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REFERENTIALLY ANCHORED INDEFINITES

Abstract. Specific indefinite noun phrases are prototypically referential expressions, show wide scope, are presuppositional, and indicate discourse prominence or “noteworthiness”. However, not all specific indefinites show these properties. The existence of so-called “narrow scope specific” or “relative specific” indefinites demonstrates that specificity cannot be explained by the wide scope of specific indefinites or by their referential properties. This paper argues that the accusative case suffix in Turkish marks specificity, including that of narrow scope specific indefinites. Enç’s (1991) semantic representation of specificity is modified and a more general representation is formulated in terms of file change semantics. Specific indefinite noun phrases are taken to introduce a new discourse item that is anchored to an already established discourse item. This underspecified semantics accounts for the different aspects of specificity.

1. INTRODUCTION*

Semantic theories generally focus on four main aspects of specific indefinites: A prototypical specific indefinite is assumed to have wide scope, a referential reading, an existential presupposition, and to indicate discourse prominence. These aspects are mirrored in the informal description of “having a referent in mind”. Depending on the theoretical perspective, the one or the other aspect may be emphasized, which has led to many theories of specificity. The classical scope approach disambiguates examples like (1a) by scope interaction of the indefinite with other operators like negation (or verbs of propositional attitudes, questions, conditionals, modals, future, intensional verbs, etc.), as in (1b) and (1c) (see Ludlow and Neale 1991). However, the contrast between a specific and non-specific reading can also appear in the absence of any other operator, such as in (2). Here, the lexical ambiguity approach (Fodor and Sag 1982) assumes two lexical meanings of the indefinite: a referential (or rigid) term, as illustrated by the continuation (2b), and a plain existential interpretation, as illustrated by the continuation (2c).

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- (1) a. Bill didn't see **a misprint**.
 b. There is a misprint which Bill didn't see.
 c. Bill saw no misprints.
- (2) a. **A book** is missing from my library.
 b. It is the Principia Mathematics of Russell.
 c. There is a gap between the books on the shelf.

However, there are specific indefinites that have neither wide scope nor can they be assigned a simple referential reading. Example (3a) adapted from Farkas (1981), with two operators besides the indefinite, show three different scope constellations: a narrow scope reading for the indefinite, as in (3b), an intermediate scope reading, as in (3c), and a wide-scope reading, as in (3d).

- (3) a. Each student has to come up with three arguments that show that **a condition** proposed by Chomsky is wrong.
 b. each student > three arguments > **a condition**
 c. each student > **a condition** > three arguments
 d. **a condition** > each student > three arguments

The intermediate reading (3c) shows that specificity cannot be reduced to scopal behavior of indefinites nor to the simple opposition of a referential vs. an existential reading. The scope behavior in (3) cannot be explained by simple existential indefinites either, since they cannot leave the scope island created by the relative clause. Cases like (3c) have been subject to an intensive discussion on 'long distance indefinites', i.e. on indefinites which show scopal properties that cannot be explained by the canonical constraints on quantified NPs (see Chierchia 2001, Jäger 2004 for an overview). Different types of theories have tried to solve these problems: Reinhart (1997), Winter (1997), Kratzer (1998), and Winter (2005), give an analysis in terms of choice functions; Krifka (2001), Yeom (1998), Geurts (to appear) propose a presuppositional analysis, while Bende-Farkas and Kamp (2001) analyze such specific indefinites as functional or dependent expressions, to name only some families of approaches.

Hintikka (1986) made a related observation on narrow scope readings of specific indefinites (if we take *a certain* as a clear indication of specificity). Sentence (4) has a reading according to which the indefinite *a certain woman* refers to some specific individual for each man. The particular relation between the man and the woman is given by the function of being his mother:

- (4) According to Freud, every man unconsciously wants to marry **a certain woman** – his mother.

It has been a controversial issue whether such cases are good examples for specific indefinites or not. However, I will show, on the basis of data from languages that mark specificity morphologically, that they are good instances of specific indefinites. I call this kind of specificity “relative specificity”¹ and assume that it is the most general case of specific indefinites. A specific indefinite noun phrase comes with an index that is referentially anchored to another referential expression (a mechanism to be explained later). Wide-scope, referential, and presuppositional indefinites are special (or “absolute”) instantiations of relative specific indefinites: they are bound by the speaker, the context of utterance, or the speech act. However, starting from instances of “relative specificity”, I develop an underspecified semantics of specificity or a theory of “referentially anchored indefinites”.

The paper is organized as follows: In section 2, I present a semantic typology of specific indefinites: (i) scopal specific indefinites, (ii) epistemic specific indefinites, (iii) partitive specific indefinites, (iv) discourse prominent or “noteworthy” indefinites, and (v) relative specific indefinites. I argue that relative specific indefinites are the most general type of specific indefinites and therefore they should be the prototypical type for any analysis.

In section 3, I discuss specificity under a cross-linguistic perspective, based on data from Differential Object Marking in Spanish, Romanian, and Turkish. While the direct case markers in Spanish and Romanian depend on a variety of other parameters and show specificity effects only in certain contexts, the case marker in Turkish is a more reliable marker for specificity. The Turkish data indicate that all instances of relative specificity are case-marked. In section 4, I develop a sketch of a theory of referentially anchored indefinites and in section 5 I give a short summary of the approach.

2. THE SEMANTIC TYPOLOGY OF SPECIFICITY

In the literature on specificity, different kinds of specific indefinites have been distinguished. Following Farkas (1995), I present the following semantic typology: (i) scopal specific indefinites, (ii) epistemic specific indefinites, and (iii) partitive specific indefinites. I add (iv) specificity as *noteworthiness* (Wright and Givón 1987, Ionin 2006), and then introduce an additional group (v) which I call “relative specific indefinites”.²

¹See von Heusinger (2002); I am not aware whether this particular term has been previously used. However, Hans-Martin Gärtner pointed out to me that Ruys (1992, 115ff) uses the term “relativized specificity” for an additional syntactic indexing rule. Owing to space limitations I cannot discuss this very interesting proposal here.

²One reviewer noted that specificity is not necessarily restricted to indefinites, but is a property that may also apply to definite noun phrases (cf. Donnellan’s referential vs. attributive distinction). I fully agree with this observation, even though it is controversially discussed in the literature. However, for the present exposition we do not need to extend specificity to definite noun phrases.

2.1. *Scopal Specificity*

Classically, the contrast between a specific and a non-specific reading of an indefinite is configurationally represented by scope interaction between the indefinite and some other operator. Example (5a) has two readings, which can be illustrated by the continuation in (5b) and (5c). A simple scope theory accounts for this contrast by assuming that the indefinite can take scope over the *want*-operator, as in (5d') or scope under that operator, as in (5e')

- (5)
- a. John wants to marry **a Norwegian**.
 - b. He met her last year.
 - c. He will move to Norway to try to achieve this goal.
 - d. There is a Norwegian₁, and John wants to marry her₁.
 - e. John wants that there be a Norwegian₁ and that he marry her₁.

The interaction of indefinites with other operators can also be illustrated with negation, as in (1), repeated as (6), or they can interact with more operators, as in (7a), from Karttunen (1976), and (7b), from Kasher and Gabbay (1976). In these cases we expect three readings, which the reader can easily work out.

- (6)
- a. Bill didn't see **a misprint**.
 - b. There is a misprint which Bill didn't see.
 - c. Bill saw no misprints.
- (7)
- a. Bill intends to visit **a museum** every day.
 - b. Luce expects Pinch to ask him for **a book**.

2.2. *Epistemic Specificity*

The ambiguity described in the last section arises in the presence of other operators such as negators, universal quantifiers, or verbs of propositional attitudes. An analysis in terms of scope seems to work well. However, there are examples that show a contrast between two readings of indefinites in the absence of other operators that is similar to the contrast discussed in the last section. The specific reading of (2a), repeated as (8a), can be continued by (8b), while the non-specific reading can be continued by (8c).

- (8)
- a. **A book** is missing from my library.
 - b. It is the Principia Mathematics of Russell.
 - c. There is a gap between the books on the shelf.

There is, however, no clear truth-conditional difference between the two readings. Therefore, the pragmatic approach (e.g. Ludlow and Neale 1991, Zamparelli 2005) assumes that the difference is due to the amount of information that is available to identify a referent. However, there is a clear contrast between the specific reading in (8b) and the non-specific one in (8c), which becomes stronger with an animate noun, as in (9a) and the continuation (9b) and (9c) from Fodor and Sag (1982).

- (9) a. **A student** in Syntax 1 cheated on the exam.
 b. His name is John.
 c. We are all trying to figure out who it was.

2.3. Partitives

Milsark (1974) argues that indefinite NPs can either receive a weak (or existential) interpretation or a strong (or presuppositional) interpretation. In (10a) the indefinite *some ghosts* receives a weak interpretation, but it gets a strong interpretation in (10b), i.e. it presupposes that there are other ghosts. The reading in (10b) is generally called “partitive”.

- (10) a. There are **some ghosts** in this house.
 b. **Some ghosts** live in the pantry; others live in the kitchen.

Enç (1991) develops the idea of specificity as partitivity and argues, based on examples like (11), that the accusative case in Turkish marks exactly this type of specificity. (11a) introduces a set of children, and the accusative marked direct object *iki kız* in (11b) must refer to a subset of the previously introduced set of children. The unmarked direct object *iki kız* in (11c), however, cannot refer to a subset of the introduced children, but must refer to another not mentioned set of two children.

- (11) a. Oda-m-a **birkaç çocuk** gir-di
 room-1.sg.-Dat. several child enter-Past
 ‘Several children entered my room.’
 b. **İki kız-ı** tanı-yor-du-m
 two girl-Acc. know-Prog.-Past-1.sg.
 ‘I knew two girls.’
 c. **İki kız** tanı-yor-du-m
 two girl know-Prog.-Past-1.sg.
 ‘I knew two girls.’

2.4. *Specificity as Noteworthiness*

Specificity can also express the discourse prominence of an indefinite noun phrase. A specific indefinite is used if the speaker intends to signal that the associated discourse referent is important and will be referred back by anaphoric expressions in the subsequent discourse. Ionin (2006) calls this *specificity as noteworthiness*. This discourse effect is often the trigger for the grammaticalization of the numerals expressing “one” towards specific indefinite articles (Wright and Givón 1987) for Hebrew and Hawaiian Creole). Ionin (2006) uses this concept to account for the English specific indefinite article *this*, which has a different semantics from the homonymous demonstrative (see Maclaran 1980, Prince 1981). The wide-scope reading with respect to the verb *want* is shown in the contrast in (12), from Ionin (2006, 180).

- (12) a. Sarah wants to read $\checkmark a/\checkmark$ this book about butterflies, but she can't find it.
 b. Sarah wants to read $\checkmark a/\#$ this book about butterflies, but she can't find one.

Ionin (2006, 181) illustrates the concept of noteworthiness with (13), quoted from Maclaran (1982, 88). (13b), which contains the specific indefinite article *this* is felicitous since it signals a discourse referent that has an important or prominent property.

- (13) a. He put on $\checkmark a/\#$ this 31 cent stamp on the envelope, so he must want it to go airmail.
 b. He put on $\checkmark a/\checkmark$ this 31 cent stamp on the envelope, and only realized later that it was worth a fortune because it was unperforated.

Ionin (2006, 187) defines noteworthiness in terms of felicity conditions, rather than presupposition, which she only uses for definite noun phrases. I paraphrase her definition in (14):

- (14) An specific indefinite noun phrase of the type [spe α] is felicitously used if the speaker intends to refer to exactly one individual x and there exists a property φ which the speaker considers noteworthy and x is both α and φ .

2.5. *Relative Specificity*

The term ‘relative specific’ or ‘intermediate scope specific indefinites’ or recently ‘long distance indefinites’ describes specific indefinites that depend on other expressions, and therefore show flexible scope behavior. This observation was

already made in early investigations of specificity. Contrary to Fodor and Sag (1982), Farkas (1981) shows with a (slightly modified) example like (3a), repeated below as (15a), that indefinite NPs can have more than only a narrow scope non-specific reading (15b) and a wide-scope specific reading (15d). They can also receive an “intermediate” scope reading (15c). On to this reading of (15a), the indefinite *a condition proposed by Chomsky* has wide scope with respect to *three arguments* and narrow scope with respect to *each student*.

- (15) a. Each student has to come up with three arguments that show that **a condition** proposed by Chomsky is wrong.
 b. each student > three argument > **a condition** narrow scope
 c. each student > **a condition** > three argument interm. scope
 d. **a condition** > each student > three argument wide scope

Hintikka (1986) made a related observation in his discussion of the expression *a certain*. In (16), he shows that the specific indefinite *a certain woman* can receive narrow scope with respect to the universal quantifier and still be specific (if one assumes that *a certain* marks specificity): there is a specific woman for each man. Hintikka suggests that the specific indefinite NP is to be represented by a Skolem-function that assigns to each man the woman who is his mother. Once the reference for man is fixed (during the process of interpreting the universal quantifier), the reference for the specific indefinite is simultaneously fixed. In (16c), we informally mark this by indexing the indefinite NP with its anchor, here the variable for *man*.

- (16) a. According to Freud, every man unconsciously wants to marry **a certain woman** – his mother. (Hintikka, 1986)
 b. $\forall x [\text{Man}(x) \rightarrow \text{Wants}(x, \text{marry}(x, f(x)))]$
 with f : Skolem function from men onto their mothers
 c. $\forall x [\text{Man}(x) \rightarrow \text{Wants}(x, \text{marry}(x, [\text{a woman}]_x)]$

A combination of epistemic and relative specificity can be found in the following example from Higginbotham (1987, 64). He describes the different readings as follows:

In typical cases specific uses are said to involve a referent that the speaker ‘has in mind.’ But this condition seems much too strong. Suppose my friend George says to me, ‘I met with a certain student of mine today.’ Then I can report the encounter to a third party by saying, ‘George said that he met with a certain student of his today,’ and the ‘specificity’ effect is felt, although I am in no position to say which student George met with

- (17) a. George: “I met a certain student of mine.”
 b. James: “George met a certain student of his.”

These observations motivate a revision of the pretheoretical description of specificity in terms of obligatory wide-scope or referential expression. It is shown that a specific indefinite NP need not depend on the speaker or the context of utterance; it can also depend on other linguistic entities, like the universal quantifier *each student* in (15) or every man in (16). This dependency will be formally reconstructed by an anchoring function in section 4.3. Before we start the formal analysis, we make a brief cross-linguistic digression to get a descriptively broader picture about the range of occurrences of specific indefinite NPs, in particular of those indefinites with intermediate scope behavior. It is quite controversial whether *a certain woman* in (16a) constitutes a good case of specific indefinite or whether it is just a non-specific indefinite with particular functions.

3. A CROSS-LINGUISTIC APPROACH TO SPECIFICITY

In many Indo-European languages, (in)definiteness is marked by the definite and indefinite articles, but specificity is not systematically marked in the article system (English *this* being an exception). Other means to grammatically encode specificity are indefinite pronouns (see Haspelmath 1997), negative determiners like German *kein* ‘not a’, which determine the (non)specificity of a noun phrase, adjectives such as *certain, specific, particular, etc.* In the remainder of this section, I discuss case markers as indicators of specificity. In languages that show Differential Object Marking, case can signal specificity (among other referential properties). This will be illustrated on data from Spanish, Romanian, and Turkish. While all these languages show case alternation, Spanish and Romanian show a specificity contrast only in certain contexts, whereas Turkish seems to encode specificity in the case marker quite systematically.

Bossong (1985) coins the concept of “Differential Object Marking” (“differentielle Objektmarkierung”) or DOM for the observation that the direct object in various languages may be marked or not. Cross-linguistically, there are at least three parameters that determine whether the direct object is marked or not (Bossong 1985, Aissen 2003): (i) animacy, (ii) referentiality, and (iii) information structure (“topicality”). In what follows, we will focus on contrasts that derive from different positions on the definiteness scale (18).

- (18) Definiteness Scale:
 pers. pron > proper name > def. NP > spec. indef. NP > non-spec.
 indef. NP

3.1. Differential Object Marking (DOM) in Spanish

Peninsular Spanish exhibits DOM by the marker *a* on the direct object if it is specific and denotes an animate (or human) referent. In (19a) the marker is obligatory, while in (19b) it is ungrammatical.

- (19) a. Vi **(a)* **la / una mujer.**
 see.Past-1.sg. A the / a woman
 ‘I saw the / a woman.’
- b. Vi (**a*) **la / una mesa.**
 see.Past-1.sg. *A the / a table
 ‘I saw the / a table.’

The distribution of the marker *a* is optional for animate non-specific indefinite noun phrases. In (20), the noun phrase *un ayudante* is clearly non-specific, since the verb in the relative clause is in the subjunctive; still the marker *a* is possible. In (21), the presence of the marker *a* makes the sentence ungrammatical under the given reading (see Leonetti 2003 for discussion). We summarize these observations in table (22), which shows that the absence of the marker *a* is indicative of non-specificity, while the presence of *a* is not necessarily an indication of specificity.

- (20) Necesitan **(a) un ayudante que sepa inglés**
 (they) need (A) an assistant that speaks_{SUBJ} English
 ‘They need an assistant that speaks English.’
- (21) Necesitan ***a camarero**
 (they) need A waiter
 ‘They need a waiter/waiters.’
- (22) Conditions for DOM in Standard Spanish

Full NP	[+Specific]	[−Specific]
[+Animate]	+	±
[−Animate]	−	−

The absence of the marker *a* in Spanish forces a non-specific interpretation. This is illustrated by the contrast of possible readings in the following two examples, where we find scope interaction with the universal quantifier. The marker *a* in Spanish allows for a wide or narrow scope reading of the indefinite noun phrase in (23a), while its absence forces a narrow scope reading in (23b) (cf. Leonetti 2003, 73).

- (23) a. Cada estudiante entrevistará **a un personaje conocido**
 every student will interview A a celebrity
 ‘Each student will interview a celebrity.’ (wide and narrow scope)
- b. Cada estudiante entrevistará **un personaje conocido**
 every student will interview a celebrity
 ‘Each student will interview a celebrity.’ (only narrow scope)

3.2. Differential Object Marking (DOM) in Romanian

Romanian has the marker *pe* to mark certain direct objects. *Pe* is obligatory for definite pronouns and proper names, as in (24); it is obligatory for definite human noun phrases and optional for specific human noun phrases; (25) is an instance of the latter. *Pe*-marking is ungrammatical for non-specific indefinite noun phrases, as in (26), where the relative clause is in the subjunctive (see Farkas 1978, Farkas and von Heusinger 2003). Thus we can summarize the conditions for human full noun phrases in Romanian, as in (27):³

- (24) Maria *(I)-a desenat *(**pe**) **Matei / el.**
 Maria *(CL) has drawn *(PE) Matei / him
 ‘Maria drew Matei / him.’
- (25) Maria (I)-a desenat (**pe**) **un băiat** **din fața ei.**
 Maria (CL) has drawn (PE) a boy in front of her.
 ‘Maria drew a boy in front of her’
- (26) Maria (*o) caută (***pe**) **o studentă care să stie** **românește.**
 Maria (*CL) look for (*PE) a student who knows_{SUBJ} Romanian
 ‘Maria is looking for a student who knows Romanian.’
- (27) Conditions for DOM in Romanian

Full NP	[+Specific]	[−Specific]
[+Animate]	±	−
[−Animate]	−	−

The marker *pe* is optional for specific noun phrases and ungrammatical for non-specific ones.⁴ This means that the presence of the marker forces a specific interpretation. In Romanian we find the reverse situation to the Spanish contrast in (23): The presence of the marker *pe* accompanied by the doubling clitic forces a wide-scope reading in (5a), while the absence of the marker allows for both readings in (5b) (Dobrovie-Sorin 1994, 229–230):⁵

³“CL” indicates a doubling clitic linked to the direct object. The conditions for clitic doubling in Romanian are similar to, but not identical with, the ones for *pe*-marking. Therefore, clitic doubling and *pe*-marking often co-occur. See Comorovski (1983) for an analysis of clitic doubling as object agreement.

⁴There are certain exceptions: *nimeni* (‘nobody’) and *cineva* (‘somebody’), which are obligatorily introduced by *pe*, even if non-specific.

⁵While the given judgments are from Dobrovie-Sorin, Ileana Comorovski (p.c.) informs me that the readings she gets are different. Both (28a) and (28b) have only a narrow scope reading. An explicit partitive expressed by *dintre* in (28a’) makes a wide scope reading possible. A wide-scope reading for (28b) is possible if *‘fiecare’* is replaced by *toți* (‘all’).

- (28) a. Fiecare profesor îi va examina **pe zece elevi**.
 every teacher CL will examen PE ten students
 ‘Every teacher will examen ten students.’ (only wide scope)
- b. Fiecare profesor va examina **zece elevi**.
 every teacher will examen ten students
 ‘Every teacher will examen ten students.’ (wide and narrow)

3.3. Turkish Object Marking and Specificity

DOM in Turkish is realized by the accusative case suffix for specific direct objects. Turkish does not have a definite article, but an indefinite one, which has the same form as the numeral for ‘one’, but differs in its distribution (see Kornfilt 1997 for discussion). Definite (Kornfilt’s demonstrative) and specific indefinite direct objects are case-marked, as in (29a) and (29b), while non-specific indefinite direct objects, as in (29c), and bare nouns in that position, as in (29d), are not case-marked (Enç 1991, Kornfilt 1997, von Heusinger and Kornfilt 2005). We can summarize the conditions in (30):⁶

- (29) a. (ben) **bu kitab-ı** oku-du-m [definite/demonstr.]
 I **this book-acc** read-past-1sg
 ‘I read this book.’
- b. (ben) **bir kitab-ı** oku-du-m [indef. spec.]
 I **a book-acc** read-past-1sg
 ‘I read **a certain** book.’
- c. (ben) **bir kitap** oku-du-m [indefinite]
 I **a book** read-past-1sg
 ‘I read **a** book.’
- d. (ben) **kitap** oku-du-m [“bare”]
 I **book** read-past-1sg
 ‘I was book-reading’

- (30) Conditions for DOM in Turkish

Full NP	[+Specific]	[–Specific]
[+Animate]	+	–
[–Animate]	+	–

- (28) a’ Fiecare profesor îi va examina **pe zece dintre elevi**.
 every teacher CL will examen PE ten of students
 ‘Every teacher will examen ten of the students’. (wide and narrow scope)

⁶Turkish also shows obligatory accusative case marking with strong quantifiers, such as *her* ‘every’, while it is optional with weak quantifiers, such as *birkaç*; ‘several’ etc. (Enç 1991, 10–11).

The examples show that the contrast between (epistemic) specific and non-specific indefinites is encoded in the morpho-syntax of Turkish. As for scopal specificity (see section 2.1), a case-marked animate direct object under a verb of propositional attitude blocks a non-specific reading, while an unmarked one is ambiguous (Dede 1986, 157). In this context, Turkish patterns with Romanian (cf. (26)), rather than with Spanish (cf. (20)).

- (31) **Bir öğrenci-yi** arı-yor-um. Bul-a-mı-yor-um
 a student-Acc. look+for-Pr.Prog.-1.sg. find-Neg.Abil-Neg.-Pr.Prog.-1.sg.
 ‘I am looking for a student. I can’t find him.’ [specific]
 ‘I am looking for a student. (*‘I can’t find one’) [*non-specific]
- (32) **Bir öğrenci** arı-yor-um. Bul-a-mı-yor-um
 a student look+for-Pr.Prog.-1.sg. find-Neg.Abil-Neg.-Pr.Prog.-1.sg.
 ‘I am looking for a student. I can’t find him.’ [specific]
 ‘I am looking for a student. I can’t find one.’ [non-specific]

Turkish also allows to mark the difference between a partitive and non-partitive reading of an indefinite – this was the starting point of Enç’s (1991) theory of specificity as partitivity. I repeat example (14) as (33). The case-marked direct object *iki kız* in (33b) must be interpreted partitively, while the non-case-marked form *iki kız* in (33c) cannot be interpreted in such a way, but must refer to two not already mentioned girls.

- (33) a. Oda-m-a **birkaç çocuk** gir-di
 room-1.sg.-Dat. several child enter-Past
 ‘Several children entered my room.’
- b. **İki kız**-ı tanı-yor-du-m
 two girl-Acc. know-Pr.Prog.-Past-1.sg.
 ‘I knew two girls.’
- c. **İki kız** tanı-yor-du-m
 two girl know-Pr.Prog.-Past-1.sg.
 ‘I knew two girls.’

Enç’s approach of specificity first links the accusative case marker with partitivity and second partitivity with specificity. Both links are controversial. There are more complex conditions for the use of the case marker in Turkish, including purely morpho-syntactic conditions (see von Heusinger and Kornfilt 2005 for an extensive discussion), and second the assumption that partitive readings are always specific

can be disputed on the grounds of the given example: in (33b), *iki kız* refers to two girls that are in the set of mentioned children – however, the identity of those girls is not given (only restricted). We cannot give justice to the whole discussion of Enç’s approach (see von Heusinger and Kornfilt 2005).

3.4. Relative Specificity in Turkish

The problem of relative specific indefinites (see section 2.5) is that it is controversial whether they are epistemic specific indefinites or existential indefinites with additional scopal properties. The data from Turkish show that they pattern with other specific indefinites (with the epistemic and scopal indefinites). Enç presents (34a) that shows two readings for the specific indefinite *a certain athlete*: a wide-scope reading (34b) and a narrow scope reading (34c):

- (34) a. Her antrenör **belli bir atlet-i** /*atlet çalıştıracak.
 every trainer certain one athlete-Acc. will train
 ‘Every trainer will train a certain athlete.’
- b. all the same athlete (specific, wide scope)
- c. each one a different one (specific, narrow scope)

Note that Enç uses here the modifier *belli* ‘(a) certain’. This contributes to the specificity of the indefinite expression and thus to the well-formedness of the accusative marker. It is interesting to note that if we front the indefinite to sentence initial position (which is a topic position), then we receive only the wide-scope specific reading, as in (35). We will come back to this weak-crossover effect in section 4.4:

- (35) a. **belli bir atlet-i** her antrenör çalıştıracak.
 certain one athlete-Acc. every trainer will train
 ‘Every trainer will train a certain athlete’
- b. all the same athlete (specific wide scope)
- c. *each one a different athlete (specific narrow scope)

Enç (1991: 19) accounts for the use of the accusative case by assuming that the direct object is “somehow distinguished. It is distinguished because it stands in the contextually salient relevant relation to some other object”. She sketches a formalization of this idea by using Skolem-functions (or what she calls “assignment functions”) for the specific indefinite, following a proposal by Hintikka (1986), which will be presented in the next section.

4. SPECIFICITY AS REFERENTIAL ANCHORING

The main thesis of this paper is that specificity indicates that an expression is referentially anchored to another argument expression in the discourse. ‘Referentially anchored’ means that the referent of the specific NP is functionally dependent on the referent of another expression. This idea can be spelled out by extending Heim’s (1982: 369f) Familiarity Condition and modifying Enç’s partitive condition for specific indefinites.⁷

4.1. Familiarity for Definiteness

Enç formalizes her view of specificity in terms of Heim’s (1982) familiarity approach to discourse structure. Heim defines definiteness in terms of familiarity, or more formally, in terms of identity of the indices of file cards for noun phrases (NPs), as defined in (36), and illustrated by (37)–(38):

(36) **Heim’s Familiarity Condition**

An NP_i in a sentence ψ with respect to a file D and the Domain of filenames Dom(D) is

- (i) [+definite] if $i \in \text{Dom}(D)$, and it is
- (ii) [–definite] if $i \notin \text{Dom}(D)$

Heim (1982) reconstructs definiteness with respect to the already established discourse. Every NP comes with an index i , which represents the discourse referent (or Heim’s “file card”) associated with that NP. If the discourse referent i is already introduced in the discourse – or more formally if the index i is an element of the set of all established discourse referents Dom(D), then the NP must be definite. If, however, the discourse referent i is not among the already established discourse referents, i.e. if $i \notin \text{Dom}(D)$, then the NP must be indefinite. Definiteness signals the familiarity of the discourse referent associated with the NP.

- (37) a. A man₁ meets a woman₂. Dom(D) = {1, 2}
- b. The man₁ talks to her₂. 1, 2 ∈ Dom(D)

- (38) a. A man₁ meets a woman₂. Dom(D) = {1, 2}
- b. A man₃ talks to a woman₄. 3, 4 ∉ Dom(D)

In (37a) the two indefinite NPs introduce new file cards or discourse items, which we indicate by the two indices 1 and 2. These indices form the domain of filenames

⁷Even though the approach is formulated in file change semantics, it adapts also insights from Farkas’ (2002) concept of “dependent readings” and Bende-Farkas and Kamp’s (2001) discussion of functional readings.

Dom(D) and they are accessible for the evaluation of the definite NPs in (37b). The two indices in (37b) can be linked to the already established indices in the domain for indices (or the domain of established discourse items), which licenses the definiteness of the two NPs. In contrast, in (38b) the two NPs are indefinite, which means their indices cannot be linked to already established indices or discourse items. Therefore, the indefinite NPs introduce new discourse items.

4.2. Enç's Partitive Specificity

Enç modifies the Familiarity Condition of definite vs. indefinite NPs to the partitivity condition for the contrast between specific/partitive vs. non-specific/non-partitive indefinite NPs. Like definite NPs, specific NPs signal that the associated discourse referent is linked to the already established discourse. Other than with definites, this link is not direct but it is the *part of*-relation or the partitive relation. Here she has to distinguish between the plural case (i) and the singular (ii). In the plural case (*several children... two of the girls*) the formal reconstruction (i) says that the partitivity is licensed by the fact that the index i (standing for a group of entities, such as *two of the girls*) is part of an index j that stands for an already established group of entities (*several children*). In the singular case (ii), the partitivity of the NP is licensed by the fact that the group consisting of that one discourse referent (therefore a set with just one index: $\{i\}$) is part of the already established group j . (39) is a reconstruction of Enç's (1991, 7 ex. (22)) condition for partitive NPs.⁸

(39) Enç's Specificity/Partitivity Condition (adapted version)

An NP _{i} in a sentence ψ with respect to a file D and the Domain of filenames Dom(D) is

- (i) for NP _{i} plural: [+ specific] if there is a j such $i \subseteq j$ and $j \in \text{Dom}(D)$ or
- (ii) for NP _{i} singular: [+ specific] if there is a j such $\{i\} \subseteq j$ and $j \in \text{Dom}(D)$

Sentence (40a) introduces a new index (or discourse item), a set of several children. The (implicit) partitive *two girl(s)* in (40b) is related to this set by the subset relation. This means that the index or discourse item 1, i.e. a set of two girls, is a subset of index 3 standing for the set of several girls already established. Since this set of two girls is new it is indefinite, but because of its relation to an already

⁸Enç's (1991:7) own reconstruction is more difficult to read: "All NPs carry a pair of indices, the first of which represents the referent of the NP. The indices themselves bear a definiteness feature. The feature on the first index determines the definiteness of the NP, as usual. The definiteness feature on the second index determines the specificity of the NP by constraining the relation of the referent of the NP to other discourse referents."

(i) Every [NP α] (i, j) is interpreted as $\alpha(x_i)$ and
 $x_i \subseteq x_j$ if NP_(i, j) is plural
 $\{x_i\} \subseteq x_j$ if NP_(i, j) is singular

established set it is partitive (and specific – according to Enç). It is also obvious that the partitive has wider scope with respect to other operators in the sentence, since it is related to an established set.

- (40) a. Several children₁ entered my room₂.
 Dom(D) = {1, 2} (with 1 denoting a set)
 b. I knew two girls₃. $3 \subseteq 1$ and $1 \in \text{Dom}(D)$

4.3. Relative Specificity

In order to account for specificity in terms of relative specificity, we formulate the condition (41) in similar terms. An NP is specific if its index (or filename) can be linked to an already established index. An additional restriction is that the already established index must be from the current sentence, rather than from the whole discourse.⁹ In this sense, specificity is sentence-bound, while definiteness is discourse-bound. The formal reconstruction of this view of specificity states that a specific NP_i signals that the associated index *i* is linked by a salient (natural or ‘reconstructable’) function (or relation) to another index *j* from the same sentence ψ .

- (41) **Relative Specificity Condition**
 An NP_i in a sentence ψ with respect to a file *F* and the Domain of filenames $\text{Dom}(\psi)$ is [+ specific] if there is a contextual salient function *f* such that $i = f(j)$ and $j \in \text{Dom}(\psi)$

Let us illustrate the definition on our examples (17), repeated below as (42a) and (42b). The speaker of the direct speech in (42a) introduces a new index 1, such that the index 2 of the specific indefinite can be linked to it by a contextually salient function *f*. This function could be spelled out by saying that George can identify that student or that there was a temporal point at which both individuals were at the same location, etc. The function only indicates that once we have fixed the identity of the anchor (George) we can also identify the identity of the anchored indefinite. In (42b), we have two potential anchors such that we can relate the index of the specific indefinite to either one of them, yielding the two representations (i) and (ii), which stand for the two accessible readings: in (i) George is the anchor and “responsible” for the specific indefinite, while in (ii) James is the anchor:

⁹A reviewer noted that this restriction is not precise enough, since it would predict that in (i) the specific indefinite could take narrow scope, which is not an available reading of (i). A more elaborate restriction seems necessary (e.g. in terms of c-command).

(i) If every trainer arrives on time, a certain athlete will sing.

- (42) a. George: “I₁ met [a certain student of mine]₂”
 $2 = f(1)$ and $1 \in \text{Dom}(\psi)$
- b. James₃: “George₁ met [a certain student of his]₂”
 reading (i) $2 = f(1)$ and $1 \in \text{Dom}(\psi)$
 reading (ii) $2 = f(3)$ and $3 \in \text{Dom}(\psi)$

In (43) the universal quantifier introduces an index 1 and a new domain for each value for 1, such that inside that domain the index 2 for the specific indefinite is functionally dependent on the index for *every trainer*.¹⁰ Again the contextually salient function could be spelled out as *his favorite athlete*, or *the athlete who pays the most money*. The index *i* introduced by the speaker can also be understood in a more general way as the speech act index of the hearer in the sense of Speas and Tenny (2003).¹¹

- (43) (speaker_i): Every trainer₁ will train a certain athlete₂.
 (i) all trainers the same athlete (specific wide scope)
 $2 = f(i)$ and $i \in \text{Dom}(\psi)$ (if *i* stands for the speaker)
 (ii): each trainer a different athlete (specific narrow scope)
 $2 = f(1)$ and $1 \in \text{Dom}(\psi)$ (if 1 stands for the trainer)

4.4. Weak-Crossover Effects

This sketch of a theory of “referentially anchored indefinites” indicates that the specific indefinite contains some index or free variable that must be bound by some other operator. So one would expect binding effects such as the weak-crossover effect (see Chierchia 2001 for a detailed discussion). The Turkish variant (44) of (43), with the indefinite direct object scrambled over the subject, can only receive the reading with wide scope. Here, we could argue that the referential index of the indefinite (specific) object, cannot be anchored by *her antrenör*, the universally quantified subject, for configurational (binding-theoretical) reasons:

- (44) [belli bir atlet -i]₂ [her antrenör]₁ çalış-tır-acak.
 certain one athlete-Acc. every trainer work-CAUS-FUT.
 ‘Every trainer₁ will train a certain athlete₂.’
- a. all trainers the same athlete (specific wide scope)
 $2 = f(i)$ and $i \in \text{Dom}(\psi)$ (if *i* stands for the speaker or the speech act)
- b. *each trainer a different athlete (specific narrow scope)
 $2 = f(1)$ is not possible

¹⁰The conditions for a universal quantifier are somewhat more complex (see Heim 1982: 352.)

¹¹Ileana Comorovski (p.c.) made me aware of this connection.

The example demonstrates that the indexing mechanism is dependent on the configuration, and the formulation in (41) needs some addition. An open question is, however, whether this weak-crossover effects hold only for specific indefinites with a particular adjective such as *certain*, or other specific indefinites, too.

5. SUMMARY

The general wisdom assumes that specific indefinite noun phrases signal that “the speaker has a particular referent in mind”, while the hearer does not know its identity. This intuition should capture the prominent properties of specific indefinites: they have (often) wide scope, they are (often) referential expression, they are (often) presuppositional, and they are (often) noteworthy, i.e. they signal discourse importance. However, I have shown that the mentioned properties are rather superficial in nature and not necessary for specific indefinites. This was illustrated with narrow scope specific indefinites or “relative specific” indefinites, which show typical features of specific indefinites (choice of the lexical item *certain*, choice of a case marker in Turkish etc.). Analyzing these instances of specific indefinites, I have demonstrated that specificity expresses an anchoring relation between an indefinite noun phrase and an argument. Building on Enç’s (1991) analysis and generalizing it, the proposed analysis is formally reconstructed in terms of file change semantics. While a definite noun phrase indicates that the referent is already given in the context, a specific indefinite introduces a new discourse item that has a (pragmatically salient) link to an already given discourse item. A non-specific indefinite just introduces a new discourse item (which is not linked to the established discourse). This general semantic form for specific indefinites can be understood as an under-specified representation that needs an anchor in the context. Depending on the type of anchor and the scopal behavior of the anchor, the specific indefinite shows some of the above-mentioned properties.

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