According to Giannakidou and Quer: “the *algún/kapjos* indefinite feels like the constrained one, sensitive to the knowledge of the speaker: it requires that the speaker be in a state of uncertainty as regards the value of the indefinite. Like with free choice, then, we are talking about an instance of limited distribution that is constrained by the indeterminacy of values.” (Giannakidou and Quer 2013: 141). With both Greek and Spanish, the differing values can be drawn from a new, given, or even generic domain.

If, instead of *algún/kapjos* we use the run-of-the-mill indefinite article, there is no trouble:

- (11) *Tengo que quedar con un profesor. Es aquel señor de allí.*
 have comp meet with a professor is that guy of there
 ‘I have to meet with a professor. It’s that guy over there.’
- (12) *Tengo que quedar con un profesor. Se llama Bob.*
 have comp meet with a professor se call Bob
 ‘I have to meet with a professor. His name is Bob.’
- (13) *Tengo que quedar con un profesor. Es el director del*
 have comp meet with a professor is the director of-the
Departamento de Filosofía.
 Department of Philosophy
 ‘I have to meet with a professor. He is the head of the Philosophy Department.’

3 We will not discuss in this paper the cross-linguistic variation concerning methods of identification; the reader is referred to Aloni and Port (2013). There may be also slight differences in the degree of infelicity, though the data reported here reflect judgments of numerous speakers checked in 2013, 2016, and August 2020. Anna Roussou in personal communication reports improved judgement on the Greek data (8–10). We will consider potential judgment variation in numerous places throughout the paper, and propose two possible explanations. For speakers like Roussou, referential vagueness might indeed be an implicature and can therefore be cancelled just as the *no more than 3* implicature is famously cancelled in *I ate three apples; in fact, I ate five*. Alternatively—and this is the explanation most consistent with the bulk of data concerning both the singular and the plural—referential vagueness can co-exist with the state of the speaker knowing the identity of the reference, *as long as other values are also being considered*. This becomes particularly visible when we have an overt plural domain or

- (14) *Thelo na miliso me enan kathijiti. Ine aftos o kirios eki.*
 want.1sg comp talk.1sg with a professor is this the guy there
 'I want to meet with a professor. It's that guy over there.'
- (15) *Thelo na miliso me enan kathijiti. To onoma tu ine*
 want.1sg comp talk.1sg with a professor the name his is
Yannis.
 Yannis
 'I want to meet with a professor. His name is Yannis.'
- (16) *Thelo na miliso me enan kathijiti. Ine o proedros tu*
 want.1sg comp talk.1sg with a professor is the director of-the
tmimatos filosofias.
 Department Philosophy
 'I want to meet with a professor. He is the head of the Philosophy Department.'

Indeed then, the indefinite article appears to not be constrained by vagueness. Another test used in the literature to distinguish the two paradigms is the 'guess who' test, originating in discussion of German *irgendein* by Kratzer and Shimoyama (2002). Here is the test in Greek and Spanish:

- (17) a. *Ha llamado algún estudiante. #¡Adivina quién!*
 have called some student guess who
 'Some student (or other) called. #Guess who!'
- b. *Ha llamado un estudiante. ¡Adivina quién!*
 have called a student guess who
 'A student called. Guess who!'

a partitive, as we shall see. The presence of a plural domain, in other words, can 'mask' the effect of vagueness. In any case, for the examples (8–10) that Roussou accepts, we must say that we do not know how general the improved judgment is—as no other speaker we have encountered shares Roussou's judgment about these sentences, and the infelicitous judgment is indisputable for Spanish.

- (18) a. *Kapjos fititis telefonise. #Mandepse pjos!*
 some student called guess who
 ‘Some student called. #Guess who!’ (Giannakidou and Quer 2013: 82)
- b. *Enas fititis telefonise. Mandepse pjos!*
 a student called guess who
 ‘A student called. Guess who!’

The continuation ‘guess who’ indicates referential certainty on the part of the speaker, so this functions as an additional test for referential vagueness. If the person who called is known to the speaker, she cannot use *algún/kapjos* (see Zamparelli 2007 for data on Italian *un-qualche*, Giannakidou 2012 for how the indefinites fit within the entire system of Greek quantifiers, and also Etxeberria 2012 for data on Basque). Again, the intuitions reported here are from the cited literature, and the native speaker authors of this paper fully share them. For this paper, intuitions (on both the singular and the plural) were solicited from additional speakers of Greek from the region of central Macedonia in Northern Greece in informal fieldwork conducted in August 2020.

The referential indeterminacy reported here has been confirmed in all cases, but a reviewer of this paper and Anna Roussou report no contrast on the ‘guess who’ test—which might be expected since ‘guess who’ is an alternative inducing structure due to *who*, it therefore forces consideration of alternatives and this matters (as we alluded to in footnote 2). The speaker invites the addressee to consider multiple values for which student called, and this is compatible, as we shall see, with referential vagueness. The effect of ‘guess who’ will be revisited in the context of focus effects in section 5, but we wanted to clarify at this initial stage already that potential variability in the judgment does not challenge referential vagueness—because there is no variability in the core cases (1) and (3) which are universally rejected by all speakers. Variability will emerge if alternatives are independently made possible as is the case with focus, plurals, and potentially ‘guess who’.

Finally, another point of difference between *algún* and *un*, and the Greek variants, is that *algún* and *kapjos* cannot be used in predicative position.⁴

4 This also applies in Spanish to plural *algunos*, but not in Greek, which requires bare NP predicates in the plural:

- (i) a. **Estos son algunos estudiantes.*
 these are some students
 b. *Estos son unos estudiantes.*
 these are some students
 ‘These are some students.’

- (19) a. **Este es algún estudiante.* / **Aftos ine kapjos fititis.*
 this is some student / this is some student
- b. *Este es un estudiante.* / *Aftos ine enas fititis.*
 this is a student / this is a student
 ‘This is a student.’

The fact that indefinites *un* and *enas* can be used as predicate nominals is expected under the standard assumption that the article is semantically vacuous in this context and undergoes type shifting to a predicative type (Partee 1987, Heim and Kratzer 1997). The *algún* and *kapjos* indefinites, on the other hand, have additional content, as we are arguing, they are therefore not vacuous and cannot be used to undergo type shifting. Notice that exactly the same holds for English *some*.

1.2 The plural

A puzzle arises when we consider the plural variant of Spanish *algún*, that is, *algunos*: it appears to be discourse dependent and partitive-like. The claim has been that *algunos* must be linked to a previously introduced antecedent set (cf. Gutiérrez-Rexach 2001, 2010, Martí 2008, 2009). Consider the following scenario, from Martí (2009):

- (20) Teachers A and B are on an excursion with [a group of children, of whom they are in charge]_K. Teacher A comes to teacher B running and says:
- a. ¿Te has enterado? [*Algunos niños*]_{K, #} se han perdido en el bosque.
 b. ¿Te has enterado? [*Unos niños*]_{K, J} se han perdido en el bosque.
 Have you heard? *Algunos/Unos* children got lost in the forest.

In this context, *algunos* can only be used to refer to the set of children of whom A and B are in charge (indicated by the subindex *K*), and says that some of the children of that group got lost in the forest. As a result, the *algunos* example is not compatible with the continuation in (21) because with this continuation it ends up being false that some of the children of the group of teachers A and B got lost. On the other hand, *unos* can be used to make reference both to the *K*-group of children, or to a different group of children (indicated by the subindex *J*). As a consequence, the *unos* example is felicitous with the continuation in (21).

- (21) After a few hours, teachers A and B discover that none of the children from their group had actually gotten lost; it was children from a neigh-

boring village and teacher A says: “We are so fortunate that what I said turned out to be false; we don’t have to give bad news to any parent!”

If by using the indefinite *algunos* the speaker intends to refer to a set of children salient in the previous discourse, we have apparent inconsistency with the anti-specificity of the singular variant we first described. Take another example, this time from Leonetti (1999):

- (22) *Se han salvado doce pasajeros. [#Unos/Algunos] estaban*
 cl have saved twelve passengers unos/algunos were
durmiendo en el momento del accidente.
 sleeping in the moment of.the accident
 ‘Twelve passengers were saved. *Unos/Algunos* were sleeping at the time of the accident.’

Here *algunos* refers to a subset of the set of those twelve passengers that were saved, and *algunos* occurs by itself—a fact important for the analysis we will offer. *Unos*, on the other hand, is unable to create a link with the previously introduced set of twelve passengers.

Interestingly, exactly the same pattern is observed with Greek *kapjos*, as we newly show here. In the plural, we have a contrast between *kapjos* and the determiner *kati*. They both belong to the *ka* paradigm, but *kati*—which is morphologically singular and as independent nominal means ‘something’—when used as a determiner it combines with a plural, and appears to be equivalent to *unos*:

- (23) Teachers A and B are on an excursion with [a group of children, of whom they are in charge]_K. Teacher A comes to teacher B running and says:
 a. Akouses? [*Kapja paidia*]_{K,#J} xathikan sto dasos.
 b. Akouses? [*Kati paidia*]_{K,J} xathikan sto dasos.
 Have you heard? *Some* children got lost in the forest.

This contrast, as far as we know, has not been observed for Greek before. It shows that the pattern originally observed for *algunos*, *unos* is more general, and holds for *kapjos*, *kati*. Interestingly, Greek *kati* allows both indexes, but there is a tendency to prefer the novel indexing, as confirmed by our own intuition and comments of speakers we consulted with.⁵ The contrast can, unfor-

⁵ A reviewer suggests that it may be possible to get the novel index with *kapjos*. If so, that would

tunately, not be reproduced in English where we have *some* in both cases and there is no plural indefinite article or an equivalent to *kati*. Greek, Spanish (and Catalan) allow us to establish a pattern because they have two construals in the plural.⁶

The discourse dependent reading, one could argue, is at odds with referential vagueness: if for the singular the speaker must be undecided about the value of the indefinite, in the plural the speaker seems to have some knowledge about the domain. We will show here that the seeming paradox is only superficial. Referential vagueness and discourse familiarity are not at odds: the D-linking effect is due to ellipsis and topicality of the domain. Greek allows ellipsis with the singular, we therefore find D-linking co-existing with vagueness also in the singular. In Spanish this is allowed with singular *algún-o* as we will see in section 4, *-o* being the marker of NP ellipsis, we argue.

The paper is organized as follows. In section 2 we elaborate on the foundational concepts of anti-specificity *referential vagueness* which is the key component for the *alg-* and *ka-* indefinites. We offer the analysis of the singular variant as conveying what we call the ‘persistent anti-uniqueness’ of referential vagueness. In section 3, we offer exceptions to the generalization that the plural variants are always D-linked. We show that there is no D-linking in the postverbal position, in generic sentences, and in existential sentences. We then discuss the context dependency of the plural due to ellipsis in section 4, and in section 5 we discuss the D-linking effect without ellipsis. We find some interesting interactions with focal structure suggesting that focus triggers alternatives that allow satisfaction of vagueness even when the speaker has a topical plurality in mind.

be consistent with its indefinite nature, suggesting further that in the plural the contrast may not be as sharp in Greek as it is in Spanish. The point, however, remains that in the plural, reference to a familiar set is possible with *kajjos*—a fact that appears, in Greek just as in Spanish, to contradict the referential indeterminacy observed in the singular.

- 6 For more recent discussion of *kati* see Alexiadou (2021). Alexiadou addresses the morphological puzzle of *kati* which appears unique in Greek—a singular determiner with plural NP argument. Compared to quantity determiners (meaning *several*, *some*), Alexiadou argues, *kati* appears to indicate unspecified quantity—which, in our view, can be understood as a Gricean manner implicature: a speaker uses a mere indefinite instead of a quantity denoting determiner, thus supporting *kati* as equivalent to *unos*, as we propose.

2 Referential vagueness and singular *algún, kappos*

2.1 *Specificity and anti-specificity*

Specificity is a recurring observation about indefinites when they seem to be interpreted ‘referentially’ (cf. Fodor and Sag 1982, Farkas 1981, Abusch 1994, Reinhart 1997, Ruys 1992, Winter 1997, Kratzer 1998, Schwarzschild 2002, von Heusinger 2011, Ebert and Hinterwimmer 2013, Endriss 2009, Farkas 1994, 2002, Ionin 2006, to mention just some works; we cannot do justice to the entire literature here). The ‘referential’ reading of an indefinite relies on the speaker’s intent to refer to a particular (singular or plural) entity, and is distinct from the common ground reference that a definite description depends upon. Consider:

(24) Ariadne saw a friend of hers last night. Her name is Evangeline.

Here, the indefinite phrase *a friend of hers* is used specifically by the speaker with the intent to refer (*referential intent* in von Heusinger 2002) to a single person that the speaker can identify by naming. In the specific use, the indefinite still introduces a novel discourse entity, but the entity is familiar to the speaker who intends to refer to it. Since Enç’s seminal work (Enç 1991), specificity is understood as the speaker ‘having a particular value in mind’. Schwarzschild (2002) calls specific indefinites *singleton* indefinites because the speaker has narrowed down the domain to exactly the one individual she intends to refer to. Ebert and Hinterwimmer (2013) and Endriss (2009) characterize specific indefinites as topical, and Ionin (2006) captures specificity as a uniqueness felicity condition attached to the speaker. In all cases, specificity is a special condition that arises, in a way, by cancelling the inherent anti-uniqueness (under the classical Heimian analysis) of the indefinite.⁷

The indefinite *a friend of hers*, of course, does not have to be interpreted specifically: it is also compatible with the continuation *but I have no idea who it was*, in which case the reading is non-specific. Specificity is said to be “a grammaticalized means to structure the relations among discourse items” (von Heusinger 2002:45), and a specificity marker is a grammatical means to create an inherently specific indefinite. Specificity markers are used systematically

⁷ Strictly speaking, Heim derives anti-uniqueness from a reasoning based on scalar competition between the definite and the indefinite given the *Maximize Presupposition!* principle which posits that, if the competing forms convey the same information, the form with the stronger presupposition must be used. Anti-uniqueness appears to be a default that rules out, e.g., the indefinite *#A sun/The sun was rising in the sky* since it is known that there is a unique sun (at least in our planetary system).

cross-linguistically, involving also case marking (Turkish, Finnish), determiners and adjectives such as *a specific*, *a particular* (see e.g. recent discussions in the papers included in Ebert and Hinterwimmer 2013).

We illustrate here with the English specificity marker called ‘referential *this*’—to be distinguished from the demonstrative one, discussed in Ionin (2006), and which is also known as *affective this* (Potts and Schwarz 2009):

- (25) Ariadne met *this new friend* last night. Her name is Evangeline. #But I have no idea who it was.

As we can see, *but I have no idea who it was* is not a possible continuation with *this new friend*, suggesting that *this new friend* is inherently specific. The presence of the specificity marker, then, is a grammatical means to create a marked indefinite that encodes specificity.⁸

Specificity in Ionin (2006) is captured as a felicity condition of *this* (Ionin 2006:23–24):

- (26) *[[This strange letter came in the mail]]* is defined in a context *c* if the following felicity condition is fulfilled:
- a. *[[this strange letter]]* is intended by the speaker *s* to refer to exactly one individual *x* in *c*; and
 - b. there is a property *P* that *s* finds noteworthy in *c*; and
 - c. the individual *x* has both the noteworthy property and the NP property.

In Ionin’s definition specificity is explicitly recognized as intention “to refer to exactly one individual”, echoing von Heusinger and the singleton indefinite idea of Schwarzschild (2002). The felicity condition of *this* is a precondition, i.e., a definedness condition on the context of use, therefore stronger than an implicature and cannot be cancelled: if I do not have a specific, unique, value in mind, I cannot use *this strange letter*, as shown above in the rejection of *but I have no idea who it was*.

Giannakidou and Quer (2013) and Giannakidou and Yoon (2016) suggest that marked indefinites such as *algún*, *kapjos*, Korean *-lato* indefinites, and free choice items (FCI) serve as grammatical means to mark the opposite of specificity: *anti-specificity*. In this view, determiners like *algún*, *kapjos* and the like

8 Notice that the plural is not specific: *Ariadne met these new friends last night. Here they are!* In the plural, *these* can only behave as a demonstrative; no specificity marker use is possible for it. In other words, only singular *this* is a specificity marker.

are *anti-specificity* markers. Given von Heusinger's distinctions, anti-specificity is the absence of referential anchoring, and the absence of referential intent. A speaker uses antispecific indefinites only if she does not have the intend to refer to a particular individual. Anti-specific determiners produce anti-specificity, just like specificity marked produce specificity—and anti-specificity limits the distribution of the indefinite.

If specificity markers create inherently specific indefinites, anti-specificity markers create inherently anti-specific indefinites that signal the opposite of specificity, namely that the speaker does not intend to refer uniquely to a particular object. There may be several reasons why one would want to do that: maybe the identity of the object does not matter in the context, or maybe the speaker lacks knowledge of the actual value. Whatever the reason may be, the anti-specific indefinite in the Giannakidou & Quer and Giannakidou & Yoon account is the dual of a specificity marked indefinite. It is a vehicle of what we can think of as 'prototypical' indefiniteness, i.e., it is a persistently anti-unique indefinite that cannot be manipulated to singleton reference.⁹ Referential vagueness is the basic case of anti-specificity.

2.2 Referential vagueness as choice in Giannakidou & Quer (2013)

According to Giannakidou and Quer (2013) and Giannakidou and Yoon (2016), anti-specificity has two incarnations: *referential vagueness* and *free choice*. Referential vagueness is the basic case and the one we focus on here. Referential vagueness describes a state of epistemic uncertainty of the speaker, and can be understood also as persistent anti-uniqueness in the sense that the speaker, in choosing to use a referentially vague determiner instead of the unmarked one, cannot be thinking of mere indefiniteness only. Remember our initial examples in section 1, repeated here:

- (27) *#Estoy casado con algún profesor americano.*
 be.loc married with some professor american
 '#I am married to some American professor.'

9 In addition to Greek, Catalan, Spanish and Korean, anti-specific indefinites are observed in Latin (Gianollo 2013), Italian (Zamparelli 2007, Aloni and Port 2010, 2014; *a.o.*), French (Jayez and Toven 2002, 2006, 2011), Romanian (Farkas 2002, 2007, Fălăuş 2009, 2011, 2014; *a.o.*), German (Kratzer and Shimoyama 2002, Eckardt 2007, Aloni 2011, Aloni and Port 2014; *a.o.*), Basque (Etcheberria in preparation). These works do not contain identical analyses, of course, but they all agree that some indefinites make an existential claim while conveying that the speaker does not know which individual makes the claim true.

- (28) #*Ime pandremeni me kapjon Amerikano kathijiti.*
 am married with some.acc American.acc professor.acc
 ‘#I am married to some American professor.’

Unless the speaker is confused or suffers from split personality disorder, they typically know who they are married to, there is no uncertainty. *Algún, kapjos*, as can be seen, are impossible in this context. English native speakers, as we said, confirm that *some* is odd too. In these cases, the epistemic state of the speaker is such that they have a single value in mind that is their husband/wife, and they are considering no other possibilities. There is no vagueness in the speaker’s mind about who their husband/wife is.

Referentially vague determiners, thus, can be used felicitously only if there is indeterminacy in the speaker’s epistemic or doxastic state about potential values. This is reminiscent of the indeterminacy of classical vagueness observed with gradable predicates. Lewis (1982) characterizes vagueness as hyper-ambiguity in the sense that for the interpretation of a vague term there are many precise concepts that closely resemble each other. The term *child*, for instance, can mean a human being at most one day old or a human being at most two days old or a human being at most three days old, and so on. The concept of supervaluation (Williamson 1994) captures the same intuition, namely that a vague term has multiple standards (for an illuminating survey see the entry for *Vagueness* in the *Stanford Encyclopedia of Philosophy*). As we move from gradability to referential vagueness, the idea of multiplicity is key, but now we are not talking about standards or degrees. Instead, the indeterminacy of referential vagueness must be understood as availability of choice among different values. This is the motivating idea behind Giannakidou (1997), Giannakidou (2001), and Giannakidou and Quer (2013)’s concept of *variation*. Vagueness of reference is vagueness of potential values, and this requires variation as the prerequisite for there to be a choice.¹⁰

A referentially vague indefinite has to be considered in a domain with multiple values. Giannakidou and Quer (2013) formulate variation as a felicity condition anchored to the speaker:

10 Note that vagueness of reference is different from vagueness of quantity, and determiners can be quantitatively vague too. We mentioned this earlier in footnote 2 about *kati*, but there is also quantity vagueness in determiners such as *many*, *several*, *some*. How many exactly is *many*, *several*, *some*? This inherent imprecision of number can again be understood as variation and choice, which appears to be general tool for vagueness.

(29) Referential Vagueness (Giannakidou and Quer 2013: (96)):

A sentence containing a referentially vague indefinite α will be felicitous
 iff: $\exists w_1, w_2 \in M(s): \llbracket \alpha \rrbracket^{w_1} \neq \llbracket \alpha \rrbracket^{w_2}$;

where α is the referentially vague indefinite, and w_1, w_2 epistemic or doxastic alternatives of the speaker, i.e., worlds compatible with the speaker's beliefs or knowledge.

The worlds w_1, w_2 represent the speaker's doxastic or epistemic state $M(s)$, i.e., her state of mind, at the time of utterance as is common practice; referential vagueness says that, for the sentence containing a referentially vague indefinite α to be felicitous, the speaker's state of mind must be such that she is considering differing values for α .¹¹ Now, an expression is felicitous in context c if the function it denotes is *defined* in c , hence the felicity condition is in effect a definedness condition on a par, say, with a presupposition.

Let us offer some more thoughts on the status of the referential vagueness condition since it is the foundation to our account.¹² Definedness conditions are the 'bridge' that links presupposition satisfaction and felicity—'Stalnaker's bridge', as von Stechow (2008) puts it. For Stalnaker, and this is important to note, presuppositions are preconditions that need to be satisfied before the common ground can be updated, and his (pragmatic) presuppositions are requirements on the *speaker's* knowledge, not on the common ground. Von Stechow and others in the context change potential tradition, on the other hand, think of the presuppositional component of the meaning of a sentence as being a requirement on the information state it is used to update. "Since the information state a sentence is used to update in the ideal case is the common ground, the presuppositional requirements are imposed on the common ground." (von Stechow 2008: 5). In effect then, definedness conditions can be understood as encompassing both presuppositions and felicity conditions, and in Stalnaker's view a presupposition is anchored to the speaker. We understand therefore the "is felicitous" in the definition of vagueness to stand for "is defined" and it is this phrasing that we will implement in the rest of the paper. This allows for a more general understanding of vagueness that doesn't get side tracked by the question (which ultimately may not matter, as it does

11 The worlds are restricted to epistemic or doxastic alternatives of the speaker also in embedded sentences: *María piensa que Adriana salió con algún lingüista* 'María thinks that Adriana went out with some linguist' still conveys the speaker's indeterminacy.

12 We thank one reviewer of this paper for prompting us to deepen this discussion.

not in Stalnaker's view) whether referential vagueness is a felicity constraint or a presupposition. It is a precondition on the context of use of indefinites *algún* and *kapjos*.

For *algún* and *kapjos*, then, the condition would read as follows:

- (30) $\llbracket \text{algún/kapjos NP VP} \rrbracket$ will be defined in a context c iff:
 $\exists w_1, w_2 \in M(s): \llbracket \text{algún/kapjos NP} \rrbracket^{w_1} \neq \llbracket \text{algún/kapjos NP} \rrbracket^{w_2}$; and w_1, w_2
 epistemic or doxastic alternatives of the speaker, i.e., worlds compatible
 with the speaker's beliefs or knowledge.

- (31) $\llbracket \text{algún/kapjos} \rrbracket = \lambda P_{\langle et \rangle} \lambda Q_{\langle et \rangle}. \exists x [P(x) \ \& \ Q(x)]$

One may assume that the existential quantifier comes after default existential closure, as in Heim's system; but we can also maintain a classical analysis of the indefinite as an existential quantifier (as recently argued by López 2021). The crucial element is that there are worlds where the variation requirement of *algún* and *kapjos* gets satisfied. The variation need not be exhaustive, as in free choice (which we discuss briefly next to illustrate the difference).

Here is how an example works:

- (32) $\llbracket \text{Estoy casado con algún profesor americano} \rrbracket$ is defined in a context c iff:
 $\exists w_1, w_2 \in M(s): \llbracket \alpha \rrbracket^{w_1} \neq \llbracket \alpha \rrbracket^{w_2}$, where α is *algún NP*;
 If felicitous, $\llbracket \text{Estoy casado con algún profesor americano} \rrbracket$ is true if there
 is at least one assignment g that verifies the condition *American-professor*
 $(x) \wedge \text{married}(m, x)$.

- (33) $\llbracket \text{Ime pandremeni me kapjon amerikano kathijiti} \rrbracket$ is defined in a context
 c iff:
 $\exists w_1, w_2 \in M(s): \llbracket \alpha \rrbracket^{w_1} \neq \llbracket \alpha \rrbracket^{w_2}$, where α is *kapjos NP*;
 If felicitous, $\llbracket \text{ime pandremeni me kapjon amerikano kathijiti} \rrbracket$ is true if
 there is at least one assignment g that verifies the condition *American-*
professor $(x) \wedge \text{married}(l, x)$.

- (34) Particular individual in mind = fixed value in the speakers epistemic state
 $M(s): w_1 \rightarrow \text{Bill}, w_2 \rightarrow \text{Bill}, w_3 \rightarrow \text{Bill}, w_4 \rightarrow \text{Bill}$

- (35) No particular individual in mind = no fixed value in $M(s)$:
 $w_1 \rightarrow \text{Bill}, w_2 \rightarrow \text{Nicolas}, w_3 \rightarrow \text{John}, w_4 \rightarrow ?$; where '?' means unknown

We will call the doxastic state where the entity of the referent varies from world to world *vague with respect to identity*: with varying values, the identity of the referent is by default indeterminate.¹³ A vague doxastic state can arise only if we have a domain with multiple values, hence the need for a non-singular domain is directly correlated with referential vagueness (our thanks to a reviewer for asking about this relation). The singleton doxastic state—as our core examples show—is incompatible with the *alg-*, *ka-*: when I am married I know who I am married to, hence no indeterminacy and no variation: in all worlds in $M(s)$, I am married to Bill. If only the non-varying model is available, the referentially vague indefinites become consequently infelicitous.

Referential vagueness can also be formulated as the direct opposite of Ionin's felicity condition, as follows:

- (36) Referential vagueness as intention of anti-uniqueness
 $\llbracket \text{algún/kapjos NPVP} \rrbracket$ is defined in a context c iff $\llbracket \text{algún/kapjos NP} \rrbracket$ is not intended by the speaker s to refer to exactly one individual x in c .

This definition uses anti-unique intention following Ionin. Giannakidou and Quer (2013) entertain this idea concluding that the two formulations capture the same set of facts, but the anti-uniqueness condition lacks the noteworthy property characteristic of specific indefinites. In both formulations, we are dealing with conditions anchored to the speaker's doxastic state and intention.

Finally, Alonso-Ovalle and Menéndez-Benito (2010) propose the anti-singleton constraint:

- (37) $\llbracket \text{algún} \rrbracket = \lambda f_{\langle et, et \rangle} \lambda P_{\langle et \rangle} \lambda Q_{\langle et \rangle} : \text{anti-singleton}(f). \exists x [f(P)(x) \ \& \ Q(x)]$

The anti-singleton constraint constrains the value of the selection function: the selection function must be a function f such that for any set P , the cardinality of $f(P)$ is larger than one. *Algún* is a function that takes a subset selection function f and two properties P and Q and is defined only when f is an anti-singleton subset selection function (Alonso-Ovalle and Menéndez-Benito 2010:8). Unlike the referential vagueness condition, this account does not tie

13 It could of course be that in a world, say w_7 , the value picked may be identical to one picked in another world. This situation is predicted by referential vagueness, since the condition requires at least one differing value, and doesn't say that for *each* world we must have a different value. The same holds for non-specific readings and smaller domains for variation: *Every child visited a museum* is true when we have domains of ten children and three museums, and some children visited the same museum.

the anti-uniqueness requirement to the speaker, but rather places it to the common ground. This appears to be too strong, given that there may be partial improvements (noted earlier for Greek), and some more that we discuss in section 5 with plurals. The observed sensitivity of judgement that we will uncover is not predicted by a common ground presuppositional account—which misses, of course, also the fact that the vagueness effect is really tied to the speaker.

All implementations emphasize the anti-uniqueness of the referentially vague indefinite. We choose the Giannakidou and Quer theory because it better connects referential vagueness with the doxastic state of the speaker, it allows a straightforward comparison with free choice, and importantly, because it is not merely anti-singleton that matters. Consider the case below with exactly two values:

(38) a. Spanish:

Debes estar acompañado por uno/ #alguno de tus padres.
 must.you be.loc accompanied by one/ some of your parents
 ‘You must be accompanied by one/#some of your parents.’

b. Greek:

Prepi na se sinodevi enas/#kapjos apo tus gonis
 must subjunctive you accompany one/ some of the parents
su.
 yours
 ‘You must be accompanied by one/#some of your parents.’

The anti-singleton constraint is satisfied in this example, but the use of *some/algún/kapjos* is quite odd. Hence anti-singleton or mere anti-uniqueness do not make the correct prediction. The definition of Giannakidou and Quer is consistent with such examples as it requires *at least two* values, and while a domain of exactly two is a domain with at least two values, intuitively the variation of vagueness needs *multiple* values, i.e., more than a single pair of values, to be satisfied as we illustrated. A single pair of values is not an adequate basis for a truly vague domain because it presents a specific, non-vague, choice of exactly two values; hence, a domain of exactly two satisfies anti-uniqueness, but it is still not adequately vague.¹⁴ Hence, referential vagueness *cannot* be reduced

14 The examples here contain partitives, but the same is observed with *enan gonea*. *Enan gonea* sounds a bit more formal in Greek, which is the reason we opted for *enas apo tus*

to mere anti-uniqueness, and the concept of variation underlying vagueness requires more than a specific choice of two.

Importantly, a referentially vague indefinite correlates with narrow scope (or, *de dicto* interpretation)—as specificity correlates with higher scope (*de re* interpretation). Consider:

- (39) a. Every tourist visited *this awesome museum, namely Le Louvre*.
 b. Every tourist visited *some museum or other, #namely Le Louvre*.

Here, the standard analysis is that the specific ‘this awesome museum’ scopes above ‘every tourist’, and gets assigned a value irrespective of the universal. The non-specific ‘some museum or other’—which we can view as equivalent to *algún/kapjos*, but these are much more common—gets interpreted with narrow scope though. Giannakidou et al. (2011) confirmed in two experiments that speakers prefer narrow scope with the *kapjos* indefinite as opposed to *enas*. This finding agrees with referential vagueness, and some preliminary data suggest that narrow scope also characterizes *algún* (Etcheberria and Giannakidou in prep.).

In terms of discourse properties, the referentially vague indefinite is subject to Heim’s novelty, like all indefinites, which requires a new index:

- (40) Heim’s Novelty/familiarity condition (Heim 1982: 298):
- Indefinite descriptions introduce *new entities* into the discourse while definite descriptions must denote entities which have previously been introduced in the discourse, i.e. refer to existing entities.
 - Let p be an atomic formula containing noun phrase NP_i . Then, for all $\langle g, w \rangle \in C$: if NP_i is definite, i must be in $dom(g)$, and if NP_i is indefinite, i must not be in $dom(g)$.

Novelty being the ‘natural’ discourse property of the indefinite, we do not expect indefinites to refer to objects familiar in the common ground. Novelty, however, does not exclude that the domain is familiar (see § 4 and § 5).

gonis su. The effect is emphatically the same. Giannakidou and Quer (2013) and Alonso-Ovalle and Menéndez-Benito (2010) also discuss the dual problem with examples such as the following:

(i) Context: I am pointing to two rooms, and say:
 Juan se ha escondido en #alguna/una habitación, pero no estoy segura de cuál.
 Juan hid in #some/a room, but I’m not sure which one.

Finally, we think it is worth noting that referential vagueness is morphologically marked with variation markers. The etymology of *algún* preserves the Latin *aliquis*, ‘other’, which has also been argued to be referentially vague (Gianollo 2013, 2018): e.g. *Mary saw a star, and Bill saw another star* where *another star* is a star different from the first. We are not saying that the contribution of *algún* is literally ‘other’, but *alg-* indicates a path of grammaticalization and semantic reanalysis (Eckardt 2006) as a referential vagueness marker that retains a loose relation, as Giannakidou and Yoon argue, to the initial meaning (*more than one*).¹⁵ The Greek and Korean referentially vague indefinites discussed in Giannakidou and Quer (2013) and Giannakidou and Yoon (2016) do not contain *other*, but *kapjos* as a wh-indeterminate is composed of the wh-word *pjos* ‘who’ and the morpheme *ka* which could be traced to the concessive scalar particle *kan* ‘even’ (Giannakidou 2007). There is no concessive meaning in *kapjos* but the scalar morphology is a good vehicle for a determiner requiring variation; see Giannakidou and Yoon (2016) for more discussion of this concept of ‘relaxed’ compositionality.

2.3 Referential Vagueness versus Free Choice

Referential vagueness can be strengthened (Giannakidou and Yoon 2016) to the universal (i.e., exhaustive) variation requirement characterizing FCIs (Giannakidou 2001) including Spanish *cualquiera* (see i.e., Alonso-Ovalle and Menéndez-Benito 2010, Giannakidou and Quer 2013). Exhaustive variation is stronger than referential vagueness in that, first, it is a presupposition (as proposed in Giannakidou 1997, 2001) hence a common ground condition—and second, it requires consideration of all values in the domain:

- (41) Presupposition of exhaustive variation of FCIs (Giannakidou 2001):
 A sentence containing a free choice indefinite α will have a truth value iff:
 $\forall w_1, w_2 \in W: \llbracket \alpha \rrbracket^{w_1} \neq \llbracket \alpha \rrbracket^{w_2}$; where α is the free choice indefinite.

While both free choice and referential vagueness require variation, referential vagueness merely does that. Free choice, on the other hand, is a definedness

15 About the morphological segmentation, we assume *alg-un* and *alg-unos* because *aliquis* + *unus* (the cardinal numeral *one*) is attested in Latin (as in *aliqua una re* ‘in some thing’, or *ad unum aliquem confugiebant?* Cic. Off. 2, 12, 41 (cf. id. ib. 2, 12, 42: id si ab uno justo et bono viro consequabantur, erant, etc.) from Lewis and Short (1956 [1879])). In Late Latin this form gave rise to *alicunus*, which later became Spanish *algún* (and Italian *alcuno*, French *aucun*, Catalan *algun* or Portuguese *algum*). By the time the first Spanish texts appeared, we already have both the singular *un* and *algún*, as well as the plural *unos* and *algunos*. Thanks to Julia Pozas-Loyo for extensive discussion.

condition that requires that *all* possible values be considered by the linguistic agent. Giannakidou and Yoon (2016) and Giannakidou (2018) state that the presupposition of exhaustive variation is a strengthening of referential vagueness conventionalized in the use of free choice morphology—but one can also view them as independent anti-specificity strategies that rely on the availability of multiple values, i.e., variation. What it means that all values must be considered and how it differs from mere vagueness have been discussed in detail in Giannakidou and Yoon (2016). Consider here the following context illustrating this core difference:

- (42) Context: A variety of delicious desserts are presented at the buffet. A says:
 A: ¡Prueba algún dulce/alguno de estos dulces!
 Try some (or other) sweet/eat some (or other) of these sweets.

These imperatives are gentle invitations to eat a sweet. An ideal context is one where the addressee is not showing much of an appetite, and the speaker invites her to try. In uttering the sentence, the speaker is not inviting the addressee to try, or consider trying, all sweets, as this is not a relevant goal in the context. The speaker here is merely inviting the addressee to consider some sweets (maybe only a few sweets that she likes), and try one of those.

The free choice invitation, by contrast, is a *consider-all* invitation:

- (43) ¡Prueba cualquier dulce!
 try any sweet
 ‘Try any sweet!’

With the FCI, the addressee is invited to consider trying every option, even the most unthinkable ones (for instance some that she has never eaten before). The addressee now came to the dessert table with a great appetite, and the speaker happily invites her to try all options. This is clearly a stronger invitation than the one with *algún*.

The Spanish FCI *cualquier* and the Greek *opjosdipote* are typical FCIs. Crucially, they can attach to the indefinite articles *un*, *enas*, but not to *algún*/*kajjos*:

- (44) Juan ha hablado con un/ #algún estudiante cualquiera.
 Juan has talked with one/ algún student any
 ‘Juan talked to (just) any student.’

- (45) *O Yannis theli na milisi me enan/ # kapjon opjodipote fititi.*
 the John wants to talk with one/ some any student
 'Juan wants to talked to (just) any student.'

The produced reading with *un* and *enan* is akin to the one obtained with *just any* in English (but this is not so important for our point here; see discussion in Lazaridou-Chatzigoga 2007 on the nuance of the Greek combination, as well as Vlachou 2006; see among others Alonso-Ovalle and Menéndez-Benito 2016, 2017 for Spanish).¹⁶ We only make a simple point here: the *algún/kapjos* indefinite cannot combine with the FCI because they contain competing requirements: *mere variation* (*vagueness*) versus *exhaustive variation*. The indefinite article is unmarked, it is therefore able to combine with a marked indefinite such as the FCI without conflicting conditions.¹⁷

3 Plural indefinites: context dependency, discourse linking

Recall our initial examples with the plural:

- (46) Teachers A and B are on an excursion with [a group of children, of whom they are in charge]_K. Teacher A comes to teacher B running and says:
 a. ¿Te has enterado? [*Algunos niños*]_{K,#J} se han perdido en el bosque.
 b. ¿Te has enterado? [*Unos niños*]_{K,J} se han perdido en el bosque.
 Have you heard? *Algunos/Unos* children got lost in the forest.
- (47) a. Akouses? [*Kapja paidia*]_{K,#J} xathikan sto dasos.
 b. Akouses? [*Kati paidia*]_{K,J} xathikan sto dasos.
 Have you heard? *Some* children got lost in the forest.

16 Giannakidou and Quer (2013) note that the theories of FCIs that posit covert universal quantifiers as, e.g., in Alonso-Ovalle and Menéndez-Benito (2010) or in Kratzer and Shimoyama (2002) have difficulty explaining the co-occurrence of *cualquiera* with *un*.

17 The Greek indefinite article can also combine with the referentially vague determiner, as in the following examples from Cavafy's famous poem *Waiting for the Barbarians*: *Itan i anthropi afti mia kapja lysis* 'Those people were some sort of solution', contrasted to *mia lysis* 'a solution'. Such uses are interesting and occur mostly with abstract nouns such as *mia kapja periptosi* 'some sort of case', *mia kapja epithimia* 'some sort of desire', etc. More discussion of such compositions is beyond the scope of this paper, but the *some-sort* effect is clearly related to vagueness.

In this context, *algunos/kapja* can only be used to refer to the set of children of whom teacher A and teacher B are in charge (indicated by the subindex *K*), and says that some of the children of that group got lost in the forest. As a result, the *algunos/kapja* examples are not compatible with the continuations below because with this continuation it ends up being false that some children of the group of teachers A and B got lost. On the other hand, *unos/kati* can make reference both to the *K*-group of children, or to a different group (indicated by the subindex *J*).

- (48) After a few hours, teachers A and B discover that none of the children from their group had actually gotten lost; it was children from a neighboring village and teacher A says: “We are so fortunate that what I said turned out to be false; we don’t have to give bad news to any parent!”

Thus, in these examples *algunos/kapja* behaves like a D-linked indefinite.¹⁸ This behavior appears to be, at first glance, in contrast with the referential vagueness requirement. But if *algunos/kapja-NP* picks out an (indefinite) subset of a salient set, there is no real conflict with referential vagueness. Instead, this matches quite closely Enç’s definition of domain specificity for plural NPs as picking out a subset of a previously introduced set. It is this concept of discourse dependence and anaphoricity that we have in mind when we characterize the dependency as D-linking, partitive like, or will be seen in § 5, topical.¹⁹

Our approach pursues the null hypothesis that the contribution of *alg-* and *ka-* in the plural is the extension of the singular—referential vagueness—and that the discourse anaphoric effect is due to additional factors that have to do with plurality, topicality of the preverbal subject NP, and whether or not we have ellipsis. We will uncover cases where the plural does *not* receive a D-linked reading: existential sentences, generic statements, and the postverbal subject position.

But let us start first with Martí’s account of *algunos*.

18 See Pesetsky (1987) for the original definition of D-linking. For the purposes of our discussion, it suffices to acknowledge that D-linking is a form of contextual dependency that forces connection to a set (i.e., property) given in the discourse. By ‘given’, one typically understands the set to be previously mentioned, entailed (as in Roberts 2004 notion of weak familiarity, see also Etxeberria and Giannakidou 2009), or somehow salient in the discourse. The exact implementation of these notions can vary, but it does not seem to matter here.

19 Many thanks to a reviewer of the paper for clarifying comments on this point.

3.1 *Alg- introducing the context variable C (Martí 2009)*

Martí proposes that *algunos* contributes a ‘partitivity implicature’. The idea is cast within an indefiniteness hierarchy where context dependency occupies the highest level of that hierarchy. The analysis works as follows:

$$(49) \llbracket \text{unos} \rrbracket = \lambda P_{\langle et \rangle} \lambda Q_{\langle et \rangle} \cdot \exists x [\text{Mol}(x) \ \& \ P(x) \ \& \ Q(x)] \\ = \text{‘Mol’ stands for ‘molecular/plural individual’}$$

$$(50) \llbracket \text{alg-} \rrbracket = \lambda R_{\langle et(ett) \rangle} \lambda P_{\langle et \rangle} \lambda Q_{\langle et \rangle} \cdot R(P \cap C)(Q) \\ = \text{Implicature: } R(P \cap C)(\{x: Q(x) = \emptyset\})^{20}$$

$$(51) \llbracket \text{algunos} \rrbracket = \lambda P_{\langle et \rangle} \lambda Q_{\langle et \rangle} \cdot \llbracket \text{unos} \rrbracket(P)(Q) \\ = \text{Implicature: } \llbracket \text{unos} \rrbracket(P)(\{x: Q(x) = \emptyset\}) \\ = \lambda P_{\langle et \rangle} \lambda Q_{\langle et \rangle} \cdot \exists x [\text{Mol}(x) \ \& \ P(x) \ \& \ Q(x)] \\ = \text{Implicature: } \exists x [\text{Mol}(x) \ \& \ P(x) \ \& \ Q(x) = \emptyset]$$

According to Martí, “both *unos* and *algunos* induce the entailment that the set denoted by the head noun is non-empty” (Martí 2009:115). The element responsible for the partitivity implicature is *alg-* which introduces the context variable *C*. *Unos* is not context dependent because it lacks *alg-*.

But if the *alg-* element creates the contextual dependency via *C* in the plural, why not also in the singular? Why isn’t the singular *D*-linked? To get out of the dilemma, Martí would have to argue that there are two *alg-*, one that contributes *C* and combines only with the plural, and one that contributes referential vagueness and combines only with the singular. But without having an explanation of why the *C* effect is lost in the singular, and why it is lost with some (but not all) plurals as we show next, such an explanation cannot be convincing, we will therefore not adopt it as a starting point for the *ka-* indefinite either.

3.2 *Non-partitive, non-D-linked interpretation of the alg- and ka-indefinites*

In this section, we show that there are contexts where *alg-* and *ka-* indefinites do not need to make reference to a previously introduced set. One such context are existential sentences; take the following example, from Martí (2009).²¹

²⁰ This formula is the result of the combination of Martí’s formulas (27) and (29) in Martí (2009:120).

²¹ The reader is referred to Gutiérrez-Rexach (2001) for more examples of this kind.

- (52) Context: Upon arriving at the school and seeing several groups of boys fighting, the principal, sick and tired of seeing the same scene every day, mumbled to himself: 'What a way to begin the day!'. In a panic, he realised that ...
- a. ... había *algunos chavales* demasiado cerca de la carretera.
 - b. ... había *unos chavales* demasiado cerca de la carretera.
- There were some boys too close to the road.
- (53) a. ... exi *kapja pedja* eki pu stekonde poli konda sto dromo.
- b. ... exi *kati pedja* eki pu stekonde poli konda sto dromo.
- There are some boys too close to the road.

In these examples, the boys who are too close to the road could be some of those boys who are fighting, but they do not have to be. As a consequence, *algunos/kapja* and *unos/kati* can be said to be equivalent in existential contexts. At the same time, referential vagueness seems to hold for *algunos/kapja*: the speaker does not know who the students are, that is, she does not have a specific set of students in mind when uttering this sentence.

Crucially, in a modified version of the above context without the existential structure, the subject *algunos/kapja* can refer to a non-specific subset of a specific set of students, as expected. We will use a scenario suggested by a reviewer. Imagine that the principal is used to students fighting, and has a subset of students in mind who usually get themselves into trouble. Now, the boys are fighting and some of them are too close to the road. The principal can use *algunos estudiantes/kapji mathites* to refer to that group as shown in (54a) and (54b) respectively:

- (54) Context: Upon arriving at the school and seeing several groups of boys fighting, the principal, sick and tired of seeing the same scene every day, mumbled to himself: 'What a way to begin the day!'. In a panic, he realised that ...
- a. ¡Vaya día! Y por si no fuera poco, algunos estudiantes están de nuevo cerca de la carretera.
 - b. Ti paliomera i simerini, pali ta idia! Ke den ftani afto, kapji mathites ine poli konda sto dromo.
- What an awful day. And if that's not enough, some students are again close to the road.

In this context, the principal uses *algunos estudiantes/kapji mathites* to refer to the set of usual suspects that cause trouble, still not knowing who exactly these

students are. In other words, the difference between the existential structure and the preverbal subject use—which is expected to be D-linked—matters.

In contrast, the postverbal position does not require D-linking:

- (55) *Llegaron algunos/unos chavales a la oficina.*
 arrived algunos/unos boys to the office
 ‘Some boys arrived to the office.’
- (56) *Irthan kapja/kati pedja sto grafio.*
 arrived kapja/kati boys in-the office
 ‘Some boys came to the office.’

In these examples, *algunos/kapja* and *unos/kati* are again indistinguishable, i.e. they do not need to make reference to a previously introduced set and allow novel indexes as indefinites. There is no difference between them, and the pattern is robust for Greek and Spanish (but cannot be observed in English which does not allow postverbal subjects).

Algunos/kapja, finally, can also be used in generic contexts without discourse dependence:

- (57) *Algunos unicornios tienen cuernos de apariencia metálica.*
 some unicorns have horns of appearance metallic
 ‘Some unicorns have horns of metallic appearance.’ (Martí 2009)
- (58) *Kapja skilja miazoun me polikes arkudes.*
 some dogs resemble with polar bears
 ‘Some dogs look like polar bears.’

Generic statements are typically domain unrestricted and are not spatio-temporally bound. Thus, here we do not make reference to a previously introduced set of unicorns or bears. The speaker makes a taxonomic reading referring to subpluralities of unicorns and bears *regardless* of whether they are mentioned or implied in the previous discourse. Being familiar with subpluralities is not excluded by referential vagueness, and it is clearly not discourse anaphoric. In addition, being familiar with the subplurality does not entail knowing exactly the extension of that plurality or having a specific, unique, kind in mind; hence generic uses of the plural are consistent with referential vagueness.

Why is the D-linking requirement suspended in existential sentences, generic statements, and postverbal subjects? It appears that the discourse specific

interpretation emerges as a special case in a particular syntactic position (preverbal subject), a unified analysis, therefore, between the singular and the plural becomes plausible, and this is what we will pursue in the rest of the paper. Discourse dependence should arise as a special case due to (a) NP ellipsis and (b) topicality of the domain in the preverbal subject position. We take up these points in sections 4 and 5.

4 Referential vagueness and NP ellipsis

The null hypothesis is that *alg-/ka-* is the element introducing referential vagueness in both the singular and the plural; hence the default interpretation of the *alg-/ka-* indefinite should be referential vagueness regardless of number. For the D-linked reading, we show now that it matters whether there is an elliptical plural or not. The elliptical plural is anaphoric, and it is responsible for the anaphoric indexing. The discourse dependence effect, thus, is not due to indefinite but to the presence of an elliptical anaphor.

To see the point about ellipsis, let us take again a typical case (the Spanish example is repeated from (22), and taken from Leonetti 1999):

- (59) *Se han salvado doce pasajeros_K. Algunos_K estaban durmiendo en*
cl have saved twelve passengers algunos were sleeping in
el momento del accidente.
 the moment of the accident
 'Twelve passengers were saved. *Algunos/Some* were sleeping at the time of the accident.'
- (60) *Sothikan dodeka epivates_K. Kapji_K koimondusan tin ora*
were-saved.3pl twelve passengers kapjoi were-sleeping the hour
tu atiximatos.
 of the accident
 'Twelve passengers were saved. *Kapji/Some* were sleeping at the time of the accident.'

In the second sentence of these example, in both Greek and Spanish the NP ('passengers') is not overt, but we can assume that it is elided under *algunos/kapji*. If we have NP ellipsis, an antecedent is required. Following standard assumptions about NP ellipsis (Kester 1996a,b), we argue that an anaphoric pronominal is present carrying a familiar index, as in the following examples.

- (61) a. $\llbracket \text{algunos} \rrbracket = \text{algunos} + \text{pro}_I$, where I is a familiar property variable, i.e. I must be in $\text{dom}(g)$.
 b. $\llbracket \text{kajj.PL} \rrbracket = \text{kajj} + \text{pro}_I$, where I is a familiar property variable, i.e. I must be in $\text{dom}(g)$.

The elliptical *pro* is an NP anaphor, indicated here with a familiar index, on a par with English *one-anaphora* in sentences like (62) (cf. Kester 1996a,b, Saab 2018; cf. also Alexiadou and Gengel 2011, Corver and van Koppen 2011). The presence of this familiarity indexed *pro* forces *algunos/kajj* to pick up the index that comes with it.

- (62) Mary bought the yellow T-shirts, and Ariadne *the blue ones_I*.

Ones_I is an overt NP anaphor that takes reference from the previously introduced nominal *T-shirts* in (62). Crucially, the two subsets of shirts talked about are different; *ones_I*, as a property anaphor, refers back to the property *shirts* introduced by the previous NP. Property anaphora does not necessitate that the antecedent and the anaphor refer to the same set of T-shirts, though E-type interpretations are possible (as in *e.g.*, *Mary bought strawberries and Ariadne ate some pro_I*, where the set of strawberries is the same) (see Giannakidou and Merchant 1997 with specific discussion of this based on Greek NP anaphora). Here, with *ones_I*, we have new T-shirts being talked about and a familiar property already present in the domain.²²

In Spanish and Greek, nominal ellipsis is licensed without *one*, but with a null *pro_I*—and it is possible with both adjectives and indefinite determiners (see Giannakidou and Merchant 1997, Giannakidou and Stavrou 1999, Panagiotidis 2002 for Greek):

- (63) a. *I Maria agorase kitrina T-shirts, ke i Ariadni kokkina [pro_I].*
 the Maria bought yellow T-shirts and the Ariadne red
 ‘Mary brought yellow T-shirts, and Ariadne red ones.’
 b. *I Maria agorase polla T-shirts, alla i Ariadni liga [pro_I].*
 the Maria bought many T-shirts but the Ariadne few
 ‘Mary brought many T-shirts, but Ariadne few.’

22 See Ettxeberria and Giannakidou (to appear) where domain restriction is correlated with partitivity and NP-anaphora. The domain restriction function introduces a contextual variable C targeting a weakly (i.e., just entailed) or a strongly (i.e. previously mentioned) familiar property in the common ground.

Spanish patterns with Greek, as we see in the following example.

- (64) a. *María compró las camisetas amarillas, y Ariadne las [pro_I]
 Maria bought D.pl T-shirts yellow.pl and Ariadne D.pl
 rojas.
 red.pl
 ‘Mary brought the yellow T-shirts, and Ariadne the red ones.’*
- b. *María compró muchas camisetas, pero Ariadne pocas [pro_I].
 Maria bought many T-shirts but Ariadne few
 ‘Mary brought many T-shirts, but Ariadne few.’*
- c. *María compró muchas camisetas, a Ariadne solo le gustaron
 Maria bought many T-shirts to Ariadne only refl liked
 las [pro_I] rojas.
 D.pl red.pl
 ‘Mary brought many T-shirts, Ariadne only liked the red ones.’*

Since null *pro_I* is allowed with indefinite determiners generally, it seems only reasonable to assume it in the case of *algunos/kapjoi*. If this is so, then one must concede that it is *NP-anaphora* that brings about the familiar indexing and D-linked reading. In other words, the context dependency of *algunos* has nothing to do with the presence of *alg-/ka-*, but everything to do with the elliptical NP anaphor. The domain for *algunos* is fixed because of *pro*, but the vagueness variation requirement still holds:

- (65) a. Referential Vagueness condition for plural *algunos* NP:
 A sentence containing plural *algunos* NP designated as α_{PL} will be defined in a context *c* iff: $\exists w_1, w_2 \in M(s): \llbracket \alpha_{PL} \rrbracket^{w_1} \neq \llbracket \alpha_{PL} \rrbracket^{w_2}$
- b. Referential Vagueness condition for plural *kapji* NP:
 A sentence containing plural *kapji* NP designated here as α_{PL} will be defined in a context *c* iff: $\exists w_1, w_2 \in M(s): \llbracket \alpha_{PL} \rrbracket^{w_1} \neq \llbracket \alpha_{PL} \rrbracket^{w_2}$

- (66) $\llbracket \text{algunos/kapji} \rrbracket = \lambda P_{(et)} \lambda Q_{(et)}. \exists x [P(x) \ \& \ Q(x)]$; where *x* is a plural entity

Since now the alternatives to α are plural entities or sets, a consequence of referential vagueness for plurality is that the speaker needs to consider at least two pluralities. If the domain *D* is previously introduced (via *pro*) and α is a singular, the values assigned to α will be individuals in *D*. If we have a plural α_{PL} , the values assigned to α_{PL} will be pluralities in *D*—which means that with *algunos* and *kapjoi* we are looking at subdomains *D'* in *D* ($D' \subset D$).

If we now consider the key examples, we realize that in order to fulfill the condition of referential vagueness for plurals *algunos* and *kapjoi*, the speaker must be considering varying pluralities, and does not know precisely what the actual plurality is.²³ This is borne out as shown by the examples below where we add the continuation *no sé quién más / kai den ksero pjós alos* ‘I don’t know who else’. Now the speaker considers subsets of pluralities of the set of *passengers* that were saved, and is uncertain about the exact values:

- (67) *Se han salvado doce pasajeros_K. Algunos_K estaban durmiendo en el momento del accidente. Eran María, Pedro, y no sé quién más.*
 I.know who else
 ‘Twelve passengers were saved. *Algunos/Some* were sleeping at the time of the accident. They were María, Peter, and I don’t know who else.’
- (68) *Sothikan dodeka epivates_K. Kapji_K kimondusan tin ora tu atiximatos. Itan o Petros, i Maria, kai den ksero pjós alos.*
 were-saved.3pl twelve passengers kapjoi were-sleeping the hour of.the accident they were the Maria the Peter and neg I.know who else
 ‘Twelve passengers were saved. *Kapji/Some* were sleeping at the time of the accident. They were María, Peter, and I don’t know who else.’

Since now the alternatives to α are plural entities, a consequence of referential vagueness for plurality is that the speaker needs to consider at least two pluralities, which means that we are looking at subdomains D' in D ($D' \subset D$). D' has to be a proper subset of D because in situations where D' is equal to D there is no variation and referential vagueness would be violated. By adding *I don’t know who else*, the vagueness condition requiring differing plural sets is satisfied:

23 Alonso-Ovalle and Menéndez-Benito (2010) claim that with the plural *algunos* there is ‘no epistemic effect’, because while singular *algún* triggers a competition with a number of alternative assertions (which correspond to different ways of narrowing the domain down to a singleton), with *algunos*, none of those alternatives constitute viable competitors. Our facts, however, suggest that the vagueness effect is also present in the plural. In addition to the D-linked case we discuss here, recall that the non-D-linked plurals (generics, existential and postverbal plural *algunos* and *kapji*) were also subject to referential vagueness, as discussed in section 3.

- (69) Plural vagueness: Let D be {María, Pedro, Mónica, Ariadne, Juan, Bill}
- a. $w_1 \rightarrow D_1 = \{\text{María, Pedro, Mónica}\}$
 - b. $w_2 \rightarrow D_2 = \{\text{María, Pedro, Juan}\}$
 - c. $w_3 \rightarrow D_3 = \{\text{María, Pedro, Ariadne}\}$
 - d. $w_4 \rightarrow D_4 = \{\text{María, Pedro, Bill}\}$
 - e. ...

However, if reference is made to a single unique plurality, the sentence becomes odd as shown by the following examples:

- (70) *Se han salvado doce pasajeros_K. Algunos_K estaban durmiendo en el momento del accidente. #Eran María, Pedro, Juan y Ana.*
 cl have saved twelve passengers algunos were sleeping in the moment of the accident they were Maria Peter Juan and Ana
 'Twelve passengers were saved. *Algunos/Some* were sleeping at the time of the accident. #They were María, Peter, Juan and Ana.'
- (71) *Sothikan dodeka epivates_K. Kapji_K kimondusan tin ora tu atiximatos. #Itan o Petros, i Maria, o Gianni kai i Ana.*
 were-saved.3pl twelve passengers kapjoi were-sleeping the hour of the accident they were the Maria the Peter the John and the Ana
 'Twelve passengers were saved. *Kapji/Some* were sleeping at the time of the accident. #They were María, Peter, John and Ana.'

It appears that knowledge of a precise unique set precludes vagueness and the indefinites *algunos/kapjoi* are infelicitous. We will come back to this type of example in § 5.2, where we discuss some variation in the judgement which suggests that even in such cases speaker vagueness could be satisfied because varying pluralities are still active.

Finally, notice that ellipsis is also possible with the singular *algun-o*. *Alguno* can refer to a previously introduced set, as follows:

- (72) Context: Today a famous writer is visiting our school. The principal says: "The students are excited to meet you". And continues:
- a. *Alguno ha leído Hamlet.*
 some.masc read Hamlet
 'Someone read Hamlet.'

- b. *Alguno de ellos ha leído Hamlet.*
 some.masc of them read Hamlet
 ‘One of them read Hamlet.’

The principal does not know who the student who read Hamlet is. He might actually be guessing, and uttering the above sentence entirely on the fly. But he does refer to the students in the school. *Alguno*, like plural *algunos*, contains an elliptical NP anaphor:

- (73) $\llbracket \text{alguno} \rrbracket = \text{alguno} + \text{pro}_I$, where I is a familiar property variable, i.e. it must be in $\text{dom}(g)$.

The same holds for Greek, and as far as we can tell, for English *someone* as we can see in the translations:

- (74) Context: Today a famous writer is visiting our school. The principal says: “The students are excited to meet you”. And continues, wanting to impress the writer:

- a. *Kapjos diavase ton Hamlet.*
 some.masc read.3sg the Hamlet
 ‘Someone read Hamlet.’
- b. *Kapjos ap’aftus diavase ton Hamlet.*
 some.masc of-them read the Hamlet
 ‘One of them read Hamlet.’

Again, the principal may just be supposing that there must be someone who read Hamlet in the entire school. The reading is clearly non-specific. The very use of *someone* supports the idea that we have an elliptical anaphor *one*. In English *some* is marked with *one*, in Spanish *algun-o* with *-o*, but in Greek mere agreement licenses *pro*. Recall that the referentially vague *algún* which lacks D-linking is bare, it contains no *-o*. In Greek there is no bare variant.

Hence in both the singular and the plural, ellipsis triggers an anaphoric *pro*, and its presence entails dependence on a previously introduced set, i.e. familiarity and D-linking. The elliptical readings with the singular *alguno/kapjos/someone* remain vague. Continuations such as “Here he is, let me introduce you to him” are impossible, just like in the original cases discussed in section 1:

(75) Context: Today we have a famous writer visiting our school. When she comes to my classroom I introduce my students to her saying “these are my students”, and then I continue:

a. *Alguno ha leído Hamlet. #Ven y te muestro quién es.*
 some.masc read Hamlet come and you show.I who is
 ‘Someone read Hamlet. Come and I’ll show who it is.’

b. *Kapjos diavase ton Hamlet. #Na, aftos ine, ela na*
 some.masc read.3sg the Hamlet here, this is, come so-that
su ton dikso.
 you him show.1sg
 ‘Someone read Hamlet. Come, so that I will show who it is.’

In my classroom, I would know who the student who read Hamlet is. The oddity suggests that referential vagueness and discourse familiarity can coexist, also in the singular—and discourse dependence is due to NP ellipsis.

Before we close the ellipsis discussion, we want to briefly concentrate on the effect that focus appears to have on referentially vague indefinites. A reviewer suggests that adding the focus word *malista* ‘indeed’, translated here as ‘actually’, makes a specific reading for *kapjos* possible. This is the case also with *alguno*, as shown below:

(76) Context: Today we have a famous writer visiting our school. She comes to my classroom, and I introduce my students saying “these are my students”, and then, wanting to impress her, I continue:

a. *¡De hecho, alguno/uno se ha leído su último libro!*
 in fact, alguno/uno se has read your last book
 ‘One/Someone actually has read your most recent book!’

b. *Kapjos/enas malista exi diavasi to profato vivlio sas!*
 some.masc/one indeed has read.3sg the recent book yours
 ‘One/Someone actually has read your most recent book!’

This reminds us of the ‘guess-who’ test discussed at the beginning which also had variable judgments. The Greek and Spanish indefinites in this context are compatible with the teacher having a particular student in mind. In fact, *kapjos* and *enas* and *alguno* and *uno* are indistinguishable. We want to suggest that when a speaker uses focus—such as *malista* and *de hecho*, or *guess who*—a pragmatic partition is created between focus alternatives (hence, multiple values) plus the new information, namely who the student is contributed by the

assertion. In this case, referential vagueness is satisfied by the existence of alternatives, and the determiner is licensed. Hence, the existence of a specific value, when other values are considered in the background, is not problematic for vagueness—and this must be what underlies the variability also in the ‘guess-who’ test, we want to suggest.

Let us consider now the determiners *algunos* and *kapjoi* with no ellipsis.

5 Referential vagueness and topicality

When *algunos/kapji* NP are used as determiners with an overt domain (NP), the idea of anaphoric *pro* is not applicable. Here, discourse dependency will depend on whether the NP domain is topical or not, and this explains the effect of position (only preverbal plurals are D-linked), existential structures (no D-linking), and genericity, as can be recalled from our earlier discussion. In the cases where discourse dependency is blocked, the domain is not ‘topical’. When the domain is topical it is discourse given, i.e., it is a set under discussion (the precise understanding of givenness is not crucial here). A topical/given NP domain is a familiar one.

Our analysis can be summarized as follows: (i) if the plural indefinites *algunos/kapji* NP appear in the preverbal position, the NP denotes a familiar domain because, as has been argued independently, the preverbal position in Spanish and Greek is a topic position; and (ii) if *algunos/kapji* NP appears in *non-topic position*, i.e. postverbal subject, the NP is not discourse dependent. The existential and generic uses follow straightforwardly: the indefinite cannot be specific or topic in the existential structure, and generic subjects are by their nature (kinds are intensional objects) discourse independent. Hence, we will not discuss these cases further.

5.1 *The singular*

One important assumption that we adopt from the literature is that the preverbal subject position in Greek and Spanish hosts topics (see, among others, Uribe-Etxebarria 1992, Barbosa 1995, Alexiadou and Anagnostopoulou 1998, Philippaki-Warbuton and Spyropoulos 2004, Ordóñez and Trevino 1999).²⁴ Crucially, both singular *algún/kapjos* and plural *algunos/kapji* are referentially

24 We will not offer arguments for this position here because the topic status of preverbal subjects (with the exception of generic subjects) is relatively uncontroversial for Spanish,

vague, and as such they cannot be topics. But in the preverbal subject position, we will suggest that the domain NP behaves like a topic and this creates the D-linking effect.

Algún/Kapjos NP as a constituent, crucially, cannot be a topic because that would force singleton reference. The singular will work as follows. Consider:

(77) Context: Today we have a famous writer visiting our school. She comes to my classroom and I introduce my students to her saying “these are my students”, and then I continue:

- a. *#Algún estudiante ha leído la Odisea en griego antiguo.*
 algún student read the Odyssey in Greek Ancient
 ‘#Some student read the Odyssey in Ancient Greek.’
- b. *#Kapjos fititis exi diavasi tin Odisia sta Arxea Elinika.*
 some student has read the Odyssey in Ancient Greek
 ‘#Some student read the Odyssey in Ancient Greek.’

(Notice again the oddity of *some* in this context). If I am the teacher, I know my students, I therefore know who has this remarkable property of having read the Odyssey in Ancient Greek. In this context referential vagueness is not satisfied, and the *algún/kapjos* are ruled out. Instead, we prefer *enas/un*:

(78) Context: Today we have a famous writer visiting our school. She comes to my classroom and I introduce my students to her saying “these are my students”, and I continue:

- a. *¡Un estudiante ha leído la Odisea en griego antiguo!*
 one student read the Odyssey in Greek Ancient
 ‘One student has read the Odyssey in Ancient Greek.’
- b. *Enas fititis exi diavasi tin Odisia sta Arxea Elinika!*
 some student has read the Odyssey in Ancient Greek
 ‘One student has read the Odyssey in Ancient Greek!’

If we assume that preverbal subjects are topics, indefinite NPs must be interpreted specifically. This is no problem for the unmarked indefinites, as we see, but it is a problem with *algún estudiante*, *kapjos fititis* because it would be at

Greek, or Italian. We are also aware that there may be differences of opinion or implementation in the syntactic literature.

odds with referential vagueness. The speaker would have to know the actual value of *algún estudiante* and *kapjos fititis* thus violating referential vagueness:

(79) Fixed value in M(s):

$w_1 \rightarrow \text{Bill}, w_2 \rightarrow \text{Bill}, w_3 \rightarrow \text{Bill}, w_4 \rightarrow \text{Bill}$

As soon as we make the set of students plural with an overt partitive, and we do not have a context where I know which student I am talking about, the sentence becomes grammatical:

(80) a. *Algún estudiante de estos, dicen, ha leído la Odisea en griego antiguo.*
 algún student of these they say has read the Odyssey in
griego antiguo.

Greek Ancient

‘Algún student of these, they say, has read the Odyssey in Ancient Greek.’

b. *Kapjos apo (aftus) tus fitites, mu lene, exi diavasi tin Odisia sta Arxea Elinika.*
 some of these the students me tell.3pl has read the
Odisia sta Arxea Elinika.

Odyssey in Ancient Greek

‘Kapjos of these students, they tell me, has read the Odyssey in Ancient Greek.’

In English the effect cannot be shown as count *some* cannot be used independently. Here *algún estudiante de estos/kapjos apo aftus tus fitites* ‘some student of these’ also appears in topic position, but unlike (77), here we have an overt partitive which introduces a specific plural domain. This allows the referential vagueness of *algún estudiante de estos/kapjos ap aftus tus fitites* to be satisfied because despite the fact that the domain set is familiar, the speaker is still uncertain about who exactly the student that read the Odyssey in Ancient Greek is—as indicated by ‘they tell me’. The only way to interpret the singular specifically is with the indefinite article in both languages:

(81) a. *Un estudiante de estos, Juan, ha leído la Odisea en griego antiguo.*
 one student of these John has read the Odyssey in Ancient
antiguo.

Greek

‘One of these students, John, has read the Odyssey in Ancient Greek.’

- b. *#Algún estudiante de estos, Juan, ha leído la Odisea en griego antiguo.*
 algún student of these John has read the Odyssey in
griego antiguo.
 Ancient Greek
 ‘#Some of these students, John, has read the Odyssey in Ancient Greek.’
- (82) a. *Enas apo tus fitites, o Yannis, exi diavasi tin Odisia sta Arxea Elinika.*
 one of the students the John has read the Odyssey in
Arxea Elinika.
 Ancient Greek
 ‘One of the students, John, has read the Odyssey in Ancient Greek.’
- b. *#Kapjos apo tus fitites, o Yannis, exi diavasi tin Odisia sta Arxea Elinika.*
 some of the students the John has read the Odyssey in
Arxea Elinika.
 Ancient Greek
 ‘#Some of the students, John, has read the Odyssey in Ancient Greek.’

We see, therefore, that even the singular *alg-/ka-* indefinite allows discourse dependence with an overt partitive, and contrasts with the singular indefinite article NP which has no trouble being interpreted specifically.

Yet, just as in the case of ellipsis observed earlier, the addition of focus results in flouting vagueness:

- (83) a. *De hecho, un estudiante de estos— concretamente Juan— ha leído la Odisea en griego antiguo.*
 in fact, one student of these specifically Juan has
leído la Odisea en griego antiguo.
 read the Odyssey in Ancient Greek
 ‘One of the students actually, in particular Juan, has read the Odyssey in Ancient Greek.’
- b. *?De hecho, algún estudiante de estos— concretamente Juan— ha leído la Odisea en griego antiguo.*
 in fact, algún student of these specifically Juan has
leído la Odisea en griego antiguo.
 read the Odyssey in Ancient Greek
 ‘One of the students actually, in particular Juan, has read the Odyssey in Ancient Greek.’
- (84) a. *Enas apo tus fitites malista— sinkekrimena o Yannis—*
 one of these students indeed specifically the John

exi diavasi tin Odisia sta Arxea Elinika.

has read the Odyssey in Ancient Greek

‘One of the students actually, in particular John, has read the Odyssey in Ancient Greek.’

- b. *?Kapjos apo tus fitites malista— sinkekrimena o Yannis—*

kapjos of these students indeed specifically the John

exi diavasi tin Odisia sta Arxea Elinika.

has read the Odyssey in Ancient Greek

‘One of the students actually, in particular John, has read the Odyssey in Ancient Greek.’

The context here is not the neutral one we had before, but one where the teacher exploits focus/intensity (see Trotzke 2017) in order to make a rhetorical point, namely that it is remarkable that the student has read the Odyssey in Ancient Greek. *Algún* and *kapjos*, though not perfect (there was variation in the judgement of the speakers consulted, whereas there was no variation with *un* and *enas*), can still be used in this context.

5.2 The plural

Recall the definedness condition we proposed for the plural:

- (85) Referential Vagueness condition for plural *algunos*:

A sentence containing plural *algunos* NP designated here as α_{PL} will be defined in a context c iff: $\exists w_1, w_2 \in M(s): \llbracket \alpha_{PL} \rrbracket^{w_1} \neq \llbracket \alpha_{PL} \rrbracket^{w_2}$

- (86) Referential Vagueness condition for plural *kapj.PL*:

A sentence containing plural *kapjoi* NP designated here as α_{PL} will be defined in a context c iff: $\exists w_1, w_2 \in M(s): \llbracket \alpha_{PL} \rrbracket^{w_1} \neq \llbracket \alpha_{PL} \rrbracket^{w_2}$

- (87) Context: A group of students went to a summer camp. On the first day of the summer camp, Instructor A says to instructor B:

- a. *Algunos alumnos* han llegado tarde. Eran María, Pedro, y *no sé quién más*.

Some students arrived late. They were María, Pedro, and I don't know who else.

- b. *Kapja pedja* irthan ligo argotera. Itan o Petros, i Maria, kai den ksero pjos alos.

Some students came a little late. They were María, Peter, and I don't know who else.

The subjects are topical plurals, and the domain is given by the context. Since now the alternatives to α are plural entities, a consequence of referential vagueness for plurality is that the speaker needs to consider at least two pluralities. We have discussed these types of examples with ellipsis before. With *algunos/kapja* the values assigned to α_{PL} will be pluralities in D —which means that with *algunos/kapja* we are looking at subdomains D' in D ($D' \subset D$).

As in the case of the elliptical plural discussed previously, by adding *I don't know who else*, the speaker signals that she does not have a complete and unique plurality in mind. The vagueness condition requires that differing plural proper subsets be considered of the total set of students that arrived late:

- (88) Plural vagueness: Let D be {María, Pedro, Mónica, Ariadne, Juan, Bill}
- a. $w_1 \rightarrow D_1 = \{\text{María, Pedro, Mónica}\}$
 - b. $w_2 \rightarrow D_2 = \{\text{María, Pedro, Juan}\}$
 - c. $w_3 \rightarrow D_3 = \{\text{María, Pedro, Ariadne}\}$
 - d. $w_4 \rightarrow D_4 = \{\text{María, Pedro, Bill}\}$
 - e. ...

Here we have various subdomains of D being picked up in the epistemic alternatives of the speaker who is in a state of vagueness about which subset the actual value is.

We think that a contrast exists, as noticed preciously with ellipsis, with what happens when the speaker knows exactly who the students were:

- (89) Context: A group of students went to a summer camp. On the first day of the summer camp, Instructor A says to instructor B:
- a. #*Algunos estudiantes* llegaron tarde. Eran Pedro, María, y Mónica.
Some students arrived late. They were María, Pedro, and Mónica.
 - b. #*Kapja pedja* irthan ligo argotera. Itan o Petros, i Maria, ke i Monica.
#Some students arrived late. They were María, Pedro, and Mónica.

In this case, in all worlds the value is the plurality consisting of *María, Pedro, and Mónica*:

- (90) Plural vagueness: Let D be {María, Pedro, Mónica, Ariadne, Bernat, Bill}
- a. $w_1 \rightarrow D_1 = \{\text{María, Pedro, Mónica}\}$
 - b. $w_2 \rightarrow D_2 = \{\text{María, Pedro, Mónica}\}$
 - c. $w_3 \rightarrow D_3 = \{\text{María, Pedro, Mónica}\}$
 - d. $w_4 \rightarrow D_4 = \{\text{María, Pedro, Mónica}\}$

If the speaker knows exactly who the students are, the subset {María, Pedro, Mónica} is invariable, it therefore appears to violate vagueness. However, Alonso-Ovalle and Menéndez-Benito (2011) discuss such examples with *algunos* and claim that they are fine. The great majority of Spanish speakers we have consulted support the judgement we report above, but if there is variation it needs to be explained—and we did find speakers of Greek that accept the continuation in (89b).

As an interesting twist, scenarios like the above, in addition to the no-variation analysis we just sketched, can also be analyzed as, in fact, satisfying vagueness. Speakers that might accept *algunos* and *kapjoi* subjects are actually contrasting the set {María, Pedro, Mónica} with the other plural alternatives available, e.g., {María, Pedro, Bill}, {María, Pedro, Monica, Bernat}, {María, Pedro, Ariadne, Bernat, Bill} and other variants. For them, the picture looks like this:

- (91) Plural vagueness: Let D be {María, Pedro, Mónica, Ariadne, Bernat, Bill}
- a. $w_1 \rightarrow D_1 = \{\text{María, Pedro, Mónica}\}$
 - b. $w_2 \rightarrow D_2 = \{\text{María, Pedro, Bill}\}$
 - c. $w_3 \rightarrow D_3 = \{\text{María, Pedro, Mónica, Bernat}\}$
 - d. $w_4 \rightarrow D_4 = \{\text{María, Pedro, Ariadne, Bernat, Bill}\} \dots$

In other words, the mechanism of variation needed for vagueness is still available, and allows for differentiation of plural subdomains. Speakers that get infelicity ignore the other sets, and get a specific, topical, invariant interpretation of the *algunos*, *kapji* as in (90). Speakers that accept the sentence, on the other hand, work with structures like (91) having differing alternatives.

The same, incidentally, can be said for the elliptical cases we discussed in section 4, and generally, for the possible improvement for speakers that might accept the sentences even under the specific reading in both the singular and the plural. Even if a specific interpretation is available, a concurring consideration of varying values still satisfies vagueness—and the degree to which concurring vagueness is exploited correlates with the tendency to accept the sentence. In other words, we are saying that in the cases we are discussing, there are two possible analyses: one where the *algunos*, *kapji* functions as topic and speakers ignore other alternatives, and one where speakers treat the set as one of possible alternatives. Under the former analysis, *algunos*, *kapji* are unacceptable, but under the latter they are fine. Which analysis a speaker chooses is of course entirely subject to them, and it is quite possible that the same speaker can accept both understandings, say in different contexts.

6 Conclusions

In this paper, we proposed a unifying and flexible analysis of the Spanish *alg-* and the Greek *ka-* paradigms as referentially vague indefinites that can nevertheless associate with a discourse given domain. Referential vagueness is a definedness condition of variation anchored to the speaker, ensuring that for a felicitous use the speaker is considering multiple possible values, i.e., multiple singularities or multiple pluralities (multiple, we showed, means more than two). We showed that the *alg-/ka-* indefinites are distinct from the FCI which presupposes exhaustive variation.

Our analysis, cast in the framework of Giannakidou and Quer (2013) and Giannakidou and Yoon (2016), treats the constraints on the distribution and interpretation of *algún* and *kajos* as pieces in the landscape of referential vagueness. The apparent D-linking, partitivity, and discourse dependence of plural variants, we argued, is not at odds with referential vagueness: the domain property can be discourse given, but the speaker can still be uncertain (and thus have differing values) about the (subdomain of) individuals to whom they make reference. The presence of an elliptical NP anaphor is also crucial in bringing about D-linking. Importantly, dependence on a discourse domain is also observed in the singular, as we saw.

One may ask if discourse dependence and the licensing of vague determiners are further correlated, if the latter depends on the former. The data we discussed here does not justify such a hypothesis: in all cases of discourse dependence observed, domain restriction was due to an external element, i.e., an NP anaphor, a topical plural subject, or the presence of an actual partitive. In addition, discourse dependence is a constraint on the domain, but referential vagueness is a pre-condition on the use of the determiner—and indeed one that can co-exist even with specificity in some cases as long as a plural domain is available as is the case, for example, with focus and overt plural or partitive restrictions. When this happens, improvement of the judgement is observed without entailing that vagueness is cancelled. The variation requirement of vagueness can be independently satisfied in a plural domain if alternatives (typically with focus) are available.

In other words, potential variability in the judgement does not challenge referential vagueness—because there is no variability in the core cases described in (1) and (3) where absolutely no alternatives are possible and are thus universally rejected by all speakers. Variability will emerge if alternatives are independently made possible with focus, overt plural domains, or ‘guess who’.

What we presented here is, to our knowledge, the only analysis that can handle and systematize the comprehensive, novel and quite subtle patterns of the

Spanish and Greek paradigms we discussed here. In the course of the discussion, we uncovered some new facts about both Spanish and Greek—including the determiner *kati* and the parallel we proposed with *unos*. Determiner *kati* and its exact relation to *unos* deserve further consideration, and our ideas are consistent with some recent work pursued in Alexiadou (2021). Recall that *kati* is invariably singular, unlike *unos*, and some empirical differences may follow from that.

In order to keep the facts manageable, we were not able to expand on every implication of vagueness, but before we close we want to offer some thoughts on the Italian determiner *qualche* ‘some’ (studied in Zamparelli 2007, Crisma 2012, Gianollo 2018), which naturally falls in the category of referentially vague determiners. As we mentioned earlier in the paper, *(un) qualche* appears to have properties of referentially vague determiners, and has been described in the literature as such. Like Greek *kati*, *(un) qualche* is invariant for gender and number and combines with either a masculine or a feminine noun; but unlike *kati*, it never combines with a morphological plural. In addition, *qualche* appears to be unable to combine with mass nouns, something also noted in the literature—which (Nicola d’Antuono (pc)) points to a far more stringent requirement for the relation between *qualche* and the atomicity vs mereology of its complement. Another relevant fact is that while *qualche+N* (without *un*) generally has a plural interpretation, it is also possible in some contexts to have a singular interpretation even without *un*, as confirmed in Zamparelli (2007: see especially pp. 299–204).

The Greek and Spanish determiners we studied here are more predictable in their morphological behavior, and we believe a further study of Italian *qualche* within the framework we developed here will be revealing. Another set of phenomena that we want to address in the future have to do with French indefinites relating to the plural articles *des* (see Espinal and Cyrino to appear for recent discussion). Our goal in this paper was to offer an analysis that develops a solid and flexible enough framework within which to situate future observations, and, hopefully, our tools will help reinterpret older observations and discover new facts.

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