

CATAPHORIC INDEFINITES

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Abstract

In this paper a subclass of specific indefinites called *cataphoric indefinites* is investigated. These indefinites carry an accent on the determiner, are partitives, and occur in topic position. They induce a particular set of alternatives, which represents an implicit, cataphoric, identifying property, and are closely similar to attributive (non-pronominal) definite descriptions. For cataphoric indefinites, the speaker-hearer asymmetry turns out to be a mere side effect of information structure.

1 Introduction

Specific indefinites are commonly characterized as (i) exhibiting exceptional scope behavior, (ii) being existentially presupposed and, (iii) involving a speaker-hearer asymmetry. Specific indefinites exhibit exceptional scope behavior taking wide or intermediate scope with respect to modal operators or additional quantifiers. The referent of a specific indefinite appears to be existentially presupposed, which places specific indefinites near to referentially used definites. The attempt to explain the specific/non-specific distinction by correlating it with the referential/attributive distinction failed, however, because of the existence of intermediate readings. Moreover, while referentially and attributively used definites are symmetric, the speaker and the hearer being able to identify the referent, specific indefinites convey a speaker-hearer asymmetry: The speaker seems to have a particular individual in mind without communicating the individual's identity to the hearer. Specific indefinites have been a topic of continuing interest for the last two decades, cf., e.g., Fodor and Sag (1982), Enc (1991), Farkas (1994), (2002), Abusch (1994), Kratzer (1998), Portner and Yabushita (2001), Schwarzschild (2002), Heusinger (2002). For an overview see section four and five in Heusinger (2002).

The analysis presented in this paper takes the speaker-hearer asymmetry as the starting point: What does it mean for the interpretation of a noun phrase if the speaker has a particular individual in mind, but the hearer is unable to identify the referent? Using a specific indefinite, the speaker informs the hearer that he will not be able to identify the referent the speaker is talking about, which is counterintuitive from a Gricean point of view: Why should it be relevant for the hearer to learn that the speaker withholds information? Why does the speaker not simply use an existential instead of a specific indefinite, if he doesn't want to reveal the referent's identity? If specificity is taken to be a semantic instead of a purely pragmatic phenomenon these questions have to be answered.

It is well-known that the interpretation of noun phrases is influenced by focus, cf., e.g., Bosch (1988), van Deemter (1994), Jäger (1998) and Umbach (2001). For specific indefinites it has been claimed that they tend to carry an accent on the determiner (e.g. Enc 1991). However, the position of the accent is clearly insufficient to distinguish non-specific from specific indefinites. Consider the German examples in (1)(a) and (b):

- (1) (a) (Paulsen, who is the local plumber, has been asked to provide internships for a group of local students:)

Paulsen: /EINEN Schüler würde ich \NEHMEN, (aber zwei sind mir zuviel.)

(I would take one student, but two are too many for me.)

- (b) (Grün, the owner of the drugstore, has been asked, too. At first, he is reluctant. But then he says:)

Grün: /EINEN Schüler würde ich \NEHMEN (nämlich den kleinen Otto Pitzke. Die anderen taugen nichts.)

(I would take one (of the) student(s), namely Otto Pitzke. The others are good for nothing.)

The indefinite NP *EINEN Schüler* in (1)(a) requires a non-specific reading whereas in (b) it is clearly specific. Nevertheless in both (a) and (b) the indefinite NP carries an accent on the indefinite determiner, which is in German used as an article and also as a numeral, similar to English *one*. Note, however, that in (a) *EINEN Schüler* contrasts with *zwei [Schüler]* (*two students*), whereas in (1)(b) it contrasts with *die anderen [Schüler]* (*the other students*). This difference will be essential to the analysis presented in this paper. It will be shown that indefinites of the latter type constitute a subclass of specifics for which the speaker-hearer asymmetry turns out to be a mere side-effect of information structure. This subclass will be called "cataphoric indefinites".

The paper is organized as follows: In the next section we will briefly review the account of focus in definite NPs proposed in Umbach (2001) and (2003), providing a suitable background for the representation of cataphoric indefinites and for the comparison of cataphoric indefinites and definites. In section three, Eckardt's (2002) notion of referential and denotational contrastive topics will be presented which account for the difference between (1)(a) and (b). In section four it will be shown how cataphoric indefinites relate to specificity (and why they are cataphoric in the first place). Finally, the scope behavior of cataphoric indefinites will be considered. Although the examples in this paper will mostly be in German, the basic results will also apply to English taking differences with respect to the distribution of the indefinite articles and word order into account.

2 Focus in definite noun phrases

In Umbach (2002), (2003) it is shown that intonation is essential for the interpretation of definite noun phrases. Consider the example in (2): Depending on whether there is an accent or not the interpretation of the definite NP *the shed* is radically different. The NP in (a), which carries an accent, clearly refers to some shed belonging to John's cottage. The NP in (b) is completely deaccented and without further context we will interpret it as referring to the cottage itself, the speaker making a disapproving comment. Obviously, in the accented version in (a) the NP introduces an additional discourse referent related to John's cottage whereas in the deaccented version in (b) it constitutes an identity anaphor.

- (2) (John has an old cottage.)

(a) Last summer he reconstructed the SHED.

(b) Last summer he RECONSTRUCTED the shed.

Farkas (2002) suggested viewing definiteness as uniqueness where familiarity is regarded as a special case of uniqueness (for uniqueness accounts of definite NPs see also Hawkins 1991 and Löbner 1985). According to Farkas a definite may achieve uniqueness either because its

descriptive content singles out a unique referent or because the referent of the definite can be identified with a previously given referent, which divides the range of definite expressions into two classes: While proper names and pronouns achieve uniqueness via identification with a given referent, full definite descriptions have to provide a singleton by means of their descriptive content (supplemented by a restriction of the relevant domain). This classification, however, is disproved by the example in (2), which demonstrates that even a full definite description may achieve uniqueness either way. For this reason in Umbach (2002) it is proposed to distinguish between two uses of full definite descriptions depending on whether there is an accent on (part of) the descriptive content:

- (i) A (use of a) definite description is "given" iff it is completely deaccented. Given definites constitute identity anaphors. Uniqueness is accounted for by the salience hierarchy of accessible discourse referents, i.e. there has to be a most salient discourse referent to be identified with the definite's referent. The descriptive content of the definite merely has to be compatible with the antecedent and may be accommodated. Thus given definites are comparable to pronouns, and can be substituted by a pronoun without affecting the meaning of the sentence. Consider, for example, (2)(b): *John has an old cottage. Last summer he RECONSTRUCTED it.*
- (ii) A (use of a) definite description is "non-given" iff at least part of the descriptive content is focussed. Non-given definites introduce novel discourse referents.¹ The uniqueness requirement has to be satisfied by the descriptive content. This is straightforward in the case of semantically unique descriptions (*the pope, the smallest prime number,...*), but may also be achieved by the help of a bridging antecedent. In the latter case the referent will be singled out by the descriptive content together with the bridging relation. In (2)(a), for example, we have to interpret *the shed* as "the unique object related to John's cottage which is a shed" making use of the previously introduced cottage as a bridging antecedent. In introducing novel discourse referents non-given definites are similar to indefinite NPs. Nevertheless they cannot be substituted by the latter because indefinites in general lack the uniqueness requirement. It will, however, be shown in section five that non-given definites may be substituted by cataphoric indefinites without affecting truth conditions.

It is important to note that this approach, although admitting two uses of definite NPs, does not admit two readings of the definite article *the*. Instead, the definite article uniformly indicates uniqueness. The two uses are due to focusing/deaccenting of the descriptive content of the definite NP and result from the interaction of the meaning of the definite article and the semantics of focus. To support this idea, in Umbach (2003) an analysis of focus in complex definite NPs is presented which is based on DRT (Kamp, Reyle 1993) and the presuppositions-as-anaphors theory of van der Sandt (1992). The interpretation of focus follows the general ideas in Rooth (1992) without, however, employing a separate level of alternative meaning. Instead, the alternative set is represented as an anaphor (see the representation in (5)(b) below). This account makes crucial use of the notion of the *focus phrase* as suggested by, e.g., Krifka (ms.), thus accounting for the fact that the alternatives

¹ Discourse referents are regarded as novel iff they are no identity anaphors, i.e. they are regarded as novel even if they relate to a bridging antecedent. There are examples challenging the correspondence of deaccented/given and focussed/novel DRs, especially if the NP has occurred in a preceding conjunction (*John has a boy and a girl. The BOY is called Kim*). Note, however, that the use of a (deaccented) pronoun (*he*) would not be appropriate in this example. For a comprehensive discussion of apparent counterexamples cf. Umbach (2001).

induced by a focus need not correspond to the focussed item. In the case of definite NPs the focus phrase is the "highest" NP including the focus. The focus phrase must not be confused with the focus domain: While the focus domain indicates the range within which alternatives vary, the focus phrase indicates the range within which backgrounded information has to be taken into account to yield the appropriate alternatives.²

This analysis also accounts for the fact that the set of alternatives induced by a focussed definite NP is restricted by the bridging antecedent (if there is a bridging antecedent involved in the interpretation). Consider the example in (3). Ben is supposed to be a reporter who wants to conduct an interview with the members of a certain research team. The proposition in (3) will be false, if Ben interviewed any member of the research team other than the Dutch one. But it will not be false if he additionally interviewed someone who is not on the team. Hence the set of alternatives relevant for quantification by *only* is limited by the members of the research team. This is intuitively intelligible taking into account that the definite NP *the DUTCH researcher* has to relate to the previously mentioned research team as a bridging antecedent in order to achieve uniqueness, that is, it has to be interpreted as "the unique member of the research team who is Dutch". Evidently, if a (partly) focussed definite NP involves a bridging antecedent (and most of them do because semantically unique descriptions are rare), then the bridging antecedent plays a double role, supporting uniqueness and also restricting the relevant alternatives.

(3) (The research team arrived at the base camp late at night.)

Ben only talked to the DUTCH researcher.

Consider finally the continuation of (3) given in (4). The NP *the OTHERS* refers to the set of non-Dutch members of the research team, which is the set of the proper alternatives induced by the focus in *the DUTCH researcher*.³

This is accounted for by assuming that the meaning of *other* consists in the property of being distinct from a co-referent. The NP *the OTHERS* and its co-referent have to relate to the same bridging antecedent, thereby partitioning the common set of alternatives into two complementary sets ("the one" and "the others").⁴

(4) (The research team arrived at the base camp late at night. Ben only talked to the DUTCH researcher.)

The OTHERS were preparing for the next day.

The DRT-based representation requires, in short, a (set valued) discourse referent A representing the set of alternatives along with the following presuppositions: (i) A is constrained by the local background (i.e. the non-focussed part of the focus phrase); (ii) the

²In (i) the focus domain (or focus) is given by *Denmark* whereas the focus phrase comprises the superordinate NP *the girl from Denmark*. In (ii) focus domain and focus phrase coincide.

(i) Ben only invited [the girl from [DENMARK]Focus Domain]Focus Phrase (... not the girl from Bulgaria)

(ii) Ben only invited [[the girl from DENMARK]Focus Domain]Focus Phrase (...not the man with the fancy hat)

³The set of "proper" alternatives is defined as the set of alternatives minus the focussed element.

⁴Throughout this paper we will assume that the co-referent is a single individual and *the others* comes as a plural, thereby simplifying the presentation. Moreover, we will ignore backgrounded descriptive material, e.g. *the OTHER geologists*. For a comprehensive discussion cf. Umbach (2003).

focus phrase referent is an element of A ; (iii) A includes at least one contrasting element, which is distinct from the focus phrase referent. These conditions match with Rooth's (1992) requirements, the discourse referent A corresponding to Rooth's variable C . Since we will employ a similar representation in the case of cataphoric specific indefinites in section five, we will briefly discuss the representation of the NP *das BLAUE Bild* in (5):

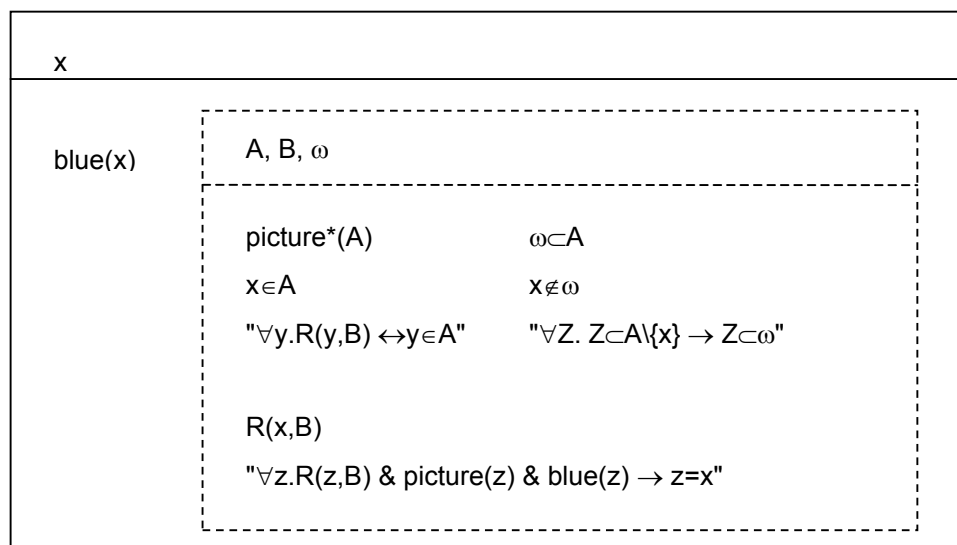
- Carrying a focus, the NP constitutes a non-given definite introducing a novel discourse referent x . The focussed part of the description corresponds to the asserted condition, $\text{blue}(x)$.
- The presuppositions are partly due to focus and partly due to definiteness. Focus requires a discourse referent A representing the set of alternatives which is constrained by the background part of the description, $\text{picture}^*(A)$ (star indicating distributivity). The set of alternatives includes the NP referent, $x \in A$, and also the contrasting elements, $\omega \subset A$, $x \notin \omega$. (For convenience, the contrasting element is assumed to be set-valued, cf. previous footnote concerning "the others". It has to be maximal w.r.t. $A \setminus \{x\}$).
- Definiteness, on the other hand, requires a bridging antecedent B and a relation $R(x, B)$. Due to uniqueness x has to be the only blue picture which is R -related to the bridging antecedent, i.e. $\forall z. R(z, B) \& \text{picture}(z) \& \text{blue}(z) \rightarrow z = x$. The bridging antecedent moreover restricts the set of alternatives, $y \in A$ iff $R(y, B)$.
- On updating, B will be bound to the previously introduced exhibition, and A will be bound to the set of elements R -related to B . When updating the succeeding sentence, the referent of *die ANDEREN* (*the others*) will be bound to the set of contrasting elements ω (for details cf. Umbach 2003).

(5) (a) (...Marek's exhibition is worth seeing.)

Das /BLAUE Bild hat mir \BESONDERS gefallen. (Aber die anderen sind auch gut.)

(I especially liked the blue picture. But the others are interesting, too.)

(b) Das /BLAUE Bild...



3. Referential vs. denotational readings of contrastive topics

Example (1) in the introduction made clear that the position of the accent is insufficient to distinguish between the non-specific and the specific reading of an indefinite NP. Although the accent is located on the determiner in (a) and (b), the indefinite *EINEN Schüler* (*ONE student*) has a non-specific reading in (a) and a specific reading in (b). At first sight this seems to be reason enough to cancel the intonation hypothesis. However, it has been pointed out by Eckardt (2002) that quantifiers in topic position with an accent on the determiner exhibit a systematic ambiguity. It will turn out in the next section that this ambiguity perfectly matches the distinction between the non-specific and the specific reading in (1)(a) and (b).

In Eckardt (2002) it is argued that quantifiers in topic position which carry an accent on the determiner are systematically ambiguous between a *referential* and a *denotational* reading. Consider Eckardt's examples in (6) and (7). In the referential reading, in (6), the NPs are partitives referring to subgroups of the previously given plural referent, i.e. the seven dwarfs. The subgroups may have the same cardinality, but they must be disjoint, that is, no dwarf both peels potatoes and roasts sausages. Assuming that (6)(a)-(c) constitute the answer to a question, the appropriate question will be *What did the dwarfs do?*, and the answer has to be exhaustive, mentioning each of the disjoint subgroups. Thus, we learn from (a)-(c) that the overall number of dwarfs is seven. Finally, the complement of the NP referent is defined, that is, the expression *the others* can be felicitously used in a continuing sentence (*THREE dwarfs were peeling potatoes. The others were roasting sausages*).

(6) (The [seven] dwarfs were busy cooking dinner.)

(a) /THREE dwarfs were \PEELING POTATOES.

(b) /TWO dwarfs were \FETCHING BEER, and

(c) /TWO dwarfs were \ROASTING SAUSAGES.

In the denotational reading, as shown in (7), the NPs denote quantifiers of different cardinality. They may, but need not be partitives relating to subgroups of a given group of objects. The quantifiers must be of different cardinality, but the denotations may overlap. The appropriate question to be answered by (7)(a)-(c) will be *How many spots were visible on what day?*, where the answer need not be exhaustive and the cardinalities cannot be added up. From (a)-(c) we cannot infer the overall number of red spots. Finally, in the denotational reading the complement of the NP referent is not defined, that is, the expression *the others* will not be felicitous in a continuation (*At different days of my measles I had increasing numbers of red spots: FOUR spots appeared on Monday. #The others were visible on Tuesday*).

(7) At different days of my measles, I had increasing numbers of red spots:

(a) /FOUR spots appeared on \MONDAY,

(b) /FIVE spots were visible in \TUESDAY, and

(c) /EIGHT spots shone on my face on \WEDNESDAY.

It follows from the above characterization that the referential and the denotational reading essentially differ with respect to the alternatives triggered by the focus. In the denotational reading the alternatives consist of quantifiers of different cardinality, {four spots, five spots, six spots,...}, where the denotations may overlap. As compared to this, in the referential reading the set of alternatives has to comprise disjoint subsets of a given referent, where the subsets are exhaustive, for example {three of the dwarfs, another two of the dwarfs, the rest of the dwarfs} or {three of the dwarfs, the other dwarfs}. The latter type of alternative sets will be most important in the analysis of cataphoric indefinites in the next section.

In addition to the characteristics given in Eckardt (2002) it can be observed that the referential and the denotational reading of a topicalized quantifier differ with respect to the scope of the negation: Referential topics induce narrow scope, cf. (8)(a), which has to be read as "most...not". Denotational topics, on the other hand, induce wide scope, cf. (8)(b) which is "not...most".

(8) (a) (The seven dwarfs were playing in the garden.)

/MOST dwarfs were \NOT wearing a cap (but two of them did.)

(b) (When I had my measles, the doctor promised that most spots were gone within a week.)

/MOST spots were \NOT gone by Friday (but at least half of them...)

These observations provide evidence that the referential/denotational difference is not just vagueness in the sense that there are different contexts and the referential reading corresponds to one type of context set while the denotational reading corresponds to another. Instead, it seems to be a genuine ambiguity. Actually, similar distinctions have been suggested by other authors, for example, Gyuris (to appear), who points out a referential/quantificational distinction with respect to Hungarian contrastive topics, and Endriss and Ebert (to appear), who discuss the conditions under which a quantifier qualifies as a topic (thereby licensing a specific interpretation). Still, the referential/denotational distinction is far from being settled issue. It is, for example, unclear whether it relates to the other features of quantifiers (monotonicity, weak/strong etc.). Moreover, it might be doubted whether denotational topics are genuine topics in the sense of aboutness topics. The question attributed to (7) appears to be a multiple focus question suggesting that the NP might be part of the comment instead of being a topic. Also, the fact that negation takes wide scope is evidence against a genuine topic. We have to leave these questions open in the present paper.

4 Cataphoric indefinites

Let us reconsider the example in (1) in the introduction, repeated in (9). In (9)(a) and (b) the indefinite NP *EINEN Schüler* carries an accent on *ein*, which is in German used as an indefinite article and also as a numeral, similar to English *one*. (9)(a) and (b) perfectly match the distinction between the denotational and the referential reading discussed in the previous section. In the non-specific reading in (a) the alternatives triggered by *EINEN Schüler* have to be quantifiers of different cardinality {one student, two students, three students,...}. This is evident from the continuation of the sentence. In contrast, in the specific reading in (b) the alternatives triggered by *EINEN Schüler* are subgroups of the student group which are disjoint and exhaustive, {one of the students, the other students}.

(9) (a) (Paulsen, who is the local plumber, has been asked to provide internships for a group of local students:)

Paulsen: /EINEN Schüler würde ich \NEHMEN, (aber zwei sind mir zuviel.)

(I would take one student, but two are too many for me.)

(b) (Grün, the owner of the drugstore, has been asked, too. At first, he is reluctant. But then he says:)

Grün: /EINEN Schüler würde ich \NEHMEN (nämlich den kleinen Otto Pitzke. Die anderen taugen nichts.)

(I would take one (of the) student(s), namely Otto Pitzke. The others are good for nothing.)

The example in (9) demonstrates that indefinites with an accent on the determiner, if they constitute referential topics, qualify as specifics. On the other hand, indefinite NPs which constitute denotational topics are clearly non-specific. The essential difference between the denotational/non-specific reading of the indefinite in (a) and the referential/specific reading in (b) lies in the nature of the alternatives evoked by the focus on the determiner. In the referential/specific reading in (b) the alternatives consist in two disjoint subgroups which exhaust the group antecedent: {one of the students, the other students}. Notice that two disjoint and exhaustive subgroups of a supergroup result in a two-cell partition, and a two-cell partition is equivalent to a property. Thus the set of alternatives in (b) represents a property. In addition, one of the cells has to be a singleton, which is indicated by the stressed determiner *EIN (ONE)*.⁵ Accordingly, in the specific reading the set of alternatives represents a property which is unique with respect to the antecedent group. By using *EINEN Schüler (one student)* in contrast to *die anderen Schüler (the other students)* the speaker conveys a particular partition of the antecedent student group into a singleton cell and the rest and, by virtue of this partition, she conveys a unique property without explicitly mentioning it.

It has been suggested by, e.g., Zimmermann (2003), Schlenker (2003) that specificity comes with an implicit identifying property. This idea is confirmed by the analysis given here. But in contrast to the above accounts, in the present analysis the identifying property need not be introduced as an additional assumption. Instead, the identifying property turns out to be a side effect of focus, that is, of the particular formation of the alternative set triggered by a referential/specific indefinite. Deducing the identifying property from the alternatives also clarifies the problem of trivial properties: If you simply assume that a specific indefinite implies the existence of an identifying property, then any unique property will do. In contrast, in the present analysis it is not the mere existence of a property which is expressed by the speaker. Recall that *EINEN Schüler* in the referential reading is not a quantifier but an anaphor. Thus when using *EINEN Schüler* in contrast to *die anderen Schüler* the speaker doesn't merely communicate the existence of a partition but instead communicates this particular partition. The property corresponding to this partition might be spelled out as "being distinct from the others", which is tantamount to an anaphoric expression which lacks information for resolution, that is, a cataphoric expression. This is the reason why these indefinites are called "cataphoric indefinites" in this paper. It will be shown below that referential/specific indefinites actually function as cataphors in a discourse.

On this analysis, the core feature of specific indefinites, namely the intuition that the speaker has a particular individual in mind without communicating the individual's identity to the hearer, turns out to result from cataphoricity, which is a well-known phenomenon. Note, however, that on the above analysis the speaker has a particular property in mind, but not (necessarily) a particular individual. Thus examples like *EINEN Läufer* in (10), which are clearly specific although the speaker cannot have a particular individual in mind, don't pose a problem.⁶

⁵It is commonly agreed that stress on *EIN (ONE)* implies the interpretation "exactly one". But what has been ignored is the fact that, even if stressed, the determiner *EIN (ONE)* need not contrast with different numbers but may also contrast with *die anderen (the others)*. It is commonly said that *ein* is homonymous being either a determiner or a numeral. However, stressed *EIN* when contrasting with *die anderen* also implies a "numeral" interpretation, since it induces a singleton property. Hence there is no clear-cut distinction between the determiner and the numeral *ein*. A clear determiner reading for stressed *EIN* is given if it contrasts with the definite determiner *DER*: *Er ist nicht EIN Verdächtiger, sondern DER Verdächtige*. This reading corresponds to English stressed *A* which contrasts with *THE* (*He is not A suspect, he is THE suspect*.)

⁶Many thanks to Cornelia Endriss for this example.

- (10) (Berlin Marathon. Before the start of the race the mayor of Berlin informs the head organizer:)

/EINEN Läufer möchte ich nach dem Rennen \PERSÖNLICH beglückwünschen, nämlich den Sieger, (... den anderen lasse ich meine besten Grüße ausrichten.)

(I would like to congratulate one of the runners, namely the winner, and offer my best wishes to the others.)

The major question concerning the speaker-hearer asymmetry of specific indefinites relates to the Gricean maxime of informativity: Why does the speaker not simply use an existential instead of a specific indefinite, if he doesn't want to reveal the referent's identity? Why should it be relevant for the hearer to learn that the speaker withholds information? On a closer look, however, it turns out that the speaker actually doesn't withhold information. Consider the example in (11)(a) and (b) which are slight modifications of (9)(b):

- (11) (Grün is asked by the teacher of the graduating class to provide internships for a group of local students:)

- (a) Grün: /EINEN Schüler würde ich \NEHMEN (... wie heißt der denn noch? ...na, der Enkel von meinem früheren Nachbarn.)

(I would take one (of the) student(s), ... wait a moment, what's his name? ... well, the grandson of my former neighbor.)

- (b) Grün: /EINEN Schüler würde ich \NEHMEN.

(I would take one (of the) student(s))

Teacher: Wen denn? (Who then?)

Grün: Na, den Otto Pitzke,... (Well, Otto Pitzke.)

In (11) (a) Grün cannot remember the referent's name and therefore he falls back upon a definite description. In (11)(b) Grün stops immediately after the first sentence. In this situation the teacher is prompted to ask for the identity of the referent, and Grün in turn has to answer this question (or else has to give a good reason for not answering the question). Obviously, the speaker-hearer asymmetry is only temporary. The speaker might have forgotten the referent's name, or be in search of a suitable description, or she might simply want to make her utterance more dramatic, but in the end she has to place the hearer in a position to determine the referent. Similarly, when using a cataphoric pronoun the speaker withholds the referent's identity, but only for a short moment. In the case of cataphoric pronouns the referent is missing, in the case of cataphoric indefinites the identifying property is missing. In either case, the missing information constitutes an open question-under-discussion, and the speaker is obliged to answer this question to ensure successful communication.

5 Cataphoric indefinites vs. non-given definites

It is generally agreed that specific indefinites exhibit a close relationship to definite NPs. Taking the given/non-given distinction for definites into account (cf. section two), cataphoric indefinites are in fact strikingly similar to non-given definites. Compare (12)(a) (= (5)(a)) and (12)(b). The examples differ only with respect to the point in time when the identifying property is provided. While in the case of the definite in (a) the identifying property is presented by a prenominal modifier, it is presented by a postponed apposition in the case of the cataphoric indefinite.

(12) (Marek's exhibition is worth seeing ...)

(a) Das /BLAUE Bild hat mir \BESONDERS gefallen, (aber die anderen sind auch gut.)

(I especially liked the blue picture, but the others are interesting, too.)

(b) /EIN Bild hat mir \BESONDERS gefallen, nämlich das \BLAUE, (aber die anderen sind auch gut.)

(I especially liked one picture, namely the blue one, but the others are interesting, too.)

Apart from the position of the modifier, i.e. the point in time the identifying property is named, the non-given definite in (a) and the cataphoric indefinite in (b) are structurally equivalent: First, both NPs introduce a novel discourse referent. Secondly, both NPs relate to a bridging antecedent to achieve uniqueness, which is the previously introduced exhibition. Note that in either case the relation to the antecedent is not simply group membership, but approximately "shown in". Thirdly, the alternatives triggered by the non-given definite and those triggered by the cataphoric indefinite are provided by the bridging antecedent, i.e. the respective sets of alternatives consist of the elements shown in the exhibition that are pictures (due to the backgrounded part of the descriptive content). The only difference between the non-given definite and the cataphoric indefinite concerns the property responsible for uniqueness. In the case of a non-given definite this property is given by the focussed part of the descriptive content and in the case of the cataphoric indefinite it is a cataphor represented by the partition of the alternatives into "the one" and "the others". Let the cataphoric property be denoted by C . Then the non-given definite yields the interpretation "the unique painting shown in Marek's exhibition which is blue" and the set of alternatives is given by {the blue picture shown in the exhibition, the non-blue pictures shown in the exhibition}. Compared to this, the cataphoric indefinite yields the interpretation "the unique painting shown in Marek's exhibition which is C ", and the set of alternatives is given by {the C picture shown in the exhibition, the non- C pictures shown in the exhibition}.

Following the representation suggested in section two, the cataphoric indefinite in (12)(b) will be represented as shown in (13):

- Being an indefinite the NP introduces a novel discourse referent x .
- Due to partitivity there has to be a bridging antecedent B and a relation $R(x, B)$.
- Focus requires a presupposed discourse referent A representing the set of alternatives.⁷ A is constrained by the background description, $\text{picture}^*(A)$ and includes the NP referent, $x \in A$, and also the contrasting elements, $\omega \subset A$, $x \notin \omega$. Moreover, A is restricted by the bridging antecedent, $y \in A$ iff $R(y, B)$.
- Due to the focus on *ein* (on the referential interpretation) the alternatives are partitioned into a singleton cell and the rest, i.e. the NP referent is the only element which is R -related to B and a picture and is not included in the contrasting elements, $\forall z. R(z, B) \& \text{picture}(z) \& z \notin \omega \rightarrow z = x$. Note, that this entails the existence of a property C such that $\forall z. R(z, B) \& \text{picture}(z) \& C(z) \rightarrow z = x$, where $C(z)$ iff $z \notin \omega$.
- On updating, B will be bound to the previously introduced exhibition. When updating the succeeding sentence, the referent of *die ANDEREN* (*the others*) will be bound to the set of contrasting elements ω .

⁷As in the case of definite NPs the relevant alternatives are assumed to relate to the focus phrase.

The representation of the cataphoric indefinite in (13) corresponds exactly to the representation of the non-given definite in (5)(b), apart from the fact that in the case of the non-given definite there is an asserted condition, $\text{blue}(x)$, whereas in the case of the cataphoric indefinite, there is a presupposed condition $C(x)$ which has to be bound by a succeeding property.⁸

(13) EIN Bild (... die anderen)

x													
<div style="border: 1px dashed black; padding: 10px; margin: 10px auto; width: 80%;"> <p>A, B, ω, C</p> <table> <tr> <td>$\text{picture}^*(A)$</td><td>$\omega \subset A$</td></tr> <tr> <td>$x \in A$</td><td>$x \notin \omega$</td></tr> <tr> <td>"$\forall y. R(y, B) \leftrightarrow y \in A$"</td><td>"$\forall Z. Z \subset A \setminus \{x\} \rightarrow Z \subset \omega$"</td></tr> <tr> <td>$R(x, B)$</td><td></td></tr> <tr> <td colspan="2">"$\forall z. R(z, B) \ \& \ \text{picture}(z) \ \& \ z \notin \omega \rightarrow z = x$"</td></tr> <tr> <td colspan="2">"$C(x) \leftrightarrow x \in A \ \& \ x \notin \omega$"</td></tr> </table> </div>		$\text{picture}^*(A)$	$\omega \subset A$	$x \in A$	$x \notin \omega$	" $\forall y. R(y, B) \leftrightarrow y \in A$ "	" $\forall Z. Z \subset A \setminus \{x\} \rightarrow Z \subset \omega$ "	$R(x, B)$		" $\forall z. R(z, B) \ \& \ \text{picture}(z) \ \& \ z \notin \omega \rightarrow z = x$ "		" $C(x) \leftrightarrow x \in A \ \& \ x \notin \omega$ "	
$\text{picture}^*(A)$	$\omega \subset A$												
$x \in A$	$x \notin \omega$												
" $\forall y. R(y, B) \leftrightarrow y \in A$ "	" $\forall Z. Z \subset A \setminus \{x\} \rightarrow Z \subset \omega$ "												
$R(x, B)$													
" $\forall z. R(z, B) \ \& \ \text{picture}(z) \ \& \ z \notin \omega \rightarrow z = x$ "													
" $C(x) \leftrightarrow x \in A \ \& \ x \notin \omega$ "													

It has been discussed in Umbach (2001) whether the distinction between the given and the non-given use of definites corresponds to the distinction between the referential and the attributive use of definite descriptions introduced by Donellan (1966). First of all, there is no one-to-one correspondence, since there are attributive uses which are identity anaphors, e.g. *"Someone murdered Smith. We're all very distressed because Smith was such a nice guy. It must be that Smith's murderer is insane -- that's the only way to explain it."*⁹ The definite *Smith's murderer* is attributive in this example, even though the discourse referent has been introduced before and thus the definite counts as given (and is in fact deaccented). On the other hand, Wilson (1991) suggested distinguishing between pronominal and attributive definite descriptions where Donellan's referential uses constitute a special case of the former. The definite *Smith's murderer* in the above example would be a pronominal one and we might amend the above claim by saying that the given/non-given distinction corresponds to the pronominal/attribute distinction according to Wilson.

In any case, cataphoric indefinites are not identity anaphors. The discourse referent is novel and is determined by a property, even if this property is a cataphor. It is important to recall that due to the cataphoric indefinite analysis the speaker-hearer asymmetry does not pertain to an individual but to a property. Thus it might be the case that the speaker has a particular property in mind and is nevertheless unable to determine the referent. One example of this kind is (10), where the indefinite is uttered before the identifying property (i.e. *winner*) can be evaluated. Note that in (10) it would be perfect to add *"(namely the winner) whoever that is"*. Similarly, Donellan's famous Martini example can easily be rephrased by a cataphoric

⁸For convenience, C is included in the list of discourse referents. But keep in mind that it is a property instead of a (group-) individual.

⁹Many thanks to Barbara Abott for pointing out this example to me.

indefinite, cf. (14). But surprisingly it is the attributive version which facilitates a cataphoric indefinite. Contrary to the common assumption that specifics are similar to referentially used definites, cataphoric indefinites pair up with attributive (non-pronominal) definite descriptions.

- (14) (After it was revealed to him that someone present at the meeting had a flask in his jacket pocket, the head of the teetotalers announced at the meeting:)

/EIN Mann muss sofort den \RAUM verlassen, ... nämlich der mit dem Flachmann in der Jacke, ... wer immer das ist.

(One man must leave the room immediately,... namely the one who has a flask in his jacket,... whoever that is.)

6 Cataphoric indefinites and scope

It has been shown in the preceding sections that for cataphoric indefinites the core feature of specificity, i.e. the speaker-hearer asymmetry concerning the identification of the referent, is a result of the interpretation of focus. Of course, cataphoric indefinites cover only a small range of the variety of specific indefinites listed in the literature. Classical examples such as the specific reading of *a logician* in *Mary talked to a logician* are not included, and neither are indefinite NPs of the form *a certain N*. Where scope with respect to other operators is concerned wide scope readings of indefinites are, of course, not restricted to cataphoric ones, cf., e.g., (15)(a) which has a *de re* reading. Still, if we focus on indefinites carrying a rising accent on the determiner, i.e. those qualifying for either a referential or a denotational topic, then there is evidence that wide scope readings require cataphoric indefinites. For example, the indefinite in (15)(b) has wide scope and is a cataphoric one, inducing the set of alternatives {one of the Greek girls, the other Greek girls}.¹⁰

- (15) (a) During his holidays in Greek, Paul has fallen in love:

Anne: Stell dir vor: Paul will eine \GRIECHIN heiraten. (Er hat sie im Urlaub kennengelernt.)

(Have you heard the news: Paul wants to marry a Greek woman. He met her while on vacation.)

- (b) During his holidays in Greek, Paul met a Greek girl group and is full of enthusiasm.

Anne: Stell dir vor: Paul will /EINE Griechin tatsächlich \HEIRATEN. Ich glaube, es ist die Schlagzeugin.)

(Believe it or not: Paul wants to marry one of the Greek girls. I think it's the drummer.)

In (16) the interaction with another quantifier is demonstrated. In each of the examples the focus in the indefinite is on the determiner, *EINEN Vortrag (one talk)*. In (a) the indefinite has wide scope and is at the same time cataphoric, one of the talks being contrasted with the other talks. In (b) the indefinite has narrow scope and is not cataphoric, the alternatives being {one

¹⁰Note that in (15)(b) the cataphoric indefinite has to precede the sentence adverb, which is a prerequisite for a topic to occur in the German middlefield (cf. Frey, to appear). Shifting the adverb seems to induce the reading where *EINE Griechin* contrasts with two Greeks, three Greeks etc. which is hard to interpret because it contradicts world knowledge: *Paul will offenbar /EINE Griechin \HEIRATEN*.

talk, at least three talks}.¹¹ In (c) the indefinite has narrow scope. Still, the alternatives consist of {one of talks, the other talks} indicating that the indefinite is a cataphoric one. Examples of this type were presented in Farkas (2002) and in Heusinger (2002) to point out that specific indefinites need not have wide scope (Farkas refers to these cases as *co-variation*, Heusinger call them *subject-specific*).

(16) (After the workshop...)

- (a) Alle Teilnehmer fanden /EINEN Vortrag offenbar /BESONDERS interessant. (Die /ANDEREN waren eher /SCHLECHT besucht.)

(Every participant found one talk especially interesting. The other talks were less popular.)

- (b) Jeder Teilnehmer fand offenbar /EINEN Vortrag \BESONDERS interessant (...aber mindestens DREI durchaus lohnenswert.)

(Every participant found one talk especially interesting and at least three talks worth hearing.)

- (c) Jeder Teilnehmer fand /EINEN Vortrag offenbar \BESONDERS wichtig, (... nämlich seinen eigenen, und die anderen mäßig interessant.)

(Every participant found one talk especially important,... namely his own one,... and the others slightly interesting.)

Let us finally have a brief look at the examples in (17). In (a) the intermediate scope reading is the most natural one. *EINE Aufführung* (*one production*) must be contrasted with *the other productions* due to world knowledge (since the theater festival has to present more than one production). Thus the indefinite is a cataphoric one. In (b) the indefinite is slightly varied, thereby licensing a denotational topic interpretation where one Marthaler production is compared to two and the indefinite has narrow scope with respect to *drei Argumente*.

(17)(The jury of the Berlin theater festival provided the reviewers with the following instructions:)

- (a) Jeder Kritiker soll drei Argumente bringen, die zeigen dass /EINE Aufführung ins \PROGRAMM genommen werden muss, (während die anderen verzichtbar sind.)

(Each reviewer has to come up with three arguments that show that one production must be put on the program whereas the others are dispensable.)

- (b) Jeder Kritiker soll drei Argumente bringen, die zeigen dass /EINE Marthaler-Aufführung ins \PROGRAMM genommen werden sollte, (aber zwei zuviel wären.)

(Each reviewer has to come up with three arguments that show that one Marthaler production should be put on the program, but two would be too many.)

Although these examples are not sufficient for definite conclusions, they provide evidence that exceptional scope behavior is allowed for cataphoric indefinites but not for denotational topic indefinites. Cataphoric indefinites in German are not restricted to the sentence initial position, but may also occur in the topic position of the German middle field (cf. Frey, to appear). Denotational topic indefinites are excluded from this position, which is evidence that they do not constitute genuine topics, in spite of the rising accent. Cataphoric indefinites may have wide scope with respect to preceding operators, as in (15)(b) and (16)(a), which is not

¹¹Note again that the sentence adverb has to precede the indefinite in this reading.

possible for denotational topic indefinites. But cataphoric indefinites may also have narrow scope inducing a co-variation reading, cf. (16)(c). Finally, cataphoric indefinites can take intermediate scope whereas denotational topic indefinites cannot.

7 Conclusions

In this paper it has been argued that cataphoric indefinites constitute a subclass of specific indefinites which is distinguished by a particular type of alternative set. Cataphoric indefinites (i) carry a focus on the determiner, (ii) are partitives, (iii) are topics, and (iv) induce a defined complement. Thus they trigger a set of alternatives of the form {one of the N, the other N}. For cataphoric indefinites, the speaker-hearer asymmetry with respect to the identity of the referent has been shown to result from the particular form of the alternative set: Inducing a partition into a singleton subgroup and the rest, the alternative set is equivalent to a unique property which is a cataphor to be specified in the subsequent discourse. On this analysis the core feature of specificity, i.e. the intuition that the speaker has a particular referent in mind without communicating its identity to the hearer, turns out to be a mere side effect of the interpretation of focus in topic constituents.

This analysis confirms the claim of Portner and Yabushita (2001) that specifics have to be partitive and topical. If we accept the evidence from German in the previous section, then denotational topics are no genuine topics and thus the combination of partitivity and topicality yields a sufficient characterization. Yet, the discussion in this paper has been limited to indefinites with an accent on the determiner and the results do not straightforwardly carry over to different accent positions. For example, shifting the accent from *EIN Bild* to *ein BILD* the alternatives no longer consists of one picture as compared to the other ones. For a specific reading of *ein BILD*, specificity effects have to be explained in some other way.

The present analysis also confirms the idea of an implicit identifying property pertaining to specific indefinites, as suggested by Schlenker (2003) and Zimmermann (2003). In contrast to their account, the present analysis need not pose the identifying property as an additional feature because it is a consequence of the particular alternative set. Moreover, the cataphoric indefinite analysis appears reminiscent of Schwarzschild's (2002) singleton indefinite analysis. However, on a closer look the accounts differ fundamentally. Schwarzschild argues that specific indefinites result from an implicit domain restriction. Different from other quantifiers, in the case of specifics the domain is restricted to a singleton. Implicit domain restrictions are given by the context and are familiar to the speaker and the hearer. Since this contradicts the observed speaker-hearer asymmetry, Schwarzschild has to pose an ad hoc privacy principle for specific indefinites. According to the cataphoric indefinites analysis the domain restriction is given by the backgrounded descriptive content and may be supplemented with implicit restrictions. For example, *EIN Bild* in (12)(b) has as its domain "pictures shown in Marek's exhibition". In contrast to Schwarzschild's account (and in accordance with the usual assumptions in focus semantics), the domain restriction is supposed to apply to all of the alternatives, whereas the singleton restriction is due to the cataphoric property induced by the particular alternative set.

Finally, cataphoric indefinites confirm the common idea that specific indefinites are close to definites. Taking the difference between given and non-given definites into account, a cataphoric indefinite is like a non-given definite apart from the fact that for non-given definites the identifying property is given by the focussed part of the descriptive content, while for cataphoric indefinites it is given by the particular alternative set and has to be specified afterwards. The similarity between cataphoric indefinites and non-given definites has a surprising consequence: If we accept that the difference between given and non-given

definites correlates with the difference between referentially (or pronominally) used and attributively used definites, then cataphoric indefinites are on the side of the attributive ones.

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