

# Kinds of (Non)-specificity

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## Abstract

The paper casts a look at the role specificity has played in DP semantics since the early seventies. It puts forward the proposal that the common thread across specificity distinctions is the contrast between stability vs. variability in value assignments for the variable introduced by the DP across various types of alternatives. Special determiners are used to mark either variation (non-specificity) or stability (specificity).

## 1 Introduction

Work within the subfield of nominal semantics has always been concerned with drawing distinctions between semantic subtypes based either on properties inherent to the nominal phrase itself or on the interaction of the interpretation of the nominal with its context. This work has been driven by two twin goals. On the theoretical side, the aim is to find the right framework for adequately characterizing the possible interpretations of nominal phrases. On the empirical side, the aim is to uncover and explain the distribution and interpretation of various morpho-syntactically distinct nominal subtypes, both within a language and from a cross-linguistic perspective.

When considering distinctions inherent to nominal expressions, a crucial role has been played by the issue of whether a determiner is present, and if so, what that determiner is. To exemplify, the contrast between definite and indefinite determiner phrases (DPs) is primarily based on the distinction between two classes of articles, of which the representatives in English are the definite article *the* and the indefinite article *a(n)*. Because of the cross-linguistic frequency of the definite/indefinite divide across articles, the characterization the semantics of definite and indefinite DPs has been on the agenda of grammarians and philosophers of language for a long time. Formal semantic work on this problem has seamlessly continued along the tracks laid out by a venerable tradition.

When it comes to specificity distinctions, matters are less clearcut because the empirical domain is more heterogeneous. Specificity distinctions have been invoked both in order to understand the different ways in which an ordinary indefinite DP can be interpreted, and in order to explain the details of the distribution and interpretation of particular subtypes of indefinite nominals.

The first in-depth discussion of the specific/non-specific distinction in the formal semantic literature is Fodor (1970), who uses it to characterize the ambiguity of (1):

- (1) Mary believes that *a friend of mine* is a bus driver.

The DP in italics above can either be interpreted *specifically*, in which case the sentence claims that there is an individual who is a friend of mine and of whom Mary believes that she is a bus driver, or *non-specifically*, in which case the sentence commits Mary to a simple existential claim according to which there exists a bus driver among my friends. In the former case a claim is made about an individual friend of mine, while in the latter the sentence involves a mere existence claim.

Fodor argues, persuasively, that the source of the ambiguity here is neither the DP itself nor the predicate *believe*. Rather, the ambiguity arises from the interaction of the interpretation of the DP

and that of the predicate, i.e., the two readings involve the scope of the DP relative to the predicate. Fodor uses the term *non-specific* for DPs within the scope of opaque-context introducing predicates, and the term *specific* for DPs outside such contexts. The notion of opaque context is inherited from the philosophy of language literature: opaque contexts are linguistic environments in which existential generalization and substitutivity of identicals fail (see Quine 1953 and Kripke 1972 among many others).

In English, the distinction between these two interpretations has no morphological correlate. But in other languages there are various morphological markers within the nominal domain that appear to be sensitive to the relative scope of the nominal. Dahl (1970) first noted the contrast between Russian ‘specific’ indefinite pronouns, marked by *-to*, and ‘non-specific’ ones, marked by *-nibud’*. Indefinite pronouns marked by *-to*, he claims, must have widest scope, while *-nibud’* indefinites must be interpreted within the scope of negation, question operators, imperatives, as well as future and conditional operators.

Another morphological distinction that correlates with scope was first noted in Rivero (1975), who observes that the use of the subjunctive mood in a restrictive relative clause in Spanish correlates with the DP having narrow scope relative to a propositional attitude predicate such as *want* or *wish*. Farkas (1981a) considers this problem in detail, and from a cross-linguistic perspective. The upshot is that the occurrence of the subjunctive mood in restrictive relative clauses in Romance languages is sensitive not simply to whether the DP is in an opaque context or not, but rather, to a further distinction between two different types of opaque contexts. Thus, opaque contexts created by predicates such as *know*, *say*, *pretend* or *dream* do not license subjunctive in relative clauses, while opaque contexts created by predicates such as *want*, *ask*, *order*, *look for*, *hope*, and various possibility and necessity operators do. Subjunctive relative clauses are generally allowed if the the clause in question is interpreted within the scope of this latter group of predicates, as well as within the scope of counterfactual conditionals, imperatives, negative and interrogative operators, or certain types of superlative or uniqueness-asserting DPs. Farkas (1981a) distinguishes the contexts that allow the subjunctive in relative clauses from those that do not on the basis of the relation of the relevant context to the world of evaluation of the matrix sentence.

The proper treatment of propositional attitudes in general has been the focus of much work in semantics and philosophy of language. From the facts discussed in the semantic literature on subjunctive relatives one can conclude that the mood contrast at issue here leads to positing fine-grained distinctions across propositional attitudes. The cross-linguistic perspective shows that while obviously semantically driven, mood contrasts show subtle variations even within the closely knit group of Romance languages, with Italian being the most tolerant of the subjunctive in relative clauses, and Romanian being the least permissive.

What is obvious even from this brief glimpse at the early literature is that if our goal is to understand the distribution of actual morphological markers, we are led to posit distinctions that are more subtle than what the philosophical literature hands down to us. We are also confronted with a type of cross-linguistic variation that is challenging to account for, namely cases where cross-linguistic patterns exhibit both stability and fine-grained, non-random differences.

Contrasts in specificity have also been invoked when discussing semantic distinctions within the nominal itself rather than distinctions resulting from the interaction of a nominal with its linguistic context. For Enç (1991), for instance, specific indefinites are those that are overtly or covertly partitive, while non-specific indefinites are those that are not. This is exemplified in (2), where the italicized DP in the first example is non-specific, while those in the second sentence are specific.

- (2) a. *A girl wearing a big red hat* came in.  
b. Three girls came in. *A girl / one of the girls* was wearing a big red hat.

The specific/non-specific distinction has been used in the literature when discussing a host of

special indefinite articles that are taken to mark their DP as either ‘specific’ or ‘non-specific’ in some sense.

The group of ‘non-specific’ markers contains *ku* in St’át’imcets (Matthewson, 1999), *algún* in Spanish (Alonso-Ovalle & Menéndez-Benito 2010), *some* in English (Farkas 2002a), *vreun* in Romanian (Fălăuş 2010b), *un NP quelconque* in French (Jayez & Tovena 2002, 2006), *eyze* in Hebrew (Kagan, 2007), *irgendein* in German (Kratzer 2005), as well as the group of dependent indefinites, e.g., DPs whose D is *egy-egy* in Hungarian or *câte*-marked indefinites in Romanian (Farkas 2001).

On the other side of the specificity divide, we have the class of ‘specific’ determiners such as *a certain* and its close equivalents in other languages (Hintikka 1986), *this* indefinites (Prince 1981, Ionin 2006), partitives (Enç 1991), and the non-*ku* determiners in St’át’imcets (Matthewson, 1999). Though there is agreement on the two groupings above, within each group, the particular markers are sensitive to a variety of parameters. We will address below the issue of finding the parameter behind this taxonomy.

The great challenge in the realm of ‘specificity’ studies, then, is to find the actual contrasts that various specificity markers are sensitive to, and the right theoretical tools that can characterize these contrasts in an insightful way. These tools have to be subtle enough to draw fine-grained distinctions, while at the same time allowing us to capture the common denominator behind the motley family of ‘non-specific’ markers that separates them from their ‘specific’ counterparts.

This challenge cannot be satisfactorily solved without at the same time understanding, and therefore shedding light on, the areas that specificity distinctions interact with. Among these are matters involving scope in general, and the proper treatment of propositional attitudes and nominal quantifiers in particular – issues that are at the heart of formal semantics. On the morpho-syntax side, understanding specificity distinctions interacts with understanding issues such as word order variation, case assignment, and the distribution of various other morphological markers.

In sum, when it comes to special indefinites, the problem is how to capture the constraints on the distribution and interpretation associated with each special determiner while at the same time understanding how each such determiner fits into a general typology of determiners and DPs. The goal, therefore, is to arrive at a theoretical approach that captures the particular constraints each special determiner imposes, while at the same time predicting which semantic distinctions are likely to be marked in the first place.

Below we consider the ways in which specificity distinctions have been invoked in the semantic literature, attempting to uncover what common denominator underlies them. In the next section (§2) we review reasons for distinguishing between different types of specificity. In section §3 we review recent work on special types of indefinite determiners and suggest that a basic contrast in terms of stability vs. variability of reference is common to all subtypes of (non)specificity distinctions. Section §4 concludes.

## 2 Subtypes of specificity

As the discussion above shows, it is useful to distinguish types of phenomena that have been treated under the rubric of specificity in early work. Farkas (1994) differentiates three kinds of ‘specificity’ – scopal, epistemic, and partitive – that have played a role in such discussions. Since these types are relevant to current work as well, we discuss each briefly below.

### 2.1 Scopal specificity

Scopal specificity concerns the question of whether a nominal is interpreted within or outside the scope of certain operators or quantifiers. As we have seen in the previous section, this is the distinction that first caught the attention of formal semanticists in the early seventies, when the issue of whether

scope should be dealt with in natural language semantics at all – and if so, how – was beginning to be debated. Under this understanding of specificity, an existential DP interpreted within the scope of a particular operator is taken to be ‘non-specific’ relative to that operator, while when interpreted outside the scope of such an operator, it is taken to be ‘specific’ relative to it.

The operators that are relevant here are those that induce truth conditional differences correlated with whether a nominal is interpreted within or outside their scope. Thus, in the case of two existentials, their relative scope is truth conditionally immaterial. And indeed, there have been no sightings of special indefinites or other morphological markings on nominals that are sensitive to the presence of another existential in the sentence.

Below we exemplify some operators and quantifiers whose scope has a truth-conditionally relevant effect on indefinite DPs:

- (3) a. *Every* girl admired *a teacher*.  
b. Amanda *wants* to talk to *a teacher*.  
c. *If* Chris had talked to *a teacher*, he would have had the facts earlier.  
d. Bob *didn't* talk to *a teacher* about this.

What the effect such an operator has on the existential in its scope depends on the semantic nature of the operator. As already noted in [Ioup \(1977\)](#), whether an indefinite is within or outside the scope of a universal DP concerns the *number* of possible witnesses, i.e., possible entities that may serve as values to the variable introduced by the DP. In our case, in order for the wide scope interpretation of the indefinite relative to the universal in (3a) to be true, there must be one teacher such that every girl admires her, while under the narrow scope interpretation of the indefinite, the sentence is true even if there is variation among the teachers admired. This variation then can result in the indefinite being associated with several witnesses, though only one such witness relative to each girl.

Matters are quite different in the case of the other examples above. The semantic nature of the scope of predicates such as *want*, as well as that of the antecedent of ‘subjunctive’ conditionals, are much debated issues. One common way of characterizing their effect on the DPs in their scope is to claim that witness choice for them involves the domain of possible worlds that do not necessarily include the world of evaluation of the matrix sentence. Alternatively, at least for *want*-type predicates, it has been proposed that the denotation of the narrow scope DP is a property ([Zimmermann 1993](#)). Whatever the best approach is, the nature of the reference of the narrow scope DP in (3b) and (3c) is quite different from that of the narrow scope DP in (3a).

Negation also affects the interpretation of indefinites, but quite differently from the other cases just discussed. Under the narrow scope interpretation of the indefinite in (3d), for every (contextually restricted) teacher in the world of evaluation, it must be the case that Bob did not talk to him or her. Under this interpretation, the sentence does not make a claim about a particular teacher, just as in the case of the narrow scope interpretations of the other examples. But the nature of the reference of the DP is now different from the other cases: the interpretation of the narrow scope existential here is parallel to that of a wide scope universal.

While the indefinites in (3a)-(3d) all count as scopally non-specific when they take narrow scope relative to any of these operators, we expect the morphological markings (if any) on the indefinites to be sensitive to the semantic nature of the operators involved. And, indeed, as far as we know, there is no special morphologically marked indefinite that simply requires its DP to have narrow scope relative to some operator, without regard to the nature of that operator. Nor do we find indefinite morphology that requires narrow scope relative to an arbitrary selection of operators, e.g., a universal DP and the predicate *want* but no other intensional predicates.

What we do find, instead, is morphological markings that are sensitive to the semantic nature of the operator that takes scope over them. For example, the class of special indefinites called ‘dependent’ in [Farkas \(1997b\)](#) are scopally non-specific relative to a universal, an adverb of quantification or an

iterative aspect marker – all contexts that induce the type of number effects that Ioup mentions, and that are formally characterized as ‘discourse-level plurality’ in Brasoveanu (2008) (building on van den Berg 1996 and Nouwen 2003; see also Brasoveanu 2013 for a recent introduction). That is, the indefinites are interpreted in such a way that the witness entity they contribute is required to vary with another entity. Such DPs cannot occur within the scope of intensional predicates like *want*, negation or conditionals, which do not create the type of dependency these DPs require.

In contrast, *strong* negative polarity items (NPIs) like *lift a finger* are licensed only in the scope of negation, and subjunctive non-restrictive relative clauses in Romanian are licensed within the scope of *want*, negation and ‘subjunctive’ conditionals but not under the scope of *every*. Similarly, Matthewson (1999) shows that in St’át’mcets, the determiner *ku* marks DPs interpreted within the scope of an intensional operator but not those in the scope of a universal, while the determiners in the *a* series in this language have to be interpreted as having widest scope (Matthewson, 2008).

Given the large variety of distinctions instantiated by scopal specificity markers, the challenge is to find the semantic properties that distinguish the various contexts these markers are sensitive to. For example, consider *a certain* indefinites in English, which often disambiguate a potentially scopally ambiguous sentence in favor of the wide scope reading for the DP, as exemplified below:

- (4) a. Delia wants to buy *an apartment in San Francisco*.  
b. Delia wants to buy *a certain apartment in San Francisco*.

Sentence (4a) is ambiguous with respect to the scope of the italicized DP, and thus can be used both to claim that there is a particular apartment in San Francisco that Delia wants to buy, and to claim that Delia has formed the wish that there be some apartment or other in San Francisco that she buys. In contrast, sentence (4b) can only be understood in the former sense, under a scopally specific interpretation of the DP. Such contrasts have led to the hypothesis that *a certain* DPs must be scopally specific.

But we have known at least since Hintikka (1986) that this hypothesis is not correct. *A certain* DPs may occur within the scope of universal quantifiers, as in (5):

- (5) Every man forgot a certain date. Namely his wife’s birthday.

Under the most salient interpretation of (5), the date each man forgot varies across men. A possible way to save the ‘wide scope only’ claim for *a certain* DPs, suggested by Hintikka, is to resort to a functional interpretation of the DP in (5): *a certain date* is interpreted as a particular salient function from men to dates. The challenge for this account is to explain when such a functional interpretation is available and when it is not. The challenge is compounded by the fact that *a certain* indefinites may not occur within the scope of alethic predicates like *want* but they are fine within the scope of doxastic predicates like *believe* and *think*, as exemplified below:

- (6) Burt believes that *a certain witch* has blighted his mare.

Thus, the functional characterization works for the case in 5 but becomes problematic when it comes to distinguishing between 4b and 6.

The above discussion has shown that the subtype of (non)-specificity involving scope is not a homogeneous notion. The challenge in the case of non-specific DPs that are sensitive to scope is to uncover what semantic parameter is involved so as to avoid simply listing the operators that these DPs are ‘licensed’ by, as has been done in the earliest works on these issues. Conversely, for DPs that have to be interpreted as scopally specific in some cases, the challenge is to identify which operators such DPs cannot occur in the scope of, and then find the actual semantic parameter involved.

## 2.2 Epistemic specificity

A different notion of specificity that has proven useful, and which does not tie the specific/non-specific distinction to scope, is epistemic specificity. An influential treatment of it is to be found in [Fodor & Sag \(1982\)](#), who introduce it based on the example in (7):

(7) *A student in Syntax 1* cheated on the exam.

Under the *specific* interpretation of the indefinite DP above, the person who utters (7) has a particular student in mind, whom she can distinguish one way or another from the other students in the class. Under the *non-specific* interpretation of the indefinite DP, the sentence claims that the speaker asserts that there is a cheater among the relevant students, without necessarily knowing anything else about this unfortunate situation. These two ways of understanding (7) cannot be reduced to scopal specificity because there is no operator in the sentence that could in principle take scope over the indefinite here.

After carefully weighing the arguments against considering this difference in interpretation as a semantic ambiguity rather than as a pragmatic one, [Fodor & Sag \(1982\)](#) opt for a semantic approach. They propose an account which treats the specific reading of the indefinite in (7) as referential, and the non-specific reading as quantificational. In their view, the semantics of a referential indefinite is parallel to the semantics of a demonstrative: the semantic value of both expressions is fixed by the context of utterance. In the case of (8) below, where the speaker points to a student in the room when he utters the sentence,

(8) *That student* cheated on the exam.

the referent of the demonstrative is the particular individual the speaker is pointing to. In this view, the crucial difference between a demonstrative and a referential indefinite is that in the case of the latter, the entity that is fixed as the semantic value of the DP is not present in the discourse context but rather, in the speaker's mind. Thus, the semantic value of the referential indefinite in (7) is the particular student the speaker has in mind, even though the addressee has no way of identifying this individual. From the point of view of the addressee, the information she gains is the same under both the referential (specific) and the existential (non-specific) readings, except for the additional information that the speaker has a particular individual in mind in the case of a referential indefinite. A referential indefinite then invites, or at least tolerates, further questions from the addressee concerning properties of the individual the speaker has in mind.

Under its epistemically-specific reading, sentence (7) is true only if the particular individual that the speaker has in mind did indeed cheat on the exam. Under the quantificational interpretation of the indefinite, on the other hand, its semantic interpretation is that of an ordinary existential. Interpreted this way, the sentence is a general statement that does not involve reference to any particular student. Consequently, the sentence is true in case there is such an individual and false otherwise.

Under this proposal then, indefinite DPs are inherently semantically ambiguous between these two interpretations independently of the linguistic context in which they occur. Fodor and Sag's argument for this particular account of the two possible interpretations of (7) is that the simpler hypothesis that takes indefinite DPs to be uniformly quantificational (with existential force) fails to account for the contrast between universal and indefinite DPs when it comes to their scope taking abilities. [Fodor & Sag \(1982\)](#) and [Farkas \(1981b\)](#) show that the 'inverse' scope of universal quantifiers is limited to their own clause, while the inverse scope of an indefinite can cross clausal boundaries even if the clause they occur in is an island for extraction. This is illustrated below, where > is short for 'scopes over':<sup>1</sup>

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<sup>1</sup>We disregard here the relative scope of the indefinite and the deontic modal because it is not relevant to the point we are making.

- (9) Pauline has to talk to every diplomat who was in touch with a Chinese dissident.  $\exists > \forall; \forall > \exists$
- (10) Pauline has to talk to a diplomat who was in touch with every Chinese dissident.  $\exists > \forall; *\forall > \exists$

Thus, (9) can be understood with the universal and the indefinite DP in a direct (or surface) scope relation, i.e., with the indefinite within the scope of the universal, mirroring the order in which the two DPs occur in the sentence. Under this interpretation, Pauline has the daunting task of talking to every diplomat with the property of having been in touch with some Chinese dissident or other. In this case then, variation of dissidents across diplomats is allowed. The sentence can also be understood with the indefinite taking inverse scope over the universal. Under this interpretation, there is a Chinese dissident such that Pauline has the task of talking to every diplomat who was in touch with this dissident. Here, the identity of the dissident is fixed relative to the diplomats.

In contrast, (10) can only be understood with the scope of the relevant DPs paralleling their surface word order, i.e., as having ‘direct’ scope. The only interpretation of (10) is one where the indefinite outscopes the universal. This is the claim that Pauline’s task is to talk to a diplomat with the property of having been in touch with every Chinese dissident. Missing now is the ‘inverse’ scope reading under which the existential is within the scope of the universal, and which allows variation of diplomats across Chinese dissidents. Under the missing reading, Pauline’s task would be to find, for every Chinese dissident, some diplomat or other that was in touch with that dissident, and then talk to him or her.

The upshot is that while the indefinite can have both an inverse and a direct scope relative to the universal in (9), when the DPs are reversed as in (10), the inverse scope reading becomes unavailable. The question that such examples raise is why it is that the inverse scope potential of universal and existential DPs is different.<sup>2</sup>

Fodor & Sag (1982) propose to explain this contrast in inverse-scope taking ability between universals and indefinites by means of the ambiguity they posit for the indefinite in (7). The claim is that the apparent wide scope reading of the indefinite in (9) is, in fact, an illusion: the indefinite is interpreted *in situ*, but it is interpreted referentially. Referential indefinites, just like demonstratives and proper names, have fixed reference independently of their immediate linguistic environment. A referential indefinite therefore cannot be interpreted as covarying with anything in its sentence, and thus it will always appear to have wide scope relative to any variation-inducing operators or quantifiers.

This solution to the problem of exceptional scope for indefinites turns out to be problematic, however. As Fodor & Sag (1982) note, their account predicts that an indefinite is either quantificational, in which case its inverse scope is limited to its clause, just as it is for universals, or it is referential, in which case it has fixed reference and therefore appears to have widest scope. It should therefore be impossible to find a sentence where an indefinite has ‘intermediate’ exceptional scope, i.e., it has inverse scope over an operator  $O_1$  outside its clause, while at the same time scoping under another, even higher operator  $O_2$ . Such readings are predicted to be impossible because if the indefinite is interpreted outside the scope of  $O_1$ , it has to be referential. But a referential indefinite has fixed reference across the board, and therefore cannot scope under  $O_2$ . Farkas (1981b) and Abusch (1994) have shown, however, that such intermediate scope readings are possible. One of the readings of example

<sup>2</sup>As work in dynamic semantics has established, this is not the only contrast between indefinites and universals. Thus, as shown below, indefinites can have discourse scope while universals cannot – at least not when the anaphoric pronoun is singular:

- (1) An<sub>i</sub> invited speaker called. She<sub>i</sub> wanted to speak to you.
- (2) Every<sub>i</sub> invited speaker called. \*She<sub>i</sub>/They<sub>i</sub> wanted to speak to you.

in (11), for instance, involves the indefinite scoping in between the two universal quantifiers:

- (11) Every committee member read every paper that a candidate submitted.  $\forall > \exists > \forall$

The relevant reading here is the pragmatically most likely one according to which every committee member was assigned a candidate from the pool of candidates, and then she had to read every paper submitted by that candidate. That is, candidates vary across committee members, but once we fix the committee member, there is no covariation between candidate and papers.

Note that this interpretation arises even if we do not assume that a unique candidate is assigned to each committee member. Under this interpretation, the sentence is true as long as for each committee member, we can find some candidate with the property that the committee member in question read every paper submitted by the candidate. The lack of uniqueness requirement here is relevant to Schwarzschild (2002), where it is claimed that the recalcitrant wide scope readings of indefinites can be explained away based on contextual uniqueness requirements narrowing down the domain of the indefinite to a singleton, thereby neutralizing the possibility of varying values and giving rise to the illusion of widest scope.

Once the major advantage of treating the contrast in (7) as a semantic ambiguity disappears, a pragmatic account seems preferable. Under this account, the epistemic specificity distinction involved in the two readings of ? concern the information state of the Speaker (or some other relevant entity) but this difference is not signaled in this sentence at the level of truth conditional semantics. But whether pragmatic or semantic, the contrast exists. Calling Fodor and Sag's 'referential' reading of the indefinite in (7) *epistemically specific* and its 'quantificational' reading *epistemically non-specific* stays neutral with respect to the way the contrast is to be accounted for. It also leaves open the possibility that languages might have a special morphological way of marking the fact that the speaker's informational state is such that she can support her general existential statement with a particular witness that verifies it.

For our purposes then, it is important to note that the epistemic specificity / non-specificity contrast is independent of scopal specificity since a DP can be epistemically non-specific even if there is no operator for it to scope under. Recall also that an indefinite can be in the scope of an operator while taking exceptional inverse scope relative to another, and therefore scopal specificity is sensitive to the local linguistic context in a way that epistemic specificity is not. In what follows then we treat epistemic and scopal specificity as different notions. We assume that when a DP is epistemically specific, the speaker has a particular entity in mind as witness for the indefinite, while in the case of epistemically non-specific indefinites this is not the case. We remain agnostic with respect to whether this difference is semantic or pragmatic.

### 2.3 Partitive specificity

Enç (1991) proposes and defines yet another type of specificity, which we call partitive. Her empirical goal is to characterize the class of DPs that receive Accusative case marking in Turkish. Roughly speaking, definite DPs as well as certain indefinites receive Accusative case when in direct object (DO) position, while other indefinites do not get Accusative case. The examples Enç starts out with are given below:

- (12) Ali bir piyano-yu kiralamak istiyor.  
Ali one piano-Acc to-rent wants  
'Ali wants to rent a certain piano.'
- (13) Ali bir piyano kiralamak istiyor.  
Ali one piano to-rent wants  
'Ali wants to rent a (nonspecific) piano.'

In the absence of special contextual circumstances, the presence of Accusative case marking in (12) forces a wide scope interpretation of the DP, while the unmarked direct object in (13) is interpreted within the scope of *want*. However, Enç shows that under closer scrutiny, Accusative case marking is not sensitive to scope *per se*. Consider a situation in which Ali is hesitating between two pianos, and wants to buy one of them and rent the other, but has not yet made up his mind with respect to which one he wants to buy, and which one he wants to rent. Crucially, (12) is still felicitous in this case even though the DP is interpreted within rather than outside the scope of *want*.

Enç's claim is that what matters for Accusative case marking on indefinites in Turkish is partitivity, defined informally in (14):

- (14) A DP is partitive if its referent is a subset of a previously introduced referent.

DPs can be overtly partitive, as in the English example below,

- (15) Susan wants to marry *one of Laura's brothers*.

or covertly partitive, as the DO in the Turkish example in (12) (assuming the context given above), or as in the English example below:

- (16) A group of youngsters appeared on the stage. *A girl* was wearing jeans, another was wearing a ball gown.

The indefinite *a girl* in (16) is covertly partitive if the referent it introduces is taken to be a member of the group mentioned in the previous sentence, which is the most natural way of interpreting it in this example.

Enç's claim then is that when an indefinite is marked by Accusative case in Turkish it has to be interpreted as a partitive. More generally, the claim is that partitivity is the property that Accusative marking in Turkish is sensitive to in general. The other types of DPs that receive Accusative marking are definites and universals, and therefore she has to show that these kinds of DPs are partitive as well. In order to achieve this goal, Enç adopts a familiarity account of definiteness under which definites pick up a familiar discourse referent. Under the definition of partitivity in (14) and under a familiarity view of definiteness, definites are partitive by default. Universals are partitive as well because they are normally understood as having contextually restricted domains. We return to the connection between definiteness and partitive specificity in the next subsection.

So far we have shown that partitive specificity understood as a semantic notion is a morphologically significant parameter because Turkish Accusative case marking is sensitive to whether a DP is semantically partitive or not. Note now that this notion of partitive specificity is independent of both scopal and epistemic specificity. The independence of partitivity and scope is shown by the fact that in both (12) and (15), the partitive DP can be interpreted within the scope of an opaque-context creating predicate like *want*.

The independence of partitive and epistemic specificity is shown by the fact that in both (12) and (15), the partitive-specific DP may be interpreted as either epistemically specific or as epistemically non-specific. Thus, if Ali has not decided which piano he will rent and which he will buy, and if Susan has not yet decided which brother of Laura's she wishes to marry, the relevant DPs are specific in the partitive sense but non-specific in the epistemic sense.<sup>3</sup>

Conversely, it is easy to think of cases where a DP is epistemically specific but not partitive. To stay with Susan and her matrimonial plans, the indefinite in (17),

- (17) Susan wants to marry *a Norwegian*.

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<sup>3</sup>Note that when discussing epistemic specificity, the 'epistemic judge' can be the Speaker or the subject of the sentence, as we will discuss briefly below. In Enç's case, as well as in 17 the difference is immaterial since if the referent of the relevant DP is epistemically non-specific for Ali or Susan it must be epistemically non-specific for the Speaker as well.

can well be interpreted as epistemically specific (and scopally specific as well) without it having to have a partitive interpretation.

Taking stock at this point, we have identified the following three independent ways in which the term ‘specificity’ has been used:

- i.* **scopal specificity**, defined in terms of wide vs. narrow scope relative to particular operators, a notion that in itself is heterogeneous given that the semantic nature of the operator matters for formal markers that are sensitive to scope relations;
- ii.* **epistemic specificity**, defined in terms of whether the speaker (or another cognitive agent) has a particular entity in mind or not; and finally,
- iii.* **partitive specificity**, defined in terms of whether the referent of the DP is a subset of a familiar set of entities or not.

To complicate matters further, Enç also shows that *a certain* DPs in English are different from Accusative case marked DPs in Turkish, though *certain* seems to mark the DP in which it occurs as ‘specific’ in some sense. She suggests that *a certain* DPs, just as their Turkish counterparts, namely DPs marked by *belli*, can be partitive but need not be. They also do not necessarily have to have wide scope. We can add now that they do not have to be epistemically specific either, as noted in Farkas (2002b). In (18) for instance, neither Borges nor the speaker has a specific number in mind and yet the use of *a certain* is appropriate.

- (18) Borges closed his eyes and saw *a certain number of birds*. He quickly reopened them without having counted the birds he saw.

Enç suggests that what *a certain* DPs require is to be somehow related to an individual already present in discourse, a property that connects them to partitivity. This approach is, however, either too narrow to be empirically correct or too vague to be theoretically useful. While in the examples Enç discusses, *a certain* DPs are indeed related to entities that are familiar in discourse by the time the DP occurs (particularly when they are scopally non-specific), in (18) above it is not clear how such a relation could be defined in a useful way. Farkas (2002b) suggests that what matters for *a certain* DPs is that their referent be in principle identifiable even if in the actual context there is no individual who can identify it. This fits the example in (18), where neither Borges nor the speaker (but only God, as Borges argues) can identify the number of birds involved.<sup>4</sup> Note that if this characterization is on the right track, we end up having yet another type of specificity, one that concerns the identifiability of the referent. So while the three types of specificity discussed above are linguistically relevant, they are by no means exhaustive.

We now turn to a brief discussion of specificity and definiteness in the context of differential object marking, of which the Turkish case discussed by Enç is a special instance.

## 2.4 Specificity, definiteness, and differential object marking (DOM)

The question of how specificity is related to definiteness has been mentioned in the previous subsection. Recall that Accusative case in Turkish marks not only partitive indefinites but also definite DPs. This is not simply a quirk of Turkish: it is cross-linguistically common to find ‘specific’ indefinite and definite DOs being marked by special morphology. The problem of Accusative case marking in Turkish falls under the general phenomenon known as ‘differential object marking’ (DOM). A language is said to exhibit DOM if a subclass of its direct objects bear a special morphological marker, which can be case marking, a preposition, or some other morpheme. In early work on DOM in Romanian,

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<sup>4</sup>This example is loosely based on *Dreamtigers*, a short story by Jorge Luis Borges. See also Farkas (1981a) for discussion.

Farkas (1978) shows that whether or not a direct object is marked by the preposition *pe* in this language depends on matters connected to animacy, as well as to matters connected to definiteness and specificity. Definite and specific indefinites can be marked with *pe* while non-specifics cannot. The sense of specificity relevant to *pe* marking was not clarified in that early work, nor has it been made completely clear since.

Aissen (2003) addresses DOM from a cross-linguistic perspective and argues that there are two parameters that DOM is sensitive to cross-linguistically, one involving the animacy of the referent of the DP, and the other its definiteness. She further shows that both parameters are associated with ordered scales with multiple elements in them. With respect to definiteness, she proposes the scale in (19) below:

(19) Personal Pronoun > Proper Name > Definite > Specific > Non-specific<sup>5</sup>

In Farkas (2002a), the specificity rung is expanded so as to differentiate between partitive, epistemic and scopal specificity, though exactly how these types of specificity are ordered with respect to DOM remains unclear.

Aissen proposes that DOM in a particular language divides this scale at a particular point, so that items that fall to the left of it are marked and those to the right are not. For Turkish, for instance, the dividing point is between Specific and Non-specific since as we have seen, definites and partitive specifics are case marked, while indefinites that are not partitive are not.

Two issues arise at this point. First, as a general question, one wonders what semantic parameter underlies the scale in (19). This issue is relevant to understanding the notion of definiteness since in order to make sense of the scale, we have to understand in what sense a personal pronoun or a proper name are more 'definite' than a definite or partitive DP. Second, a more narrow question concerns the relation of definiteness and partitive specificity. In particular, we have to understand in what sense partitives are closer to definites than non-partitives. This issue is relevant not only to our understanding of DOM but also to our understanding of specificity, so we address it briefly next.<sup>6</sup>

As mentioned briefly above, Enç (1991) shows that under a familiarity view of definiteness, and under the view of partitive specificity she proposes, the two are naturally connected. If definites are required to introduce a familiar discourse referent, they will by definition count as partitive since for a DP to be partitive, its referent must be a subset of a familiar referent. We can even see how partitive indefinites are less familiar than definites: the former are a strict subset of a familiar discourse referent while the latter are identical to it.<sup>7</sup>

The problem with this view of the relationship between definiteness and partitivity is that the familiarity theory of definites has been called into question in recent years on empirical grounds (see Abbott 1999, Farkas 2002a, Roberts 2003 among many others). Because of the many instances of felicitous novel definites, the uniqueness view of definites has come to be favored. Under the uniqueness approach to definiteness, informally speaking, definites require the domain from which their referent is chosen to be singleton. In the case of familiar definites, this condition is met under the assumption that the domain can be contextually restricted to the unique previously introduced referent that satisfies the property contributed by the descriptive content of the definite DP. To exemplify, the referent of the italicized DP in (20) is definite because its domain is unique by definition, while the referent of the italicized DP in (21) is unique because it is contextually restricted to the referents introduced in the immediately preceding discourse.

(20) *The first person to reach Mars* may be an American.

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<sup>5</sup>A neglected but important issue here concerns the status of universal DPs relative to DOM. We have seen that in Turkish universal DPs are treated on a par with partitives, and are marked by Accusative case. How general this situation is remains an open issue.

<sup>6</sup>For a discussion of definiteness in relation to (19), see Farkas (2002a).

<sup>7</sup>For the best arguments in favor of the familiarity/novelty view of definiteness/indefiniteness contrast, see Heim (1982).

(21) A man and a woman came in. *The woman* was wearing a red hat.

The problem now is that under a (contextual) uniqueness theory of definiteness, we can no longer maintain Enç's account of the connection between definites and partitives. A way of recapturing the connection, suggested in Farkas (2002a), is to see definiteness and specificity contrasts as involving the contrast between more or less restricted domains from which referents are to be chosen. Definites restrict this domain to a singleton, partitives restrict it to an already familiar domain, while those DPs that are non-partitive and indefinite leave it unrestricted.

Going one step further, this domain restriction can be seen as a way of limiting possible variation in reference. The more restricted the domain is, the more restricted the reference of the DP. Once one thinks in terms of variation versus stability of reference, one can also distinguish between proper names and definite DPs: proper names have fixed reference relative to all  $\langle$ world, assignment $\rangle$  pairs, including those that are still live options in the Common Ground, while definite DPs have fixed reference only with respect to a particular  $\langle$ world, assignment $\rangle$  pair. Partitives too have their reference (and therefore covariation 'potential') restricted relative to particular  $\langle$ world, assignment $\rangle$  pairs. Thus, it is commonly assumed that proper names refer rigidly across worlds and assignments, which is why they are immune to variation. On the other hand, a definite description that is not anaphoric does not have this sort of fixed reference: the most natural way of interpreting (20) is with the definite description within the scope of the modal. Finally, in the case of anaphoric expressions, their referent is fixed to the referent of their antecedent, and it inherits its stability or variation property from it.

This brief discussion of the connection between definiteness and specificity thus opens up the possibility of taking stability vs. variation in reference as a common denominator underlying the other kinds of specificity distinctions, not just the partitive variety. In the case of scopal specificity the connection is obvious. Recall that when scope is semantically detectable, i.e., when it yields truth conditional-differences, a DP has narrow scope relative to an operator in case its reference is allowed to vary across parameters introduced by that operator. When a DP has wide scope relative to such an operator, its reference is fixed relative to those parameters. Consider, for example, (22) below.

(22) Every <sub>$x$</sub>  child sang a <sub>$y$</sub>  song.

The relevant parameter involves varying values assigned to the discourse referent  $x$  introduced by *every*: the indefinite has narrow scope relative to the universal if the values of  $y$ , introduced by *a*, can covary with the values of  $x$ , and it has wide scope relative to *every* if the value of  $y$  is fixed for all values of  $x$ . In the case of (23),

(23) Annabel wants <sub>$w$</sub>  to visit a <sub>$y$</sub>  village in France.

the relevant parameter is worlds  $w$  compatible with what Annabel believes which, in addition, are ranked high according to certain preferences of hers. In both cases a wide scope interpretation of the indefinite ensures that the reference of the DP stays fixed relative to the parameters involved, while a narrow scope interpretation allows variation. Note that in the case of the wide scope interpretation, the issue of whether the indefinite is epistemically specific or not is still open. A narrow scope interpretation of the indefinite relative to *want*, on the other hand, is no longer compatible with epistemic specificity.

Concerning epistemic specificity, recall that epistemically specific indefinites require the speaker to have a particular entity in mind as a value for the indefinite, while in the case of an epistemically non-specific indefinite, this is not the case. We can model the epistemically specific interpretation by taking the value of the discourse referent introduced by the indefinite to be fixed relative to the set of worlds that are compatible with what the speaker believes. In contrast, the value of an epistemically non-specific indefinite varies across these worlds (see Kamp & Bende-Farkas 2006 and references therein for more discussion). Once this characterization is accepted for matrix-level cases like Fodor and Sag's

(see (7) above), we can extend it to embedded cases where the embedding verb is doxastic, such as (24):

(24) Barney believes that *a Syntax 1 student* cheated on the exam.

The indefinite here has multiple possible readings, not all of which should necessarily be treated as semantic in nature. Thus, the sentence may be interpreted as describing a situation in which Barney has a particular individual in mind, who might well be a figment of his imagination, about whom he believes he is a cheater. In this case the indefinite has narrow scope relative to *believe* and is epistemically specific relative to Barney. The epistemically non-specific reading – again, with respect to Barney – is one where the sentence describes a situation in which Barney has a purely existential belief, in which case the identity of the cheater is allowed to vary across worlds compatible with what he believes.<sup>8</sup>

Returning now to (23), one could argue that there too epistemic specificity has to be relativized so as to involve either the speaker or Annabel, the subject of the propositional attitude predicate, whose beliefs are relevant when determining the worlds relative to which the complement of the predicate is interpreted.

In sum, we have shown so far that the notion of specificity is heterogeneous, involving at least the three subkinds, scopal, epistemic and partitive. We have also shown that there are morphological phenomena that are sensitive to different sub-kinds of specificity, and in fact, are even more fine-grained than this three-way distinction. Finally, we have suggested that there is, nevertheless, a common denominator across the various types of specificity relevant to natural language, namely the notion of fixed vs. variable reference relative to a set of parameters. The nature of the parameters involved and the way they are introduced is responsible for the heterogeneity we find in this area. Thus, despite this common denominator we posit, the various kinds of specificity distinguished in the literature and discussed above remain independent.

In the next section, we elaborate on this proposal addressing the question of how it can accommodate the variety of specificity distinctions we find, particularly within the class of indefinite DPs.

### 3 Specificity as variation vs. stability of reference

The common denominator underlying the various kinds of specificity discussed in the literature, we suggest, is the basic contrast between stability and variation in reference. If this is indeed the basic contrast specificity distinctions are sensitive to, we expect it to play a role in the contrasts that various special indefinite articles are marking. We claim in this section that this expectation is met.

As has been mentioned in the introduction, the bulk of the current work on indefinites focuses on the details of the semantics and pragmatics of various special shades of indefinites, such as the singular determiner *some* (*some<sub>SC</sub>*), *a certain* and its German counterparts *ein bestimmt/gewiss*, *this* indefinites, dependent (or distributive) indefinites, such as Hungarian *egy-egy* indefinites, as well as existential items with free choice or epistemic non-specificity effects, such as German *irgendein*, Romanian *vreun*, Hebrew *eyze*, Spanish *algún*, French *un NP quelconque* and its Italian counterparts.<sup>9</sup> Some of the basic questions that arise in this area are formulated in (25) below:

(25) a. What expectations should we have concerning the type of information encoded in a D?

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<sup>8</sup>Partly independent of these distinctions is the issue of whether the italicized DP is interpreted as specific or non-specific relative to the speaker.

<sup>9</sup>Without attempting to be comprehensive, we mention some of the large amount of work on these determiners here: Farkas (2006) and Fălăuș (2010b) on *vreun*, Jayez & Tovenă (2002) and Jayez & Tovenă (2013) on French non-specificity markers, Alonso-Ovalle & Menéndez-Benito (2010) on *algún*, Kagan (2007) on *eyze*, Ionin (2006) on *this* indefinites, Aloni & Port (2010) on epistemic non-specifics in German, Italian and Spanish, Farkas (2001) on *egg-egy* in Hungarian, von Heusinger & Klein (2013) on two indefinites in Uzbek, Ebert et al (2013) on German *bestimmt* and *gewiss*.

- b. What, if any, is the common denominator underlying specificity distinctions and more broadly, semantic distinctions across determiner types?
- c. How do scopal restrictions interact with specificity markings?

The more studies there are investigating this rich research area, the more clear it is that the differences among these items are systematic. Thus, the question of what fundamental contrasts are marked by these indefinites becomes ever more urgent. The semantic tool that has been found useful in work after work on these issues is the notion of *alternative*, which different theories define in different ways. In the informal discussion that follows, we assume that the D in a DP introduces a discourse referent (or variable), and variables are assigned values by sets of assignment functions. Each assignment function in such a set is an alternative relative to which the value of the discourse referent is determined. The properties of the set of assignment functions giving values to a variable depend on the linguistic and extra-linguistic context. Below then, alternatives are seen as a set of assignment-value pairs, where the assignment functions in the set give values to the variable in question. Connecting this work to specificity, we claim that examining the properties of these alternatives is a useful tool in understanding specificity distinctions.

In terms of their truth-conditional contribution, we assume that indefinite determiners select a witness entity from the set of entities denoted by their NP sister. In terms of effects on the discourse, we assume they minimally introduce a variable (or discourse referent) and the updated output assignments assign to this variable an entity satisfying the property contributed by the NP.

Within the class of indefinite determiners, we assume a basic distinction between a neutral determiner that has no further role than the minimal one described above, and a host of non-neutral determiners that impose further constraints on the values of the variable they introduce. We hypothesize that these constraints fall into one of two types:

- (26) a. **Domain constraints:** impose further constraints on the domain of the variable.
- b. **Evaluation constraints:** impose further constraints on the set of output alternatives we obtain after the indefinite updates its input set of alternatives.

Under these rather minimal assumptions, we are able to make the following two cross-linguistic predictions that begin to answer the question in (25a):

- (27) a. Determiners impose semantically/pragmatically coherent restrictions.
- b. Determiners are predicted not to impose purely structural restrictions.

The first prediction above rules out determiner types that cannot receive a natural semantic characterization. An example of a constraint that is ruled out would be one that required an existential DP to have a universal in its scope. While such a constraint is structurally simple, it does not result in a semantically coherent restriction because the interpretive properties of an existential are not affected by the presence of a universal in its scope. Consequently, such a requirement cannot be connected to constraints on the domain or evaluation of the existential. Constraints amounting to requiring the indefinite to occur within the scope of a quantifier or operator, on the other hand, are not ruled out because being within the scope of an operator or quantifier may affect the way the DP is evaluated. But such narrow-scope constraints are predicted to be non-arbitrary. Thus, an example of a determiner type ruled out by the first constraint above is one required to be interpreted within the scope of an existential quantifier or an epistemic predicate. This is not a semantically coherent restriction because there is no semantic property that ‘naturally’ distinguishes these two contexts from all others.

The second prediction above rules out determiners that impose purely syntactic constraints, for instance, occurring within the restrictor or nuclear scope of some quantifier independently of the

semantics of that quantifier.<sup>10</sup>

Against this background, we return to the question in (25b) and suggest that the common denominator underlying the family of specificity distinctions is as follows:

- (28) The specificity/non-specificity distinction involves regulating witness choice for the relevant variable by requiring either stability or variation of value across particular assignments.

Within specificity-encoding determiners then, the major distinction is between the two types of determiners in (29):

- (29) a. **Pro-variation determiners:** Ds that impose a constraint that leads to relative variability of values.  
b. **Anti-variation determiners:** Ds that impose a constraint that leads to relative stability of values.

A pro-variation determiner imposes a constraint whose effect is to enforce variation of values for the relevant variable across a particular set of assignments. An anti-variation determiner imposes a constraint that limits such variation. Limiting variation of values is a marker of ‘specificity’. Enforcing variation of values is a marker of ‘non-specificity’. Different specificity/non-specificity markers differ relative to the way the relevant assignment set is characterized. Going back now to the specificity/definiteness scale in (19) above, we predict that DPs headed by pro-variation determiners are less likely to be DOM marked than DPs headed by anti-variation determiners.

Within the inventory of definite and indefinite Ds mentioned so far, those in (30a) can be characterized as anti-variation determiners, and therefore as specific Ds, while those in (30b) can be characterized as pro-variation determiners, and therefore as non-specific Ds:

- (30) a. specific Ds: definite Ds, demonstrative Ds, *a certain*, *ein gewiss/bestimmt* (German), *this*-indefinites, overt partitives, *a*-series determiners (St’át’imcets)  
b. non-specific Ds: *some<sub>SG</sub>*, *câte* (Romanian), *egy-egy* (Hungarian), *irgendein* (German), *vreun* (Romanian), *eyze* (Hebrew), *algún* (Spanish), *ku* (St’át’imcets)

For both specificity and non-specificity markers, one has to characterize the assignment set (or alternative set) they are sensitive to. For specificity markers, we should further ask what variation they tolerate. The answer, combined with the appropriate semantics for quantifiers (and other operators), should predict what operators can have such a specificity marker within their scope. For non-specificity markers, the relevant question is what type of variation they require, which in turn will determine what operator, if any, they have to occur in the semantic scope of.

The details of the answers to these questions for particular specificity or non-specificity marking determiners will depend on the nature of the constraint contributed by that particular determiner, as well as general assumptions about how variation of values across alternatives can enter the interpretation process. The ideal answer to the questions in (25c) then is that the scopal properties of a DP should follow from its semantics, and if the DP is headed by a D, the semantics of that D should be sufficient to predict its scopal behavior.

Recent work on special determiners has uncovered a wide variety of specificity distinctions. At least part of the reason for this richness is, we claim, the diversity of alternatives across which values may vary or stay fixed. As already indicated, we take the notion of alternative to involve the value a discourse referent gets at a particular world:

- (31) An alternative for a discourse referent  $x$  encodes the following two components:

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<sup>10</sup>Negative concord items come to mind as possible systematic exceptions to (27b). Note that not even in their case is the constraint involved purely syntactic.

- i. a world  $w$ ;
- ii. an assignment function  $f$  defined for  $x$  at  $w$ ;

This is not a formal definition, but merely a characterization of the notion of alternatives we find useful for characterizing (non-)specificity. There are many ways of formalizing sets of alternatives encoding this information, but that level of detail is not necessary for the present discussion. Leaving the world variable aside for now, requiring variation for a variable  $x$  contributed by an indefinite across a set of assignments  $G$  means that there must be at least two assignments  $g$  and  $g'$  in  $G$  such that  $g(x) \neq g'(x)$ . Stability of values across the set of alternatives  $G$  means that  $x$  is assigned the same value by all the assignments in  $G$ .

We can now distinguish the following two major types of quantificational alternatives, depending on how they are introduced: (i) ‘external’ alternatives and (ii) ‘internal’ alternatives. The set of *external alternatives* are the set of contexts in the Tarskian/Montagovian sense relative to which an expression is evaluated. Omitting the model and world of evaluation for simplicity, the set  $G$  of external alternatives for the variable  $x$  introduced by the indefinite in (32a) is as given in (32b):

- (32) a.  $A_x$  student left.  
 b.  $G = \{g : \llbracket \ulcorner A_x \text{ student left} \urcorner \rrbracket^g = \mathbb{T} \rrbracket\}^{11}$

In terms of Discourse Representation Theory (DRT; [Kamp 1981](#), [Kamp & Reyle 1993](#)),  $G$  is the set of embedding functions for a discourse representation structure (DRS). It is the set of all assignment functions which assign to  $x$  a value that is both a student and left.

The set of *internal alternatives* is the set of assignment functions that is the result of interpreting an expression. In terms of Dynamic Predicate Logic (DPL; [Groenendijk & Stokhof 1991](#)) this is the set of all output assignments we obtain after we update the input set of assignments with the meaning of the expression under consideration. The set of internal alternatives resulting from the interpretation of (32a) relative to  $G$  is the set  $H$  below:<sup>12</sup>

$$(33) \quad H = \{h : \exists g \in G (g[x]h \wedge \llbracket \text{STUDENT}(x) \rrbracket^h \wedge \llbracket \text{LEAVE}(x) \rrbracket^h)\}$$

The sub-formula  $g[x]h$  in (33) requires the assignments  $g$  and  $h$  to differ at most with respect to the value they assign to the variable  $x$ .

Variation of values for  $x$  within its set  $H$  of internal alternatives is possible when this set is not a singleton. This situation comes about when there is some source within the sentence that is being interpreted, such as a quantifier or some other operator, that introduces a non-singleton set of alternatives  $G$  relative to which the indefinite is interpreted. This is the case, for instance, in (34) below, where the determiner *every* introduces such a set:

- (34) Every <sub>$x$</sub>  student read a <sub>$y$</sub>  book.

After the universal *every <sub>$x$</sub>  student* is interpreted, it outputs a set of alternatives  $G$  that store all the students in the domain relative to the variable  $x$ . That is,  $G$  contains (at least) as many assignments/alternatives as there are students. Then the indefinite variable  $y$  is evaluated relative to  $G$  and every  $g \in G$  is updated with respect to  $y$ . The indefinite is said to be outside the semantic scope of the universal iff the set of values assigned to  $y$  in the resulting set of internal alternatives  $H$  is a singleton set, i.e., the value of  $y$  is fixed relative to all the values of  $x$ . In this case the indefinite will be

<sup>11</sup>We’re providing the maximal set  $G$  here only for simplicity.

<sup>12</sup>Again, we’re providing the maximal set  $H$  for simplicity here, but semantic clauses for existentials that are non-maximal are also possible; various other issues, e.g., the interpretation of singular number morphology on the indefinite, complicate this picture further; see [Brasoveanu \(2010\)](#), [Brasoveanu & Farkas \(2011\)](#) and [Brasoveanu \(2013\)](#) among others for various solutions to this and more discussion.

scopally specific relative to the universal. But if  $y$  is assigned different values for different values of  $x$  in  $H$  (or at least for some of the  $x$  values), the indefinite is in the semantic scope of the universal, and scopally non-specific. In addition, the value of the indefinite may vary (be non-specific) or be constant (specific) relative to external alternatives.

Variation/stability requirements can target internal or external alternatives. If variation is required across internal alternatives (as is the case for dependent indefinites such as *câte* marked indefinites and the special ‘epistemic’ indefinite marker *vreun* in Romanian), the DP in question will have to be within the semantic scope of an expression that introduces a non-singleton set of alternatives. If on the other hand variation across external alternatives is required (as is the case for *some<sub>SC</sub>* according to Farkas 2002a), there is no need for the DP in question to be within the semantic scope of an operator or quantifier because external alternatives are assumed to be provided by the context of interpretation. This, then, exemplifies the way scopal constraints a D imposes on the DP it heads can be at least partially predicted from the type of interpretive constraint the D imposes.

Let us turn now to an example with overt partitives, such as *one of the guests*. Partitives are an example of a DP type that imposes a constraint resulting in relative external stability. Such DPs restrict the domain of the variable they introduce to a subset of a discourse-familiar set and thereby limit the potential of variation across external alternatives, all of which have to choose a value from this subset. Partitives then are specific relative to simple non-partitives since the condition they impose is an anti-variation constraint. Given that the requirement is an anti-variation constraint, we correctly predict partitives to pattern with other ‘specific’ DPs relative to DOM, for instance.

On the other hand, given that the type of constraint they impose targets external alternatives, we again correctly predict that the semantic scope of partitives will be unaffected and thus that they will be able to take semantic scope inside or outside any operator or quantifier. That this prediction is correct is seen in (35), where the partitive can be interpreted inside or outside the scope of negation, and in (36), where it can be interpreted inside or outside the scope of the intensional predicate *want*.

(35) Alice didn’t marry *one of Phil’s brothers*.

(36) Alice wants/doesn’t want to marry *one of Phil’s brothers*.

A different kind of stability-of-reference constraint is involved in the interpretation of *a certain* indefinites. Intuitively, such indefinites require that their referent be identifiable in principle. This can be formally captured by assuming that these special indefinites require stability of reference across a particular type of external alternatives, namely those encoding contexts that are more informative concerning the identity of the referent than the current ‘matrix’ context. The idea is that it should be possible to monotonically increase information relative to the current context so that we reach a context in which all external alternatives agree on the value assigned to the variable introduced by *a certain*. This constraint then ensures that the witness for the indefinite is identifiable in principle. As a result, *a certain* indefinites are predicted not to occur within the semantic scope of negation or a verb like *want*, but be fine within the scope of universal quantifiers or epistemic predicates, as illustrated below:

(37) Alice didn’t marry a certain American. *a certain* > negation; \*negation > *a certain*

(38) Alice wants to marry a certain American. *a certain* > *want*; \**want* > *a certain*

(39) Every team discussed a certain legal case. *a certain* > *every*; *every* > *a certain*

(40) Alex thinks that a certain witch blighted his mare. *a certain* > *think*; *think* > *a certain*

On the other hand, non-specificity markers targeting internal alternatives will have to be interpreted within an environment that provides the set of internal alternatives the DP needs. This is the case with dependent indefinites and other special determiners that resist widest scope interpretations

and must be ‘licensed’ by expressions whose interpretation involves introducing particular types of internal alternatives.

Finally, note that the literature on epistemic indefinites, i.e., indefinites that appear to mark the fact that the speaker is either ignorant or indifferent relative to the identity of the referent, has shown that these indefinites are sensitive to the nature of the modal context they must be interpreted in, as well as to the various shades of ignorance and the presence of indifference implications; see in particular [Alonso-Ovalle & Menéndez-Benito \(2010\)](#) and [Aloni & Port \(2010\)](#). A comprehensive account of these subtle variations remains an open issue.

To sum up, we have suggested above that non-specificity determiners impose restrictions that enforce variation across alternatives. This variation may involve external or internal alternatives. If internal alternatives are involved, the DP headed by the determiner in question will have to be interpreted within the semantic scope of an expression that introduces such alternatives. We suggested that this is the case for dependent indefinites, as well as for other special indefinites that resist widest scope interpretations. If external alternatives are targeted, the relevant DPs are predicted to have wide scope freely.

Specificity markers, on the other hand, impose restrictions on variation. They differ with respect to the nature of the alternatives that are restricted or the source of the restriction. Such items are predicted to be interpreted outside the scope of expressions that would impose variation that goes against their restriction. The approach sketched here allows us to see both what is common across a diverse class of specificity markers and what is common across a diverse class of non-specificity markers: the former require variation of reference across alternatives, the latter impose restrictions on variation. This perspective helps shed some light on the complexities of the phenomena associated with specificity. It also holds out the promise of accounting for the scopal properties of a DP solely based on the semantic characterization of the DP and of the various operators and quantifiers it interacts with.

## 4 Conclusion

We have shown, we hope, that specificity distinctions are relevant to a variety of linguistic phenomena, and therefore the notion of specificity deserves attention. At the same time, when this attention is directed to the actual linguistic markings sensitive to it, it becomes clear that we are dealing with a large family of distinctions. In such cases the twin issues that arise are *(i)* how to best characterize the parameters across which the members of this family differ, and *(ii)* how to characterize the parameters that are responsible for what unites the various members into a single family. To make progress on the first issue, the relevant linguistic phenomena have to be studied in great detail and cross-linguistic connections have to be sought. To make progress on the second, new theoretical tools have to be fashioned or old ones sharpened.

We have suggested that the family resemblance trait across various kinds of specificity involves the notion of stability (specificity) vs. variation (non-specificity) of reference across alternatives. The richness of distinctions we find is due to the heterogeneous nature of possible alternatives involved. Dividing particular Ds into specificity and non-specificity markers depending on whether they impose or limit variation of values for the variable they introduce is, we suggest, a useful step towards understanding the large variety of determiners and DPs we find within a language and cross-linguistically. The view we propose is that determiners impose domain or evaluation constraints pertaining to the variable they introduce. The hope is that once the right constraints are formulated, the distribution and interpretation constraints on particular determiners will follow. A lot more work needs to be done, however, in order to fulfill this hope.

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