

EVENT NPs AND PERCEPTION VERB COMPLEMENTS IN ENGLISH AND KOREAN

Sang-Geun Lee

University of Wisconsin-Madison

0. Introduction

Since the introduction of the Mapping Hypothesis by Diesing (1992), based on different language data, linguists (Kiss 1996, Yoon 1997) have suggested that there should be a strict phrasal partition, IP/VP (Diesing 1992), in syntax for the interpretation of indefinite NPs (or bare plurals), which has correlates in Heim's (1982) semantic partition of restrictive clause/nuclear scope in the logical representation. However, none of them gave any further explanation for the special properties of the VP- the necessity of the VP node in syntax to be mapped into the nuclear scope.

Towards the general goal within Diesing's (1992) Mapping framework, I propose that the necessity of the VP node mapping into the nuclear scope can be derived from the existence of indefinite event NPs, which are introduced by stage-level predicates and syntactically dominate and contain the VP. Following several theoretical assumptions such as indefinites are not inherently quantified, but merely introduce variables into the logical representation (Heim 1982), and bare plurals (Carlson 1977) and events (Higginbotham 1983, Parsons 1990) are a particular kind of indefinite NPs, and only stage-level predicates, but not individual-level predicates,¹ have a Davidsonian event argument (Kratzer 1989), I will explain why material like bare plurals inside of the VP has no other way but to be mapped into the nuclear scope, being interpreted as existential, whereas material outside of the VP cannot be mapped into the nuclear scope, ending up with a generic reading.

Towards the specific goal within Diesing's (1992) Mapping Hypothesis algorithm, I will address why the bare plural subject NPs both in bare and gerundive perception verb complements of *see* have only existential readings even though the complements are analyzed as having different internal structures, VPs and IPs. So, the problem in our hands is there are two different structures for the same interpretation of bare plurals, which is not predicted by Diesing (1992).

1. Perception verb complements and the strict Mapping Hypothesis

On the basis of Milsark's (1977) distinction between stage/individual-level predicates and Kratzer's (1989) Davidsonian spatio-temporal event argument reserved only in stage-level

¹ I assume with Carlson (1977) and Kratzer (1989) that stage-level (SL) properties are properties of stages (i.e., temporary property at a particular time and place) and individual-level (IL) properties are properties of individuals (i.e., somewhat enduring or unique property), and that only stage-level predicates have an abstract "Davidsonian" spatiotemporal event argument, whereas individual-level predicates lack this argument.

predicates, Diesing (1992) proposes the Mapping Hypothesis, where syntactic trees (at the level of LF in English and at S-S in German) be divided into two parts, IP/VP, which correspond to Heim's (1982) two major parts of the logical representation, restrictive clause/nuclear scope, providing a desired semantic partition for generic or existential interpretation of bare plurals.

- (1) Diesing's (1992) Mapping Hypothesis
 Material from VP is mapped into the nuclear scope.
 Material from IP is mapped into a restrictive clause.

In Diesing's (1992) mapping mechanism, English bare plural subjects are interpreted differently in the VP-external and VP-internal subject positions: a bare plural in the VP-external subject position is mapped into the restrictive clause in the logical representation, being bound by an implicit generic operator, *Gen*, whereas a bare plural in the VP-internal subject position is mapped into the nuclear scope, being existentially bound by an implicit existential quantifier (c.f., Heim 1982, Diesing 1992). On this view, subjects of stage-level predicates can appear in either of the two subject slots, [Spec, IP] or [Spec, VP], while subjects of individual-level predicates stand only in the VP-external subject position, [Spec, IP]. The allowance of lowering for the bare plural subjects of stage-level predicates at LF (c.f., May 1977) accounts for why they have both the generic and existential readings, whereas the bare plural subjects of individual-level predicates are never ambiguous; only the generic reading is allowed. The contrast in the interpretation of bare plurals in two different types of predicates can be represented as in (2) and (3):

- (2) a. Firemen are available. (ambiguous: both generic and existential)
 b. [_{IP} Firemen]_i [_r infl [_{VP} (Firemen)_i [_v (SL.predic.) are available]]]
 c. Gen_{x,t} [x is a fireman & t is a time] [x is available at t] (generic)
 E_x [x is a fireman] & [x is available] (existential)
- (3) a. Linguists know French. (unambiguous: generic only)
 b. [_{IP} Linguists]_i [_r INFL [_{VP} PRO]_i [_v (IL.predic.) know French]]]
 c. Gen_x [x is a linguist] & [x knows French] (generic)

Now, if we take Diesing's (1992) strict Mapping Hypothesis seriously as it stands, then it will lead us to analyze the perception verb complements of *see* at LF as in (4), since the bare plural subject *soldiers* in (4) is interpreted as existential only, not generic, though its predicate *walk* is obviously stage-level. This implies there should be no IP projection, which would leave room for the bare plural to appear in the VP-external position and thus be interpreted as generic.

- (4) I saw [_{VP} soldiers [_v walk noisily down the street]]. (existential only)
- (5) a. I saw [soldiers walking noisily down the street]. (existential only)
 b. I saw [_{IP(+N)} soldiers [_r -ing[+N] [_{VP} _t walk noisily down the street]]].

However, this treatment raises several empirical problems. First of all, bare plurals in gerundive perception verb complements seem to have the same interpretation (i.e., existential only), as shown in (5 a). Nevertheless, English gerundive perception verb complements are usually analyzed differently from the bare perception verb complements: they are analyzed as IPs, not bare VPs, due to the aspectual property of *-ing* (cf., Reuland 1983, Johnson 1988, Milsark 1988), as illustrated

in (5 b). Assuming that the IP analysis of gerundive perception verb complements of *see* in (5 b) is correct, then within Diesing's (1992) framework, the embedded bare plural *soldiers* in (5) would yield two readings, both generic and existential, since it can appear both in the VP-external and VP-internal subject positions. But this prediction is simply incorrect.

Another problem for Diesing's mapping algorithm is that if we adopt Chomsky's (1995) checking theory that DPs (or NPs) should raise and adjoin to the matrix *v* to check formal features (e.g., case features, \emptyset -features, and D-features) at LF, then the 'exceptional' accusative case of the VP-Small Clause subject *soldiers* in (6) must be checked off in [Spec of *vP*], which is obviously VP-external position. If this is the case, we have no choice but to wrongly allow the bare plural subject NP *soldiers* in (6) to be mapped into the restrictive clause, producing an undesirable result, generic reading. A partial structure in question has the following representation:

- (6) a. I saw [soldiers walk noisily down the street]].
 b. I_i saw $_j$ [$_{VP}$ soldiers $_k$ [$_{VP}$ t_i t_j [$_{VP}$ t_k walk noisily down the street]]] (at LF)

Furthermore, Diesing's (1992) strict partition (IP/VP) of the Mapping Hypothesis is incompatible with the interpretation of bare plurals in Korean perception verb complements.

- (7) Mary-nun [$_{NP}$ [$_{IP}$ *pyengsatul*]-i [$_{VP}$ kil-ul-ttala keleka]-nun]-kes]-ul poassta. (existential only)
 Mary-Nom soldiers-Nom street-Acc-along walk-Asp-event-Acc saw
 (Mary saw soldiers walking down the street.)

Contrary to Diesing's prediction that the bare plurals associated with stage-level predicates are interpreted as both existential and generic, the embedded bare plural subject NP *pyengsatul* 'soldiers' in (7) is interpreted only existentially. On the whole, within Diesing's (1992) strict Mapping Hypothesis, we would run into three empirical problems related to the interpretation of bare plural NPs in perception verb complements. One crucial observation especially in (5) and (7) is that the bare plural subject NP *soldiers* still appears to be contained inside of a certain syntactic projection having [+N] feature, other than the VP. In what follows, I wish to argue that the event NP is the real complement of the perception verb *see*, which is semantically selected by *see* and introduced only by stage-level predicates.

2. C-selection and S-selection of *see*

Pesetsky (1982: 191) suggests that verbs that semantically select (*s-select*) an argument of certain semantic types (e.g., questions, propositions, exclamations) categorially select (*c-select*) both CPs and NPs. NPs cannot appear, however, if they cannot be case-marked. In this manner, c-selection properties can be derived from s-selection properties. In the same vein, Odijk (1997: 368) suggests that events are typically structurally realized by VPs, IPs, or CPs but can also be realized as NPs. In this section, I propose that the perception verb *see* semantically selects events, which are realized as NPs at the level of surface structure in Korean and at LF in English. A piece of evidence for this proposal comes from Higginbotham's (1983) report that the perception verb *see* s-selects for not individual-level predicates but stage-level predicates, which have an extra argument for events.

- (8) a. We saw [_{AP} John drunk].
 b. ??We saw [_{AP} John tall].
 c. We saw [_{VP} John find the answer].
 d. ??We saw [_{VP} John know the answer].
- Higginbotham (1983: 118)

Higginbotham (1983) explains that (8 a, c) can be easily accepted as ordinary talk, however (8 b), at first blush, is odd and grows in plausibility as one imagines, contrary to fact, unusual height to be a variable rather than invariant property of its possessor. (8 d), which contains a individual-level predicate *know* also makes a poor Small Clause complement to the perception verb *see*. In general, stage-level predicates can, and individual-level predicates cannot, serve as perception verb complements. One way, according to Higginbotham (1983), of trying to grasp the distinction between stage-level and individual-level predications is through Davidson's (1967) hypothesis, that it is just stage-level predications for which an extra event argument is reserved in logical form.

Base on this observation reported by Higginbotham (1983), I further propose that regardless of the different structural realization of perception verb complements in overt syntax, be they the VPs of English bare perception verb complements, the IPs of English gerundive perception verb complements, or the NPs of Korean perception verb complements, they should be reconstructed as an event NP projection at LF, as represented in (9). The only reason for the event arguments in English bare/gerundive perception verb complements not to be structurally realized as NPs, but rather as VPs and IPs, in overt syntax, as shown in (10), is that in English there is no overt morphological noun head denoting events: gerundive marker *ing* denoting events is not a noun head, but just a suffix. In contrast, in Korean perception verb constructions, the event arguments are realized in the morphologically overt form of the head noun *kes*, as shown in (9 c):

- (9) a. I saw [_{NP} t_i [_Γ -ing_{+N} [_{VP} soldiers_i leave]]]. (at LF)
 b. I saw [_{NP} soldiers leave]. (at LF)
 c. Mary-nun [_{NP} [_{IP} pyengsatul-i [_{VP} ttena]-nun]-kes]-ul poassta. (at S-S and LF)
 Mary-Nom soldiers-Nom leave-Asp-event-Acc saw
 'Mary saw soldiers leaving.'
- (10) a. I saw [_{VP_{+N}} soldiers [_V walk noisily down the street]].
 b. I saw [_{IP_{+N}} soldiers [_Γ ing [_{VP} walk noisily down the street]]].

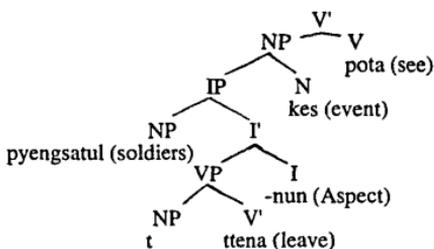
In short, the observation described by Higginbotham (1983) supports my claim that Milsark's (1977) semantic distinction between individual/stage-level predicates holds systematically even inside the perception verb complements of *see*: stage-level predicates, which have an extra event argument in the Davidsonian sense, can, and yet individual-level predicates cannot, serve as the secondary predicates in perception verb complements to the matrix verb *see*. And the realization of event NPs at the level of surface structure can be explained by the existence of overt noun head designating events. In the next section, I will compare the English gerundive perception verb complements with the Korean perception verb complements, and show that the complements actually act like NPs although they are analyzed differently, IPs and NPs, in overt syntax.

3. Internal structure of gerundive perception verb complements in English and Korean
 3.1 The difference in structural representation

As regards the internal structure of Korean perception verb complements of *see*, I propose that the complements can be represented as event NPs by adopting the NP-shell structure analysis (originally proposed by Kang (1988)), in which the NP-shell (event NP) directly dominates sentential nodes such as IPs or VPs. This structure is somehow similar to that of English Acc-ing constructions (i.e., DP), as illustrated in (12), which is proposed by Abney (1987):

- (11) a. Sara-ka [_{NP} [_{IP} pyengsatul-i ttena-nun]-kes]-ul poassta
 Sara-Nom soldiers-Nom leave-Asp-event-Acc saw
 (Sara saw soldiers leave.)

b.



- (12) John hated [_{DP} -ing [_{IP} the boys [_{VP} eat the fish]]].

However, the structural representation in (12) creates the burden, though, that V and *-ing* should form a correct morphological unit, which leads Abney (1987) to the extra assumption that *-ing* lowers onto the verb at PF where the ECP does not apply, since under lowering movements, the trace of movement is not c-commanded by the moved element, hence the trace cannot escape the ECP. That is why lowering movements are generally disfavored. Under these circumstances, I rather assume, along with Johnson (1988), Milsark (1988), that English gerundive perception verb complements are analyzed as IPs and the nominal inflection marker *-ing* is inserted into the infl node or perhaps in the position of aspect markers. On this assumption, the nominal feature, [+N], of *-ing* percolates into its maximal projection of IP. This might be partially represented like (13):

- (13) I saw [_{IP} _(+N) soldiers_i [_{I'} -ing_(+N) [_{VP} t_i leave]]].

One immediate consequence of this analysis is that it can explain the contrast between (14 a), where the embedded subject NP *the boys* cannot be raised due to the barrierhood of DP by inheritance, and (14 b), where the embedded subject NP *the boys* can be moved out of the IP node, which is usually treated as deficient for the movements.

- (14) a. *The boys_i were hated [_{DP} -ing [_{IP} t_i [_{VP} eat the fish]]].
 b. The boys_i were seen [_{IP} t_i [_{I'} -ing [_{VP} eat the fish]]].

In addition, the IP analysis of English gerundive perception verb complements contributes to account for the contrast between the English gerundive perception verb complements and Korean perception verb complements. First, consider case assignment of embedded subject NPs in the complements. In English (15), the embedded subject is assigned accusative case, on the other hand in Korean (16), the embedded subject is assigned nominative case.

(15) I saw [_{IP} him/*he [_I singing the Marseillaise]].

(16) Sara-ka [_{NP} [_{VP} ku-ka/*-lul ttena-nun]-kes]-ul poassta
 Sara-Nom he-Nom/-Acc leave-Asp-event-Acc saw
 (Sara saw him leaving.)

According to Chomsky's (1986) barrierhood which is defined by L-marking, the embedded subject NP *him* in (15) can be assigned accusative case, since the embedded clause node IP is L-marked by the matrix verb *see* and thus is not serving as a barrier for the case assignment. However, in (16), the event NP node can serve as a barrier for case-assignment from the matrix verb *pota* 'see,' since though the NP itself is L-marked by the matrix verb, it still can get barrierhood from the lower IP node by inheritance, which is not L-marked by the event noun head *kes* 'event.' Therefore, the subject *ku* 'he' contained inside of the NP in (16) is forced to get only a nominative case, which I assume is assigned by one of the properties of Infl (e.g., aspectuality). Turning to the contrast in (17) with respect to the complex NP constraint,

(17) a. Whom did you see [_{IP(+NP)} Mary meeting t]..
 b. ??[nwukwu-lul] ne-nun [_{NP} [_{IP} Mary-ka t manna-nun]-kes]-ul poass-ni?
 who-Acc you-Top Mary-Nom meet-Asp-event-Acc saw-Q
 (Whom did you see Mary meeting?)

the contrast between (17 a) and (17 b) can also be attributed to the different structural representation: IP and NP. That is, the NP in (17 b) can serve as a blocking category for movements, while the IP in (17 a) cannot.

3.2 The similarity in the realization of events

What I am trying to show in this subsection is that two salient functions of the English gerundive form *-ing*, i.e., nominalizer and progressive aspect (Reuland 1983, Abney 1987), are realized in two distinctive morphological forms in Korean; the aspectual marker *-nun* and the noun head *kes* 'event,' as can be seen in a parallel pattern of translation from Korean [*-nun* + *kes*] to English [*-ing*]:

(18) a. [[ku-uy kay-lul cwuki-nun]-kes]-un cangkwn-ul hwana-keyhayssta.
 he-Gen dog-Acc kill-Asp-event-Top general-Acc upset-made
 (The killing of his dog upset the general.)

- b. [[copasim-ha-nun]-kes]-ul memchwuela!
 impatient-do-Asp-event-Acc stop
 (Stop being impatient!)
 c. *[[yengli-ha-nun]-kes]-ul memchwuela!
 intelligent-do-Asp-event-Acc stop
 (*Stop being intelligent!)

In (18), it is obvious that the English gerundive form *-ing* corresponds to the two distinctive forms in Korean; the aspectual marker *-nun* plus the event head noun *kes*. Likewise, the possibility that only stage-level adjectives, but not individual-level predicates, can be nominalized by adding *-ing*, is also observed in Korean counterparts, as illustrated in (18 b, c), where the stage-level adjectives are followed by the aspectual marker *-nun* plus event head noun *kes*, while individual-level adjectives cannot. This can be explained by assuming that event arguments are introduced only by stage-level predicates and realized in the form of *-ing* in English and *-nun+ kes* in Korean.

This conclusion seems to provide a good way to explain the English data observed by Akmajian (1977). Note that bare perception verb complements in English simply fail in the constituent test:

- (19) a. *What we saw was [Raquel Welch take a bath]. (Akmajian 1977: 439)
 b. *It was [Raquel Welch take a bath] that we saw.
 c. *?We could hear, but we couldn't see, [Raquel Welch take a bath].
 d. *[Raquel Welch take a bath] is a breathtaking sight to see.
 e. *[Raquel Welch take a bath] has been witnessed by many a moviegoer.

These data look invariably bad especially when the perception verb complements are in subject position. However, as Gee (1977) pointed out, this would only indicate that they are not NPs in overt syntax, at best. Akmajian (1977) also admits that the reader (native speakers of English) can see that adding [*-ing*] to the verb *take* in any of the above examples (i.e., (19)) will restore grammaticality, as shown in the English translation of (20). The observation in (20) suggests that English gerundive perception verb complements and Korean counterparts should be treated as [+N] categories even in overt syntax. That is, the suggestion made by both Gee (1977) and Akmajian (1977) can serve as another piece of evidence for my proposal that English gerundive perception verb complements are similar to the Korean counterparts in the realization of events; both can be analyzed as having the nominal feature [+N], though the way for the feature to be realized in overt syntax is different. Events in English gerundive perception verb complements are realized as IPs having the [+N] feature by percolation of the suffix *ing*[+N], whereas events in Korean perception verb complements are realized as NPs by projection of the noun head *kes*[+N]. Note the grammaticality in (20):

- (20) a. [wuli-ka po-n-kes]-un [R.W.-ka mokyokha-nun-kes] iessta.
 we-Nom see-Asp-event-Top R.W.-Nom take a bath-Asp-event was
 (What we saw was [Raquel Welch taking a bath]. or
 It was [Raquel Welch taking a bath] that we saw.)
 b. [R.W.-ka mokyokha-nun-kes]-ul, wuli-nun tulul-swu, kulena pol-swu-epsessta.
 R.W.-Nom take a bath-Asp-event-Acc, we-Tom hear-can, but see-can-not
 (We could hear, but we couldn't see, [Raquel Welch taking a bath].)

necessarily mapped into the nuclear scope, side by side with the event NPs, being interpreted as existential.

5. Relativized Mapping Hypothesis

In this section, I propose the Relativized Mapping Hypothesis in the sense that if indefinites (e.g., bare plurals) are generated inside of the indefinite event NPs, then in the course of the event NPs going into the nuclear scope, any indefinites inside of these event NPs should be automatically bound in the domain of existential closure (c.f., Heim 1982), resulting in a nonspecific (existential) reading. In contrast, if they are outside of the event NPs or no event NPs are generated (e.g., with individual-level predicates), then they should be bound by any operator such as an abstract *Gen*, in the case of bare plural NPs, being interpreted as specific (generic).²

(22) Relativized Mapping Hypothesis

Material inside of event NPs is mapped into the nuclear scope.

Material outside of event NPs is mapped into a restrictive clause.

What is crucial in this proposal is that Diesing's (1992) claim that the VP node in syntax is mapped into the nuclear scope in the logical representation is never accidental and cannot be simply stipulated as an independent theory. There is a theoretical basis for the VP to be mapped into the nuclear scope. That is, the necessity that the VP should be mapped into the nuclear scope can be derived from the semantic fact that the VP node projected from a stage-level predicate is actually syntactically dominated by and contained inside of an indefinite event NP, and thus it is, not accidentally but necessarily, forced to be brought into the nuclear scope with the indefinite event NP itself going into the nuclear scope, being bound by an existential closure. I will show how the Relativized Mapping Hypothesis under consideration works out with perception verb complements in English and Korean, yielding a correct interpretation (i.e., existential reading only) of the bare plurals.

- (23) a. I saw [_{VP} soldiers leave]. (at S-S)
 b. I saw [_{NP} soldiers leave]. (at LF)
 └── nuclear scope ─┘
 c. [Ee: [Ex: soldier (x)] & leave (x, e)] (in LR)
- (24) a. I saw [_{IP} soldiers_i [_r -ing [_{VP} t_i leave]]]. (at S-S)
 b. I saw [_{NP} soldiers_i [_r -ing [_{VP} t_i leave]]]. (at LF)
 └── nuclear scope ─┘
 c. [Ee: [Ex: soldier (x)] & leave (x, e)] (in LR)
- (25) a. Sara-ka [_{NP} [_{IP} pyengsatul-i ttena-nun]-kes]-ul poassta. (at S-S)
 -Nom soldiers-Nom leave-Asp-event-Acc saw
 'Sara saw soldiers leaving.'

² In this paper, I will follow one way of being specific proposed by Enc (1991), according to which a specific NP is discourse-related in that partitive specifics introduce into the domain of discourse individuals from a previously given set. So, presuppositional or generic interpretation of indefinites is treated as specific, while cardinal or existential interpretation of indefinites is treated as nonspecific.

(28).³ If this is the case, the higher event NP 'seeing' can be treated as an indefinite and thus the indefinites such as the bare plural NP *soldiers* and the lower event NP 'walking' contained inside of this higher event NP should go into the nuclear scope, side by side with the higher event NP 'seeing,' being interpreted as existential.

6. Conclusion

In relation to the interpretation of bare plural NPs in perception verb complements, to solve the several empirical problems for Diesing's (1992) strict Mapping Hypothesis. I have proposed the Relativized Mapping Hypothesis, where if bare plurals are inside of the event NPs, they are automatically mapped into the nuclear scope, being bound by existential closure and interpreted existentially. On the other hand if they are outside of the event NPs or no event NP is created, then the bare plurals are bound by an abstract generic operator *Gen*, producing a generic reading.

With the event NP analysis, I tried to uncover the special properties, if any, of the VP node in Diesing's (1992) Mapping Hypothesis. That is, the mapping from the VP node in syntax to the nuclear scope in the logical representation is not just an accidental phenomenon, but can be derived from the two semantic proposals saying that indefinites are not inherently quantified, but merely introduce variables into the logical representation (c.f., Heim 1982) and that event NPs reserved in stage-level predicates are another type of indefinites (c.f., Higginbotham 1983, Parsons 1990, among others). On this view, the VP node contained inside of the event NP is automatically mapped into the nuclear scope in the course of the indefinite event NP going into the nuclear scope and being bound by the existential closure.

REFERENCES

- Abney, S. (1987) *The English noun phrase in its sentential aspect*. Ph. D. dissertation, MIT.
 Akmajian, A. (1977) The complement structure of perception verbs in an autonomous syntax framework, in P. W. Culicover, T. Wasow, & A. Akmajian (eds.), *Formal Syntax*, 427-460, NY, Academic Press.
 Carlson, G. (1977) A unified analysis of the English bare plural, *Linguistics and Philosophy* 1, 413-457.
 Chomsky, N. (1986) *Barriers*, Cambridge, Mass., MIT press.
 Chomsky, N (1995) *The Minimalist program*, Cambridge, Mass., MIT Press.

³ According to Safir (1993), if two event places are in the immediate scope of the same [+/- tense] Infl, then they are contemporaneous with respect to the specification of tense. However, if an independent Infl node intrudes between two event places, then the event place in the immediate scope of the lower Infl is independent from the event place in the immediate scope of the higher Infl, as represented in (i):

- i. I_i [vP E_i + V [IP I_j [vP E_j + V]]]
 ii. a. Carmen saw [Emma kiss Peter].
 b. Carmen [I' I-Past [vP E-saw [vP Emma [V' E-kiss Peter]]]]

From this perspective, I will further assume that if there is no intervening tense, an event of an embedded clause can be identified as the same event in the matrix clause by the tense of the matrix clause

- Davidson, D. (1967) The logical form of action sentences, in N. Rescher (ed.), *The Logic of Decision and Action*. Pittsburgh, University of Pittsburgh Press.
- Diesing, M. (1992) *Indefinites*, Cambridge, Mass., MIT Press.
- Enc, M. (1991) The semantics of specificity, *LI* 22, 1-25.
- Gee, J. (1977) Comments on the paper by Akmajian, in P. W. Culicover, T. Wasow, & A. Akmajian (eds.), *Formal Syntax*, 461-482, NY, Academic Press.
- Heim, I. (1982) *The semantics of definite and indefinite noun phrases*, Ph. D. dissertation, Univ. of Massachusetts, Amherst.
- Higginbotham, J. (1983) The logic of perceptual reports: An extensional alternative to situation semantics, *The Journal of Philosophy* 80, 100-127.
- Johnson, K. (1988) Clausal gerund, the ECP, and Government, *LI* 19.4, 583-609.
- Kang, M-Y (1988) *Topics in Korean syntax: Phrase structure, variable binding and movement*, Ph. D. dissertation, MIT.
- Kiss, K. E. (1996) Two subject positions in English, *LR* 13, 119-142.
- Kratzer, A. (1988) *Stage-level and Individual-level predicates*, Unpublished ms, Univ. of Mass, Amherst.
- May, R. (1977) *The grammar of quantification*, Ph. D. dissertation, MIT.
- Milsark, G. (1977) Toward an explanation of certain peculiarities of the existential construction in English, *Linguistic Analysis* 3.1, 1-29.
- Milsark, G. (1988) Singl-ing, *LI* 19.4, 611-634.
- Neale, S. (1988) Events and "Logical Form", *Linguistics and Philosophy* 11, 303-321.
- Odiijk, J. (1997) C-selection and S-selection, *LI* 28.2, 365-371.
- Parsons, T. (1990) *Events in the semantics of English: A study in subatomic semantics*, Cambridge, Mass., MIT.
- Pesetsky, D. (1982) *Paths and categories*, Ph. D. dissertation, MIT
- Reuland, E. J. (1983) Governing -ing, *LI* 14.1, 101-136.
- Safir, K. (1993) Perception, selection, and structural economy, *Natural Language Semantics* 2, 47-70.
- Yoon, S-H (1997) *The grammar of WH-interpretation, scrambling and De Re/De Dicto distinction*, Ph. D. dissertation, UW-Madison.