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1 Introduction

According to Diesing's (1992) Mapping Hypothesis, the material from VP is mapped onto a nuclear scope and the material from IP is mapped onto a restrictive clause in a tripartite structure of logical representation. The hypothesis predicts that syntactic structure determines the logical representation of a given sentence. This in turn predicts that the syntax determines the semantics of a given sentence. Diesing shows that this prediction is borne out in her discussion of the semantics of indefinite NPs and bare plurals in English and German.

The usage of the marker *-(n)un* in Korean also shows that the syntax determines the semantics of a given sentence.¹ The marker *-(n)un* can attach to all NPs in Korean. However, in some cases, it is interpreted as a neutral topic of the sentence and in other cases, it fails to mark the topic of the sentence and acquires an exhaustive reading (to be defined in section 2). The question to be asked is whether Korean has two different *-(n)un*'s with the same phonological realizations. Here, I present a unified account of *-(n)un* by pursuing the approach that there is one *-(n)un*, with the different meanings of *-(n)un* explained by the syntax.

In section 2, I define the topic reading and exhaustive reading of *-(n)un*, and argue that the interpretation of the *-(n)un*-marker varies according to the syntactic environment in which it occurs. More specifically, I claim that at S-structure, (1) a VP-external *-(n)un*-marked NP will result in a topic reading and (2) a VP-internal *-(n)un*-marked NP will result in an exhaustive reading. In sections 3 and 4, I present more data that support my claim. In section 5, I discuss the syntactic differences related to the two readings of *-(n)un*-marker. Finally, I propose an account of why the different syntactic environment produces the different readings of *-(n)un*.

2 Topic Reading vs. Exhaustive Reading

The data show that if a *-(n)un*-marked NP occurs outside of VP at S-structure, it functions as a sentence topic resulting in a topic reading. Such an NP denotes what the sentence is about (Reinhart 1981, Gundel 1985, Horn 1986). But if a *-(n)un*-marked NP occurs inside of VP at S-structure, it can no longer be interpreted as the sentence topic. Instead, it acquires an exhaustive reading. A *-(n)un*-marked NP with an exhaustive reading introduces a presupposition that there are other elements in the discourse domain besides the discourse entity picked out by the NP, and the sentence with such an NP asserts that the proposition only applies to the entity picked out by the NP. (1) exemplifies the topic reading and (2a) exemplifies the exhaustive reading.

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¹ The marker *-un/nun* alternates depending on its phonological environment: *-un* is used after a consonant and *-nun* is used after a vowel.

- (1) [_{IP} John-un [_{VP} Mary-lul coahanta.]]
 John-Top Mary-Acc like-pres
 'John likes Mary.'

assertion: like(John, Mary)

- (2) a. [_{IP} John-i [_{VP} Mary-nun coahanta.]]
 John-Nom Mary-Exh like-pres
 'It is Mary that John likes.'²

presupposition: $\exists x(x \neq \text{Mary})$

assertion: $\forall x[(x \neq \text{Mary}) \rightarrow \neg \text{like}(\text{John}, x)]$

- b. [_{IP} John-i [_{VP} Mary-nun an coahanta.]]
 John-Nom Mary-Exh not like-pres
 'It is Mary that John doesn't like.'

presupposition: $\exists x(x \neq \text{Mary})$

assertion: $\forall x[(x \neq \text{Mary}) \rightarrow \text{like}(\text{John}, x)]$

While (1), which has *-(n)un* marked on the subject, just states that John likes Mary, (2a) with the object *-(n)un*-marked presupposes that there are other people besides Mary in the discourse domain and asserts that John dislikes everybody in that group except for Mary. That is, while, *-un* in (1) doesn't introduce a presupposition that there are other people in the domain, *-nun* in (2a) does. Such a presupposition survives even in the negation of (2a) as shown in (2b). (2b) shares the same presupposition with (2a) and asserts that John likes everybody in the domain except for Mary.

One can easily test these different readings by setting up a discourse context. Let's assume that there are Mary, Sue, and Jane in the domain. Person A asks another person B who John likes. The appropriate answer would be (1) if B just wants to convey the information about how John feels about Mary and doesn't want to convey any information about how John feels about other girls. However, let's assume that B somehow believes that John doesn't like any of the girls except for Mary and wants to convey this information. The appropriate answer in this context is (2a). The marker *-nun* that is attached to the object *Mary* indicates that John only likes Mary and doesn't like Sue and Jane. On hearing (2a), speaker A will infer that John doesn't like Jane and Sue.

A more refined definition of the exhaustive reading of *-(n)un* can be provided with example (3). Let's assume that A asked if Cathy likes Mary, with *-(n)un* marked on the object, *Mary*:

- (3) (a) A: [_{IP} Cathy-ka [_{VP} Mary-nun coaha-ni?]]
 Cathy-Nom Mary-Exh like-pres-Q?
 'Is it Mary that Cathy likes?'

presupposition: There are other people besides Mary in the domain and Cathy doesn't like them.

² I use cleft constructions for the exhaustive reading of *-(n)un* in the English translation.

- (b) B. Ani, [_{IP} Cathy-ka [_{VP} Mary-to an coahay.]]
 no, Cathy-Nom Mary-also not like
 'No, Cathy doesn't like Mary either.'

Presupposition: There are other people besides Mary in the domain and Cathy doesn't like them.

- (c) B'. # Ani, [_{IP} Cathy-ka [_{VP} Mary-nun an coahay.]]
 no, Cathy-Nom Mary-Exh not like
 'No, it is Mary that Cathy doesn't like.'

Presupposition: There are other people besides Mary in the domain and Cathy does like them.

The appropriate answer to question (3a) is (3b) if the answer is that Cathy doesn't like Mary. The presupposition introduced by the question in (3a) is that there are other people in the discourse domain and that Cathy doesn't like them. (3b) introduces the same presupposition as the question in (3a). The presupposition of (3b) is that there are other people in the domain and Cathy doesn't like them. The marker *-to* provides the reading that Cathy doesn't like Mary either. However, the presupposition of (3c) is that there are other people in the domain and Cathy likes them. (3c) cannot be a felicitous answer to (3a) because (3c) is not sharing the same presupposition with (3a). Such a question-answer pair results in a presupposition violation.

According to the meaning of the exhaustive reading defined here, we predict that an NP with a universal quantifier cannot have the marker *-(n)un* when occurring in a VP-internal position, whereas an NP with an existential quantifier can have the marker *-(n)un* when occurring in the same syntactic position. A universally quantified NP with *-(n)un* in object position should have the exhaustive reading. However, the universal quantifier exhausts the set denoted by the given NP. This makes a universally quantified NP incompatible with the exhaustive reading. Consider the data in (4):

- (4) a. * [_{IP} John-i [_{VP} motun sakwa-nun mek-ess-ta.]]
 John-Nom every apple-Exh eat-past
 * 'It is every apple that John ate.'³
- b. [_{IP} John-i [_{IP} etten sakwa-nun mek-ess-ta.]]
 John-Nom some apple-Exh eat-past
 'It is some apples that John ate.'

In (4a), the *-nun* attached to the object *motun sakwa* ('every apple') forces the exhaustive reading. But the presupposition that there are other apples that John didn't eat cannot survive since the set denoted by the NP is exhausted by the universal quantifier. (4b) shows that an NP with an existential quantifier is compatible with the exhaustive reading because the existential quantifier doesn't exhaust the set denoted by the NP. Hence, in (4b), the presupposition that there are other apples that John didn't eat survives.

Furthermore, if the claim that a VP-external *-(n)un*-marked NP results in a topic reading is correct, a universally quantified NP should be able to occur with *-(n)un* in a VP-external position. The prediction is borne out by the data, as shown in (5).

³ Note that the English translation of (4a) is anomalous too.

- (5) [_{IP} Motun sakwa-nun [_{VP} masiss-ta.]]
 every apple-top tastes good.
 'Every apple tastes good.'

(5) shows that a universally quantified NP can be marked with *-nun* in a VP-external position because the whole NP functions as the sentence topic in such a position.

3 More Evidence

3.1 *-(n)un*-Marked Scrambled Object

Further evidence for the claim that a VP-external *-(n)un*-marked NP at S-structure results in a topic reading and a VP-internal *-(n)un*-marked NP at S-structure results in an exhaustive reading comes from the topic reading of *-(n)un*-marked scrambled objects. A scrambled object gets out of VP and adjoins to IP. Thus, a scrambled *-(n)un*-marked object should lose the exhaustive reading and get a topic reading instead. I show that this is indeed the case with the question-answer pair in (6):

- (6) a. Nwu-ka sakwa-lul mek-ess-ni?
 who-Nom apple-Acc eat-past-Q?
 'Who ate an apple?'
 b. # [_{IP} John-i [_{VP} sakwa-nun mek-ess-ta.]]
 John-Nom apple-Exh eat-past
 'It is an apple that John ate.'
 c. [_{IP} Sakwa-nun_i [_{IP} John-i [_{VP} t_i mek-ess-ta.]]]
 apple-Top John-Nom eat-past
 'As for the apple, John ate it.'

The answer to question (6a) should have *sakwa* as its topic. In (6b), although *sakwa* is indeed marked with *-(n)un*, it is not an appropriate answer to (6a). In (6b), *sakwa-nun* is in a VP-internal position. It cannot function as the sentence topic and receives the exhaustive reading instead. However, (6c) is an appropriate answer to the question (6a). Here, *sakwa-nun* is scrambled out of VP and adjoined to IP. It loses the exhaustive reading and functions as the sentence topic. This shows that when the object with *-(n)un*-marker ends up in a VP-external position at S-structure, it functions as the topic of the sentence.

Furthermore, the following answer-pair example shows that a *-(n)un*-marked scrambled object cannot have an exhaustive reading:

- (7) a. John-i mwuess-ul mek-ess-ni?
 John-Nom what-Acc eat-past-Q
 'What did John eat?'
 b. # [_{IP} Sakwa-nun_i [_{IP} John-i [_{VP} t_i mek-ess-ta.]]]
 apple-Top John-Nom eat-past
 'Speaking of the apple, John ate it.'

- c. [_{IP} John-i [_{VP} sakwa-nun mek-ess-ta.]]
 John-Nom apple-Exh eat-past
 'It is an apple that John ate.'

The answer to question (7a) should have *John* as its sentence topic and the new information should be represented by the object. (7b) is not an appropriate answer to (7a) since the object which encodes the new information is scrambled to the sentence initial position and marked with *-nun* and functions as the sentence topic. However, (7c) is an appropriate answer to (7a) since the object encoding the new information is not functioning as the sentence topic. It is in the VP-internal position and gets the exhaustive reading.

3.2 *-(n)un*-Marked Adverbs

In addition to NPs, adverbs can be marked with *-(n)un*. Adverbs can either adjoin to VP or IP. This predicts that VP-adjoined *-(n)un*-marked adverbs should have exhaustive reading and IP-adjoined *-(n)un*-marked adverbs have a topic reading according to the claim made here. The prediction is borne out by the data. (8a) and (8b) show that *-(n)un*-marked adverbs in VP-internal positions have an exhaustive reading.

- (8) a. [_{IP} John-i [_{VP} ppali-nun tti-ess-ta]].
 John-Nom quickly-Exh run-past
 'John ran quickly, and not in some other way.'
- b. [_{IP} John-i [_{VP} ejey-nun teynis-lul chye-ss-ta]].
 John-Nom yesterday-Exh tennis-Acc play-past
 'John played tennis yesterday, and not some other day.'

The data in (9) show that *-(n)un*-marked adverbs in VP-external positions have topic reading if the adverb can function as a sentence topic.

- (9) a. * [_{IP} ppali-nun [_{IP} John-i [_{VP} tti-ess-ta]].
 quickly-Top John-Nom run-past
 'John ran quickly.'
- b. [_{IP} ejey-nun [_{IP} John-i [_{VP} teynis-lul chye-ss-ta]].
 yesterday-Top John-Nom tennis-Acc play-past
 'John played tennis yesterday.'

(9a) is ungrammatical because the IP-adjoined adverb *ppali-nun* cannot function as the sentence topic. However, in (9b), the IP-adjoined adverb *ejey-nun* can indeed function as the sentence topic.

4 Syntactic Differences between the Topic Reading and the Exhaustive Reading of the Marker *-(n)un*

4.1 Number of *-(n)un*-marked NPs

While there can be more than one *-(n)un*-marked NP in VP-internal position, there can be only one in VP-external position. That is, although a sentence can have more than one NP with exhaustive reading *-(n)un*, it can have only one NP with the topic reading *-(n)un*. This corresponds to the usual notion that a sentence has a unique topic (Reinhart 1981). A sentence becomes ungrammatical if there is more than one topic as in (10):

- (10) * [_{IP} Sakwa-nun_i [_{IP} John-un [_{VP} t_i mek-ess-ta.]]]
 apple-Top John-Top eat-past
 'Speaking of the apple, speaking of John, he ate it.'

(10) has two *-(n)un*-marked NPs in VP-external positions: the subject and the scrambled object. Hence, both NPs must function as the topic of the sentence. In this case, the sentence is ungrammatical showing that there cannot be two topics in a sentence. However, a sentence can have a *-(n)un*-marked NP in VP-external position and another *-(n)un*-marked NP in VP-internal position, as shown in (11):

- (11) [_{IP} John-un [_{VP} sakwa-nun mek-ess-ta.]]
 John-Top sakwa-Exh eat-past
 'Speaking of John, it is an apple that he ate.'

In (11), the subject functions as the topic of the sentence and the object has an exhaustive reading.

(12) shows that a sentence is grammatical with two *-(n)un*-marked NPs with an exhaustive reading. (12) is a double object construction. Both the direct object (*chayk-un*) and the indirect object (*Mary-eykey-nun*) are marked with *-(n)un*.

- (12) [_{IP} John-i [_{VP} chayk-un Mary-eykey-nun cwu-ess-ta.]]
 John-Nom book-Exh Mary-to-Exh give-past
 'John gave only the book to only Mary.'

(12) introduces the presupposition that there are other things besides the book under discussion and other people besides Mary, and asserts that John gave only the book under discussion to only Mary and to no other person.

4.2 Island Effects

VP-external *-(n)un*-marked NPs show sensitivity to island effects, whereas VP-internal *-(n)un*-marked NPs don't.

- (13) a. * [_{IP} John-i [_{NP} [_{CP} [_{IP} Mary-nun coaha-nun]] salam-ul] man-ass-ta.]⁴
 John-Nom Mary-Top like-Mod person-Acc meet-past
 'John met a person who Mary likes.'

⁴ Note that the second *-nun* here is not a topic marker. It is a marker that turns adjectives or verbs into modifiers.

- b. * [_{IP} John-i [_{CP} [_{IP} Sue-nun apha-ss-ki ttaymwuney]] cenhwa ha-yess-ta.]
 John-Nom Sue-Top sick-past because telephone do-past.
 'John called because Sue was sick.'
- c. * [_{IP} [_{NP} [_{CP} [_{IP} John-un_i [_{IP} Mary-ka t_i coahanta]] -nun] sasil-i]
 yere salam-ul nolakey-ha-yess-ta.]
 John-Top Mary-Nom t_i like-Mod fact-Nom
 many people-Acc surprise-past
 'The fact that Mary likes John surprised many people.'

The *-(n)un*-marked NPs in all sentences in (13) have neither topic reading nor exhaustive reading. In (13a), the subject of the relative clause is marked with *-nun* and in (13b), the subject of the adjunct clause is marked with *-nun*. (13c) has a complex NP. The complement clause of the complex NP has a scrambled object marked with *-(n)un*. All the *-(n)un*-marked NPs in (13) should function as the sentence topic, but the sentences are ungrammatical. This shows that *-(n)un*-marker simply cannot attach to VP-external NPs inside an island.

The data in (14) show that *-(n)un*-marker can attach to objects in an island:

- (14) a. [_{IP} John-i [_{NP} [_{CP} [_{IP} [_{VP} Mary-nun coaha-nun]]] salam-ul] man-ass-ta.]
 John-Nom Mary-Exh like-Mod person-Acc meet-past
 'John met a person who likes only Mary.'
- b. [_{IP} [_{NP} [_{CP} [_{IP} Sue-ka [_{VP} John-un coahanta-nun]]] sasil-i] Mary-ul
 nolakey ha-yess-ta.]
 Sue-Nom John-Exh like-Mod fact-Nom Mary-Acc
 surprise do-past.
 'The fact that Sue likes only John surprised Mary.'

In (14a), the object of the relative clause is *-nun*-marked and in (14b), the object of the complement clause of the complex NP is *-un*-marked. These *-(n)un*-marked NPs are in VP-internal position, and they both give rise to the exhaustive reading.

I assume that the topic is an operator that must bind a variable, following Huang (1989). According to the prohibition against vacuous quantification, all operators must bind a variable (Milsark 1974, Chomsky 1975). Thus, it is reasonable to expect that at LF a *-(n)un*-marked element moves to highest [SPEC, CP], leaving a trace in its base-generated position. The trace functions as a variable, and the moved element binds the trace from the [SPEC, CP]. The movement account is strengthened by the data showing that a topic cannot occur inside an island, as shown in (13). The *-(n)un*-marked NPs in VP-external position, which have the topic reading, show island effects suggesting that they undergo movement at LF. The LF representations for (13a), (13b) and (13c) are as follows:

- (15) a. * [_{CP} Mary-nun_i [_{IP} John-i [_{NP} [_{CP} [_{IP} t_i coaha-nun]]] salam-ul] man-
 ass-ta.]
 Mary-Top John-Nom like-Mod person-Acc meet-past
 'John met a person who Mary likes.'

- b. * [_{CP} Sue-nun_i [_{IP} John-i [_{CP} [_{IP} t_i apha-ss-ki ttaymwuney]] cenhwa ha-yess-ta.]]
 Sue-Top John-Nom sick-past because telephone do-past.
 'John called because Sue was sick.'
- c. * [_{CP} John-un_i [_{IP} [_{NP} [_{CP} [_{IP} t_i [_{IP} Mary-ka t_i coahanta]] -nun] sasil-i] yere salam-ul nolakey-ha-yess-ta.]]
 John-Top Mary-Nom t_i like-Mod
 fact-Nom many people-Acc surprise-past
 'The fact that Mary likes John surprised many people.'

In (15a), *Mary-nun* in the highest [SPEC, CP] cannot properly govern its trace at [SPEC, IP] because NP is a barrier to government following Chomsky (1986). In (15b), *Sue-nun* in the highest [SPEC, CP] cannot properly govern its trace since the trace is in [SPEC, IP] of an adjunct clause which is adjoined to VP. The CP is a barrier to government. Similarly, in (15c), *John-un* in the highest [SPEC, CP] cannot properly govern its trace since the intervening NP is a barrier.

The movement analysis predicts that a topic can occur in complement clauses that are not islands. This prediction is borne out by the data as shown in (16):

- (16) a. [_{IP} Mary-ka [_{CP} [_{IP} John-un ttwungttwunghata-ko]] mal ha-yess-ta.]
 Mary-Nom John-Top fat-Comp say do-past
 'Mary said that John is fat.' (S-structure)
- b. [_{CP} John-un_i [_{IP} Mary-ka [_{CP} [_{IP} t_i ttwungttwunghata-ko]] mal ha-yess-ta.]]
 John-Top Mary-Nom fat-Comp say do-past (LF)

At LF, the trace is properly governed by its antecedent *John-un* and the sentence is grammatical as predicted.

In contrast to the *-(n)un*-marked NPs in VP external position, those within VP, which have the exhaustive reading, do not show island effects. The VP-internal *-(n)un*-marked NPs can occur in an island as long as they occur within the VP of that clause as shown in (14). This suggests that *-(n)un*-marked constituents with an exhaustive reading do not move at LF.

In sum, if a *-(n)un*-marked NP occurs in a VP-external position at S-structure, it must move to the highest [SPEC, CP] and bind its trace at LF. If a *-(n)un*-marked NP occurs in a VP-internal position at S-structure, it doesn't move at LF. The VP-internal *-(n)un*-marked NP does not function as a sentence topic and has an exhaustive reading instead. Why this should be the case will be discussed in section 5.

5 A Proposal: Asymmetry in the Quantificational Force of *-(n)un*

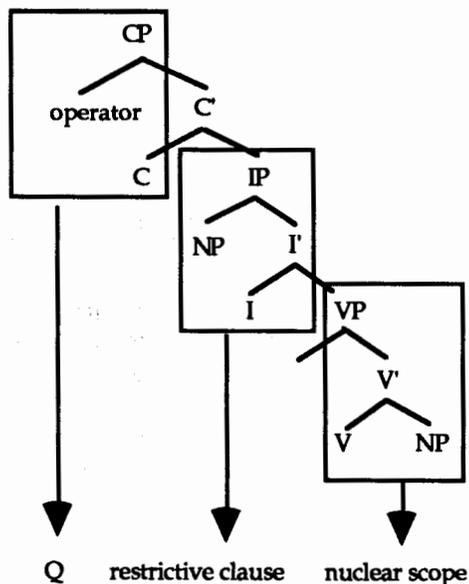
Based on the facts concerning island effects, I make the following proposal:

- (17) a. *-(n)un* is quantificational if it is in a VP-external position at S-structure.
 b. *-(n)un* is non-quantificational if it is in a VP-internal position at S-structure.

The quantificational *-(n)un* results in a topic reading, whereas the non-quantificational *-(n)un* results in an exhaustive reading.

Following Heim-Diesing line of tree splitting, I assume that the material from VP is mapped onto a nuclear scope and the material from outside of VP is mapped onto a restrictive clause in a tripartite structure of logical representation. (18) is a representation that shows how mapping from LF to tripartite structure of logical representation takes place:

(18) Mapping Hypothesis (Diesing 1992)



When *-(n)un* occurs in a VP-internal position, it is in a position where it cannot have a quantificational force. *-(n)un* in a VP-internal position doesn't introduce a variable. Thus, it doesn't move at LF to derive a tripartite operator-variable structure. However, *-(n)un* in a VP-external position introduces a variable that must be bound by an operator which I call a topic operator. Hence, it undergoes movement at LF to derive a tripartite operator-variable structure.

The asymmetry in the quantification force of *-(n)un* according to the different syntactic environment is exemplified in (19) and (20):

(19) a. [_{IP} John-un [_{VP} Mary-lul coahanta.]] (S-structure)
 John-Top Mary-Acc like-pres
 'John likes Mary.'

b. Top(x) [x is John] [x likes Mary] (logical representation)

(20) [_{IP} John-i [_{VP} Mary-nun coahanta.]]
 John-Nom Mary-Exh like-pres
 'John likes Mary only.'

In (19a), *-un* is in a VP-external position. It introduces a variable that must be bound by a topic operator. Thus, the sentence forms an operator-variable structure as shown in (19b). In (20), *-nun* is in a VP-internal position. It does not introduce a variable. Hence, no operator-variable structure can be constructed.

6 Conclusion

The present paper shows that a unified account of *-(n)un* can be given if at S-structure VP-internal *-(n)un*-marked NPs result in an exhaustive reading and VP-external *-(n)un*-marked NPs result in a topic reading. When *-(n)un* is attached to a VP-external NP at S-structure, it makes that constituent the topic of the sentence. It induces movement of the NP to the highest [SPEC, CP] at LF to create an operator-variable structure. The moved NP must bind its trace at LF.

When *-(n)un* attaches to a VP-internal NP at S-structure, it doesn't function as a topic marker. Instead, it results in an exhaustive reading. That is, it introduces a presuppositional set of the relevant sort that contains certain elements and asserts that the proposition doesn't apply to all the elements in the set except for the element picked out by the NP. The marker *-(n)un* in VP internal position doesn't have a quantificational force, so it cannot create an operator-variable structure. Thus, it doesn't induce any movement at LF.

According to the present analysis, the marker *-(n)un* in Korean is another case that shows a close relationship between syntax and semantics of a given sentence.

One remaining issue that must be addressed is the reason why the *-(n)un*-marked NPs occurring in VP-internal positions acquire exhaustive reading. I leave this question for future research.

References

- Chomsky, Noam (1986) *Barriers*. Cambridge, Mass.: MIT Press.
- Diesing, Molly (1992) *Indefinites*. Cambridge, Mass.: MIT Press.
- Gundel, J. (1985) "'Shared knowledge' and topicality." *Journal of Pragmatics* 9.1. Pp.83-107.
- Heim, Irene (1982) "The Semantics of Definite and Indefinite Noun Phrases." Ph.D. dissertation, University of Massachusetts, Amherst.
- Horn, L. (1986) Presupposition, theme, and variations. In Farley, A., Farley, P., and McCullough, K.E., (eds.) *Papers from the 22nd Regional Meeting, CLS*. Pp.168-92.
- Huang, J. (1989) "Pro drop in Chinese: a Generalized Control Theory," in Jaeggli, and Safir (eds.) *The Null Subject Parameter*. Kluwer.
- Reinhart, T. (1981) "Pragmatics and linguistics: an analysis of sentence topics." *Philosophica* 27. Pp.53-94.