CONTRASTIVE TOPIC/FOCUS AND POLARITY IN DISCOURSE

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ABSTRACT.[1]   The information structure categories of Contrastive Topic and Contrastive Focus are examined to see their crucial roles in polarity and (conventional) implicature generation and implicature suspension and their respective correlatins with PA and SN conjunctions on one hand and descriptive (denotational) negation and metalinguistic negation on the other. The underlying notion of concessivity involved in both Contrastive Topic and Concessive and thereby derived scalarity are exemplified. Their role in quantifiers and quantifier positions on the Square of Opposition are also investigated. So far the role of information structure has not been duly entertained in the semantics and/or pragmatics of implicature and polarity or rather in the "border war" (Horn in this volume) between the two. Korean, English and some crosslinguistic data are employed to seek general principles.

0. INTRODUCTION

This paper explores how Contrastive Topic (CT) basically evokes polarity-reversed conventional but scalar implicatures in information structure and how it involves scalarity via concessivity and thus is related to negativity (and negative polarity) in an interesting way. CT, *-nun*-marked in Korean or with contrastive intonation L+H*LH% in English, is different from its non-CT correspondent, case-marked in Korean or with no contrastive intonation in English; CT always generates implicatures, while the non-CT-marked correspondent generates conversational scalar implicatures in certain contexts but not always. The controversy over global vs. local computation of implicatures may depend on how we view the general tendency of general inferences of generalized conversational implicatures associated with linguistic expressions becoming stereotyped and conventionalized in the linguistic system; conventional forms are tempted to be treated in the semantic, grammatical system, although we cannot ignore discourse-related, pragmatic aspects of the inferences and defeasibility involved. CT marking will be a good testing device. It also investigates how CT is distinct from Contrastive Focus (CF); we can see that CF is involved in metalinguistic negation, whereas CT is deeply involved in default implicatures of descriptive or denotational nature.

Topicality not only involves the aboutness of a referent for comment in topic-comment partition in a sentence but it also involves linking with some potential topical elements mentioned or assumed in the previous discourse (cf. Hetland 2003). Therefore, a topical constituent is not limited to a nominal category but ranges to a verbal and any kind of category. CF, on the other hand, is basically focal, although an alternative question involving a limited given set of alternatives is assumed to precede the utterance with CF in the previous discourse. Therefore, the analysis of CT and CF is naturally modelled to be based on a dialogue or discourse model of question and answer. This paper basically argues that CT responds to a

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conjunct or one scalar value of a previous/accommodated (conjunctive) question with a potential Topic (Lee 1999a), whereas CF follows or accommodates an alternative disjunctive question (Lee 2003a). This explains why CF is intuitively exhaustive and why CT conveys a denied stronger/higher predicate meaning. This distinction will help remove much confusion about the categories CT and CF in the field of information structure (e.g. contra Han 1998, Choi 1999 and others) and help understand how far semantics (of scalar entailments) works and from what point pragmatics (implicatures) intervenes. Recently much has been done on the phenomenon of CT, though with diversity or some confusion in terminology, in German (Buring 1997), in Korean (Lee 1999a) and in English (Steedman 2000). But the nature of CF has not been well explored and the two categories have not been clearly characterized in a question and answer dialogue model, although Carlson (1983) and Roberts (1996) make use of the model with respect to CT. The category of *kontrast* set by Vallduvi and Vilkuna (1998) include all sorts of focus-related phenomena including *wh*-words and CT, though in contrast with rheme. It may be quite general but is not conceptually revealing. This paper will use Korean and English data for arguments, but will utilize some other languages whenever necessary.

The notion of Topic has been fairly well characterized by Kuroda (1972), Kuno (1973), Lee (1973), Gundel (1974), Reinhart (1981) and others with various factors such as prominent position, definiteness (or specificity/partitivity), aboutness, and judgement types of categorical vs. thetic (Kuroda 1972). But still many Western linguists including Roberts (1996) are skeptical about the theoretical status of noncontrastive Topic and even those including Buring (2003) who work on CT exclude Topic from information structure categories. Buring's "s-topic," though basically changed to 'contrastive topic' recently after Lee (1999a) (Buring 2003), is more discourse-related than his discourse- or d-topic, which is a non-contrastive Topic. AI people's use of 'focus' or 'in focus' is applied to Topic and Gundel's (1999) recent somewhat misleading use of 'psychological focus' for Topic or 'in focus' for referent accessibility hierarchy (1993) seems to have been influenced by AI. The label of 'focus' has become fashionable. We cannot agree on Steedman's (2000) claim that a *wh*-word in a question is a 'theme.' Thus viewed, Topic may be a futile topic and Focus may be just a hocus pocus, although much progress in information structure is noticed. If we turn to CT and CF, the phenomena themselves are more complex and we can see more confusion: CT is often called CF by many syntacticians. We will try to see a clear distinction between the two in the flow of information in discourse along with the correspondence between meaning and prosody, particularly structurally different meanings associated with different prosodic features of the topic marker *-nun* in Korean. We can see that contextual clues on alternatives involved in CT interpretation have a psychological reality. We can also see how the conjunction distinction between PA and SN is strongly correlated with CT and CF, respectively. We will see how CT is strongly associated with polarity-reversal for denial in its unuttered part and how it interacts with overt negation, touching on its further interaction with the Concessive (CNC) focus particles *–to* 'even' for poalrity and *–man* 'only' for another dimesion of scalarity.

2. CONTRASTIVE (PREDICATE) TOPIC AND CONVENTIONAL SCALAR IMPLICATURES

2.1. *Topic Condition and Contrastive Topic*

A non-contrastive Topic, with the widest possible scope in meaning in a sentence, is based on (assumed) common ground and the rest of a sentence is typically "about" it (Reinhart 1981) and thus cannot have any focal H* tone involved cross-linguistically. It is typically generic,

inherently conditional and intensional (Lee 1996), as follows:

(1) inswayki-nun hankukin-i   palmyenghae-ss-ta
    printer –TOP Korean –NOM invent-PAST-DEC
    'The printer, a Korean invented it.'

A referential Topic is an instance of Topic in a special, closed-circuit world, typically mentioned in the previous discourse. The following is an example, when asked, "Where did Sue go?"

(2) ku ai –nun hakkyo-ey ka-ss-e
    the   -TOP school-to go-PAST-DEC
    'The child went to school.'

Because this noncontrastive Topic is directly linked to and is coreferential with its antecedent Sue across the sentence, the Topic phrase can be easily deleted in Korean, although at least a pronominal is needed in English. In (1), 'the printer' may not be deleted because it may be introduced for the first time and must be evoked from common ground world knowledge.
    A coherence relation between the Topic phrase and its complement is required as follows (Lee 2003c):

(3) **Coherence** condition for topical S: The Topic phrase in Spec, TopP must be coherently
    related to the complement of the Topic. This dependency relation based on the Topic
    marker requires coherent anaphoric (binding), conditional (based on causal/logical),
    possessive (alienable/inalienable), whole-part, set-member relationship, necessarily with
    the LARGER (in its abstract denotational sense, including scope) in the TopP preceding
    the smaller in the complement phrase (Lee 1989, 1994).

Extra-sentential (or 'dangling') Topics occur at times, based on coherence of causal or conditional relations between them and the rest of the utterances (e.g., *Coffee-nun cam-i an w-a* 'Coffee-Top sleep doesn't come' (see Lee 2003c).
    A Topic, non-focal, also involved in the head formation of relativization, and licensed largely by the assertive mood in the matrix sentence, cannot occur within relative and subordinate clauses, as in (4).

(4) Mary-nun   [Yumi-ka/*-nun   o-ki   cen-ey] ttena-ss-ta
        -TOP   -NOM/TOP come-NMLZ before-at leave-PAST-DEC
    'Mary left before Yumi came.'

However, Contrastive Topic can occur in relative and subordinate clauses, contra Jacobs (1997) and Krifka (1999) in German, but in line with Molnar (1998). In English, a subject but not an object in the relative clause can become a CT because of thematic hierarchy and prosody (Lee 2003). In contrast, Korean is far more flexible in allowing CT in the relative clause and subordination largely because it is morphologically marked. Typically it is definite, but even an indefinite NP can become a Topic, if it is modified by some familiarizing expression so that it can be anchored in the speech situation and accommodated by the hearer.
    After a Topic nominal with –*nun* (or a null Topic), another –*nun*-marked nominal constituent

becomes a CT if it is in the complement IP, with the relation smaller than the Topic in denotation. When we talk about elephants and about their noses in contrast with other head parts, assuming the hearer's query about the potential Topic of elephants' head parts, a CT of 'nose' is taken from a contextually given set of relevant and comparable contrastive alternatives such as {nose, ear, horn} in head (and neck) body parts. If the 'nose' nominal is not CT-marked, it is typically NOM-marked with no contrastive meaning/implicature. Paradigmatic choice in the whole linguistic system is much broader and is a different story. Consider:

(5) khokkiri-nun   kho-*nun*   kil-ta
    elephant-TOP   nose-CT   long-DEC
    'As for the elephant, its nose$_{CT}$ is long.'
    (Gnx [elephant'(x)][x's nose is long] $+>$ x's non-nose alternatives are not long)
    [+>implicates]

In spoken Korean, a high tone on the CT marker –*nun* is required for naturalness. In the initial position, –*nun* typically marks a noncontrastive Topic but can be ambiguous between Topic and CT if there is no intonation marked as in a written text. Consequently multi-CT in a sentence is possible, though hard to compute and not most natural. All different kinds of categories can be a CT: Not only those nominals in the above relation but object and dative nominals, PPs, various adverbials, and verbs/adjectives and propositions constitute CT, if marked by -*nun*.

2.2. *Contrastive (Predicate) Topic, List CTs and Kinds of Scales*

Now let us consider Contrastive Topic further. First, why is it called 'Contrastive Topic' rather than 'Contrastive Focus,' or 'TF' (Kadmon 2001)? Why is it claimed to be topical or thematic here? Consider:

(6) Q: What about Frank? Did he eat the beans and (did he eat) the peanuts?
    A: He ate the **beans** $_{L+H*LH\%}$.
    A': khong-UN $_{LH*(\%)}$/?*-ul   mek-ess-e
        beans –CT /?*ACC eat-PAST-DEC
        '(He) ate the beans$_{CT}$.' $+>$ 'But he didn't eat the peanuts.'

Contrastive Topics have perceptually and physically distinct pitch accents in various languages such as English (as in 'the **beans**$_{L+H*LH\%}$ (1A)) and Korean (as in 'khong-UN $_{LH*(\%)}$' (1A')). German shows a fall-rise hat accent. Somehow my consultants of French could hardly identify this distinct pitch in French, probably because it already has a sequence of rising pitches with phrasal boundaries, but recently Marandin et al (2002) reported "C accent" in French, which is functionally equivalent to B accent of CT, with a rising pitch accent on the first syllable, not the last syllable, of the CT constituent. I could also discern a CT accent in Spanish. This distinct pitch pattern drew linguists' attention to the phenomenon of CT in English (Bolinger 1961 and Jackendoff 1972) but not to non-contrastive Topic. Hetland (2003) noted striking similarities between English and Korean from Lee's (1999a) findings in CT and Hedberg (2002) reanalyzed her prosody and CT/Focus in spoken English on the basis of such findings and demonstrated a

parallellism between the two genetically, typologically and areally unrelated languages.[2]

First, there is a sharp difference between the Topic and CT markers in pitch and energy concentration. In (5), a dramatic difference in F_0 pitch height between the first Topic –*nun* and the second CT –*nun* is noticed. The CT -*nun* phrase may be described as LH*(%). There occurs a direct rise from L on the final syllable of the nominal or other lexical constituent (or nominalizer) to the CT marker –*nun*, a non-lexical function element, unlike in Indo-European languages (Lee 1999). This means that contrastive CT accent and contour in Korean and English is different from other focus accents. The marker -*nun* shows phrasal boundaries, those of Intonational Phrase (IntP=IP) or Accentual Phrase (AP).[3] Because of the phrase-final rise, CT has nothing to do with dephrasing effect witnessed in (Contrative) Focus elements, involving a high pitch on a pre-phrase-final element (cf. Jun 1993). CT –*nun* is also the longest in duration among different phrase final elements in the same position in a sentence.

An L+H* pitch accent followed by LH% is used to "convey that the accented item—and not some alternative related item—should be mutually believed," according to Pierrehumbert and Hirschberg (1990). They hint at topicality by 'mutual belief' in terms of the 'contrast' contour. The CT-marked element is linked to the previous potential Topic and that is why it belongs to the category of Topic rather than Focus in a broad definition. Denotationally, CT typically involves (unexpressed) relevant, comparable alternatives in our mind of the constituent members of the potential Topic (accommodated at times) in the previous context, and the choice from alternatives involves focality unlike in Topic but it is secondary.

Jackendoff's (1972) association of fall-rise 'B-accent' with 'topic' and of falling 'A-accent' with 'focus' is reasonable, although he does not have CT yet. A H* pitch accent is crosslinguistically required for Focus, typically followed by LL% and dephrasing or deaccenting.

List Topic –*nun*, one kind of CT, is far lower (as to be an L) than the typical CT –*nun* in pitch and can be prolonged with mid-H unlike CT –*nun*. It occurs when CT –*nun* sentences are conjoined and no unuttered part remains (Lee 1999b). It is complete with the closure of the potential Topic and simply shows a declension effect. Because it is complete, it does not generate any implicature. Normally, it does not involve concessivity and therefore not scalarity, either. List CTs are conjoined by a noncontrastive coordinate connective (-*ko* 'and') rather than by a concessive one –*ciman* 'but' in Korean and other langauges. Observe:

(7)   khun ai -nun   sa   haknyen-i-ko   cakun ai -nun   i
      big   child CT   4 grade-be-and   little child-CT   2
      haknyen-i-eyo [To a question: 'What grades are your kids in?']
      grade -be-Dec
      'The elder is in 4th grade and the little one is in 2nd grade.'

We can freely have unranked alternative instances of a type on a Hirschberg scale as an answer. Consider:

(8) A: Do you have any juice?

B: I have orange and grapefruit.

    +> But I don't have apple/pear/peach/etc. juice.

In most cases, B may think her answer would be sufficient because A uses a weak NPI in a weak nonveridical, though not monotone-decreasing, question context, that has a covert Concessive (*even*) in *any* with a begging or 'settle-for-less' effect (in Korean, ***amu juice-i-ra-to*** a weak NPI). Then, the given implicature may not occur except in a particular context. If it occurs, it must be a conversational implicature. But, if B knows that A is picky about juice then the conventional fall-rise contrastive intonation can be used to convey the given implicature and she assumes that A may not be happy with the kinds (quality, not quantity) of juice that B has. This situation is not unlike the closure of the potential Topic in the discourse, if we combine B's utterance with the '+> But –' part. This also belongs to a POSET relation. Another such relation holds between (9A) and (9 B). Via accommodation for an indirect but relevant answer, a scale can be set up: <orange juice, {beer, orange juice}>, with the two forming a supertype, i.e., a set of **drinks**, as a pool (sum) of choice. B's subject and object can be CT-marked in Korean. Consider:

    (9) A: Did everyone order beer?
        B: Somebody ordered orange juice. (Sevi 2005)

In (10), the question has a supertype 'Beatles' autographs' as a potential Topic and the answer is in CT. The CT can have either the autographic prestige ranking reading, as given, or the no ranking partition reading, of which the implicature must be 'but not others' autographs.' In either case, a POSET relation holds and a scale can be set up. Without CT marking, an easily cancellable conversational implicature is possible

    (10) A: Do you have Beatles' autographs? (adapted from van Rooy 2004)
        B: George Harrison's$_{CT}$.
                +> ¬John Lennon's (though ◇Ringo Star's)
            a. Autographic prestige ranking:
                <Star < Harrison < {Lennon, McCartny}>
            b. No ranking "Standard" partition: 4 Beatles -> 16 cells.

Thus viewed, there are scales of different types: (Horn's) entailment, ranking without entailment, and unranking (list).
    CT can occur on all phrases (argument and adjunct) of all different categories including adverbs in situ and in fronted positions with the *–nun* marker and high pitch. Observe:

    (11) a. Sue-ka   muncey-rul   wuahakey-**nun**/*-man phul-ess-ta[4]
             –NOM work-ACC   elegantly-CT   -only solve-PAST-DEC
           'Sue solved the problem elegantly$_{CT}$ (but not quickly).'
        b. *He solved the problem (at 2:00) **only** elegantly (and not both elegantly and quickly.)
          (Szabolcsi and Zwarts 1992)

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[4]In a strong challenge to the other speaker's negative comment, -*man* can be used in the meaning of 'with no other alternative way than *elegantly*; '*yes, elegantly* certainly/surely, why not?' (this kind of uses for –*man* has been discussed in the literature, though this **unique** manner issue has not been addressed).

The CT marker is a functional category in K and J. CT marking by intonation alone is possible in other languages. Turning to a CT of adverb, for the other party's question about how to get to a cetrtain place, (12) is negative and an affirmative proposition with a weaker value than 'well' in the scale is implicated, such as 'but I know just a little bit about it.' It cannot implicate 'I know nothing about it.' The speaker in this situation is willing to cooperate. Observe:

(12) cal   **-un**   moll-a
      well-CT   no-know-DEC
      '(I) don't know (it=how to get there) well$_{CT}$.'

Figure 1.   Adverb CT with High Pitch

The surface form *molla* in (12) is complex in meaning and the underlying structure of (12) must be as (13a):

(13) a. cal   al-ci   **-nun**   mot -hay
          well know-CI-CT   not -do-DEC
          '(I) don't know (it) well$_{CT}$.'   +> '(I) know (it) just a little bit.'
      b. ??cal-**un**   al-a   [cf1   cal al-ki-**nun**   hay]; [cf.2 Chae (1977)]
          well CT   know-DEC
          '(I) know (it) well$_{CT}$.'   '(I) don't know (it) very well'
      c. ?*maywu cal-**un**   al-a   cf. maywu cal al-ki- **nun**   hay .
          well CT   know-DEC
          '(I) know (it) very well$_{CT}$.'   ?+> '(I) don't know (it) extraordinarily well'

In (13a) the CT marker is associated with the focal constituent *cal* 'well,' as will be explained shortly, and the verb and negation become one word. Still negation has wide scope over the CT, triggering a weaker positive adverb implicature (from a negative scale <~very well, ~well, ~commonly, ~a little>). In (13b), -*nun* is readily associated with the adverb *cal* 'well' and may implicate '(I) don't know (it) very well.' But it may rather be associated with the entire predicate first, as in cf1, to implicate (*cal*) *selmyeng-ul mot hay* 'cannot explain it (well).' In (13c), because the degree modification is almost quantificationally maximal or universal, it is not easy to find a higher modifier to deny, although a higher predicate alternative may be found to be denied, such

as 'but she cannot apply it to practice.' The parallel holds in English.

2.3. *Chierchia (2004) vs. Horn (2005) on Negative Scales: CT Required*
This is sharply distinguished from an utterance without CT-marking on the relevant constituent:

   (14) cal   molla
          well don't know
          'I don't know it well.'

Utterance (14), as opposed to (13), can be used when <u>the speaker knows (almost) nothing about it</u>. The speaker may not be willing to cooperate with this utterance. The same thing happens in English, too. With fall-rise contrastive contour, (15a) implicates some positive value. Compare:

   (15) a. I don't know her \ well/. +> But I know her a little.
          b. I don't know her well. +> I know a little or nothing about her.
   (16) a. I don't have \ many/ matches left. +> But I have just a few matches left.
          b. I don't have many matches left. +> But I have just a few (or no) matches left.

Chierchia's (2004) claim that implicatures of negative scales are "somewhat weaker and flimsier than their positive counterparts" and are "indirect scalar implicatures" does not consider the kind of situation where CT occurs overtly as in (15a)/(16a) or covertly. The counterpart of the CT-marked quantifier in (16a) in Korean is *manh-ci-**nun*** with the CT marker. When there is no CT marking with intonation or marker involved, implicatures of negative scales can be logically any positive value including near-null or null (though null is negative, it can be included due to vagueness or granularity) below the given value and can give the impression of 'weaker and flimsier.'   Chierchia's account is based on one side of the phenomenon and totally lacks the idea of CT, although he greatly relies on conventionalized aspects of scalar implicatures in his effort to incorporate them into the computational system of grammar. Hence, Horn's (2005) disagreement on the asymmetry between negative and positive is understandable. However, Horn does not make use of CT either. If CT is involved, it becomes conventional and you cannot avoid positive implicatures of a lower but non-null value in the scale, denial of still a stronger value in the reversed scale <~all, ~many, no(ne)(=~one/some)>, as opposed to <one/some, many, all>. Null does not count as a possible positive contrasted value when CT comes in. As indicated, negative sentences tend to be topical with unmarked intonation. Horn's (this volume) attack on Chierchia's (2004) distinction between 'direct' and 'indirect' scalar implicatures is reasonable. There is one single principle of up-denial implicatures; a stronger value on a negative scale, i.e., a negated weaker value, is denied to yield a positive weaker value in scale reversal in negative sentences, with nothing indirect. If a positive scale with CT basis is taken into account, implicatures from negative and positive are systematic.

2.4. *Negative Utterances Presuppositional or More Topical*
Negative sentences are normally discourse-bound and show asymmetry with their corresponding positive sentences, presupposing the latter but not vice versa (Horn 1989). I would further say that negative sentences are typically contrastively or concessively topical and that is why negative sentences with intonationally unmarked quantifiers like (17a) and (16b) evoke implicatures of the same content in general as those negative sentences with CT intonation like

(19a) and (16a). The speaker affirms a scalar value to establish an upper bound on some scale and denies a scalar value to establish a lower bound. This is reduced to the same principle of inducing an implicature denying a stronger/higher value on a scale because 'negatively scalar' (Horn 1989) elements have a reversed scale (Fauconnier 1975) from 'positively scalar' ones (see also Lee 2000), as shown in <1, 2, 3> vs. <～3, ～2, ～1>.   Consequently, in denying scalar values in [Vi (true)------Vj(Denied)-------Vk], the denial of Vj will implicate that lower values in Vi are true. Horn (1972) earlier claimed that (17a) uttered with 'unmarked' intonation (speakers report that the negative is accented) will license (17b) [*But* added], as cited by Hirschberg (1991). Observe:

(17) a. I don't have three friends.
　　　b. But I have fewer than three (or no) friends.
(18) a. I don't have many friends.
　　　b. But I have just a few (some) friends.
(19) a. I don't have ＼ three／ friends.
　　　b. But I have fewer than three friends.

Hirschberg factually disputes a bit with Horn and Horn himself retreated on cardinals for non-implicating 'exactly' readings in special contexts such as 'mathematical, collective, and elliptical' later (Horn 1992, Horn this volume), admitting a significant difference between cardinals and "inexact" scalar values, particularly in view of current psycholinguistic support. But Horn's initial intuition and Gazdar's (1979) as well on negated cardinals as in (17a) with 'unmarked' intonation seems to have been plausible and (17b) is an unmarked default or 'prominent' reading. Other "inexact" scalar values such as quantifiers like *some* and *many*, modals like *possible*, connectives like *or* and (degree) predicates like *warm* are scalarly well-behaved, as in (16) and (18), with no controversy. Now observe (19a) with fall-rise intonation. It implicates (19b), although Hirschberg (1991) claims that even with fall-rise on *three* ((19b)) one can get "an upper- or a lower-bound reading." However, people have hard time imagining a situation that suits an upper-bound reading. (16a) corresponds to (20a) in Korean and (18a) with fall-rise CT intonation corresponds to (21), with the Korean counterparts invoking roughly the same implicature of (20b). With non-cardinal quantifying DETs such as *many* in (18) and *manh-* 'many/much' in negative sentences can also implicate weaker positive quantifying DETs down to zero both in English and Korean. Chierchia's observation on this in English may be correct but not entirely because the fact holds only when they have unmarked (no CT) intonation. But those with CT intonation in English and CT marker in Korean on negative quantifiers cannot lead to a nil quantifying implicature situation at all. Compare:

(20) a. na –nun sengnyang-i manh-i nam-ci anh-ass-ta
　　　　'I don't have many matches left.'
　　　b. +> haciman na –nun sengnyang-i yakkan nam-a iss-ta (maybe 'none')
　　　　　'But I have a few matches left.'
(21) na –nun sengnyang-i manh-i-**nun** nam-ci anh-ass-ta
(22) = (16a) ≒ I don't have ＼　many／ matches left. (no 'none' implicature)

However, when (17a) is uttered with stress on three with focus, as in (23a), it will license (23b) (Horn 1972). When cardinals are focused, they are interpreted in the 'exactly' meaning (Wee

2005) and tend to 'block' an up-denying implicature, co-occurring with an up-affirming clause. They turn out to be 'metalinguistic' in nature. They sit in a CF frame. Observe:

(23) a. I don't have THREE friends.
    b. I have more than three friends.

In Korean, stressed focalized cardinals must get case markers attached. Then more attention is given to the exhaustive or 'exactly' interpretation but speakers are rarely conscious of denial of a higher value as implicature, unlike in a CT context. This is true particularly when they constitute a predicate. Normally affirmative sentences with case markers attached to scalar quantifier expressions tend to be interpreted in the 'exactly' meaning in Korean, giving new information.

2.5. *Contrastive Predicate Topic Revisited*
CT is not limited to a nominal type; it is also applied to a property (predicate) type:

(24) She $\backslash$ arrived/$_{CT}$. +> ¬She went on the stage
(25) She $\backslash$ passed/$_{CT}$ +> ¬She aced the exam. (Cf. She passed$_f$(Rooth's (1996))

The question whether she went on the stage may be a potential topic in the previous discourse. (24) evokes a scale of *<arrive, go on the stage>* in context and (25) readily evokes *<pass, ace the exam>*. If we consider a specific context in which 'go on the stage' requires 'arrive' as a precondition, the former entails the latter in that context and we can call it a pragmatic entailment. The latter scale may be semantic; 'ace the exam' entails 'pass the exam.' (Conventional) scalar implicatures are invoked by both pragmatic and semantic entailments. On the predicate part we can also have such a CT:

(26) All the abstracts $\backslash$ did/$_{CT}$ get accepted. +> But there may be withdrawals.

CT-marking on the aux (by *do*-support) in English or on a predicate ending in Korean may function as a verum CT in the sense that polarity of affirmative and negative (yes/no) is contrasted, as in (26), evoking a polarity-reversed alternative proposition (rather than predicate) as an implicature (negative here originally). Rooth's (1996) simple alternatives by F-marking (and conversational implicature) cannot explain why fall-rise requires the relevant type of scalar implicatures (see Lee (2000)). Let us see how CT is equivalent to concessive construction (its contraposition is impossible, unlike in a regular conditional). Even if we make concession by going down the scale to a predicate of lower value adversely by attaching the CNC marker 'even', still it is not the case. Then, the higher values are also denied. Temporal, causal, logical and any other ranking sequences of processes/events can form scales of all predicates in general to create CTs such as <touch hands, (hug,) kiss>. Consider:

(27) son-ul   manci-ki   **-nun** hay-ss-e
`   hand-ACC   touch-NMR-CT   do-PAST-DEC
    'I $\backslash$ touched her hands/.' (NMR = NOMINALIZER)
   +> haciman khissu-nun ha-ci anh-ass-e
     'But I didn't kiss her.'
(28) a. son-ul manci-ki-nun hay-ss-e-to   khissu-nun ha-ci anh-ass-e

'Although I touched (her) hands I didn't kiss her.'
    b. te-o sawa-ri-wa shita keredo/*-mo   kisu-wa shi-na-katta   [Japanese]
                           (cf. toshi-temo 'even if')

In contrast, adversely going down to a lower predicate with the CNC marker *–to* or 'even' creates an NPI. Observe:

    (29) son-ul manci-ci-**to**   mot hay-ss-e
         hand-ACC touch-CI-CNC_not.able did
         'I didn't even touch her hands.'
    (30) A: Did you read the book?
         B: I didn't even open it!

The CT marker *–nun* looks upward to establish an upper bound and generates an up-denial implicature, whereas the downward CNC marker *–to* with a weaker predicate becomes an NPI, requiring negative, other monotone decreasing or uncertainty contexts. This principle holds for all predicates in all languages. We will further discuss the relation between *–nun* and *–to* shortly.

2.6. *Scope: Negation Wide vs. CT Narrow*

CT has narrow-scope over other scope-bearers, although Buring (1997) disagrees. I claim that the narrow-scope CT is scalar, as in (31). If a CT is fronted to the initial position of a sentence it tends to get topicality effect with wide scope unlike when *in situ*.

    (31) euysa-euy sam-pwun-euy i-**nun** hayko-ha-ci anh-ass-ta.
         doctor-of   3 –division-of 2-CT   fire not-PAST-DEC
         '(The Government) did not fire two thirds of the doctors.'

In (31), the CT narrow-scope non-partition scalar reading ($\neg$ 2/3) [up to 2/3] is obtained, with an assumed null or realized Topic in the initial position. We can get a CT (partition) wide-scope reading (2/3 $\neg$), if we have the CT constituent before the subject such as 'the Government.' It tends to have topicality effect, with a low tone on *–nun* or *–wa*. CT basically takes narrow-scope over scope-bearing elements and reveals scalarity.

    A REASON adjunct clause is another scope bearer and it interacts with negation in various languages. Many linguists say (32) is ambiguous but (a) REASON > NEG if the REASON is focused and the negation has no CT marker preceding and no high tone, (b) if *–ci* gets a compensatory high tone, REASON < NEG, and (c) if the pre-negation part is focused an MN reading occurs. Consider:

    (32)   pwuca –yese   kyelhon-ha-ci   anh   -ass-e
           rich-be-because   marry   -CI   not.do –PAST-DEC
           a. '(He) didn't marry (her) because she is rich.'   REASON > NEG (no high)
           b. '(He) married (her) not because she is rich.'   REASON < NEG (high tone)
           c. '(He) didn't marry (her) because she is rich; he married her because…' MN

Without any intonation marking, the sentence may be ambiguous. With intonation marking, it is

not. If a Contrastive Predicate Topic marker *–nun* is attached to *–ci* to make it *–ci-**nun***, (32) gets the REASON < NEG reading, as in (b), just like when a high tone lies on *–ci*. If the CT marker is deleted, its **compensatory high tone** remains and its interpretation is the same as when it has the CT marker with a high tone. Because CT is topical and focal, it becomes focally associated with the reason clause and the reason comes to have the CT effect. The interpretation of the CT-marked S is [I married her not because she is rich$_{CT}$]. Then, its implicature may be: [I married her because she is nice], 'nice' being weaker than 'rich' in the pragmatic scale. There is an exact correlation between intonation and interpretation, and intonation may be claimed to be compositional. If a heavy stress lies on *pwuca –yese* 'because she is rich' and a pause follows and then the intonation goes down for the rest of the sentence, its reading is (a). Still another reading is a CF situation where the MN (the entire pre-negation) part is there but the positive alternative is assumed from the discourse (e.g., 'He married her not because she is rich but because (say, she is pretty),' *Puca-i-ese-ka ani-i-ra yepp-ese kyelhon-hay-ss-ta*). All the scope relations involving quantifier–negation and REASON-negation depend on whether the sentences in question have inherently Contrastive Predicate Topic, related to the previous discourse context. If that is the case, the sentences must take the wide-scope negation, with the Contrastive Predicate Topic focally associated with the relevant quantifiers/REASON clause or arguments/adjuncts. Otherwise, the quantifier or REASON is focused (for (a)) for its wide scope over negation or it has CF to be metalinguistically negated and the other alternative is asserted or assumed, as here. Thus viewed, scope ambiguity is not present. Constituent negation also involves Contrastive Predicate Topic, with the latter being focally associated with the relevant constituent; even constituent CTs without negation may come from predicate part.

2.7. *The Psychological Reality of CT*
If the use of a CT (object) in an embedded sentence matched the previous context with a set of alternatives, the reading time for the embedded verb part was found to be significantly shorter than that when it did not match the previous context, i.e., when the context had no set of alternatives, in an experiment conducted by Kim and Yoon (2004) in support of my claims on CT. Context 1: While three students C, I, and Y were having a discussion, their professor entered the class. Context 2: While two students C and Y were having a discussion, their professor entered the class. The two conditions (a) [matching the context] and (b) [mismatching the context] were realized as follows:

a. 'The professor' [$_{IP}$ C-NOM – Y-**nun** – 'trickily' – 'harassed'] 'thought'
      704(ms)   639   847   774   **935**   814
b. 'The professor' [$_{IP}$ C-NOM – Y-**nun** – 'trickily' – 'harrassed'] 'thought'
      711   600   846   735   **1029**   838

Table 1: Reading times for phrases for CT match/mismatch sentences

It was also neurologically reported in an ERP brain wave study (Ito and Garnsey 2004) that a Focus mismatch for a *wh-* question 'Who lost the key?' with a Focus-less *Masayo-ga* instead of a Focused *MSAYO-ga* in Japanese caused remarkable negativity effect (Lee, to appear).

3. Contrastive Topic Goes with *PA* 'but' and Contrastive Focus with *SN* 'but'

3.1. *CT-PA Correlation*

Some linguists have found a very interesting distinction between PA and SN adversative conjunctive connectives in various languages such as Spanish, German and Hebrew, so far known, although a few exceptional languages such as English and French do not show the distinction in form (Anscrombre and Ducrot 1997, Koenig and Benndorf 1998, Schwenter 2002). However, so far people failed to indicate how Contrastive Topic (CT) is related to PA and Contrastive Focus to SN. Consider the CT~PA correlation first:

(33) a. I am not ecstatic, *but* I am happy. [pero, aber = PA]
    b. I am not ecstatic $_{L+H*LH\%}$. +> '*but* I am happy.'
(34) a. na –nun hwangholha-ci-**nun** anh-*ciman* hayngpokhay.
        I –TOP ecstatic   -CI-CT not-but   happy
    b. na –nun hwangholha-ci-**nun** anh-a. +> '*haciman* hayngpokhay.'
        I –TOP ecstatic   -CI-CT not-but   happy

In (33), a scale of <happy, ecstatic> (*ecstatic* entailing *happy*) is triggered by the contrastive topichood of the predicate of the first conjunct. The predicate is linked to a potential Topic in the previous discourse. Prosodically, a CT utterance such as (33b) constitutes an Int(onational)P, just as in Korean, e.g., in *ney irum-UN?* 'Your name?' (Focus ellipsis), whereas a CF involved in metalinguistic negation is typically an A(ccentual)P.   The scale is reversed by negation, with *not ecstatic* being weaker than *not happy*, i.e., <¬ecstatic, ¬happy>. However, *happy* and *unhappy* cannot be on the same scale; the former is positive and the latter is negative. A polarity-mixed scale is a disaster; strength (or highness) directionality is not kept. The first conjunct, with the Contrastive Predicate Topic, then, is contrasted with the second conjunct by means of the PA *but*. The first conjunct generates, as a potential scalar implicature, the denial of a stronger element *not happy* in the scale, resulting in *happy* after the double negation ¬ ¬ *happy*. But the potential implicature part is explicitly expressed as a second conjunct *but I am happy*. If the first conjunct alone is uttered, as in (33b), the potential implicature becomes a real implicature. Here the different degrees of *happy, ecstatic*, with negation, must be 'denotational' (Lee 1999a) or 'descriptive' (Horn 1989). In that interpretation, if *ecstatic* and *happy* are replaced by each other in (33a), the result is bad:

(35) **I am not happy, but*$_{PA}$ I am ecstatic.* (With CT-intonation in particular)

This happens with all other PA conjunctions in different languages.What happens if there is no particular CT marking by intonation or morphological marker on the predicate of the first conjunct or a simple sentence in (33a, 33b, 34a, 34b) and its equivalents in other languages (36-41)? Levinson would suggest a *generalized conversational implicature* (GCI), here *scalar*, as a default interpretation. However, if a simple affirmative semtence with a scalar term is uttered, people do not seem to pay any special attention to its scalar implicature, although they accept the 'exact' interpretation by default. A simple negative sentence even with no CT marking tends to be more topical than its affirmative counterpart because a negative sentence occurs to deny given information. In Hebrew, a particularly strong stress (I assume it is contrastively topical) is required on the predicate, as in (37b), to get the relevant implicature, according to Hazout and Dascal (p.c.). In other words, CT marking by intonation/stress or markers is required to convey its conventional scalar implicature. Therefore, if conventional CT marking occurs but the context fails to support the required relevant polarity and alternatives, the utterance must be infelicitously

true even if it is true. Its truth cannot be innocuous. The pure conjunction *and* (and its equivalents in other languages) and the contrastive conjunction *but* (and its equivalents in other languages) are truth-conditionally identical in traditional truth-conditional semantics but this level alone cannot capture the real distinctions between the two.

The Korean counterpart (34a) well demonstrates that the predicate is a Contrastive Topic with the CT marker *–nun* and that CT requires the PA conjunction *–ciman* (or S-initial dialogal *haciman/kurechiman*). At times, another connective *-nuntey* may be used, though not typical for PA, contra H. Lee (2004), to show 'telling-my-side' or what the speaker found out as circumstantial and evidential ground to be shared with the hearer in the first conjunct to express his inference in the second conjunct. Or it is used without the second conjunct so that the hearer can infer the speaker's intention (cf. Park 1999). The predicate of the second conjunct can also take the CT marker, as in *hayngpokha-ki-nun hay* '(I am) happy$_{CT}$ ' instead of *hayngpokhay* '(I am) happy.' (Alternatively the second conjunct alone may take the CT marker or both conjuncts may lack it to be contextually supported.) Still alternatively, without any explicit PA connective, a CT-marked sentence can be followed by its contrasted sentence of denial of stronger element in juxtaposition (as in *Sey myeng –un ani-i-ya. Twu myeng-i-ya/*Ney myeng-i-ya* [three-CL-CT not-be-DEC. two-CL-be-DEC/four-CL-be-DEC]'(It) is not three-CT. (It) is two/*four' (see (46) below and Choi 2004). One crucial characteristics of CT, followed by a PA, is that its sentence is a concessive admission/compliance. Scalarity follows from concessivity. Thus, the first conjunct of (33a) can be paraphrased as 'although/even though/if I am not ecstatic.' Therefore, it can be called 'concessive (cf. Horn 1989) contrast,' in contrast with juxtaposing contrast. On the other hand, SN conjunctions of metalinguistic negation/correction to be discussed shortly lack this kind of concession.

Japanese also shows the distinction of PA *–ga* (or S-initial dialogal *shikashi/datte*) and SN *naku* (negation incorporated as in Korean) (A. Ikeya p.c.). In colloquial Dutch, the same *maar* is used for both PA and SN, as *but* and *mais* in French. But in formal Dutch, the SN 'but' is *echter*. Let us further observe crosslinguistic data below:

(36) Ich bin nicht in Extase, *aber* glücklich. (German: U. Sauerland p.c.)
     'I am not in ecstasy, but (I am) happy.'
(37) a. ani lo lilhav *aval* ani samex   (Hebrew: I. Hazout, p.c.)
         I not ecstatic but I happy   'I am not ecstatic but I am happy.'
     b. ani lo lilhav.   'I am not ecstatic.'
(38) Ni-sem ekstatičen, sem *pa* srečen   (Slovenian: I. Zagar p.c.)
     not-I-am ecstatic I-am but happy
(39) a. Mai   dep   **thi**   khong dep (*nhung* de   nhin) (Viet: Thu Ba Nguyen p.c.)
         Mai   beautiful CT not beautiful (but easy   look)
         'Mai is not beautiful, but she looks all right.'
     b. *Mai thi   khong de   nhin nhung dep   [impossible]
         Mai CT not   easy look   but   beautiful
         'Mai does not look all right but beautiful.'
(40) Ta lao **shi** lao, *bu guo* shenti hen jiankang
     he old CT old   but   body very healthy
     'He is old but he is very healthy.'
(41) Ol khyz ush yer bal-ny tasta-gan-men torteu-in tasta-mady (Kazakh)   .
       the woman 3 that guy-ACC dump-PAST-but 4 –ACC dump-PAST-NEG

'She dumped three guys but she didn't dump four guys.'

In (36), *aber* is required and *sondern* is not permitted except in the case where there was a previous claim that I was ecstatic and that part of expression *in Extase* is negated (metalinguistically) for correction. All the above cross linguistic facts show that the PA conjunction is motivated by the concessive nature of the CT in the first conjunct and because of the concessiveness of the first conjunct scalarity arises with a stronger alternative element denied in the second conjunct. A weaker admitted and a stronger denied (by double negation if a first conjunct is negatively uttered), by which the speaker's argumentative direction/goal is achieved. Thus, the explicitly uttered second conjunct or a scalarly implicated identical proposition generated by CT has greater argumentative force. Naturally, if the first conjunct is affirmative, concessively admitting the previous mention (in a question) of it, then a higher stronger predicate is denied with PA, as follows:

(42) a. I am happy, but I am not ecstatic.
b. I embraced her, but I didn't kiss her.
c. *I kissed her, but I didn't touch her.

The scale mobilized is basically semantic with quantifiers, numeral indefinites and predicates (including modals, etc) but a particularized context can intervene for an argumentative goal-oriented pragmatic scale with short-circuit pragmatic entailments (semantically, *kiss -/-> embrace; kiss --> touch*). The wide scope denotational negation (over a scalar CT-marked element) (with the nature of external negation) is necessarily scalar, whereas the metalinguistic negation we will see now is not. The kinds of propositions explicitly given after the PA conjunction seem to be more flexible than those of corresponding implicatures that are invoked by the CT utterances. An S-initial discoursal PA marker in Korean is *kurechiman* 'But.'

A Q-implicature or its expression easily occurs with a CT or CT-related PA pattern. Consider.

(43) a. She is a Republican but is honest.
b. She is not tall but a good basketball player.
c. (A) The man who is drinking martini is my uncle.
(B) Yes, you are right (*or* he is) but he is drinking water.
d. (A) mwun com tat-e 'Close the door.'
(B) mwun –un tat-kess-ciman (-nuntey) pan-mal-un samka-cwusipsio
'I will, but don't use the half-speech.'

As in (43) generic entailments (Koenig and Benndorf 1998) of common belief, presupposition or speech act pre-conditions of manner, etc. evoked by the first conjunct or previous discourse are, I would claim, scalarly higher in a sense and naturally denied by the second conjunct or the response utterance after PA. Therefore, the same principle of denial of a stronger/higher element applies to these cases as well as quantificationally scalar elements of numerals, quantifiers, predicates, and scalar nominals. An R-principle-based implicature candidate, however, does not normally appear as an explicit expression as it is. If it has to appear it should be conjoined to the given utterance with 'and.' On the other hand, it can also be explicitly denied as a stronger scalar alternative in the second conjunct after PA (e.g. *pen han kay –rul ilh-e peri-ess-nun-tey/-ciman nay kes-un ani-iya* 'I lost a pen but it is not mine'; my pen->a pen; *She got pregnant and got*

married but not in that order). In other words, R-inference-based implicatures can be fed into the PA pattern by denial of them. Thus viewed, all the potential Q- or scalar implicatures plus pre-conditional propositions of sentences can explicitly appear in the second conjunct of a PA conjunction by the same scalar principle of denial of a stronger element. In like manner, even potential R-implicatures can be input to the second conjunct of a PA conjunction by the same denial of a stronger element principle. The concessivity of CT underlies this scalar principle.   .

Interestingly enough, the conjunction marker *–ko* can be immediately followed by the CT marker (44a) or CNC marker (44b), to be continued by negative assertions:

(44) a. caknyen sel nal cangkeri cenhwa-rul ha-ko-**nun**   yenlak-i eps-ta
          last year New Year' Day long distance call-ACC-do-and-CT contact-NOM no-DEC
          '(He) made a long distance call on the New Year's Day last year and-CT there has been no contact.'
      b. ku i-nun nam-uy tari-rul pwuncile noh-ko-**to** chaykim-ul cici anh-nun-ta
          that person-TOP other's leg-ACC break put-and-CONC responsinility bear not
          'He broke other's leg and-CNC does not bear any responsibility for that.'

The CT marker attached to *–ko* 'and' in (44a) establishes the proposition in the first conjunct as a concessively past given member in the common ground between the interlocutors and some relevant but contrasted, often negative, proposition follows. In (44b), we go down the scale of alternatives adversely to the first proposition of perfective event and still it is not the expected case in the second conjunct (by default, if (-conditional) the first event occurs, one is responsible for it). Without *–ko*, there occurs an irrealis (conditional) concessive meaning.

When a potential conjunctive Topic with a single predicate in a question such as 'Do robins and penguins both fly?' is closed in the answer by a split list CT construction such as 'Robins fly but penguins don't', the CT that take the given predicate must be the first conjunct of PA, not the one that denies it such as ?*'Penguins don't fly but robins do.' This shows that CT and PA go together in concessive admission of the given in the previous context. Therefore, if the same question is in the negative, the latter answer is adequate but not the former (cf. Kawamura 2002).

It is also interesting to learn that a scalar Q-implicature (e.g., - three   +>   (**but not four**)) but not an R-implicature (e.g., - a finger - +> (**my finger**)) is reported to be part of what the speaker says by subjects in experiments conducted by Gibbs and Moise 1997).

3.2. *CF-SN Correlation*
We can now turn to SN conjunctions that co-occur with metalinguistic negation and an alternative (or rectification/correction). The contrasted alternatives are 'symmetrical' (Dascal and Katriel 1977); they express a pair of elements in Contrastive Focus explicitly. One element is totally rejected by denial and is replaced by another of the same order. The pair are in Contrastive Focus in the sense that the speaker accommodates an alternative question 'Are you happy or ecstatic,' after hearing some comment like 'You must be happy after your wedding.' Because the alternatives in the pair are contrastively focused, "extra heavy stress" falls on the negated item (Lasnik 1975) and presumably on the replacing item. The idea of alternative disjunctive questions as a testing device for CF clearly distinguishes it from CT, although CT and CF do have a notion of *contrast* in common with a contextually closed set of alternatives (Lee 2003a). SN conjunctions differ from PA in form in various languages including Korean.

Consider:

(45) a. I am not HAPPY, I am ECSTATIC.
　　 b. I am not HAPPY *but* (#I am) ECSTATIC. [sondern, sino = SN]
　　 c. I am not HAPPY *but* MISERABLE.
　　 d. I am not ECSTATIC *but* just HAPPY.
(46) na-nun HAYNGPOKHA-n kes-i *ani-i-ra/*ani-i-ciman* HWANGHOLHAY.
　　　 I-TOP happy　-REL NMZ-NOM not-be-CONJ ecstatic
　　　 'I am not happy but$_{SN/*PA}$ ecstatic.'
(47) a. Ich bin nicht GLÜCKLICH, ich bin IN EXTASE.
　　　 I am　　not　happy, I am in ecstasy
　　 b. Ich bin nicht GLÜCKLICH, *sondern/*aber* (ich bin) IN EXTASE.
(48) a. ani lo　SAMEAX *ela* (#ani) NILHAV.　 (Hebrew)
　　　 I not　happy　　but　　ecstatic
　　 b. ani lo　NILHAV　*ela*　rak　SAMEAX.
　　　 I　not ecstatic　　but　only happy
　　　 'I am not ecstatic but only happy.'
(49) Ni-sem SREČEN, *temveč* EKSTATIČEN. (Slovenian) (I.　)
　　 not-I-am happy　but ecstatic　 'I am not happy but ecstatic.'
(50) yer bala-ny USHEU-in tasta-gany *emes*, TORTEU-in tasta-gan (Kazakh)
　　 that guy-ACC 3-ACC dump-PAST not　4 –ACC dump-PAST
　　 'She dumped not three guys but four guys.'
(51) Wo bu shi XIHUAN ta,　er　shi　AI　ta.　(Chinese)
　　　 I　not SHI like him　but SHI love him
　　　 'I do not like him but love him.'
(52) Mia-nun PUCA-**ka** ani-i-ra **PU:CA**-iya　(as RICHE in French)
　　　 -TOP rich-NOM not-SN RICH-be-DEC
　　 'Mia is not rich but RICH.' (PU:CA 'very rich')

In (45a), two full sentences are juxtaposed without *but* unlike in (45b), where *but* appears but then the second conjunct must be a constituent rather than a full clause, matching that in the first conjunct under the immediate scope of the metalinguistic negation. This tendency is witnessed cross-linguistically, as we can see in Hebrew (48a) and German (47b). This is in sharp contrast with (33a), where the PA *but* is followed by a full clause. Prosodically, the PA *but* mediates IntPs, whereas the SN *but* mediates Accentual Phrases in general. A similar but weaker intent of metalinguistic negation can be conveyed by the comparative construction *A rather than B* (e.g., *He's more negligent than vicious*) or *B–i-ra-ki-pota A* in Korean without any explicit negative.

　　 In (33b), even without a CT contour and without the second conjunct the utterance 'I am not ecstatic' can constitute an S with a conversational scalar imlicature of 'but I am happy,' depending on the context. The same thing happens with (34b) in Korean without the second conjunct, still generating the second conjunct as a conversational implicature, depending on context, without –*nun*. This is a Weak Contrastive Topic situation for me. If the first conjunct without the second one happens to have a contrastive contour of L+H*LH% or a hat accent in German on 'happy', 'happy' becomes a Contrastive Topic (or Strong Contrastive Topic) and you cannot avoid conveying the conventional scalar implicature of 'but I am happy' (affirmative weaker) (Lee 2003b, 2000). If we have the 'but' part explicitly as in (33a), it is a PA (*pero* in

Spanish and *aber* in German, see Schwenter (2002)). This corresponds to (34a) in Korean.

In (45a), we have a focus stress on 'happy' and 'ecstatic' and in the first conjunct the normal implicature of affirmative weaker 'I am all right' is blocked and dramatically 'I am ecstatic' is contrastively asserted. In this case, the second conjunct is essential and cannot be deleted (to become an implicature, differently from (35b)). (45a) fits my definition of CF, with an accommodated question 'Are you happy or ecstatic?' (45b) is an SN (*sondern* and *sino*). In Korean, we use '-*nun*' (or -*wa* in J) attached to 'ecstatic' and 'but' (-*ciman*) for (34a) for CT but the Nominative marker -*ka* (or still-*wa* in J), Negation marker *ani*, Copula –*i*- and -*ra* (embedded DEC) for (46). This negation in the form of *andi-ra* is witnessed very early in Korean, around 13 C. (Seungjai Lee p.c.). ((46) is metalinguistic negation. I distinguished it from CT (Lee, 1999a).

A sentence such as *She was not able to solve the problem* evokes an R-based implicature *She did not solve the problem*. Therefore, its denial *She solved it* cannot be the second conjunct because it leads to a contradiction. But if *ABLE* is extraordinarily stressed (with the modifier *just* before it, preferably) and *SOLVED* in the second conjunct is also stressed (again with the modifier *actually*, preferably), forming a proper CF frame, then SN metalinguistic negation construction arises. This means that Koenig and Benndorf's (1998) argument that R-based inference cannot occur in SN categorically is not correct. We can see how it is sensitive to focus stress. Horn's (1989) example *Chris didn't MANAGE to solve the problem --- it was quite EASY for him* is another such example.

In Slovenian, unusually, there is no distinction in form between the coordinate conjunction 'and' and the contrastive PA conjunction 'but.' They are both *pa* but the SN 'but' is distinct from this and is *temveč*, as in (49). So far, the PA/SN conjunction distinction has been shown to be correlated with CT and CF, respectively. This correlation has not previously been explicated.

3.3. *CF: the Primary Condition for MN*
Cross-linguistically, in CT-PA conjunction, the scalar up-denial principle is applied and the first conjunct is topically and admissively rendered and concessive, no matter whether the second conjunct is uttered or in implicature. The first conjunct (possibly together with the second) is topically related to the previous discourse in the sense that the negated predicate is part of the potential Topic in the previous discourse. If the second conjunct is uttered, it tends to constitute a full clause as an Intonational Phrase (IP). If the first conjunct is negative, the negative is typically stressed. Observe (45b) again and (54). Interestingly enough, the predicates in (53) are inherently negative (Lee 1999c) and forms a negative scale like <hässlich 'ugly', dumm 'dumb'>. The denial of a higher value *dumm* 'dumb' on the scale yields a weaker value *hässlich* 'ugly' in the second conjunct explicitly or in implicature.

(53) a. Maria ist *nicht* dumm, *aber* sie ist hässlich.
    b. ≒ Maria-nun papo-**nun** ani-i-*ciman* hopak-i-ta

In CF-SN conjunction, in contrast, from a potential disjunctive alternative question an alternative is metalinguistically/echoically denied and the other alternative is asserted.
Therefore, if my position of CF - SN correlation theory of 'MN' is adopted, the (pair of) alternatives can be chosen from any domain of Horn's 'canonical' implicature 'blocking,' linguistic (including prosodic) forms and, I would say, parasitically truth-affecting terms. The denial is "an objection to a previous utterance on any grounds whatever" (Horn 1989), "including the choice of a lexical item as yielding a *false* proposition?" (Horn, e-mail reply p.c. May 5, 2005,

to my question on (55), *italic* added). Horn almost came to concede up to the point of admitting 'the choice of a lexical item as yielding a *false* proposition' in the scope of metalinguistic negation. The crucial distinction between DN and MN, then, is that DN is topically poised and MN is focally poised. A heavy stress is typically imposed on the fisrt CF constituent (and the second) of such CF – SN ('MN') construction and the second conjunct tends to be an Accentual Phrase rather than an IntP. Observe the implicature 'blocking' examples again in (45-52) and the new examples below. In (54) and (55), one objects to the choice of *dumm* as yielding a *false* proposition ('parasitically denotational/descriptive' for me).

(54) a. Maria ist *nicht* DUMM, *sondern* HÄSSLICH.   (CF)
     b. ≑ Maria-nun PAPO-**ka** *ani-i-ra* HOPAK-i-ya
(55) a. I am not happy/ecstatic; (in fact) I am miserable.   (CF)
     Cf. I am not ＼happy/, but I am all right/*miserable.
     b. na-nun hayngpok-ha-n kes-i ani-i-ra pichamhay.

In sum, information structure rather than truth-conditions crucially functions for the distinction between DN and MN; DN relies on CT – PA, MN on CF – SN. CT creates a denotationally scalar contrastive set of alternatives in the domain of discourse. The CF – SN MN construction has a set of paired alternatives, of which one echoic alternative expression is denied for 'whatever' reason and has no scale.

The MN CF conjunct may be elliptical at times. Note that Ladd's (1980) example (56) (marking added) shows that the same utterance can be rejoined either by CT or by CF: there is a whole-part relation between 'the state of New York' and 'Ithaca' by means of CT (56A, B) or a CF contrast between an elliptical MN such as 'not in the state of New York but,' as in (56A, C). A discoursal MN discourse marker *ku key ani-i-ra* 'not that but' in Korean can precede the CF rejoinder. Observe:

(56) A: Harry's the biggest fool in the state of New York.
     B: In ＼Ithaca/$_{CT}$, maybe.
     C: In THE WHOLE WORLD$_{CF}$, maybe. [CF] (MN assumed)

The fragment PP with the CT contour in (56B) is equivalent to the *-nun* (K) or *–wa* (J) CT-marked expression (*Ithaca-ese-**nun*** 'Ithaca-Loc-CT'). Then, the relevant scale in context must be <Ithaca (part), state of New York (whole)> (<Weak, Strong>). 'Ithaca' has been admitted in the utterance and the implicature, subtracting it from the whole, is 'but not in the rest of the state of New York.' For the CF MN answer (56C), we can posit a potential alternative question 'In the state of New York or in the whole world?' at some stage. The positive alternative is chosen from the upward range of values to be denied for an up-denial implicature that is actually blocked.

The following MN example compels us to think further about the limit of extensional truth-conditions. The alternative predicates with CF from an alternative question may be referentially/extensionally identical but are different in intentional meaning. That is why it can become a funny joke. The other's representation is echoically denied to be replaced by intensionally different predicate. Observe:

(57) She is not PLUMP; she is TALL IN EVERY DIRECTION.

Presupposition-cancelling cases of MN are marked ones. Presupposition is not easy to be the target of negation and be in the direct scope of negation. Consider:

(58) The King of France is not bald; there is no King of France.

Even if we try the external negation of the first clause with existential presupposition in the definite description, as in (59a) and (59b) in Korean, the negation cannot cancel the presupposition. Observe:

(59) a. It is not the case that the King of France is bald.
    b. ≒ France wang –i taymeri-i-n-kes-**un** ani-i-ta

In (59b), the CT marker –(*n*)*un* (CT negation will be discussed later) can be focally negatively associated with either the predicate ('not bald' scalar +> 'but with a bit of hair') or the subject ('not the King of France' +> 'but the prime minister of France') or the entire clause in the embedded complement clause ('~ that the King of France is bald' +> 'but that …'). Because of the CT marker within the scope of negation there always arise associated alternative individuals, events or situations/worlds and there is no way of cancelling the presupposition. The only way left in Korean is having the entire clause in CF and replace the CT marker –(*n*)*un* by the focal NOM marker –*ka* and make the MN negation and a presupposition-cancelling clause follow. The resulting MN representation will be:

(60) ?[France wang –i   taymeri-i-n-kes]-**i** ani-i-ra France wang –i eps-ta
        king-NOM bald-be-COMP-NOM MN   king-NOM not.be-DEC
    'Same as (21).'

As claimed in Lee (1999a), CT in Korean, in English as well, I would claim, is basically denotational and cannot involve MN. Therefore, the nominals *highway* and *kosoktoro* 'highway' in (61) are regarded as different entities with different properties by native Koreans, contra H. Lee (2005). Otherwise, (61) is judged to be odd. The same thing occurs in the English CT construction, as in (62). Observe:

(61) hankwuk-ey-nun highway-**nun** eps-ko kosoktoro-**nun** iss-ta
    Korea-LOC-TOP   -CT   not.be-and 'highway'-CT be-DEC
    'There is no 'highway' but *kosoktoro* in Korea.' (adapted from H. Lee 2004)
(62) As for highways, Korea doesn't have them, but as for *kosoktoro*, Korea has it.

We now come to understand how CT is denotational and how MN needs CF. If (61) is purported to be an MN case, it may marginally parasitically work only as game-playing of bad taste. Even non-ranked list CTs cannot constitute a normal MN.
    There are some adverbial NPIs that originate, I claim, from an underlying MN construction such as *pothong* 'commonly' and *yekan* 'ordinarily,' of which the first syllable is stressed to be the CF target of MN. The second clause with the positive alternative is often implicit. Consider:

(63) Mia-nun *pothong/yekan* pappu –n kes –i ani-i-ya (emchengna-key pappu-a)
        -TOP commonly   busy –COMP-NOM not-be-DEC extraordinarily busy

'Mia is not COMMONLY busy; she is extraordinarily busy.'

The stressed *pothong* 'commonly,' but not the unstressed one, functions as an NPI, taking the focal NOM marker, but not the CT marker, before the negation of external nature. These facts also support my view of information structure basis of PA/SN and DN/MN distinctions. The most common source of NPIs is IND + CNC. Another is adverbial NPIs by CF - MN as in (63) or CT negation as in *not particularly*.

4. CONCESSIVITY AND SCALARITY BY **CT -*NUN* AND CONCESSIVE -*TO*** IN POLARITY

4.1. Where Does Scalarity Come from?
In (64), *han saram* 'one person' is indefinite, nonspecific and not a partition (=IND 1) and when it occurs with the Contrastive Topic (CT) marker –*nun*, as a quantifier DP, invokes a scalar implicature of denial of a stronger value, looking upward, in the scale. The assertion part of the utterance is concessively accepted in the sense that it is followed by a concessive conjunction (*haciman* 'but'), being paraphrasable to a concessive adverbial construction led by -*e-to* 'although.' Observe:

(64) han saram-**un**   o-l swu iss-ta
    one person-CT   come-can -DEC
    'One person-CT (≒ Up to one person) can come.'
    +> '*But* not more than one person can come.'
    ≒ '*Although* one person can come (*han saram-un o-l swu iss-e-to*), not more than one
        person can come.'

However, a numeral plus CT marker does not directly constitute an NPI, although it generates a denial implicature. On the other hand, when the Concessive marker (CNC) –*to* (in K)/–*mo* (in J) is attached to an indefinite such as a numeral/minimizer and INDefinite-*wh-/ amu-* (and *any* with implicit *even* (Y.-S. Lee and Horn 1994)) (C. Lee 1993, 1996), it generates an NPI, as shown in the contrast between (65) and (66). Therefore, without negation, it creates anomaly cross linguistically.

(65) a. han saram –**to**   an   w-ass-ta
        one person-CNC not come-PAST-DEC
      b. hitori 'one person' –mo CNC   ko-nakatta 'not came' [Japanese]
        (a, b) 'Not even one person came.'
(66) a. *han saram –**to**   w-ass-ta
      one persom-CNC   come-PAST-DEC
      b. *hitori   -**mo**   kita   [Japanese]
      c. *ek   bhii   admii aayaa [Hindi]
          one   even   man came
        (a, b) '*Even one person came.' (cf. Not even one person came.)

If it is followed by a NOM, as in (67), however, it must be either specific or a partition, though not definite necessarily, taking wide scope over the negation as an existential, in the S. So, 'more than one person didn't come' is not scalarly entailed by (67).

(67) a. han saram –i　　　an　w-ass-ta
　　　　 one person NOM not　come-PAST-DEC　　(NOM=Nominative)
　　　 b. hitori　　(-ga)　　　ko-nakatta　[Japanese]
　　　　 one person NOM　　come-didn't
　　　　 (a, b) 'One person didn't come.'

In view of these facts, attributing polarity simply to focus, as done by Rooth (1985), Krifka (1994) and partly Lahiri (1998) or to its relatedness to scalar implicature suspension, as proposed by Chierchia (2004), is all important but is not adequate enough explanatorily. Chierchia's approach is interesting but simply lacks the ultimate motivation behind polarity. Concession with an Indefinite compositionally triggers an adversity scale, requiring a close flat wide scope negation (as in *even one*; with negation *none* < *not one* <*not even one*) to become an NPI, and the resulting NPI DP and its systematically related affirmative CT-marked DP in (69) may constitute duals, as argued early for the definite DP-associated pair in You and Lee (1996) and rediscovered partly and independently by Oshima (2002). In other words, (68) below is equivalent to the external negation of (65):

(68) han saram –**to**　　an　o-n　　　kes –un ani-i-ta
　　　 one person –CNC　　not come-REL CMP-CT not-COP-DEC
　　　 'It is not the case that not even one person came.' = 'One person-CT came.'
(69) han saram –**un**　　　w-ass-ta
　　　 one person –CT　　come-PAST-DEC
　　　 'One personCT came.' (≒ *Up to one person came.)[5]

The possible duality relation and the relative positions of those Concessive DPs and CTs in the Square of Opposition will be discussed shortly. Generally, DPs in (65) and (67) are focal, whereas that in (64) and (69) is topical; the CNC marker in (65) is focal and the DP in (67) as the subject of a thetic sentence is rather focal and out of the scope of the predicate negation. The NOM-marked DP, therefore, can be regarded as a Positive Polarity Item (PPI), like some use of *some* in English (see Szabolcsi 2004).

Rooth's focus alternatives are not scalar and his simple extension to an English morpheme *even* for likelihood implicatures lacks a general explanation. The motivation of scalar alternatives lies in the strategy of making concession. Concession is scalar: a bigger concession entails a smaller concession. The speaker concedes to the hearer, as if it were a game of interaction. When you make concession you go down the scale of alternative adverse steps. So, the weakest bound in a given situation must be negatively rendered. Thus the total negation of the maximization of the relevant *wh*-domain is possible if the bound is the lowest like *one* or *hana* 'one' in any language. The emphatic concessive adversity reaches maximization reversely in polarity. (65) has the original assertion part (70), as in Lahiri (1998) and its corresponding likelihood hierarchy implicature part to be discussed:

(70) $\neg\exists x[\mathbf{one}(x) \wedge \text{person}(x) \wedge$　x came] (assuming that **one** is true of

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[5] In English, the scalar expression *up to* can occur only in modal contexts, not in episodic ones, whereas the CT marker *–nun* in Korean, though with a similar meaning, can occur in episodic contexts, although it functions as a weak NPI-licensing context.

any entity that contains at least one atomic part) 'No one came.'

Lahiri and many others assume that the above scopal way of representing (65) is good enough to show its entailing all the negative larger numbers than **one** (and furthermore its implicating that the larger numbers' not coming is more or equally likely, as hinted from its translation into English). However, this is not so obvious. To be explicit about the entailment and implicature involved, there must be a CNC and therefore scalar unit of concept or operator (*even, -to,* or *-mo*) before the weakest quantificational value (*one* here) to make the relations work properly.

4.2. *Any Indefinite Lower Bound with Concessive Creates Negative Polarity*

The process of conflict itself to explain the unacceptability of (66) with 'one' was well captured in Lahiri (1998), except full scalarity and its ultimate motivation. Lack of concessivity and full scalarity in Rooth and Lahiri, however, leads to the failure of distinguishing between (contrastive) focus and concession. Focus induces simple alternatives and simple alternatives to 'three' instead of 'one' include not only numbers larger than 'three' but also numbers smaller than 'three,' whereas concession requires 'three' with a Concessive as the lowest possible bound in the quantitative scale as expected in the discourse context, denying propositions with larger numbers scalarly. To meet this need, we need the following likelihood scalarity defined:

(71) For every cardinality natural numeral predicate U, U' such that
$\forall x[\mathbf{U}(x) \to \mathbf{U'}(x)]$,
likelihood $(\hat{}\neg\exists x[\mathbf{U}(x) \land person(x) \land x \ came]))$
>likelihood $(\hat{}\neg\exists x[\mathbf{U'}(x) \land person(x) \land x \ came]))$
(If a numeral U is larger than U', then the coming of U' is more likely than that of U
and U''s not coming is less likely than U's not coming.)
[The implicature part is fully scalarly defined here unlike Lahiri's]

Positive scalarity is reversed to negative scalarity fully in (71). Lahiri's approach may cause difficulty treating a case of NPI with a non-lowest bound in a scale such as (72a, b), and (9a, b):

(72) a. sey saram -to   an   w   -ass   -ta
        three person-CNC not   come-PAST-DEC
      b. SAN NIn   -MO   KO -nakat –ta   [Japanese]
        three person-CNC   come-NEG-PAST
      (a, b) 'Not even three persons came.' (≈'Less than three came.').
(73) a. Mary-nun   sey   muncey-**to** *(mot) phul-ess-e
            -TOP three   problem-CONCESS not solve-PAST-DEC
      b. Mary-wa   mondai-o   mitsu-**mo**   deki-na-katta [J]
          -TOP   problem-ACC three-CNC   solve-not-PAST
      (a, b) Mary could ?*(not) **even** solve three problems.
            ＋> 'Mary could solve less than three problems.'

(73a) involves concessivity down to a lower bound 'three problems' or any number *n* because of the Concessive marker/morpheme. But the lower bound has to do with the CT meaning of minimum expectation *sey muncey-**nun** phul-ess-e-ya hay* '(She) should have solved (at least)

three problems.' This way, a Concessive and a CT are closely intertwined. The CT fall-rise or –*nun*-marked clauses in (74), invoking a scalar implicature connected by a connective of concessive nature, can be paraphrased into concessive clauses in (75). CT is also based on concessivity. (76) shows how scalarity works with the lowest natural number 'one' and the CT marker in Korean (and Japanese). One person or event with its individuation cannot but mass can have partitions. The CT marker in (76b) can not be scalar; no lower affirmative is possible. The former with –*nun* cannot occur with negation but the latter can, as in (76b) and (77). Consider:

(74) a. Mary solved [three problems – L+H*LH%].
    b. Mary-ka sey muncey-**nun** phul-ess-e   [- mondai-o mitsu-**wa** - Japanese]
        -NOM 3 problem-CT solve-PAST-DEC
    + > '***but*** Mary solved not more than three problems.'
(75) a. Although/*Even* if Mary solved three problems, she didn't solve more than three problems.
    b. Mary-ka sey muncey-**nun** phul-ess-***ciman*** (-e-*to*), te –nun mot phul-ess-e
(76) a. han   saram-**un**   o-l swu iss-ta   [(64) repeated]
    one   person –CT   come-can
    'One person can come.' (Up to one person ---)
    + > '***but*** more than one person can not come.'
    b. ?*han saram-**un**   **an**   w-ass-ta
     one   person –CT   not   come -PAST-DEC
     ?*' \ One/ person didn't come.' (Up to one person ---)
    c. . ?*han pen-**un**   **an**   w-ass-ta   Cf. han pen-**to an** w-ass-ta
      one time -CT   not   come in-PAST-DEC
      '(He/she) didn't come up to one time.'
(77) whisky-rul   han pyeng –**un an**   masi-ess –e
        -ACC one bottle –CT not   drink-PAST-DEC
    '(I) didn't drink one bottle of whisky-CT.' (---up to one whole bottle)

4.3. *A Weak NPI and Covert Concessive for Scalar Implicature Suspension*

A weak NPI is formed by Common Noun + *n* Classifier + *-i-ra-to* 'be-DEC-CNC' (*n = numeral*) and is licensed by weakly negative contexts for a 'settle-for-less' strategy (Kadmon and Landman 1993). One such example 'one person'- *i-ra-to* can occur in a predicate CT, as in (78). A weak NPI but not a CT or strong NPI can occur in a momotone-decreasing context like a conditional, as in (79). Observe:

(78) han   saram-***i--ra-to***   o-ki-**nun**   hay-ss-e/o-ass-e
    one   person-be-DEC-CNC come-NMZ-CT do-PAST-DEC
    'At least one person did come (but *denial of a higher predicate/proposition*).'
(79) twu saram- ***i-ra-to***/*twu saram- **un**/*twu saram-**to**   o-**myen**, sicakha-kess-ta   two
     person be-DEC-CNC   -CT   -CNC come-COND start-will-DEC
    'If two persons- ***i--ra-to*** (weak NPI) come, I will start.'

The 'two persons' part in the weak NPI 'two persons'- ***i-ra-to*** in the conditional of (79) can be replaced by the weakest predicates such as *nwukwu* 'INDwho' and *amu* 'any person,' other quantifiers such as 'some' and 'half' and scalar predicates in a broad sense such as 'lift a finger,'

'budge an inch' and 'touch,' 'push,' 'hurt' ---, to form a weak NPI. They all have the semantic or rank scale notion and the resulting weak NPIs show a minimum satisfaction point in the 'begging' or 'settle-for-less' concession strategy. Korean has two separate slightly different Concessive forms (with –*to* in common) for strong and weak NPIs (in Greek as well) but English and some other languages do not have separate forms. English NPI *any* and Concessive *even* occur in both contexts, weak and strong. In English NPI *any*, *even* is covert (Y. Lee and Horn 1994). Let us consider the English counterpart of (79a) and examples of weak quantifying determiners without *even*. With *even*, denial of *more than n* is impossible (80b). Without *even*, still the implicature of *not more than n* is suspended in the monotone-decreasing context of conditional (81a), but it can stay, as in (81b), depending on the context, unlike in (80b). A weak NPI is also triggered by a negative implicature of *glad* in (82), which causes difficulty for the nonveridicality licensing condition, as pointed out in Lee (1999c). Horn (1989) indicates that the computation of scalar implicatures appears to be inhibited not only by negation but also generally in 'negation like' monotone-decreasing contexts such as *doubt*. Chierchia (2000) further points out that any *any*-licensing contexts can suspend implicatures, with (83). The modifier positon of the universal quantifier in (83) is anti-additive and a weak quantificational connective *or* is in the scope of a covert *even* (as in *even* [A *or* B]) to form covert a weak NPI. Then, naturally a stronger [A *and* B] is accepted, suspending the exclusion scalar implicature. Observe:

(80) a. If even two persons come, I will start. (If more than two come, that's better.)
     b. *If even two persons come, I will start, but if three persons come, I won't.
(81) a. If two persons come, I will start. (If more than two come, that's better.)
     b. If two persons come, I will start, but if three persons come, I won't.
     c. If anyone/a half/one third comes, I will start. (If more than more than one/a half/one third comes, that's better.)
(82) a. I am glad that I (*even*) got two tickets.
     b. I am glad that I got *any* humble tickets/I (*even*) got humble tickets.
     c. *I even got two tickets.   [D. Jewitt, pc]
(83) Everyone who takes a test or presents a paper will pass.
     Expectation: A student who does both will pass. [Suspension of 'not both']

There are various contexts that license such weak NPIs: a weakly monotone-decreasing contexts (Chierchia 2004) as well as a nonveridical (Zwarts 1995) or even more weakly negative contexts including CT and weakly negative predicates, as argued in Joe and Lee (2002), Lee (2004). In those contexts of weak NPI licensing, the suspension of scalar implicatures denying a stronger/higher value in the scale is extremely naturally expected since a stronger/higher value (=negation of the denial of it) is most welcome from the beginning, making concession by setting the low minimum sufficiency point, in a gesture of 'begging' (Lee 1999c) or 'settle-for-less' (Kadmon and Landman 1993). So far this possibility of general application of covert Concessive marking has not been explored. This is the ultimate motivation of why scalar implicature suspension contexts generally coincide with all sorts of weakly negative contexts. This was a big puzzle for Chierchia (2004).

Even *any* in English functions as a weak NPI with the covert *even* in a weak licensing context like a question. It has to do with the weakest quality/property/kind, rather than quantity. That is why it is odd to answer an *any* question with a cardinal. Consider:

(84) A: Did you eat *any* apples?
    B: Yes, I even ate rotten/#three apples.

The affective expression '*any* apples' in the question corresponds to the weak NPI '*amu sakwa-i-ra-to*' in Korean.

In the case of strong quantifiers, which cannot get a weak NPI marker *-i-ra-to* '(settle-for-less) even,' we can conceive the situation as one in which the denial (negation) of a stronger value is cancelled by the 'negative' force of monotone-decreasing or non-veridical contexts. We can see this in weak NPI contexts such as:

(85) a. If most students come in, I will start the class. ('*not all*' suspended)
    b. Did most students come in? (Yes, all of them.)
(86) I am glad you got most tickets.
    Yes, (actually) I got all of them.

Uncertainty contexts such as conditional (85a), question (85b) and emotive factive predicate (86) are contexts that license weak existential *any* and its equivalent in various languages. I pointed out that a CT context is an additional suspension context, although it may not license *any*. But its corresponding CT sentence licenses an existential weak NPI in Korean. Any contexts that are non-veridical, in its extended sense, suspend scalar implicatures, if not exhuastivized by Focus.

5. IMPLICATURE SUSPENSION; CT AND CONCESSIVE ON SQUARE OF OPPOSITION

5.1. *Implicature Suspension Affected By Topicality and Focality*

Information structure struction notions of (Contrastive) Topic and (Contrastive) Focus greatly affect the suspension of scalar implicatures. Chierchia (2004), however, does not incorporate these. In a (contrastive) topical context, the denial of a stronger value *not both/not and* in *or* is suspended and the *both* reading is predominently favored as to be regarded as the only reading in the Topic-marked DPs in the Topic position crosslinguistically (Korean and Vietnamese). Topic typically requires strong (definite, universal, *both*) DPs and opts for the strong reading. In this respect, this seems to be different from suspension in monotone decreasing contexts. Consider:

(87) a. As for linguists or philosophers, they are stubborn. <suspended: both>
    b. Linguists or philosophers are stubborn. <not suspended: ¬both for many and suspended for some native speakers>   Lee (2004)
(88) a. As for the oranges or the bananas, they are next to the door. <suspended: both>
    b. The oranges or the bananas are next to the door. <not suspended: ¬ both>
    c. As for the oranges, Mary likes *(them).   ---Topic
(89) ?? Oranges or bananas, Mary carried.
(90) *As for *any* linguists, they are stubborn.

As in (87) and (88), *or* in the *as for* construction is interpreted as *both A and B*, and *or* in the subject position without *as for* keeps the up-denial scalar implicature, regardless whether the predicates involved are individual-level (though suspended for some people) or satge-level ones.

Topcalization of a disjunctive DP from non-subject, as in (90), is bad; a conflict arises because the topicality effect of a strong reading is needed without *as for*.

On the other hand, Sevi (2005) objected to Chierchia's generalization that all the contexts that license *any* suspend scalar implicatures, saying that he is wrong because almost all the contexts Chierchia listed as suspending scalar implicatures (*not both* of *or*) actually license them. Such contexts are negation, negative DET (*no*), restriction of *every*, antecedents of conditionals, negative embedding predicates such as *doubt/regret/fear*, generic statements, *before*, *without*, comparatives, verbs of comparison (*prefer*), modality of permission, questions and imperatives. All the examples Sevi gives are answers to the previous *wh-* questions that have wide scope over other possible scope-bearers or quantifiers. Then, the relevant answer part will have narrow Focus. Consider:

(91) a. Whom didn't Sue meet?
    b. She didn't meet Hugo or Theo (I don't know which). (Sevi (2005)

Such utterances or echo questions with *wh*-words in situ may occur. Indeed Sevi assumes a *wh*-question in situ to get a focused cardinal to solve Chierchia's exceptional example – *If John has [two]_F cars, the third one parked outside must be someone else's.* The embedded question one can postulate would rather be an alternative question 'Does he have two or three cars?' to derive the CF *[two]_{CF}* cardinal.

5.2. *Predicates Weaker than Monotone-decreasing Suspends Implicatures*
Hoeksema and Klein (1995) failed to identify the following special type of predicates weaker than monotone-decreasing that suspend implicatures. Consider:

(92) a. Students *turned off* beepers **or** cell phones. <*not both* suspended>
    b. *Mary *turned off* <u>any</u> lamps in the building
    c. Students *turned on* beepers or cell phones.<not suspended; *not both*>
(93) a. mathit-es   e-kli-san   ta   radiophone **i** kinita tous [Gr.] <suspened>
      'Students turned off their radios or mobile phones.'
    b.*mathit-es   e-kli-san   <u>tipota</u> kinita
      'Students turned off *any* mobile phones.'
    c. mathit-es   anik-san ta radiophone i kinita tous   <not suspended>
      'Students turned on their radios or mobile phones.' (E. Christodoulou, p.c.)

This double nature of not licensing *any* and suspending implicatures comes from the duality of the event structure of the predicate *i.e.*, the subevent of agentive process, which is positive, and the subevent of absence result state changed from process to *off* as opposed to *on*, which is negative. A complex event analysis by the Generative Lexicon Theory à la Pustejovsky (1995) can capture this nicely, not a single event analysis by the (Neo-) Davidsonian approach. But these weakly negative predicates cannot suspend implicatures of quantifiers such as *some*.

As indicated, a Concessive and a CT marker are closely intertwined and we can even find an NPI formed by the latter, being attached to an aspect or event reiteration adverbs *tasi* 'again' or *ni-do* (Japanese) 'two times.' To save a weaker affirmative presupposition, 'a second time' or a number larger than 'one' is employed. Consider:

(94) a. ku-nun   tasi-**nun**   o-ci   anh-ass-ta/*w-ass-ta
        he –TOP again-CT come-CI not-PAST-DEC/*came
        'He did not come ever again.' (Presupposition: he came at least once before).
    b. ni   -do-to-**wa**   shi-mai/*suru   [Japanese]
        two-time-TO-CT do-won't
        '(I) won't do it twice.' (Presupposition: I did it once.)

There was not an alternative situation in which he came back (a) or there won't be an alternative situation in which I will do it for the second time (b). The agents involved have a bad feeling about what they already did it is put in sharp contrast with a new situation. This kind of effect cannot be attained by their combination with the Concessive –to or –mo.

In (95), a total (=universal) and a partial (=existential) predicates (Yoon 1997) appear in an alternative Q and the answer can be (95a) with a total predicate in CT but not with a partial predicate in CT, as in (95b). NEG > Total Pred is a CT but not NEG > Partial Pred. A parallel is the case with the CT contour in English, as in the translations. Consider:

(95) cuk-ess-ni   sal –ass-ni
      die-PAST-Q live-PAST-Q
      'Is (it) dead or alive?'
    a.   cuk-ci-**nun** anh –ass –e   [*cuk*- 'dead': total predicate]
        die   CT not –PAST-DEC
        '(It) is not DEAD CT.'
    b.   ?*sal-ci-nun anh-ass-e   [*sal*- 'alive': partial predicate]
          live-CI-CT neg-PAST-DEC
        '(It) is not ALIVE CT.'   %(But the fish is still fresh.)

A CT-marked inherently negative adjective utterance conveys some associated positive thing and conversely its antonymous positive adjective conveys a negative stronger predicate for a certain goal.   Consider:

(96) a. kil –i   cop   -ki   -NUN   hae
        road-NOM narrow -NM -CT   do-DEC
        'The road is narrow CT.'
    b. 'But two cars can go through.'
(97) a. kil –i   nelp 'wide'   -ki   - NUN hae
        'The road is wide-CT.'
    b. 'But not enough for trucks to go through.'

    CT both in English and Korean serves as a context that licenses a weak NPI as well. CT is based on scalar structure for concessive admission and polarity reversal in conveyance of meaning. Negative polarity is also based on concession and concession generates scales (C. Lee 1999b). It is not limited to Determiners, DPs, and adverbs. Strong negative polarity predicates such as *lift a finger* are scalar with the covert CNC *even* and can occur with contrastive contour to become a weak NPI, generating a contrastive negative proposition. Observe:

(98) He lifted a ＼ finger/ (to help her). [L+H*LH%] (from Lee 2000)

+> But he wasn't active enough to be very helpful.

The predicate *lift a finger* is the lowest bound in the concession scale. Exactly the same kind of scalar C-set is employed showing a degree of bigger motions for being substantially helpful to someone. Going down to a lower bound adversely is making concession. Admission contexts such as CT, conditional, rhetorical question (101), etc. license weak NPIs (of begging' or 'settle-for-less' type), denying a stronger alternative. Strongly negative contexts such as overt negation and *before* clause license strong NPIs (99-100), negating the lowest element. Observe strong and weak NPI cases.

(99) Sam didn't (even) lift a finger.
(100) Before Sam (even) lifted a finger, everything had been finished.
(101) Would he (even) lift a finger?

CT is concessive admission of the uttered part and the speaker's intent is to convey the polarity reversed scalar implicatures denying a stronger/higher element. The crucial principle is denial of a stronger value in the relevant scale and its consequence is: if the uttered part is affirmative, then its implicature is a negative proposition denying a stronger/higher value; if the uttered part is negative, its implicature is an affirmative proposition with a weaker affirmative value in the scale evoked in the context.

The intervention effect, a problem for everybody (Chierchia 2004), is basically a matter of focality (and topicality) competition (Lee 2003b) rather than of pure LF nature, with the class of **quantized** quantifiers including cardinals as interveners. Chierchia's attempt to include *if* in the class does not seem to be intuitively plausible.

5.3. *Are the CT Marker and the Concessive Marker Duals?*
Returning to the possible duality relation between the CT marker *–nun* and the CNC marker *–to* and their positions in the Square of Opposition, let us consider how (68) becomes equivalent to (69) and it appears they come into duality. The DP *han saram –to* 'even one person,' as [IND + Concessive], along with *amu-to* 'even anyone'/*nwukwu-to* 'even INDwho,' *sey saram –to* 'even three person' and *celpan-to* 'even a half,' is an NPI and forms a negative sentence with the negative *ani* (contracted to *an*), as in (65). These weakest [IND + Concessive] forms and other IND quantifiers including arbitrary cardinal numerals like 'three,' with CNC, require the negative *ani*, being considered to take the E corner. The weakest [IND + CNC] forms plus negation all roughly mean 'none' and is equivalent to *motwu* 'all (persons)' + *ka* NOM with negation (all> not). This universal negation form is also at E. If (65) is negated, as in (68), it becomes (69). Therefore, we are tempted to say that the DP or Q(uantifier) *han saram –to* 'even one person' or [IND + *–to*] in general and *han saram –un* 'at least one person/one person$_{CT}$ ' or [IND + *–nun*] in general, respectively, are in duality. Let's try with *nwukwu-to* 'even INDwho.' As an NPI, it must get the negative *ani*, taking E. Then, its negation (102) is equivalent to *nwukwu-i-nka-**nun*** 'somebody$_{CT}$', which takes the I corner.

(102) nwukwu-**to**   an o-n   kes-**un**   ani-i-ta
        IND*who*-CNC not come-PAST/REL COMP-CT not-be-DEC
        'It is not the case that nobody came.'
(103) motwu-ka   an o-n   kes-**un**   ani-i-ta

all　　-NOM　　not come-PAST/REL COMP-CT not-be-DEC
　　　　'It is not the case that every body didn't came.'
(104) nwukwu-i-nka-**nun**　　w-ass-ta
　　　　somebody　　　-CT　　come-PAST-DEC
　　　　'Somebody$_{CT}$ came.'

The positive existential expression *nwukwu-i-nka-**nun*** 'somebody$_{CT}$' in (104) at I is in contradiction with the negative NPI expression *nwukwu-to* 'even IND*who*' *ani* 'not' in (102) at E. In (102), the CT operator has as its domain the entire preceding clause ([$_{IP}$　…]$_{CT}$) and gets focally associated with the NPI Q (=Qunatifier, DP) to change it to an existential Q in a CNC-CT flip-flop in shape by ineraction in Korean. When the NPI Q *nwukwu-to* 'even IND*who*' occurs with the inner negative *an* before the predicate 'come,' it first gains universal force (with negation wide scope) but within the scope of the outer CT-marked negation (I will call this 'CT negation'), the CT-associated NPI Q (although -*nun* cannot be attached to –*to*) must change to its corresponding existential Q with double negation effect. Therefore, we can say that the CNC –*to* and the CT marker –*nun* function as duals at least asymmetrically when we apply an outer CT negation to a CNC NPI negative sentence. The same operation occurs when the equivalent universal negation Q replaces the NPI Q, as in (103). Therefore, both (102) and (103) are equal to (104). However, a CT-negation as the only negation in a sentence with such an NPI cannot be associated with it. It can only be assiciated with other constituents in the sentence, with the verb 'come' in (105). This kind of existential Q-based NPIs show an interesting clear contrast with universal Qs in CT-negation sentences (106) and (107). In (107), the CT can be associated with the universal Q subject (or alternatively with 'come'), making it a narrow scope-bearer over negation and making the consequent become equivalent to (107b), where a direct combination of 'all' and CT occurs. (106) and (107b) must be located at the O corner. Observe:

(105) *amu-to*　　　o-ci-**nun**　　　anh-ass-ta
　　　　any -CNC come-CI-CT　　not.DO-PAST-DEC
　　　　'Nobody came$_{CT}$.' (But some sent gifts.)
(106) ALL \ didn't come /.　　(L+)H*LH%　　∼ > ∀
　　　　Cf. ALL didn't come \ . H*LL%　　　　∀ > ∼
(107) a. motwu-ka　　an o-ci-**nun** anh-ass-ta
　　　　　all-NOM　　come-CI-CT not.DO-PAST-DEC
　　　　　'It is not the case that all didn't come.' Or 'All came (but ---).'
　　　　b. motwu-**nun**　　o-ci anh-ass-ta
　　　　　all-CT　　　　come-CI not.DO-PAST-DEC = (21)

The operations involved in CT negation as scope determiner above occur underlyingly in English as well in parallel.
　　Let's consider the Square again and see the Q and negation relations. The positive universal expression *motwu-ka* 'all-NOM' at A entails existential expressions at I and the negative Qs at E entail their corresponding negative expressions at O. The universal Q at A is in contradiction with the negative universal Q *motwu-nun ani* 'not all' at O, which in turn implicates the positive existential Q *nwukwu-i-nka-**nun*** 'somebody$_{CT}$' at I. We can establish the traditional duality between A and I Qs by way of A = ∼I…∼. Observe:

(108) a. nwukwu-i-ka-**nun**   an o-n   kes-i   ani-i-ta
         IND*who*   -CNC   not come-PAST.REL CMP-NOM not
         'It is not the case that somebody didn't come.'
     b. motwu-ka w-ass-ta
        all-NOM come-PAST-DEC
        'All came.'

In (108a,b), the Q of I *nwukwu-**nun*** as a whole and that of A *motwu-ka* as a whole are duals. We can also apply the internal and external negations to the latter and arrive at (103), which is equivalent to (102).

    We can also apply CT negation to (72), where the subject [cardinal + CNC] Q *sey saram-to* 'even three persons' occurs as NPI already with negation, as (109). The CT marker, which is topical and focal, gets associated with the focused Q *sey saram –to*, followed by negation. (109), then, seems to entail (110). Observe:

(109) [sey saram -to   an   o   -n   kes]-**un**   ani-i-ta
       three person-CNC not   come-PAST.REL COMP-CT not-be-DEC
       'It is no the case that not even three persons came.'
(110) sey saram -**un**   o   -ass-ta
       three   -CT   come   -PAST-DEC
       'Three persons$_{CT}$ came.'

However, (109) can further denote alternative situations in which more than three (four or five --- with the effect of 'at least three') persons came. Then, we may have to say that entailments denying a higher value 'more than three' invoked by the NPI negation in (110) can be negated by the CT in this particular case. If the subject 'three persons' is relaced by a middle Q *celpan* 'half,' entailment from (109) to (110) is rather solid. Furthermore, it is not easy to see how negating (110) twice leads to a positive counterpart of (109) *'***sey saram –to** *o-ass-ta*' or *'**celpan –to** *o-ass-ta*' with '*celpan* 'half' instead of *sey saram-to*. This ungrammaticality happens because IND + CNC is an NPI form. The equivalent positive forms of *–to* are *–ina* 'as many as' (upward looking, as opposed to *–to*, which is downward looking because of concessivity) in Korean and the same form of *–mo* but with a high tone in Japanese. If the Qs are replaced by a definite nominal + *to* such as *Mia-to, -to* normally becomes an additive and does not fuction as an NPI formative. But a negative sentence with it can be CT-negated to entail the corresponding posittive sentence *Mia-nun w-ass-ta* 'Mia$_{CT}$ came.' Negating this twice is easier to entail its affirmative counterpart *Mia-to w-ass-ta* and their duality in this case appears clearer.

    The asymmetry of duality test and other opposition relations is more visible in numeral and other midscale Qs than those Qs at the four extreme corners of the Square (see Horn 1989 for 'arithmetic scale' and Levinson 2000 for the problem of midscale expressions). That seems why van Benthem (1984) said only the four corner Qs A "all", E "no," I "some," and O "not all" are the ones that obey general conditions such as Concervativity, Quantity and so on. But lexicalization of 'no' at E and no lexicalization at O are rather a language particular phenomenon caused by typology and historical developments, as hinted by Hoeksema (1999), but the E corner lexicalization seems to be based on the general tendency of IND + CNC becoming frozen into NPIs. Indeed English, German and few other languages have prenominal negative elements which result from a combination of a negative and a weak Q or a weakest numeral. In an SOV

language like Korean or Japanese, negation occurs necessarily preverbally or postverbally and NPIs can occur in the subject position, anti-c-commanding the licensor. Even I corner Q 'some' in Englsih a rare case; the majority of languages form existential Q from IND*wh-* words or even interrogative sentences as in Korean and Japanese, e.g., *nwukwu-i-nka* 'Who is (it)?' in (104). This indefinite PPI as a nominal can occur freely with case markers and all other markers but even if it is combined with *–to*, it cannot function as an NPI. Observe:

(111) nwukwu-i-nka-**to** (an) w-ass-ta   cf.   nwukwu-**to** *(an) w-ass-ta
       [who-be-Qn]–additive not come-PAST-DEC   IND*who*-CNC not came

Consider all the relations so far discussed in the following Square of Opposition:

motwu-ka   'all-NOM'   motwu-ka ani   'all-NOM not'
                        A   **E**   han saram-to/amwu-to/nwukwu-to ani

sey saram-ina   '3 persons-INA'   sey saram-to ani '3 persons –CNC not'

sey saram-un   '3 persons –CT'   sey saram-un ani   '3 persons –CT not'
nwukwu-i-nka-nun   'someone-CT'   **I**   **O**   Motwu-nun ani   'all-CT not'
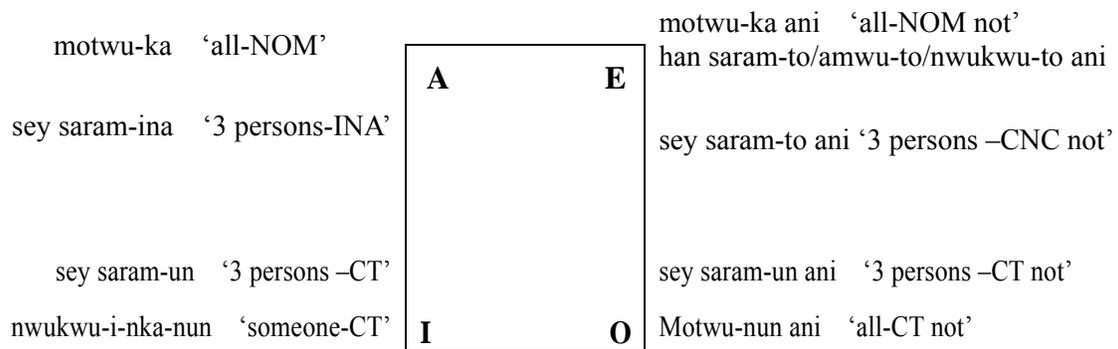
Figure 2. Quantifiers in Square of Opposition in Korean

We can now see that various Qs in Korean charactersically show the CT and CNC markers in a rather compositional or at least decompositional way whereas English and other related languages rarely do. The upper dimension corners (A, E) nest Qs that are typically focal, whereas the lower dimension corners (I, O) nest Qs that are typically contrastively topical. The Qs of the weakest or weak indefinites at E end in the Concessive marker to show their lower-bound concession gesture but to acertain strongly negative contexts (or weakly negative contexts in the case of weaker 'begging' or 'settle-for-less' Concessive marker *–i-ra-to* attached to the same INDs or even Definites) for emphatic denial with the following negative (or settle-for-less in a polarity-sensitive) contexts. In English, 'not (even) one/anyone/three/a half' or a lexicalized 'none' (<not one<not even one) or 'no' can be at E, together with its dual 'all … not' ($\sim$I = A …$\sim$ [duals]). The weak(est) INDs such as *one*, *any*; *three*, *a half* must have the Concessive *even*, equivalent to *–to*, covertly or overtly to be preceded by a negative. The weakest must take the E corner. All the weak quantifiers following *not* must be interpreted with *even* in front of the quantifiers, even if it is not overt. On the other hand, the strongest Q like *all*, if preceded by *not* in English must be interpreted as a CT Q. Here again, a CT fall-rise L+H*LH% intonation (\ *all/*) may be covert or overt in English but its effect on interpretation is clear. This meaning complexity of partial admission and partial denial because of CT seems to block the lexicalization of 'not all' and possibly any other 'not + strong Q' as expected from the Monotonicity Correspondence Universal (proposed by Barwise and Cooper 1981) differently from 'no,' 'none,' and 'never' (n-words with negative force), which are negatively emphatic and

straightforward, like scalar NPIs in other langauges. The positive Q *all*, if it occurs with CT, cannot find an upper value for denial because *all* is highest and becomes ill-formed. Observe:

(112) a. ?* \ All / came.
      b. ?*motwu-**nun** w-ass-e
         all-CT   came
         'At least all came.'

Therefore, universal Q with CT must occur with negation to invoke a lower affirmative scalar implicature. Thus, the O corner *motwu-nun ani* or *not all* necessarily gets a CT interpretation. The I corner Qs corresponding to 'some' such as *ilpu-nun* 'a part', *nwukwu-i-nka-nun* implicate but not entail this *not all* at O and the latter also implicate the former in a pragmatic relation.

5.4. *The Exchaustive –MAN 'Only' is Scalar as Well as Logical but Unlike –NUN (CT) and –TO 'Even'*

Unlike *–nun* the CT marker and *–to* 'even' so far treated, *-man* 'only' may be logical in the sense that the denial of relevant alternatives is entailed in it. It is different from *only* in English in the sense that it typically has the agent's intentional or controllability meaning. Various scalar meanings denoted by *only* in English are put in different expressions in Korean and Japanese. *Only* in English is interpreted in its exhaustivity as well as in its scalarity in the predicate and elsewhere. On the other hand, *-man* in Korean is interpreted often in its exhaustivity and in its scalarity in quantificational (including numeral and predicate) contexts. This is largely the case in Japanese, although there are some interesting differences between Korean and Japanese. In English, *only* in (113a) is scalar but its counterparts in Korean are not *–man* 'only' but some other expressions. Consider:

(113) a. I *only* talked to a secretary.   [scalar or logical (ambiguous)]
      b. pise-hako *pakk-ey* yayki-ha-ci *mot* hay-ss-ta [not - except] [scalar]
         secareatary-with except talk   not   did
      c. pise-hako-*man* yayki-hay-ss-ta [exclusion] [logical]
(114) a.   I only jumped 1.90m. [scalar]
      b. na –nun 1.90m *pakk-ey*   *mot* ttwi-ess-ta [high or long jump (or running)] [scalar]
      c. na-nun 1.90m **-man** ttwi-ess-ta [running situation, not high or long jump, exclusion
         interpretation]
(115) a. I am only a secretary.   [scalar]
      b. na-nun pise –i-*l ppwun/ttarum*-i-ta
         I   -TOP secretary-be-PreN-PPWUN-be-DEC
      c. * na-nun pise –*man*-i-ta

The Korean counterpart of the scalar reading of (113a) is (113b). In (113b), an exception phrase *pakkey* 'except' has been employed together with an ability modality negation marker *mot* 'not able to,' denoting unfavorable circumstances. (113c), with *–man*, can only denote exhaustivity. A parallel relation of scalarity holds between (114a) and (114b). (114c), with its exhaustivity/exclusion interpretation and intentional meaning, can only be used in a running situation felicitously because we can hardly adjust a high or long jump. With an identificational

predicate nominal, as in (115), *only* in English is scalar and its equivalent in Korean is another morpheme, not *-man*.

However, - *man* in Korean is also applied to a lower element in inherent scales of numerals, quantifiers and predicates, not to a highest or higher element, as in (116), (117) and (118):

> (116) a. Yumi-nun sakwa-rul   sey kay-man   mek-ess-ta
>   -TOP apple-ACC three CL-only eat-PAST-DEC
>   'Yumi only ate three apples.'
>   b. * Yumi-nun sakwa-rul yel kay-man   mek-ess-ta
>   -TOP apple-ACC ten CL-only eat-PAST-DEC
>   'Yumi only ate ten apples.' [when the total is ten] (*pakkey* may be better to show dissatisfaction)
> (117) Yumi-nun Inho-rul   mil-ki-man hay-ss-ta
>   -TOP   -ACC   push-NMN-only do-PAST-DEC
>   'Yumi only pushed Inho.' [not a higher predicate such as 'hurt.']

Some quantificational operator head *ONLY* may be posited so that its agreement association with its marker and its scopal behaviour (118) may be explained (Y. Lee 2005) and for blocking implicatures (Sauerland 2004) in my Contrastive Focus (or Horn's metalinguistic negation) situation (119). But scalar meanings involved in *only* are semantically/pragmatically important.

> (118) Sue-man(-un)   motu-ka   cohaha-n-ta   (In the underlying order, ($\forall$ > only)
>   -only-TOP   all-NOM   like
>   (i) 'All like only Sue.' ($\forall$ > only) (ii) 'Sue is the only all like.' (only > $\forall$)
>   b. Sue-man-ul   motu-ka   cohaha-n-ta
>   -only-ACC   all   -NOM   like
>   'All like only Sue.' ($\forall$ > only) [not ambiguous]
> (119) a. They did not play MANY of Beethoven's symphonies. They played ALL of them.
>   b. They did not play **only** MANY of Beethoven's symphonies. They played ALL of them.
>   c. *They did not play only MANY of Beethoven's symphonies. They played a few of them.
>   d. Dia bukan memutuskan dengan hanya tiga lelaki, tetapi empat/*dua.
>   she   not   cut ties with only   3   guys   but   4/*2 (Indonesian, D. N. Rosidin)
>   'She dumped not only three guys but four of them/*two of them.'

As we have seen, CF pairs are mediated by metalinguistic negation. If **only** occurs with quantificational expressions such as numerals, quantifiers and scalar predicates in its scope, it necessarily gets a scalar interpretation under the scope of negation to block the denial of stronger alternatives but not all alternatives including denial of weaker alternatives. Therefore, Sauerland's (2004) postulation of *ONLY* under negation for a metalinguistic negation cannot account for cases like (121c), where a correction alternative is offered in the second conjunct. If we want to incorporate such positive alternattives into a broader range of metalinguistic negation, we must consider postulating a Contrastive Focus (CF) operator under negation so that only the metalinguistically negated expression is picked up and all the denials of relevant alternatives can

be negated and any relevant affirmative alternative can occur in the second conjunct. In Indonesian (121d), --- *dumped not hanya'only' 3 tetapi 'but' 4* is all right but --- *tetapi 'but' 2* is ungrammatical, which exactly shows that *hanya'only'* is only scalar here and *tetapi 'but'* functions as SN here.

Only and *–man* Qs are converted from *all* and *motun* Qs, as in *Only men* [G] *are snorers* [F] from *All snorers* [F] *are men* [G] and can be positioned behind A as A' in the square, further forming E,' I' and O' in the three dimensional space (Horn 1997). By considering *Only non*-G *is* F, which has the internal negation of the first argument/predicate, we can also establish duality of -*man* and –*to*. It is equivalent to *No* G *is* F, which is an NPI version, and O' = *Not only* G *is* F is a CT negation. The system is a parallel with A, E, I, O and we do not elaborate it.

There are two different negation wide scope contexts --- CT and CF in all languages; if negation scopes over CT, scalar and denotational, if it scopes over CF, metalinguistic. This has been a big puzzle in Linguistics so far![6]

6. CONCLUSION

So far we have examined the roles and effects of information structure and concessivity on polarity-related implicature generation and suspension in discourse. This paper has investigated the systematic relatedness between the concessive –*to* (or *mo*)-marked polarity phenomenon and the high tone –*nun* (or *wa*)-marked Contrastive Topic phenomenon with respect to underlying concessivity and thereby derived scalarity. We have explored the correlations between (overt and covert) Contrastive Topic and PA conjunction (-*ciman)* on one hand and between Contrastive Focus and SN conjunction (-*ka ani-i-ra*) on the other to show the linkage between information structure and argumentation structure of Q- and R-implicatures cross-linguistically. CT is denotational and CF – SN is metalinguistic but can parasitically be denotational. Negation wide scope itself is not a panacea; if over CT – partial negation and if over CF – metalinguistic negation. The intervention effect is also a problem of focality-topicality. The exhaustivity focus marker –*man* (or *dake* in Japanese) is more logical than *only*. Its scalar but intentional and not concessive features have also been observed in inherently scalar numeral, quantifier and predicate contexts.

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[6] Han Kamp, in p.c. (2004), complained that metalinguistic negation also has wide scope over its target quantifier, just as in descriptive negation over a universal quantifier, etc.

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