For K. Turner et al (eds) (1999) The Semantics/Pragmatics Interface from Different Points of View (CRiSPI 1), Elsevier Science.

CONTRASTIVE TOPIC: A LOCUS OF THE INTERFACE -Evidence from Korean and English

CHUNGMIN LEE

Department of Linguistics, Seoul National University, Seoul 151-742, Korea [clee@snu.ac.kr]

1. INTRODUCTION

This paper addresses the issue of characterizing Contrastive Topic by examining how it is both topical an d focal, as recently claimed (Krifka 1991 ms, etc.) and advocated with Korean data (Lee 1996 ms, Choi '9 7, Cho '97 ms, Wee 1997 ms).¹ The paper essentially attempts to show how 'contrastive' occurs and how it is distinguished from 'exclusive'/'exhaustive' in (Exclusive) Focus. I will try to show how the whole is sue can be treated in the semantics/pragmatics interface and how it is further related to prosody and gram matical relations.

In **2**, the nature of Contrastive Topic is explained: a Topic in the discourse (e.g., in a question) is divide d into partitions and a Contrastive Topic is about one partition in contrast with the rest of the partitions an d the speaker has the alternative in contrast in mind. By its cancellative function, a Contrastive Topic give s rise to an implicature concerning the alternative in contrast in the polarity opposite to the given. It is mar ked by something like B accent in English and by a similar high pitch on the (Contrastive) Topic marker morpheme in Korean. In **3**, it is distinguished from Topic, which lacks contrastiveness, and from Focus, which is exclusively highlighted. In **4**, it is shown how topicality is hierarchically structured syntactically/ thematically and how event/proposition contrasts occur. Cancellability function in contrast is shown and why '[All]_B came' is impossible in Korean and English is explained. Where and how scalar implicatures o ccur are explored. In **5**, the distinction between denotational and metalinguistic levels is advocated in neg ation and other operators. In **6**, the phenomenon of Contrastive Topic is viewed explicitly from the alterna

¹ Earlier related versions of this paper were presented at the 5th Int'l Pragmatics Conference in Mexico Cit y in 1996 and at the discourse and pragmatics group and language and information (formal semantics) gro up workshops earlier. I wish to thank Vallduvi, who made comments in Mexico, and those who made co mments or asked questions at various meetings. All frailties, however, are mine.

tive semantics position and some weaknesses of the position are presented. In **7**, it is shown how Focus is related to grammatical relations and how Contrastive Topic and some focusing morphemes are over and a bove them with pragmatic presupposition and implicature effects. In **8**, the paper ends with the conclusion that different viewpoints are complementary in exploring aspects of the fundamental nature of the compl ex semantics/pragmatics interface phenomenon.

2. CONTRASTIVE TOPIC: WHAT IT IS

Fintel (1994) proposed to treat Contrastive Topics as phrases which are both topicmarked and contain a focused item, developing L. Carlson's (1983) idea that the so-called 'topicalized' N Ps in English are both old and new because there are two questions in the background. Observe:

- (1) [[These]_F examples]_T I found [in Gundel].
- (2) Where did I find which example?
 - a. Where did I find these examples?
 - b. Where did I find the other examples?

Fintel thus assigns Topic (T) to the NP as a whole and Focus (F) to the Det in the NP, as in (1). Note that the question of (2b), which explicitly has ['the other' examples] in contrast with ['these' examples], remains unanswered or reserved. Similarly, Krifka's Contrastive Topic from subject (cited in Partee 1991 LSA lecture):

- (3) What did Bill's sisters do?
- (4) [Bill's [youngest]_F sister]_T [kissed John].

It is noted that there is a separate Nuclear Scope Focus for each sentence: [in Gundel] and [kissed John], r espectively, when a Contrastive Topic occurs. However, it has not been investigated whether a typical (th ematic) Topic can co-occur with a Contrastive Topic. My answer for this question is yes. This is true of in dividual-level predicates and matrix clauses in particular, with their Topics from subjects and Contrastive Topics in their predicate parts. If the question in (3) is: 'What did Bill's sisters do to the boys?' and the an swer is (4), then 'John' in the predicate becomes contrastive in the given definite set of 'the boys.' Multip le Contrastive Topics in a sentence are likewise permissible, though rare, depending on discourse contexts in English (and in Korean as well).

Differently from von Fintel (1994), I argue that the Nuclear Scope Focus part can also be contrastive (at t he same time), though not common, as will be discussed shortly. In particular, Rooth's (1996, 1992) exa

mple of an answer to the roommates-quiz question (another friend's question about how the quiz went) m ust be viewed from an entirely new perspective: contrastiveness. Let us consider his representations of the possible answers:

- (5) a. Well, I [passed]_F'
 - b. Well, [I]_F passed. (cf. Well, [[I]_F]_T passed.)

Rooth argues that, in answering with (5a), the speaker suggests that he did no better than passing, wasn't an ace and that, with (5b), the speaker may implicate that my roommates did not pass. However, in the gi ven context of the roommates known to both interlocutors, Rooth's intended interpretation of (5b) must n ot be represented by simply marking F. The presupposed sub-question for it may be 'How did all of you (you and your roommates) do on the quiz?' Then, the part $(I]_{F}$ in the answer (5b), as an answer to one su b-sub-question 'How did you do?' in contrast with 'How did your roommates do?,' constitutes a Contrasti ve Topic in the sense that 'I' is in contrast with my roommates, as part of the Topic. Therefore, it may hav e to be represented by $[[I]_F]_T$ ('I' in Top is drawn back to Foc in the tree). It should be different from the a nswer for the question 'Who passed?,' which is an information focus. Rooth's representation rather corres ponds to this kind of focus but not to a Contrastive Topic. Similarly, to get the scalar implicature evoked by the first answer (5a), the speaker who asked the question is concerned with pass/fail and 'pass/fail' can become topical in a sense. Differently from nominal references, event-related contrasts are vague and mo re dependent on quantity scales. In English, Contrastive Topics are prosodically marked, as indicated by Roberts (1996) and it is my contention that, in Korean, they are both morphologically and prosodically m arked. In the given particular roommates-quiz and similar situations, it seems that both the subject part an d the predicate part, though rarely, can be Contrastive Topics.

The Meaning of Contrast

The most important point about Contrastive Topic is that the contrast set is clearly in the speaker's mind a nd it is formed via discourse contexts, as we can see in 'these examples' in contrast with '**the** other examp les,' '**which** example' in the question being possible only with a definite set of alternative examples. In (3), 'Bill's sisters' is also a definite set of alternatives and in that sense it is old information and can form a Topic but the choice of the 'youngest' among the sisters is not known, or new, to the previous speaker a nd thus is focused in contrast with '**the** other sisters,' ending up in Contrastive Topic. However, Vallduvi (1990) does not admit that such a Contrastive Topic has a Focus in it (the partitions are known to the initi al speaker). But, if the preceding question were about 'Bill's youngest sister' from the beginning, there co uld not be anything (new or) focal from the given singleton set in the answer to the hearer. Gundel (1994) admits a contrastive kind of Focus. In (4), therefore, the speaker's answer is with reservations about the other

her sisters.

The speaker's choice of the particular alternative in focus is selective and conditional This notion of 'Contrastive' is crucially distinct from 'Exhaustive' (Kuno 1974), i.e., 'Exclusive' (my ter m) to be discussed later. The following Contrastive Topic example from Kasper (1987) in German transla ted into English by Fintel shows the conditional nature of (Contrastive) Topic:

- (6) a. $[[Peter]_F]_T$ would have $[solved]_F$ this problem.
 - b. If Peter had been faced with this problem, he would have solved it.

The contrast set for a Contrastive Topic is clearly in the speaker's mind and it is formed via discourse con texts, in view of the fact that '**which** example' in the question in (2) is possible only with a DEFINITE SE T of alternative examples. 'Bill's sisters' is also a definite set of alternatives, so it is old information and c an form a Topic but the 'youngest' among the sisters is rather new, in a sense, to the one who asked (in th e sense that he didn't know 'which one' in the given set) and thus is focused in contrast with '**the** other si sters,' ending up in Contrastive Topic. An answer to Krifka's example question (3) could be:

(7) His **brothers** had a big fight.

And the contrast can be with such relevant things from outside of the given set, still constituting a Contras tive Topic, though making a detour from the asker's intention, requiring the answerer's extra mental proc essing of 'I don't know about his SISTERS, but if we can accommodate the category extension to his SIB LINGS, then his 'MALE' SIBLINGS = brothers ---.' Then, the accommodated super-question becomes 'What did Bill's **siblings** do?.' Thus, it entails its subquestion 'What did his brothers do?' (every propositi on answering the super-question answers the sub-question, according to Groenendijk and Stokhof 1984). Truth-conditionally or semantically, the set of true propositions as a possible answer for question (3), doe s not contain 'his brothers' in the member propositions. So, (7) cannot be an answer. Indeed, it is not a str aightforward but detour answer, with the forced accommodation. Accommodation is a pragmatic device. Actually, the relevant high peak in its fall-rise Contrastive Topic intonation (in accommodation) is described to be much more delayed than the other (non-accommodated) cases of Contrastive Topic. Let us turn to prosody now.

Prosodically Distinct, Partitive Nature

Prosodically, Jackendoff's (1972) distinction of B accent from A accent must be relevant here. The B acc ent may be associated with a Contrastive Topic. It also corresponds to a high pitch on the Contrastive Top ic marker -*NUN* in Korean. In general, A accent is for the focus part of a normal [Topic--Focus] sentence and B accent for the Contrastive Topic part of a basically [Contrastive Topic—Focus] sentence. The latter can be exemplified by (1), (4), (5), and (6a) above. For instance, (1) and (5b) can be represented as follo ws, if we put Pierrehumbert and Hirshberg's (1990) intonation notations in parentheses:

(8) [[These] examples]_{B(L-H%)} I found [in Gundel]_{A(L-L%)}.

(9) Well, $[I]_{B(L-H\%)}$ passed $_{A(L-L\%)}$. (Well, [one roommate]_{B(L-H\%)} passed $_{A(L-L\%)}$.)

These Contrastive Topics come from the partitions of the original Topic denotations. However, in the acc ommodated case of Contrastive Topic such as the one in (7), the high peak in its fall-rise Contrastive Topic c intonation is much more delayed, as in L*+HLH% (Ward & Hirshberg 1985) than the other non-accom modated partitioned cases of Contrastive Topic, as in L+H*LH% (Pierrehumbert 1980) or simply L-H%, as shown above. Whether to view these two divisions as two different categories or not is controversial an d all the pragmatic factors involving accommodation and its consequent complex and marked mental proc essing in contexts must be duly appreciated, even though I tentatively treat both of them as belonging to t he category of Contrastive Topic here. In this context, we must be cautious not to admit non-accommodat ed, irrelevant, unfelicitous utterances, defying interpretations even in rich contexts. Some examples of Contrastive Topics in Korean can be shown as follows:

(10) a. [ceil eorin yeotongsaeng-UN]_B Joe-hako khiseu-hae-ss-eo (cf. (2)-(3))

youngest sister CT with kiss do Past Dec

'[The youngest sister]_B kissed Joe.'

b. [rummeit han myong -UN]_B hapkyeok-hae-ss-eo (cf. (5b))

roomamate one Cl CT passed

'One roommate B passed.'

(11) na [khong -UN]_B meok -eoss-eo

I beans CT eat Past Dec

'I ate [the beans]_B.'

. (12) na [tongceon-UN]_B iss -eo

I coin CT exist Dec

'I have [coins]_B.'

(13) na [cungkuk-e -NUN]_B sa-wol-e ka

I China to CT April in go

'I'm going to [China]_B in [April]_A.'

We can see a parallel between the high pitch on the CT marker in Korean and the B accent in English thro

ughout the CT examples above. In (10a), the question is about 'Bill's sisters' and the answer is about a pa rtition of it, the speaker and the hearer being aware of the unanswered part. In (10b), the question is about 'you and your roommates' and still its super-question might be 'How did the quiz go?' Numerals easily b ecome partitives. (11) has an object Contrastive Topic, answering a question about 'the cereal' or 'the foo d,' depending on contexts. If the question is 'Did you eat the beans?,' and the answer is '*khong*[beans]-*U N/khong-Ø na*[I] *meok*[eat] *-eoss*[Past] *-eo*[Dec],' with the object in Topic position, or 'The beans, I ate t hem,' then '*khong*[beans]-*UN/khong-Ø*' and 'The beans' tends to become a Topic. If the answer is (11) t o the same question, a super-question must be newly accommodated and the initial speaker becomes curio us about the unanswered part. In Possessor/Experiencer constructions such as (12), the Theme in the non-Topic position becomes a Contrastive Topic necessarily, if it is *NUN*-marked. The question for (12) must be 'Do you have money?' and because of the cancellative function of the Contrastive Topic, 'but I don't h ave bills' is implicated. The cell of money can be divided into two sub-cells: the cell of coins and that of b ills. The question was answered with a weaker version, not a stronger version committed to 'money' (coin s + bills) as a whole, which implicates not having bills. (See below for partitions.)

money	
coins	bills

This is a conversational saclar implicante. So, it can be cancelled in such a way as 'in fact I also have bill s.' The question for (13) may be 'When are you going to which place?' = {you are going to *u* at *t*: *u* a plac e, *t*: a time} (cf. Roberts 1996). If it is an answer to a question like '[When are you going to China]_F?,' wit h no prior discourse, then the initial interlocutor is likely to accommodate the super-question and ask 'Wh ere else ---?' However, Roberts's discussion does not make it clear which *wh*-word in the multi-*wh*-questi on is picked up as topical. In fact, the part answering the D-linked *which* NP must be CT-marked. Therefor re, suppose the question is '*Which month* are you going where?' Then, the answer must be as follows:

- (13') na [sa-wol -e -NUN]_B cungkuk -e ka
 - I April in CT China in go
 - 'I'm going to [China]_A in [April]_{B.}' 'In [April]_B I'm going to [China]_A'

The CT-marked NP 'in April,' which is topical, must be scrambled to the front of 'to China,' which is inf ormationally focal, in Korean, though topicalization in English seems optional. If an information focus pa rt corresponding to a *wh*-word in the question accompanies a CT element in an answer sentence, another a ffirmative CT sentence can follow by implicature or assertion. In other words, there must be pairs in paral lel, CT---Focus conj. CT---Focus, such as [*sa-wol -e -NUN*]_B cungkuk -e, [o-wol -e -NUN]_B mongol-e 'in April to China, in May to Mongolia' (gapping possible) to form a continued affirmative conjunct ('and/bu

t ---'). But without such pairs, a conjunction with two affirmative conjuncts is impossible, e.g., **na* [*cung kuk-e* -*NUN*]_{*B*} *ka* '[To China]_B I'm going' and/but *na* [*Mongol-e-NUN*]_{*B*} *ka* '[to Mongolia]_B I'm going,' o r *(12) followed by 'and/but *na* [*ciphye-NUN*]_{*B*} -*iss* -*eo* 'I have [bills]_B.' However, if the question is 'Whe re do you have your money?' and its answer is as follows, then it is all right: *tongceon-UN cumeoni-e iss-eo* 'The coins are in the pocket,' *haciman ciphye-NUN cigap-e iss-eo* 'but the bills are in the wallet.' Here, the information focus parts must distinct from each other in different conjuncts.

The totality of the whole set involved is in the Topic of the relevant super-question and in the mind of the person who answers the question. Therefore, the given partial answer plus the continued complementary negative assertion/implicature constitutes a totality. Multiple affirmative CT sentences are possible if ther e are multiple CT---Focus pairs, as we have seen.

The A contour was also exemplified by a universal negation $(\forall \neg)$ sentence and the B accent also by a par tial negation $(\neg \forall)$ sentence in English. Contrastive Topic, I would argue, has unique context-dependent a nd interactive prosodic features cross-linguistically and, for the latter partial negation sentence with the B accent, Korean analogously shows high pitch on the Contrastive Topic marker, as in (14):

- (14) haksaeng -tul -i modu-NUN o-ci anh -ass -ta student Pl Nom all CT come not Past Dec
 'Not all students came.'
- (15) haksaeng-tul-i modu o-ci anh -ass -ta student Pl Nom all come not Past Dec'All students didn't come.' [ambiguously]

The Contrastive Topic marker can be attached to the universal quantifier directly as in (14), with a high pi tch on the marker (or the marker can be attached to the Verb-Comp 'o-ci' instead to get the same partial n egation). Here, scope/negation reversal necessarily occurs. Contrastive Topics, ensured by morphology an d prosody in Korean and by prosody in English, may affect the Logical Form of a sentence. Even in (15), a similar high pitch occurs on the Comp '-ci' right after the Verb where the Contrastive Topic marker can be attached. Here, the negated 'all' (some) can have the rest of 'all' (i.e., '-all' can be 'many,' 'some,' etc.) in contrast in partition and thus can get a Contrastive Topic marker.

Without the marker, the negative sentence, such as (15), can be 'ambiguous.' But the partial negation (ne gation wide scope) reading, corresponding to the reading of (14) involving the Contrastive Topic marker, retains the prosodic features of (14) (*motu* 'all' closer to the following negation in pronunciation and a hig h pitch on the Comp '-ci' after the Verb). The universal negation reading lacks these B-contoured prosodi

c features, *motu* 'all' being closer to the subject noun in pronunciation. On the other hand, if we say 'All -*NUN* came' affirmatively in Korean, it is unacceptable (Lee 1989, 1992) because there cannot be any cont rast made by partition in the whole set.² Other quantifying Determiners do not have this problem in formi ng a Contrastive Topic. For example, 'Half-NUN came' is OK and naturally the other half in contrast did n't come, by implicature. Therefore, all the quantifying Determiners including numerals and fractions co ming from grammatical subject tend to form a Contrastive Topic easily, with some constraints on the univ ersal Determiner. Similar constraints involving the universal quantifier in English have been recently foun d by Buering (1994). From the above, we can say Contrastive Topic (CT henceforth, when used as a modi fier) has its own unique, pragmatically significant prosodic features both in English and Korean.

3. HOW DISTINCT FROM TOPIC AND FOCUS

How Distinct from Topic

A typical (thematic) Topic shows zero or little contrastiveness and no high pitch or stress, though its mark er is not distinct from the CT marker ('-(N)UN') in Korean and in Japanese ('-wa'), with a slight pause afte r it. It often comes from a subject but can come from an object or other non-subject elements, as in (17) b elow. A Topic is typically presupposed, familiar, or at least anchored. Generic statements are typical Topi c constructions (Lee 1996). Consider:

(16) [mul -UN]_T thumyongha -ta [generic] water Top transparent Dec

'Water is transparent.'

(17) [inshaeki -NUN]_T hankuk saram -i palmyonghae-ss-ta [kind-object predicate]
printer Top Korean person Nom invented
'The printer, a Korean invented it.'

When there is a salient discourse Topic or its candidate (indefinite) previously established, its anaphoric NP can become a sentential Topic, continuing as a discourse Topic until discourse Topics are changed. T here does not occur any partitioning or accommodation of the antecedent denotation, unlike in Contrastiv e Topic. Topics in Korean must be at the head of an S as SPEC-CP, with the Topic marker. The marker m ay be null and the whole Topic NP can be a zero pronominal. Then, the rest of the S/discourse talks *about* the Topic. Observe:

² However, if the sentence is followed by a cancellative/contrastive clause like 'but no one volunteered,' t hen its acceptability improves sharply. See the section of *Event Contrast*.

(18) a. [Mary -NUN]_i yocium muot ha -ni?

Top nowadays what do Q

'What does Mary do these days?

b. [ku chinku -NUN]_{Ti} taehakwon -e tani -eo that friend Top graduate school to attend
'That friend goes to graduate school.'

In spoken Korean, the Topic marker -*NUN* in (18b) can easily delete, not affecting the Topichood of the r emaining nominal. Those typical Topics shown above can change to Contrastive Topics in contexts wher e some explicit items in contrast with the NP denotation are given and are in the speaker's mind. Contrast ive Topics, on the other hand, can also occur in the middle of an S rather freely. Elements with a CT mark er that appear in different conjuncts, either at the head or not, in juxtaposition, are Contrastive Topics, and if they are from subjects, predicates must be distinct from each other. The *NUN*-marked elements in the middle of an S are Contrastive Topics but not Topics, if they are not Topics embedded in matrix commun ication verbs (Lee 1973). A Topic operator has been suggested, in line with DRT (Lee 1996a).

In English, on the other hand, the device of fronting/dislocation/intonation is employed because there is n o marker for Topic or Contrastive Topic. The so-called 'topicalization' as in (1) typically creates a Contras tive Topic rather than a Topic (cf. Gundel 1974). Rather, the operation of left-dislocation, leaving a residu al pronoun behind, creates a Topic in English. The 'As for ---- ' construction (e.g., 'As for the children, the y went to school') seems a subtype of dislocation but seems to be often employed as a Contrastive Topic with B accent. Therefore, 'topicalization' can be said to be a misnomer by Chomsky. A right-dislocated el ement in English such as the following is also topical. It is unaccented (Lambrecht 1994). Observe:

(19) She is a real ANGEL, your sister.

So far, we have tried to see clearly the distinction between Topic and Contrastive Topic, both in Korean a nd in English. Topics are unaccented and share other common features in both languages. Therefore, Rob erts' (1997) pessimism about the theoretical status of Topic in information structure is not tenable.

Distinction from Focus

In English, a default Focus falls on the last element or NP of an S in a Topic-Focus construction. In Korea n, a head-final language, a default Focus falls on the pre-verbal position (cf. Kim 1985), much like in Hun garian. Otherwise, some 'marked'/ uneconomical stress (Rinehart 1995) or focus construction like 'It is

MARY who ---' must be used.

A genuine Focus, I would argue, has no notion of contrast except that of 'alternatives' (Rooth 1985). The focused element alone is highlighted and other alternatives are simply shadowed and ignored or excluded at the moment of utterance, even if 'evoked' in explicit linguistic contexts. No reservation, conditionality, partitioning or hedge regarding other alternatives (characteristic of Contrastive Topic) occurs in uttering a Focus. For a multiple question, a multiple information focus assertion is possible, as follows:

(20) nu -ka eonce eotiseo mueosul eolmae sa-ss-ni?who Nom when where what for what price bought'Who bought what, where, when, for what price?'

(21) [Mary-ka]_F [eoce]_F [chaek-pang-eseo]_F [soseol-chaek-ul]_F [sa-cheon-won-e]_F s-ass-ta Nom yesterday bookstore in novel Acc 4 thousand for bought
'Mary bought a novel for four thousand won in a bookstore yesterday.'

All the focused elements supply new information in (21) in an appropriate answer to the multiple question of (20). The verbal part alone remains as the background. Both in English and Korean, Focus elements ar e uttered with falling accents regularly. This is different from a 'word-by-word (continuous) reading' into nation. It must also be noted that in Korean such intonational focus with falling accents necessarily occur with structural and oblique case markers, as shown in (21) above, as opposed to a CT marker and its pitch accent.

It is a lot easier to have this kind of multiple foci than to have multiple CT elements in a sentence. For ins tance, we can get a corresponding multiple CT sentence to (21) by replacing the Nom and Acc markers by the CT marker -*NUN* and by attaching the CT marker to the other Focus elements. As a result, 'Mary-*NU N* yesterday-*NUN* bookstore-eseo-*NUN* book-*NUN* 4 thousand-won-e-*NUN* bought' is produced. The res ulting multi-CT sentence is hardly acceptable because it is almost impossible to keep track of all the diffe rent partitionings required to be in the mind of the speaker by different CT elements. We can devise a con text or contexts in which such a sentence can be interpreted theoretically but it is hampered by the limit of human cognitive (memory) capacity for processing. From (9) above, it is possible to get a double CT sent ence by nominalizing the verbal part in Korean: *na*'I'-*NUN hapkyok*'pass'-*UN hae-ss-eo*'did' 'As for me, I did pass(ing).' In contrast, it is easier to keep track of only highlighted elements, without paying attenti on to largely shadowed, ignored, or excluded members of contextually possible alternative sets. Alternati ve sets are mostly fuzzy except Exclusive/Contrastive/Exhaustive-listing Focus to be discussed.

Focusing 'delimiters' such as -man 'only' in Korean and only in English have a truth-conditional effect, b

ut others such as *-to* 'also' and *also* have a presuppositional effect. Suppose Mary drank coffee and wine. Then, the sentences in (22) are false, but those in (23) are true. Consider:

(22) a. Mary-NUN coffee -man masi-oss-ta

Top only drank

'Mary only drank coffee.'

b. Mary only drank coffee.'

(23) a. Mary--NUN coffee -to masi-oss-ta

Top also drank

'Mary also drank coffee.'

b. Mary also drank coffee.'

All these focalizers in Korean are attached to the focused element normally but clausal scope ones which must be attached to the verbal part often float to the nominal part (*pom[spring]-man[only] o[come]-myon [if] sae-ka u-n-ta* 'If only spring comes, birds sing', *pom[spring]-to[also] w-ass-uni untongha-ca* 'Since i t is also the case that spring has come, let's take exercise'). Scope interactions among multiple focalizers (and negation) arise in a sentence. The focalizers *-man* 'only' and *-to* 'also' can be in a dual relation and t hey are intricately related with the CT marker *-NUN* semantically and pragmatically.

The term 'Contrastive Focus' is used in a confused way. Lambrecht (1994) refers to an 'old' (active) refer ent carrying a focus accent as a 'Contrastive Focus.' Thus, the following examples (24a, 25) are given:

(24) a. Pago [io]_{F.}

b. [nae-ka]_{F.} nae-l-kke.

I Nom pay will

'I'll pay.'

(25) a. Among John, Mary, and Tom, who is the oldest? [Tom]_F is the oldest. ---Kuno

b. Who baked the cake, you or your mother? -- [I]_F did. ---Lambrecht

c. After the roommate's utterance 'you-wa[CT] do cleaning, I-wa[CT] do cooking,'

I -ga do cooking, so you-wa[CT] do cleaning.' ---modified from Kuno

Those focused pronouns or nominals are said to have a limited number of alternatives in the context. This corresponds to what Kuno (1972) calls 'exhaustive-listing ga' and what I call Exclusive Focus. Exclusive Focus applies not only to the nominative case as in Kuno but also to any other cases. But there is no clear distinction between a specified and non-specified number of alternatives. There is no clear sense of contr ast involved comparable to contrast in Contrastive Topic. If asked 'Who made the hamburgers?' the focus

ed part in the answer can have either a specified or non-specified number f alternatives depending on the context. It is my basic contention that (Exclusive) Focus highlights a particular element from among the (evoked) members of the alternative set, shadowing other members at the moment of utterance. If a generi c NP in a generic statement is focused, its Nom(inative) marker is revived and specially stressed, e.g., fro m (16): [*mul -i*]_F *thumyongha -ta* 'It is water is that is transparent.' The sentence sounds echoic from the p revious context as a denial or can be an answer to the question 'What is transparent?' and we are not sure whether its alternatives are limited or not.

We usually consider Focus and Topic at the sentential level, even though Topic came to be understood to be connected to a previous question or discourse. People have not discussed a discourse Focus so far. If al l past sentences go into the context or presupposed propositions, then is the Focus in the last sentence the only Focus, as implied in Stalnaker (1974)? Or, more practically, what would be the most important, high lighted and conclusive Focus or set of coherent Focuses, as a newly asserted part? If we can set up a sche ma of extracting this, which sounds tougher than extracting a discourse Topic, then some automatic Topi c and Focus extractor for an extended text will be possible (cf. Hajicova and Sgall 1995).

4. TOPICALITY HIERARCHY AND EVENT/PROPOSITION CONTRAST

Topicality Hierarchy

The topicality hierarchy roughly corresponds to the NP accessibility (or a modified Thematic) hierarchy (Keenan & Comrie 1974), interwoven with word order. Generics are most topical, and Agent, Experiencer, and Theme, domain-restricted by a (presupposed) question, are next topical and spatio-temporal Location is less topical, when they are in Topic position. They easily form a Topic, with no contrast. Even in one S a CT-marked element closer to the V in the Nuclear Scope is more contrastive/focal than topical. Thus, i n (11), if we insert a (quantity) modifier like *manhi* 'a lot' just before the verb, it is OK, but if it precedes the Contrastive Topic *khong-UN* 'beans-CT,' then it becomes ungrammatical; the Contrastive Topic is tha t much topical and the specific information provided by the modifier is that much focal. Likewise, a CTmarked verb, too contrastive/focal, cannot become a Topic. Only strong NPs are 'scrambled' (de Hoop 19 92). The more topical, the more strong. An element both indefinite and nonspecific cannot be a Topic. Ind efinite Topics have anchoring/specificizing modifiers. Indefinite and specific Contrastive Topics abound i n English (the parenthesized sentence of (9)) and Korean ((10b)).

Event/Proposition Contrast

Even verbs and adjectives in Korean can get a CT interpretation by nominalizing them and attaching the

CT marker to those nominalized predicates (necessitating something like DO-support for verbal inflection as a consequence). Observe:

(26) Sue -ka Mary -rul mil -ki -NUN hae-ss-ta
 Nom Acc push Nominalizer CT do Pst Dec
 'Sue pushed Mary, but ---(she didn't hit her or fell her to the ground).'

A Contrastive Topic applied to a verb/adjective is **event-contrastive**, implicating the denial of an event/st ate higher or stronger than the given event/state in contrast on the triggered **scale** relevant in the discourse context. Similar effects occur in English, with B accent in predicates or VP preposing constructions (War d 1985). It is so focal that it cannot be scrambled to a VP-external position in Korean. In other words, it c annot become a typical Topic, as mentioned. A preposed VP in English cannot become one, either (analo gous to a nominalized CT VP in Korean, or simple emphasis). In a sentence, a CT-marked element closer to the verb in the Nuclear Scope is more contrastive/focal than topical. In the case of event-contrast, scala r implicature is unmistakably guaranteed and its subject and object remain identical in the implicated or f ollowing sentence. If the following clause or implicature has a different subject and predicate, the *-NUN*-marked sentence is **propostion-contrastive**.³

If the CT marker -*NUN* is attached to a manner adverb, then it also becomes **event-contrastive**, and its se ntence is interpreted in the same way as the sentence in which it is attached to the verb. Observe:

(27) Sue -ka Mary -rul seke-NUN mil -eoss-ta Nom Acc hard CT push Past Dec
'Sue pushed Mary hard, but ---(she didn't fell her to the ground).'
(28) Sue -ka Mary -rul seke mil -ki -NUN hae-ss -ta Nom Acc hard push Nominalizer CT do Past Dec
'Sue pushed Mary hard, but ---(she didn't fell her to the ground).'

Both sentences have scalar implicatures in the same way. A stronger event than 'push hard' on the scale, e.g., 'fell (to the ground)' is negated in conversational implicature. If the stronger had been intended, it co

³ See Lee 1973, which discussed the unuttered clause that shows conditionality, reservation, etc. This is for event/pro position-contrast possibilities.

uld have been uttered because of the quantity maxim. The CT scope in this case is up to the adverb. Howe ver, if its scope remains in the verb constituent 'push,' then only the stronger alternatives such as 'hit' can be negated in implicature, meaning 'but didn't hit her hard.' So, the adverbial modification remains unaff ected in the latter case. Though rarely, a scale can apply to the degree of manner, etc. of the modification only, not affecting the verb. Because of the scope behavior of the CT marker, the CT-marked adverbial m odifier *seke-NUN* can hardly scramble over the object 'Mary-rul (Acc)' in (27), but with out the CT mark er, the adverb *seke* can scramble over it. This effect may be obtained by some inversion in English. Exam ples of event/proposition contrast in English include a sentence in which a focal (emphatic) auxiliary appe ars such as: 'We DID receive your fax, but unfortunately it didn't come out right.' Aspects and modals als o can get CT-marking: [Aspect] *tali-ko-NUN iss-ta* '(He) is running, (but I am not sure whether he can *fin ish* the race)(Progressive and perfective (*finish*) are on the same scale); [Modal] *ka-to toe-ki-NUN ha-cim an kkok ka-ya ha-na*? 'I may go, but must I go?' (Permission and obligation (deontic) modals are on a sca le); [Tense] *cal ha-ki-NUN hae-ss-ciman/??cal hae-ss-ki-NUN ha-cima aphuro-ka muce-i-ya* '(You) DI D well but the future is a problem' (not easy to get a tense contrast in Korean---rather time adverbial is co ntrasted: *ceon-e* 'before'-*NUN cal hae-ss-ciman---* '--- did well BEFORE but---.' .

If an instrumental has the CT marker, then scalar contrasts in instrumental nominal, i.e., individual contra sts, occur (e.g., *mae-ro-NUN* 'with a rod-CT' ---> 'not with a (stronger) club/iron bar/---.' Here, the instrumental oblique case marker -*ro* is obligatory, follwed by the CT marker -*NUN*. Note, on the other hand, th at an instrumental NP (without the instrumental marker) cannot form a typical (thematic) Topic, e.g., cons ider the following contrast:

(29) a. appa -ka Mary-rul mae-ro -NUN ttaeri -eoss -ta daddy Nom Acc rod with CT beat Past Dec
b. * mae-NUN appa -ka Mary-rul ttaeri-eoss-ta rod Top daddy Nom Acc beat Past Dec
'This rod Daddy beat Mary.'

If the polarity of the assertion is negative in (26) (being '---*mil-ci-NUN anh-ass-ta* '--didn't push-CT--'), t hen some polarity-reversed implicature of weaker alternative events such as 'but touched her,' etc. occurs, if the CT scope is the verb itself, maintaining the same theme in the events. However, if the negative CT effect is associated with the focused object, then the object constituent is negated, with some other alterna tive in contrast being affirmatively implicated. Its consequence, then, is that it becomes equivalent to the negative object-CT sentence. Further, if the negative CT effect is associated with the subject, then the subject constituent is negated, with some other alternative in contrast affirmatively implicated. Floated CT m arkers, however, have different effects, as will be shown readily.

Cancellative Function and Proposition-CT Marker Floatability

The Contrastive Topic has the cancellative function, i.e., canceling expectations of various dimensions. T hat is why after a CT sentence, such a cancellative sentence as 'but --- [denial of a stronger alternative on scale]' explicitly or implicitly follows (Bell 1998). This is obvious in event-contrasts and less obvious in t he case of individual-contrasts because in the latter the stronger alternative is the Topic denotation in the previous question or discourse and the real contrast arises between the CT partition and the alternative par tition(s) in the originally intended Topic denotation. Even Contrastive Topics in different conjuncts in a *-k* o or 'and' conjunction (contrastiveness decreasing), there occurs cancellation of identical predicates (the c ancellative *-ciman* 'but' can be used here with the same truth conditions). Therefore, in CT conjuncts (eit her with *-ko* 'and' or *-ciman* 'but'), predicates cannot be identical, as follows:

(30) a. Joe -NUN ca -ko Sue -NUN nol -ass-ta.

CT sleep and Sue -CT play Past Dec

'Joe-CT slept and Sue-CT played.'

b. *Joe -NUN ca -ko Sue -NUN ca -ass-ta.

CT sleep and Sue -CT sleep Past Dec

*'Joe-CT slept and Sue-CT slept.'

A remarkable phenomenon about proposition-contrasts is that the CT-marker attached to the verb or adjec tive can float to the subject part of the sentence. Consider:

- (31) (?)motu -NUN o-ass -ciman amu-to naseo-ci anh -ass -ta all CT came but anyone volunteer not Past Dec'All came but no one volunteered.'
- (32) motu(-ka) o-ki-NUN haess -ciman amu-to naseo-ci anh -ass -ta all come CT did but anyone volunteer not Past Dec 'All came but no one volunteered.'

In (32), the CT marker is attached to the verb 'come,' and the sentence has the same interpretation as (31), in which the marker is attached to the subject. As in (32), if the CT marker is attached to the verb or any non-subject element, the subject tends to get the neutralized subject marker, rather than the *-NUN* marker. The cancellative function of the marker on the verb takes its scope over the whole proposition and some other proposition comes after the contrastive conjunction marker *-ciman* 'but.' Let us consider further exa mples, as follows:

(33) Yeonghi -NUN o -ass -ciman panki -l saram -i eops -eo CT come Past but welcome to person Nom not exist 'Yeonghi came but there is no one to welcome him.'

(34) pom -UN o -ass -ciman IMF hanpha -ro chup-ta spring CT come Past but cold wave due to cold'Even if spring is here, it is cold due to the IMF cold wave.'

In (33) or (34), the expectation associated with the first proposition is canceled by the second proposition. Both examples form proposition-contrasts and show CT marker floating to the subjects from the verbs; e ach example has distinct clauses in the contrastive conjunction. Suppose the second conjunct also has the *-NUN*-marked subject in (33) and (34), then the new sentences will be individual-contrastive, not event/pr oposition-contrastive. Further, suppose both examples only have the first conjunct, like 'Yeonghi-CT cam e' and 'Spring-CT came,' then the agentive 'Yeonghi-CT' tends to constitute an individual-contrast, wher eas the unaccusative (weather/season-related) VP-internal subject 'Spring-CT' tends to constitute an even t(/proposition)-contrast, not an individual-contrast. The subject and the verb together form an event VP an d they are hardly separable in the latter case. When floating occurs and the subject gets CT-marked, then i ts topicality increases and the event (/proposition)-contrast becomes more emphatic. If a whole clause is a ssigned Focus or CT/Topic, its effect gets diluted. Floating is for a stronger effect. In an event-contrastive, transitive sentence, the CT marker may move to its object, as follows:

(35) Joe-ka tol -UN cha-ass -ciman pal-UN tachi-ci anh -ass -ta Nom stone CT kick Past but foot CT hurt not Past Dec'Joe kicked the rock-CT but didn't hurt his foot-CT.'

In (35), floating occurred in both conjuncts from each verb (---*cha-ki-NUN hae-ss-ciman ---tachi-ci-NUN anh-ass-ta*) to its object. Therefore, an object-CT sentence is ambiguous between individual-contrast and event-contrast readings. In the individual-contrast reading, the following or implicated clause must have t he same verb. As already shown in (27) and (28) above, the CT marker on the verb in (28) floats to its ma nner adverb in (27). English also seems to show the phenomenon of CT B accent floating. Consider:

(36) $?*[[All]_B (of the students)]_T came.$

(37) $[[All]_B$ (of the students)]_T came but no one volunteered.

The CT B accent falls on the subject part in (37), where a proposition-contrast actually occurs. The same accent cannot fall on the subject of (36), an affirmative sentence, where a contrastive clause does not follo

w. 'All' cannot have any partitions in contrast and cannot constitute a Contrastive Topic, as discussed earl ier with a Korean example. In English, as an SVO language, the CT B accent should fall on the object, rat her than on the verb (see the translation of (35)).

5. DENOTATIONAL VS. METALINGUISTIC CONTRASTS

Contrasts treated so far are denotational, not metalinguistic. Therefore, a denotational equivalent to a Topi c or another constituent in an answer sentence cannot take a CT accent. Suppose I forgot whether the othe r party has only son or only daughter and asked him, "How is your daughter doing?" My friend's answer with the corrected Topic, if the friend is cooperative enough, cannot take the CT B accent: *"[My son]_B is doing fine" or *"[*nae* 'my' *atul* 'son'-*UN*]_{CT} *cal ha-ko iss eo* 'is doing fine."" It cannot be a Contrastive Topic; partitioning or contrast cannot occur. Only some correction lengthening can occur. In general, cha nge in expressions can freely occur as far as their denotational or even functional values are the same. The changed expression cannot take a CT marking in this case. On the other hand, metalinguistic contrasts by negation (Horn 1985) (and other logical operators such as conditional, disjunction and conjunction) are a little different. Consider:

- (38) a. We didn't see the hippopotamuses.
 - b. We saw the hippopotami. (not P; P)
- (39) a. She's not happy; she's ecstatic.
 - b. kunyeo -nun haengpokha-n keos-i ani-ra hwangholhae
 - she Top happy Comp-Nom Neg Cnj ecstatic
 - 'It is not the case that she is happy but she is ecstatic.'
 - c. (?)kunyeo -nun haengpokha-ci anh -ko hwangholhae
 - she Top happy Neg Cnj ecstatic
 - 'She is not happy but she is ecstatic.'

In (38), (a) and (b) constitute a contradiction extensionally but they are all right metalinguistically. If the negated utterance (a) is followed by an utterance like 'We saw rhinoceroses' (not P; Q), we get a denotati onal or descriptive reading, with no contradiction felt. That is why Horn (1985) argues for ambiguity: neg ation as the ordinary truth-functional operator and negation for the marked, extended metalinguistic use of the operator. The latter is pragmatically derived for Horn. Carston and Noh (1996), on the other hand, reg ards negation, including metalinguistic, as unambiguously truth-functional. They and van der Sandt (1991) are against Horn's alleged semantic ambiguity thesis. However, we cannot avoid some word-game-like fun or a slight sense of betrayal in standard cases of metalinguistic negation; negation has been applied at a different level from a denotational level. If we introduce a communication verb as in 'Mary *says* [hippo

potamuses] and John *says* [hippopotami],' the linguistic forms themselves become denotational objects in the conjuncts and the conjunction is applied truth-functionally at the usually expected denotational level. As soon as we change the verbs to *saw* in the same sentence, however, what they saw may be identical in a bizarre way, if the objects of the verbs are not used as mention (e.g., as the letters of the words) at a diff erent level. The conjunction operator must take both conjuncts at the same descriptive level or at the same non-descriptive, metarepresentational (metalinguistic/mention) level consistently. It cannot take one conj unct descriptively and the other non-descriptively at a mixed level. This level consistency principle also a pplies to other logical operators such as negation and disjunction. In the case of metalinguistic negation, b oth of the contrast pair propositions involve linguistic forms but not their denotational or descriptive cont ents. In this sense, it is distinct from Contrastive Topic, which has to do with denotational values.⁴

To see the distinction between metalinguistic negation and (negative) Contrastive Topic clearly, consider er the following impossibility of *-NUN* attachment to the metalinguistic item in (40). Consider further the contrast between the denotational scalar implicature or its expression in the (negative) Contrastive Topic example (41) and the impossibility of like implicature or expression in the non-topical (focal) example (4 2).

(40) ?*kunyeo -nun haengpokha-ci-NUN anh -ko hwangholhae she Top happy CT Neg Cnj ecstatic'She is not happy-CT but she is ecstatic.'

(41) a. Mary-nun namca -rul se myeong -UN cha -ci anh -ass -eo

Top man Acc 3 Cl CT kick not Past Dec

'Mary didn't kick three men-CT.'

b. tu myeong -ul / *ne myeong -ul cha -ass -eo

2 Cl Acc 4 Cl Acc kick Past Dec

'(She) kicked two/*four.'

(42) . a. Mary-nun namca -rul se myeong -ul cha -ci anh -ass -eo Top man Acc 3 Cl Acc kick not Past Dec
'Mary didn't kick three men-CT.'
b. tu myeong -ul / ne myeong -ul cha -ass -eo 2 Cl Acc 4 Cl Acc kick Past Dec

'(She) kicked two/four.'

In (42b), '(She) kicked four' is possible because (42a) can have the 'exactly/precisely' reading, which (41

⁴ McCawley's (1991) *contrastive negation* structure, 'not X (but) Y,' is rather syntactic and the contrast involved can

be either topical or focal denotationally and can also lend itself to metalinguistic uses.

a) cannot have.

The relevance-theoretic approach also acknowledges the role pragmatics plays in interpreting the metalin guistic or echoic use of negation: the negation operator is logical or (truth-conditional) semantic and the metalinguistic use is pragmatically inferred from context. However, if this approach purports to take an u nderspecification or underdeterminacy thesis, as it proclaims, which sounds attractive, its *truth* in 'truth-c onditional' must be dissociated from *denotational*, which seems a bizarre situation.

6. ALTERNATIVES

Rooth (1996) makes use of alternative semantics for focus. Focus introduces a set of alternatives with a variable x, but does not necessarily involve existential presupposition. He distinguishes intonational focu s from a cleft in this respect. The latter has existential presupposition, not the former. Consider Akmajia n's (1973) examples and their corresponding ones in Korean:

- (43) MITCHELL urged Nixon to appoint Carswell.
- (44) It is MITCHELL who urged Nixon to appoint Carswell.
- (45) [x urged Nixon to appoint Carswell]. [x = Mitchell]
- (46) MITCHELL-i[Nom] --- /*Mithell -UN[Top] --- (in the intended sense)
- (47) [Nixon -eke --- chokku -han kos -UN]_T MITCHELL -i -ta
 - Dative urged Comp Top is Dec
 - 'It is MITCHELL who urged -.'

Both the intonational focus sentence of (43) and the cleft sentence in (44) have an almost identical backgr ound like the open proposition in (39). Rooth, however, argues that an intonational focus sentence like (4 3) lacks existential presupposition 'someone urged---,' as evidenced when it is an answer to a yes-no ques tion like 'Did anyone urge Nixon to appoint Carswell?' An alternative proposition of the form in (45) doe s not have this presupposition, whereas (44) has. It must be noted that the corresponding intonational focu s NP in Korean shows a nominative marker, not a Topic marker, as in (46), and the presupposed part of th e cleft in (44) corresponds to a Topic clause missing its subject in it, in (47). Rooth argues that intonation al focus in English has a weak semantics of evoking alternatives, differently from a cleft, which has stren gthened semantics of existential presupposition and 'exhaustive listing.' What I want to make sure at this point is that the notion of '(evoking) alternatives' is distinct from that of 'contrast' we have treated.

The alternative semantics approach to focus is also based on the theory of question-answer dialogue ga me. If we ask a question, it can be continued or answered in a restricted range of possibilities, a set of sent ences, which Buering (1994) calls a 'topic' or T, our 'super-Topic,' since we have a super-question. This i s distinct from our typical (thematic) exhaustive sentential Topic and non-exhaustive sentence-internal Co ntrastive Topic. They are all topical in some common respect. The focus value of a sentence is derived fro m it as $[[Mary drank [coffee]_F]]^f$ = the set of propositions of the form "Mary drank y," or as $[[[Mary]_F]$ dr ank coffee]]^f = the set of propositions of the form "x drank coffee." The ordinary semantic value of a sent ence, on the other hand, is $[[Mary drank [coffee]_F]]^o$ = the proposition "Mary drank coffee." The alternati ve set, in a question-answer congruence, is ultimately determined by the semantics and/or pragmatics of q uestions, as Rooth admits. Focus is regarded to evoke this set in a presuppositional way. Let us consider h ow Buering tries to get an appropriate question-answer congruence incorporating the topic semantic value of a sentence. A set of propositions $[[s]]^f$ can be transformed into a proposition by *trivialization*, i.e., for ming its union $\cup [[s]]^f$. In the same token, the topic semantic value of a sentence can be represented as $[[s]]^f$ by sticking in the alternatives to our CT in the s [the woman]_{CT} wore [a suit]_F', for instance: 'the ma n wore [a suit]_F,' and 'the woman wore [a suit]_F ' for an answer to the question 'What did the couple wea r?' Assuming that there are only two elements in [[a suit]]^f, i.e., a suit and a dress, we can get the followin g set of propositions:

(48) {the man wore a suit, the woman wore a dress, the man wore a dress, the woman wore a suit}

Then, we have both CT and focus alternatives here as [[What did the couple wear?]]. We can have a simil ar set for [[Where did I find which examples?]] for (1) at the head of the paper. Buering, then, gives the fo llowing equation and the appropriate answer condition for an exhaustive answer:

(49) A sentence s can appropriately be uttered given a super-Topic T iff

- a. $\cup [[s]]^{tf} = \cup T$ and
- b. $[[s]]^{\circ}$ is an appropriate 'answer' to $[[s]]^{f}$.

A Contrastive Topic serves to narrow down the (super-)Topic originated by the original (super)question s o that an exhaustive answer can be provided. Given a question-answer sequence q a, the residual topic (C T) consists of those propositions which are in [[q]] but not in [[a]]^{*f*}. The latter is instantiated by {[the ma n]_{CT} wore a suit, [the man]_{CT} wore a dress}, and [[s]]^o by the ordinary semantic value of '[the woman]_{CT} wore [a suit]_F'. Therefore, uttering a CT sentence like this amounts to asserting that only the propositions in [[s=a]]^o out of [[s=a]]^{*f*} is true, and the CT sentence is expected to be continued with some residual topic (CT), which can be found in [[42]]=[[q]]. The CT-marked sentence '[the woman]_{CT} wore [a suit]_F' is iden tical with its non-CT-marked counterpart sentence in truth conditions, but it leads to a totally different stat e of discourse. This is exactly where semantics-pragmatics interface arises. If the denotational value of th e intended super-Topic in the super-question is identical with that of the Topic in the answer, then the To pic is not contrastive but is exhaustive from the beginning.

This alternatives approach makes our previous treatment of Contrastive Topic somewhat more explicit set -theoretically, but leaves quite a lot unexplained: the rise of implicature (to be continued with), accommo dation of what the super-question did not quite intend, and presuppositional subtleties related to the distin ctions between 'the couple' and the combination of 'the man' and 'the woman,' between 'both' and 'the t wo,' etc. In particular, no clear distinction is made in this approach between 'what' and the D-linked 'whi ch' in the super-question of question-answer sequence, in establishing related sets. Relevant sets are cruci ally dependent on the interactional meanings of linguistic expressions and contexts, contexts including the speaker's cognitive states.

7. HOW TO DO WITH GRAMMATICAL RELATIONS

To be highlighted as a Focus, a nominal expression must maintain its structural or oblique case marker on it. This was evidenced by (21), in which each focused nominal corresponding to its *wh*-word in (20) has i ts own case, nominative, accusative, or oblique. The Exclusive Focus in (43), where the subject variable i s substituted by a constant as in (45), is Nom-marked as in (46) and the presuppositional part [Restrictor] in (44) gets Top-marked in Korean as in (47). Nom and Acc case markers are mutually exclusive with the Top/CT marker in Korean, although the Top/CT marker can occur with oblique cases. Consider:

(50) [nuku -ka/*-NUN]_F Mary -rul mil -eoss -ni? who Nom Top Acc push Past Q
'Who pushed Mary?'
(51) [Sue -ka]_F but *[Sue -NUN] Nom Top
'Sue.'

However, in stressed (Exclusive) Focus environments as well as neutral, default environments such as em bedded clauses, structural and oblique case markers show up. Top/CT expressions as well as focusing deli miters (focalizers) in general are heavily presupposition/implicature-bound, whereas neutral and natural c ase-marked elements, whether focused or not, are free from such effects.

Consider the rough Korean counterparts of a sign in the London underground '*Dogs Must Be Carried*,' in itially discussed by Halliday (1970) and analyzed by Partee (1991):

(50) kae -rul an -ko tureo -ka -shi -o dog Acc embrace and enter go Hon Imp 'Please enter with dogs embraced.'

IMP (here (e), embrace dogs and enter at e) [modified from Partee (1991)]

(51) kae -NUN an -ko tureo -ka -shi -o

Top/CT

'Dogs, enter with them embraced.'

MUST/IMP (dog (x) & here (x), embrace x and enter) [cf. Partee (1991)]

Note that the 'dog' is Acc-marked in (50). Then, we may have to be worried. In (51), the dog is topical, th us conditional and we don't have to be worried. In English, the active version 'You must carry DOGS' m ay be similar to (50), with the normal grammatical relation of object in its position. Passivization is a devi ce of topicalization in this case in English and the topicalized passive subject reading is a common readin g, since CARRY is focused. This is different from 'Shoes must be worn,' where SHOES must be focused.

All the elements in an ordinary sentence may have a set of alternatives, in its weaker sense, in their choice s in paradigmatic relations, e.g. observe the Korean sentences:

(52) pi-ka[Nom] o-n -ta
'Rain is coming = it's raining'
(53) pi-NUN[CT] o-n-ta
'Rain-CT is coming.'

Sentence (52) as a whole is an information unit, in Nuclear Scope or VP; even if the Nom is replaced by a top marker, it is a Contrastive Topic, not a Topic, in contrast with 'snow,' or other events. A Contrastive Topic in the Restrictor part of the tripartite semantic structure may interact with some focal element, resul ting in: [[F]]T (e.g. (8)); a Contrastive Topic in Nuclear Scope: [[T]]F (e.g. (53)). The former arises in the Topic zone and the latter in the Focus zone.

We can now make a tentative generalization such that the ordinary truth-conditional semantic value or foc us semantic value of a proposition is based on structural and inherent grammatical relations, whereas cont rastive topicality gives rise to presupposition/implicature effects over and above grammatical relations.

8. CONCLUSION

We have tried to see the semantics/pragmatics interface with regard to the phenomenon of Contrastive To pic in Korean and English. We could explore some aspects of the fundamental nature of the phenomenon

by means of different theoretical viewpoints such as game theory of dialogues, discourse representation th eory, alternative semantics, relevance theory, prosodic theory, and so on. We cannot but admit that differe nt theories are in need for different aspects of the complex phenomenon.

For communication, we talk about something. It is based on our background common knowledge. That is how topics are possible. However, often we over-/under-assume the other party's knowledge and we nee d topic management. Focusing is to pay attention to some particular item in our expression because of our limited cognitive resources. Contrastive Topic involves both aspects in the semantics/pragmatics interfac e, probably more pragmatics-leaned, with presupposition/implicatue effects. We could see some special p rosodic features involved in the phenomenon in both languages. It cannot be independent of syntactic stru ctures, either. It is an enormous area of linguistics and more, awaiting everyone's future research.

REFERENCES

Bell, D. M. (1998) 'Cancellative Markers: A Core/Periphery Approach,' Ms., Submitted to *Pragmatics*.Buering, D. (1994) 'Topic,' in P. Bosch & R. van der Sandt (eds.) *Focus and Natural Language*

Processing Volume 2:271-280.

- Carlson, L. (1983) Dialogue Games: An Approach to Discourse Analysis, Reidel, Dordrecht.
- Carston, R. & Eun-ju Noh (1996) 'A Truth-Functional Account of Metalinguistic Negation, with Evidence from Korean,' *Language Sciences*, 18: 485-504.
- Cho, Eun (1997) 'Why, Contrastive Topic, and LF Movement,' Ms., Cornell U.
- Choi, Hye-Won (1996) *Optimizing Structure in Context: Scrambling and Information Structure*, Doctoral Dissertation, Stanford U.
- von Fintel, K. (1994) *Restrictions on Quantifier Domains*, Doctoral Dissertation. U. of Massachusetts, Amherst.
- Groenendijk, J. & M. Stokhoff (1984) *Studies on the Semantics of Questions and the Pragmatics of Answers*, Doctoral Dissertation, U. of Amsterdam.
- Gundel, J. (1994) 'On Different Kinds of Focus,' in P. Bosch & R. van der Sandt (eds.) *Focus and Natural Language Processing* Volume 1: 457-466.
- Halliday, M.A.K. (1970) A Course in Spoken English: Intonation, Oxford U. Press, Oxford.
- Hacicova E., P. Sgall, H. Skoumalova (1995) 'An Automatic Procedure for Topic-Focus Identification,' *Computational Lingustics* 21: 81-94.
- De Hoop, H. (1992) Case Configuration and NP Interpretation, Doctoral Dissertation, Groningen.
- Horn, L. (1985) 'Metalinguistic Negation and Pragmatic Ambiguity,' Language 61: 121-174.
- Jackendoff, R. (1972) Semantic Interpretation in Generative Grammar, MIT Press, Cambridge.

- Keenan, E. & B. Comrie (1974) 'NP Accessibility and Universal Grammar,' *Linguistic Inquiry* 8: 63:100.
- Kim, Alan Hyun-oak (1985) Grammar of Focus in Korean Syntax and its Implications,' Doctoral Dissertation. U. of Southern California.
- Krifka, M. (1991) 'A Compositional Semantics for Multiple Focus Constructions,' SALT I, Cornell U.
- Kuno, S. (1972) 'Functional Sentence Perspective: A Case Study from Japanese and English,' *Linguistic Inquiry* 3: 269-320.
- Lambrecht, K. (1994) Information Structure and Sentence Form, Cambridge U. Press.
- Lee, Chungmin (1973) Abstract Syntax and Korean with Reference to English, Thaehaksa, Seoul. ------ (1992) '(In-)Definiteness/(Non-)Specificity vs. Topic/Focus: with Special Reference to

Korean,' (in Korean) Journal of Korean Linguistics, 22:397-424.

- ----- (1996a) 'Generic Sentences Are Topic Constructions,' in T. Fretheim & J.K. Gundel (eds.) *Reference and Referent Accessibility*, John Benjamins, Amsterdam/Philadelphia.
- ----- (1996b) 'Focus/Contrast and Grammatical Relations
- Partee, B. H. (1991) 'Topic, Focus, and Quantification,' in S. Moore & A. Z. Wyner (eds.) *SALT* I, Cornell U.
- Rinehart, T. (1995) 'Interface Strategies,' OTS Working Papers, Utrecht U.
- Roberts, C. (1996) 'Information Structure in Discourse: Towards an Integrated Formal Theory of Pragmatics,' Ms., The Ohio State U.
- Rooth, M. (1996) 'Focus,' in S. Lappin (ed.) *The Handbook of Contemporary Semantic Theory*, Blackwell, London.
- Pierrhumbert, J. (1980) The Phonology and Phonetics of English Intonation, Doctoral Dissertation, MIT.
- Pierrehumbert, J. & J. Hirschberg (1990) 'The Meaning of Intonational Contours in the Interpretation of Discourse, in P. Cohen, J. Morgan , and M. Pollack (eds.) *Intentions in Communication*, MIT Press, Cambridge.
- van der Sandt, R. (1991) 'Denial,' CLS 27: The Parasession on Negation, 331-344.
- Schwarzschild, R. (1994) 'The Contrastiveness and Associated Foci,' Ms., Rutgers U.
- Stalnakar, R. (1974) 'Pragmatic Presuppositions,' A. Rogers et al (eds.) Proceed's of the Texas Conference on Performatives, Presuppositions and Implicatures, Center for Applied Linguistics, Arlington.
- Vallduvi, E. (1992) The Informational Component, Garlands Press, New York.
- Ward, G. (1985) The Semantics and Pragmatics of Preposing, Doctoral Dissertation, U. of Pennsylvania.
- Wee, Hae-Kyung (1997) 'Semantics and Pragmatics of Contrastive Topic in Korean and English,' Ms., Indiana U.