

Topic Interpretation with Quantificational Adverbs and Determiners*

Cornelia Endriss and Stefan Hinterwimmer

Universität Potsdam and Humboldt-Universität zu Berlin

1. Introduction

It is widely assumed that syntax determines the arguments of determiner quantifiers (D-quantifiers), whereas information structure (IS) is the decisive factor in the definition of restrictor and nucleus in constructions with quantificational adverbs (Q-adverbs). Concerning adverbial quantification, it is uncontroversial that topical material tends to be interpreted in the restrictor of a Q-adverb (cf. Partee 1991). It has also been observed that IS has an influence on the interpretation of sentences with D-quantifiers. Topical indefinites usually receive a strong interpretation, i.e. they are interpreted with wide scope or generically. However, so far, these two observations have not been related systematically. In this paper, we argue that they are based on one underlying principle, which is responsible for the interpretive effect of topicality in the context of adverbial quantifiers as well as in combination with D-quantifiers.

We understand the term *topic* in the aboutness sense of Reinhart (1981), whose basic understanding of topichood is based on (Strawson 1964). She argues along with many authors that there is more to topicality than just pure discourse givenness or *familiarity*. Reinhart furthermore shows that familiarity is not even a necessary property of topics. The topic of a sentence is simply understood as the center of interest, the item the sentence is about. Reinhart understands the topic of a sentence as the *address* where the rest of the information conveyed by the respective assertion is stored during the context update. Topicality thereby has an information structuring function in the literal sense of the term.

*We would like to thank Christian Ebert, Manfred Krifka, and Peter Staudacher for valuable comments on an earlier version of this paper and Shinishiro Ishihara for discussion and native speaker judgements on Japanese data. This work was funded by the Deutsche Forschungsgemeinschaft as part of the Sonderforschungsbereich 632 (Information Structure).

The same idea is pursued by Vallduví (1992) and implemented by Portner and Yabushita (1998) (despite the fact that Portner and Yabushita (1998) do not account for the case of non-familiar topics).

Frey (2004) shows that left-dislocation in German marks the left-dislocated item unambiguously as aboutness-topic in this sense¹. DPs can also be unambiguously marked as topics by *wa*-marking in Japanese. We make use of these two strategies as diagnostics for topicality.

2. Interpreting Topicality

Although the main function of topicality is an information structuring one, as argued in the previous section, it can be shown that it is not a purely pragmatic notion. It has been shown that the interpretation of DPs as topical has a direct influence on the truth conditions of an utterance, i.e. not just focus, but also topicality has a direct effect on semantics.

2.1. Adverbial Quantifiers

Despite many differences, the theories that explain the different interpretations occurring with Q-adverbs as an information structural effect agree that topical/non-focal material is mapped onto the restrictor, and focal/non-topical material is mapped onto the nuclear scope (see among many others Rooth 1985, Partee 1991, von Stechow 1994, Chierchia 1995).

Consider the following example from (Rooth 1995). In English and German, topic and focus are usually indicated by intonation. It is easy to verify that the focused DP, which is accented², is interpreted in the nuclear scope of the Q-adverb *always*, whereas the non-focused part is interpreted in the restrictor.

- (1) a. *In English, a U always follows **a Q**.* (true)
b. $ALL\ s.[in(s, Q)][follow(s, U, Q)]$
c. *'In English, all Qs are followed by a U.'*
d. *In English, **a U** always follows a Q.* (false)
e. $ALL\ s.[in(s, U)][follow(s, U, Q)]$
f. *'In English, all Us follow a Q.'*

As can be seen in the representations of (1a) and (1d) in (1b) and (1e) respectively, the example involves quantification over situations *s*. The different interpretations are triggered by different information structures.

¹We will see below that we think that this generalization is too strong. Left dislocation can also host contrastive DPs that are not topical. Nevertheless, we can use it as a means to detect topical DPs, if we control for contrastivity.

²We indicate the pitch accent by using capital letters for the corresponding syllable. As the syllable consists only of one letter in case of example (1), we additionally underline the accented part. The focused part can certainly comprise more than just the accented constituent. For the rules of focus projection, see (Selkirk 1995). We mark the topical parts by boldface.

These readings, where indefinites that are interpreted in the restrictor of some other quantificational adverb (*always* in the cases above) are usually referred to as *quantificational variability readings* in the literature (Berman 1991), because the indefinite seems to receive its quantificational force from the embedding quantifier and thus its meaning varies with this quantifier. In the following, we will therefore also refer to these sentences as *quantificational variability (QV) cases*.

The same pattern emerges in Japanese, where topicality is indicated by *wa*-marking of the topical phrase (see Kuno 1972). For a similar example, see (Krifka 2001).

- (2) a. Eigo -de -wa, U -ga itumo Q -ni tuzuku. (true)
English in Top U Nom always Q Dat follow
'In English, all *Qs* are followed by a *U*.'
- b. Eigo -de -wa, U -**wa** itumo Q -ni tuzuku. (false)
English in Top U Top always Q Dat follow
'In English, all *Us* follow a *Q*.'
- c. Eigo -de -wa, U -ga itumo **Q -ni -wa** tuzuku. (true)
English in Top U Nom always Q Dat Top follow
'In English, all *Qs* are followed by a *U*.' (+contr for a *Q*)

If the subject is *wa*-marked as in (2b), the topical phrase is mapped onto the restrictor, as expected, and the sentence receives the interpretation that in English all *Us* follow a *Q*, which is wrong. If the object is marked for topic as in (2c), the sentence has the interpretation that holds true for English. But additionally, the sentence has a contrastive interpretation. This contrastivity effect induced by object *wa*-marking has already been observed by Kuno (1972). In this case, the hearer expects that a *Q* contrasts with another letter. This might be due to the fact that the object is already interpreted as topic by default, if the subject is marked for nominative (see (2a)). The *wa*-marking of the object would then be superfluous, unless it has an additional effect, namely to invoke a contrastive interpretation. We summarize the relevant parts of the above mentioned observations concerning the possible interpretations for sentences with adverbial quantifiers in the following way:

Observation 1 (e.g. Partee 1991) *Topical material tends to be interpreted in the restrictor of an adverbial quantifier.*

2.2. Generic Readings

It is known that topical indefinites can receive a generic interpretation when they appear in sentences with generic tense. To illustrate this point, we use again German left dislocation, which marks the left dislocated element as topic³.

- (3) a. Ein LÖwe, der hat eine lange Mähne.
A lion RP has a long mane
'Lions have long manes.'

³*RP* stands for resumptive pronoun.

- b. Kuzira -wa honyuu-doobutu desu. (from Kuno 1972, p. 270)
 whale Top mammal is
'Whales are mammals.'

Note that the indefinite in (3a) has a pitch accent on the NP. This is the only possibility for the sentence to receive a generic interpretation⁴. This leads us to the following statement of the facts:

Observation 2 (e.g. Kuno, 1972) *In sentences with generic tense, topical indefinites are interpreted generically.*

2.3. Determiner Quantifiers

Concerning D-quantification, it has been observed that the topical status of a quantificational DP also affects its interpretation. Whereas restrictor and nucleus of a D-quantifier are determined widely independent of information structure (but see (Herburger 2000) and (Krifka 1990) for possible exceptions to this general scheme), the topical status of a quantificational DP still contributes to the truth conditions of the sentence. A topical DP can only receive wide scope with respect to other quantifiers (see e.g. Cresti 1995, Jäger 1996, Portner and Yabushita 2001, Ebert and Endriss 2004):

- (4) a. EInen Löwen, den hat JEder gesehen. [*only wide scope for 'e. Löwen'*]
 A lion RP has everybody seen
'Some lion everyone saw.'
- b. Einen LÖwen hat JEder gesehen. [*wide or narrow scope for 'e. Löwen'*]
 A lion has everybody seen
'Some lion has been seen by everyone.'

In (4a), the determiner of the left dislocated indefinite needs to be accented and the indefinite unambiguously receives a wide scope interpretation. A different intonation would lead to uninterpretability or a marked interpretation⁵. A generic interpretation is impossible due to the episodic tense of (4a). A non-generic interpretation of the topical indefinite seems

⁴We only mark the relevant accents in the DP domain and the sentence's main accent, which is on the first syllable of *Mähne* (*mane*) in (3a).

⁵For some German speakers, sentence (4a) with stress on the NP seems marginally possible. However, the sentence then has a contrastive flavour, as is evidenced by the fact that (i) appears degraded without (ii) following it.

- (i) Einen LÖwen, den hat JEder gesehen.
 A lion RP has everybody seen
'Some lion has been seen by everyone.'
- (ii) Aber eine TIger hatte NIEmand gesehen.
 But a tiger had nobody seen
'But nobody had seen a tiger.'

to necessitate stress on the determiner. (4b) on the other hand, which is no topic marking construction, allows for a narrow and a wide scope reading of the indefinite – even if the determiner receives a pitch accent⁶. We can summarize these facts as follows:

Observation 3 (e.g. Cresti, 1995) *Topical indefinites tend to take wider scope than other quantifiers.*

Summing up Sections 2.2 and 2.3, it can be said that a generically interpreted topical indefinite as in (3a) is only licensed, if the NP, and not the determiner is accented. On the other hand, a non-generic topical DP enforces the determiner to be accented; otherwise the sentence is conceived as unacceptable.

3. Towards an Explanation of the Observations

The interpretation of a topical DP as generic, i.e. Observation 2, can easily be explained as an instance of Observation 1. If it is assumed that a covert Q-adverb with generic force is inserted in sentences such as (3a), the result will be an interpretation as in (5b), where the topical indefinite ends up in the restrictor of the generic quantifier⁷.

- (5) a. Ein LÖwe, der hat eine lange Mähne.
A lion RP has a long mane
'Lions have long manes.'
- b. $GEN s.[\exists x.lion(x) \wedge in(s, x)][\exists x.lion(x) \wedge has_long_mane(s, x)]$

However, it is not at all obvious how Observations 1 and 2 relate to Observation 3. In this paper, we want to provide an answer to this question. We will argue that all three observations result from one and the same principle.

Principle 1 (Topic Occurrence Principle (prel.)) *Topical material cannot be interpreted in the nuclear scope of a quantifier.*

We take this as evidence that left dislocation does not only allow for topical phrases in left dislocated position as argued by Frey (2004), but also for contrastive elements. In this paper, we will disregard contrastive readings. If a left dislocation construction has a non-contrastive interpretation, we follow Frey and assume that the left dislocated phrase is necessarily topical. In other words, every non-contrastive DP in left dislocated position is necessarily topic. The only way to interpret the indefinite in (4a) as topic, i.e. not necessarily contrastively, is with heavy stress on the determiner.

⁶With heavy stress on the determiner, the sentence could receive a narrow scope reading in a way that everyone had seen one lion as opposed to two or three. This contrastivity effect is expected, because the stress on the determiner must be licensed somehow – if not because it indicates topicality (and thereby wide scope), it must be because the determiner contrasts with other determiners. However, crucially, (4b) has a narrow scope reading and (4a) does not.

⁷Note that we have indicated only the parts that are relevant for our present concerns in (5) and all subsequent representations of quantification over situations. In particular, we suppress the minimality condition that has to be associated with situation-quantification in order to avoid the requantification problem, which results from interpreting indefinites in the restrictor as well as in the nucleus of a quantifier (see von Stechow 1994, Krifka 2001).

Quantification can be understood as a higher order predication process, where the nucleus naturally corresponds to the predication of the sentence, whereas the restrictor is naturally understood as the object of predication, i.e. the topical part (for a similar idea, cf. Krifka 1984). Under these assumptions, the *Topic Occurrence Principle* suggests itself. The actual underlying principle could be:

Principle 2 (Topic Occurrence Principle) *Topical material resists predicative environments.*

3.1. Adverbial Quantification and the Topic Occurrence Principle

Observation 1 and Observation 2 (which is an instance of the first) directly follow from the *Topic Occurrence Principle*. Concerning adverbial quantification, one option for topical material to escape the nuclear scope of the respective Q-adverb is to be interpreted in the restrictor, as shown in examples (1), (2), and (5). However, also in the context of adverbial quantifiers, there is another – less acknowledged – possibility, namely that the topical material is interpreted outside of the scope of the Q-adverb, thus receiving a wide scope interpretation.

- (6) a. EIN Löwe, der ist meistens schlecht geLAUNT.
 A lion he is usually bad tempered
 'Some lion is usually bad-tempered.'
- b. $\exists x.lion(x) \wedge MOST s.[in(s, x)][bad_tempered(s, x)]$

Example (6) receives the following reading: There is a specific lion such that this lion is bad-tempered in most contextually salient situations. This reading would be an instance of Observation 3, although we are dealing with adverbial quantifiers in this case. Crucially, all the cases discussed above – the quantificational variability cases as well as the wide scope case exemplified in (6) – are predicted by the *Topic Occurrence Principle*.

3.2. Determiner Quantification and the Topic Occurrence Principle

With D-quantifiers, matters are different, as those quantifiers choose their arguments syntactically. This means that topical material that does not belong to the syntactic complement of a D-quantifier cannot end up in its (semantic) restrictor. The *Topic Occurrence Principle* also prohibits that it is interpreted in the nuclear scope. Hence, it has to be interpreted outside of the scope of the D-quantifier. The only option for a topical DP then is to take wide scope. The other D-quantifier accordingly has to be interpreted in the nuclear scope of the topical one. Example (4), repeated below as (7), exemplifies this issue.

- (7) a. EInen Löwen, den hat JEder gesehen. [*only wide scope for 'e. Löwen'*]
 A lion RP has everybody seen
 'Some lion everyone saw.'

- b. EInen Löwen hat JEder gesehen. [*wide or narrow scope for 'e. Löwen'*]
 A lion has everybody seen
 'Some lion has been seen by everyone.'

The left dislocation construction in (7a) marks the indefinite *einen Löwen* (*some lion*) as topic. In effect, the sentence only receives a wide scope reading for the indefinite. As opposed to this, (7b), where *einen Löwen* (*some lion*) has been topicalized, is ambiguous between a wide scope and a narrow scope reading of the indefinite, which could be derived via reconstruction. This is due to the fact that topicalized DPs – despite the misleading terminology⁸ – need not be topics, as has been shown by Frey (2004).

Generally speaking, a sentence with two quantificational DPs, schematically represented in (8a), allows for four different imaginable interpretations, which are given in (8b). DP_1 and DP_2 represent different DPs, where DP_2 is not a part of DP_1 's syntactic complement⁹.

- (8) a. Surface Structure:

$\dots DP_1(\dots)_{Compl} (\dots (DP_2)_{Top} \dots)_{-Compl}$

- b. Imaginable Interpretations:

1. $Q_1[\dots]_{Restr} [\dots Q_2 \dots]_{Nucl}$
2. $Q_1[\dots Q_2 \dots]_{Restr} [\dots]_{Nucl}$
3. $Q_2[\dots]_{Restr} [\dots Q_1 \dots]_{Nucl}$
4. $Q_2[\dots Q_1 \dots]_{Restr} [\dots]_{Nucl}$

The Topic Occurrence Principle in combination with the fact that D-quantifiers are IS-insensitive now explains that only the reading in (8b.3) is a viable option. (8b.1) is excluded, because DP_2 is topical by assumption and the *Topic Occurrence Principle* forbids the corresponding generalized quantifier Q_2 to be interpreted in the nuclear scope of another operator, i.e. of DP_1 in this case. (8b.2) and (8b.4) are excluded, because determiner quantifiers choose their arguments syntactically and can only take material into their restrictor that constitutes their syntactic complement. Hence, (8b.2) is impossible, because DP_2 does not appear in the complement of DP_1 . Neither does DP_1 appear in DP_2 's complement, which excludes interpretation possibility (8b.4). This explains why topical indefinites can only take wide scope with respect to other quantifiers.

4. Markedness and the Topic Occurrence Principle

We propose that wide scope interpretations of topical indefinites and their mapping onto the restrictor of an adverbial quantifier stem from the same principle: topical material avoids

⁸This construction carries its name, because it has been originally regarded as topic marking (see e.g. Reinhart 1981). However, Frey shows that in fact it is not, at least not obligatory.

⁹The parentheses mark the syntactic complement and non-complement. Q_1 and Q_2 are the semantic equivalents of these DPs, and the brackets mark the semantic restrictor and nucleus.

predicative environments. However, the two cases discussed above – though the indefinites are uniquely analyzed as topics in many theories in both cases – do not have appearances as similar as expected. In fact, as has been hinted at before, wide scope indefinites necessitate stress on the determiner (see (4)), whereas indefinites interpreted in the restrictor of an adverbial or generic quantifier realize the accent on the NP (see (3)). Likewise, in English the determiner *a* is the only possibility to invoke generic or quantificational variability readings, whereas *some* or the cardinal predicate *one* have to be used if the respective indefinite is to have scope over a clause mate Q-adverb.

- (9) a. Ein PFERD, das hat vier BEIne.
A horse RP has four legs
b. #EIN Pferd, das hat vier BEIne.
A horse RP has four legs
c. *A horse has four legs.*
d. #*Some/One horse has four legs.*

(9a) and (9c) receive a generic interpretation, whereas *EIN Pferd (some horse)* in (9b) and (9d) can only be interpreted partitively, i.e. as referring to one of an already established set of horses. As the sentence states that only one of these horses has four legs (and this is known to be a general property of horses), the sentences are pragmatically odd.

- (10) a. Ein PFERD, das hat meistens braune AUGen.
A horse RP has usually brown eyes
b. #EIN Pferd, das hat meistens braune AUGen.
A horse RP has usually brown eyes
c. *A horse usually has brown eyes.*
d. #*Some/One horse usually has brown eyes.*

There is a quantificational variability reading for (10a) and (10c), but not for (10b) and (10d). The only reading (10b,d) could possibly get would be one where the individual level predicate *have brown eyes* is reinterpreted as a stage level predicate. The sentences would then be true in a situation where some specific horse has the peculiar ability to change its eye colour and where this horse has brown eyes in most (contextually salient) situations (see (Kratzer 1995) for this marginal possibility to interpret individual level predicates as stage level predicates).

We have seen that in English, different determiners (*some* vs. *a*) have to be used for the wide scope and the QV/generic reading, respectively. In German, the same semantic difference manifests itself with stressed vs. unstressed *ein*. We believe that this pattern is explainable by the following assumptions: *a* and unstressed *ein* are the unmarked/neutral instances of the indefinite determiner. Unmarked structure goes along with default/simplest interpretation, i.e. here: interpretation in the restrictor, because situations need to be restricted somehow and prefer restriction by overt material rather than accommodation.

Marked structures in turn are correlated with the dispreferred/more complex interpretation. Stressed material is marked as opposed to non-stressed material; *some* is clearly the more complex determiner than *a*.

There is more to say about the nature of the 'markedness' in case of stressed *ein* in German and *someone* in English. We will concentrate on the situation in German first. Consider sentence (10b) again, which does not get a quantificational variability reading. Note that the determiner *ein* is ambiguous between its ordinary quantificational meaning and the meaning of the cardinality predicate *one*. Let us assume that stress on *ein* brings the cardinal meaning to the fore and is furthermore interpreted as a focus accent (inside the topical DP) of a free focus. According to Rooth (1985, 1992), focusing a constituent has the effect of introducing a set of propositions (the focus semantic value of the sentence) that only differ from the original proposition (the ordinary semantic value) insofar as the focused constituent has been replaced by an alternative to that constituent. In the case of *ein*, natural alternatives are determiners with higher cardinality: *zwei* (*two*), *drei* (*three*), etc.

In principle, adverbially quantified sentences with topical indefinites have two options to fulfil the *Topic Occurrence Principle*: the topical material can be interpreted in the restrictor of the Q-adverb or the topical indefinite can take wide scope over the Q-adverb. We have seen above that in case of (10b), a wide scope reading is impossible simply because the predicate *to have brown eyes* is an individual level predicate, which means that it cannot be ascribed to one and the same individual more than once. A wide scope reading is therefore blocked. The interesting remaining question is why the topical indefinite in (10b) cannot be interpreted in the restrictor of the Q-adverb, i.e. why (10b) does not receive a QV-reading. This is shown in (11) below: (11b) shows the ordinary semantic value of the QV-reading and (11c) the focus semantic value of this reading.

- (11) a. #EIN Pferd, das hat meistens braune AUgen.
 A horse RP has usually brown eyes
 b. $MOSTs. [\exists x. |x| = 1 \wedge horse(x) \wedge in(x, s)] [\exists x. |x| = 1 \wedge has_brown_eyes(s, x)]$
 c. $\{MOSTs. [\exists x. |x| = 1 \wedge horse(x) \wedge in(x, s)] [\exists x. |x| = 1 \wedge has_brown_eyes(s, x)],$
 $MOSTs. [\exists x. |x| = 2 \wedge horse(x) \wedge in(x, s)] [\exists x. |x| = 2 \wedge has_brown_eyes(s, x)],$
 $MOSTs. [\exists x. |x| = 3 \dots]\}$

Here, *ein* bears a free focus in addition to the focus on *has brown eyes*, which is bound by the Q-adverb. It is plausible to assume that this focus marking inside of a topical constituent is a costly operation that has to be motivated somehow, i.e. there has to be some point in contrasting a proposition with the set of propositions introduced via focus marking. The most obvious option would be to contrast the truth value of the original proposition with the truth values of the alternative propositions to the effect that only the former is true, while all the others are false. In case of the QV-reading of (11a), there is no reason that would justify the introduction of the set given in (11c). As *to have brown eyes* is an individual level predicate, it is not conceivable that horses have brown eyes when they are alone, but have a different eye colour when they come in pairs (and as triplets, quartets, etc.). But the conceivability of such a state of affairs is the only reason for the introduction of the set

given in (11c) that comes to mind. Therefore, a quantificational variability reading of (11a) is blocked. Hence, both the wide scope reading and the QV-reading are ruled out for (11a). This explains the oddity of the sentence.

Note that our explanation makes a clear prediction: if a stage level predicate is employed such that it is conceivable that an individual falls under this predicate when it is alone but does not fulfil it in situations where other individuals of the same kind are present, it should be possible to map indefinites with stressed *ein* onto the restrictor of Q-adverbs. This prediction seems to be borne out, as is evidenced by the fact that (12a) can receive the reading given in (12b). This is expected, as it is conceivable that dogs are tame when they are alone, but become aggressive in the presence of other dogs. In this case, it is sensible to contrast situations that contain only one dog with others that contain more than one.

- (12) a. EIN Hund, der ist meistens ZAHM.
 A dog RP is usually tame
- b. *MOST*s. $[\exists x. |x| = 1 \wedge dog(x) \wedge in(x, s)] [\exists x. |x| = 1 \wedge tame(s, x)]$

This explanation carries over to the situation in English straightforwardly for *one* vs. *a*, but not as good in the case of *some*. First, the determiner *some* does not have a comparable cardinal interpretation. Secondly, indefinite DPs headed by *some* never induce quantificational variability readings, regardless of the fact whether *some* is stressed or not (see von Stechow 2004). We therefore want to make the following tentative suggestion, which is based on aspects of the analysis of *some*-indefinites proposed by (Farkas 2002). According to her analysis, both *a* and *some* are indefinites with the same basic meaning, where *a* is the unmarked variant, while *some* is the more marked variant that may only be used if the speaker is either unable or unwilling to further specify the individual that this variable is to be resolved to. Based on this assumption, Farkas (2002) is able to explain the oddity of examples (13a,b) below (from Farkas 2002, ex. 41, 43a): if the possibility of a further identification is not even an issue, it is very strange to indicate explicitly that no such identification is to be provided.

- (13) a. **Marc walked some mile before he stopped for a rest.*
- b. *Oh look! #There's some fly in my soup.*

We believe that something similar is going on in the case of adverbially quantified sentences containing *some*-indefinites. When an indefinite is interpreted in the restrictor of a Q-adverb, the result is that this Q-adverb quantifies over situations about which nothing else is known but that each of them contains an individual that satisfies the respective NP-predicate. As those situations are exclusively individuated on the basis of this information, each of them has to contain a different individual of the required kind (after all, this is how quantificational variability comes about). But if each situation contains a different individual, a further identification of the respective individuals is not at issue. Therefore, it would be useless to indicate explicitly that no such identification will be provided.

5. Conclusion

We have tried to point out the common basis of the following interpretative effects that occur in connection with topical DPs:

- Topical material tends to be interpreted in the restrictor of quantificational adverbs.
- Topical indefinites receive a strong – i.e. a generic or a specific – interpretation.

These effects, which have been known for quite a while, had never been related to each other. We aimed at reducing these unrelated observations to one principle, i.e. the *Topic Occurrence Principle*. Further evidence for our claim comes from Persian: A *ra*-marked (indefinite) element is usually interpreted in the restrictor of a Q-adverb, and the very same marker is analyzed as a specificity marker.

References

- Berman, Stephan. 1991. The Semantics of Open Sentences. Doctoral dissertation, University of Massachusetts, Amherst.
- Chierchia, Gennaro. 1995. Individual Level Predicates as Inherent Generics. 176–233. Chicago: University of Chicago Press.
- Cresti, Diana. 1995. Indefinite Topics. Doctoral dissertation, MIT.
- Ebert, Christian, and Cornelia Endriss. 2004. Topic interpretation and wide scope indefinites. In *Proceedings of the NELS 34*. Amherst: GLSA.
- Farkas, Donka. 2002. Varieties of Indefinites. In *Proceedings of SALT 12*, ed. Jackson, Brendan. Ithaca, NY: Cornell University.
- von Fintel, Kai. 1994. Restrictions on Quantifier Domains. Doctoral dissertation, University of Massachusetts, Amherst.
- von Fintel, Kai. 2004. A Minimal Theory of Adverbial Quantification. In *Context-Dependence in the Analysis of Linguistic Meaning*, eds. Kamp, Hans, and Barbara Partee, 137–175. Oxford: Elsevier Ltd.
- Frey, Werner. 2004. Notes on the Syntax and the Pragmatics of German Left Dislocation. In *The Syntax and Semantics of the Left Periphery*, eds. Lohnstein, Horst, and Susanne Trissler, 203–233. Mouton de Gruyter.
- Herburger, Elena. 2000. *What Counts: Focus and Quantification*. Cambridge, Massachusetts: MIT Press.
- Jäger, Gerhard. 1996. Topics in Dynamic Semantics. Doctoral dissertation, Humboldt-Universität zu Berlin.
- Kratzer, Angelika. 1995. Stage Level and Individual Level Predicates. 176–233. Chicago: University of Chicago Press.
- Krifka, Manfred. 1984. Fokus, Topik, syntaktische Struktur und semantische Interpretation. Universität München.
- Krifka, Manfred. 1990. Four Thousand Ships Passed Through the Lock: Object-Induced Measure Functions on Events. *Linguistics and Philosophy* 13:487–520.

- Krifka, Manfred. 2001. Non-novel Indefinites in Adverbial Quantification. In *Logical Perspectives on Language and Information*, eds. Condoravdi, Cleo, and Gerard R. Renardel de Lavalette, 1–40. Stanford: CSLI Publications.
- Kuno, Susumu. 1972. Functional Sentence Perspective: A Case Study from Japanese and English. *Linguistic Inquiry* 3:269–336.
- Partee, Barbara. 1991. Topic, Focus and Quantification. In *Proceedings from Semantics and Linguistic Theory*, eds. Moore, Steve, and Adam Z. Wyner, volume 1 of *Cornell Working Papers in Linguistics*, 159–188. Cornell.
- Portner, Paul, and Katsuhiko Yabushita. 1998. The Semantics and Pragmatics of Topic Phrases. *Linguistics & Philosophy* 21:117–157.
- Portner, Paul, and Katsuhiko Yabushita. 2001. Specific Indefinites and the Information Structure Theory of Topics. *Journal of Semantics* 18:221–297.
- Reinhart, Tanya. 1981. Pragmatics and Linguistics. An Analysis of Sentence Topics. *Philosophica* 27:53–94.
- Rooth, Mats. 1985. Association with Focus. Doctoral dissertation, University of Massachusetts, Amherst.
- Rooth, Mats. 1992. A Theory of Focus Interpretation. *Natural Language Semantics* 1:75–116.
- Rooth, Mats. 1995. Indefinites, adverbs of quantification, and focus semantics. In *The Generic Book*, eds. Carlson, Gregory N., and Francis Jeffrey Pelletier, 125–175. Chicago: University of Chicago Press.
- Selkirk, Elisabeth. 1995. Sentence Prosody: Intonation, Stress, and Phrasing. In *The Handbook of Phonological Theory*, ed. Goldsmith, John A., 550–569. Cambridge, Massachusetts/Oxford, UK: Blackwell.
- Strawson, Peter. 1964. Identifying Reference and Truth Values. *Theoria* 30. Reprinted in Steinberg and Jakobovits (eds.), *Semantics*, 1971.
- Vallduví, Enric. 1992. *The Informational Component*. New York: Garland.

Cornelia Endriss
SFB 632
Universität Potsdam
Postfach 601553
14415 Potsdam
Germany

Stefan Hinterwimmer
SFB 632
Humboldt-Universität zu Berlin
Mohrenstr. 40-41
10117 Berlin
Germany

endriss@rz.uni-potsdam.de

hinterwimmer@rz.hu-berlin.de