Scalar Meanings of the Concessive (*–to*), the Contrastive Topic Marker (*-nun*) and *–man* 'only' in Korean (and Japanese)

Chungmin Lee
Seoul Nat'l University
Dept of :Linguistics and Cognitive Science Program,
Seoul, Korea
clee@snu.ac.kr

Abstract

This paper investigates 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. I also investigate the scalar features of the exhaustivity focus marker *–man* (or *dake*) in inherently scalar numeral, quantifier and predicate contexts. I further try to show a relation between polarity/negativity and implicature (suspension).

1   Introduction

The concessive *–to* (or *mo*)-marked (attached to an Indefinite) polarity phenomenon and the high tone *–nun* (or *wa*)-marked Contrastive Topic (CT) phenomenon show a close relatedness, with respect to underlying concessivity and thereby derived scalarity. The scalar but not concessive features of the exhaustivity focus marker *–man* (or *dake*) in inherently scalar numeral, quantifier and predicate contexts will also be described. Some relatedness between polarity/negativity and implicature (suspension) will be investigated. Negative CT Ss invoke affirmative weaker implicatures connected by a PA 'but' and metalinguistic negation constitutes a Contrastive Focus construction. I argue that both polarity, based on *–to* 'even,' and CT, *-nun* with a high tone, involve conventional scalar implicatures motivated by concessivity.

2   Polarity: Concessivity and Scalarity

2.1   Where Does Scalarity Come from?

When the concessive marker *–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. Lee and Horn 1994)) (C. Lee 1993, 1996), it generates an NPI, as in (1) and (3):

(1) a. han saram –to   an w-ass-ta
        one person-CNC not come-PAST-DEC
     b. hitori -mo   ko-nakatta (a, b) 'One person-CNC didn't come.'
(2) a. han saram –i[NOM]   an w-ass-ta (NOM=Nominative)
     b. hitori   (-ga)   ko-nakatta (a, b) 'One person didn't come.'
(3) a. *han saram –to w-ass-ta
     b. *hitori -mo kita
        (a, b) '*Even one person came.' (cf. Not even one person came.)

In (1), *han saram* 'one person' is indefinite, nonspecific and not a partition requires a negation as an NPI, if it is followed by the Concessive (CNC) marker, reaching universal negation by reversed entailment. If

it is followed by a NOM, as in (2), however, it must be either specific or a partition, though not definite, taking wide scope over the negation as an existential, in the S. So, 'more didn't come' is not scalarly entailed by (2). Attributing polarity simply to focus, as done by Rooth (1985), Krifka (1994) and partly Lahiri (1998) or to simple scalar implicature suspension, as proposed by Chierchia (2002) is not adequate enough. Chierchia's approach simply lacks an ultimate motivation behind polarity. Concession triggers an adversity scale and suspends scalar implicatures. So, contrary to his expectation, an implicature of 'not both' is suspended in the following S because of the concessive 'even' without any negative predicate such as 'doubt':

(4) Even Kim or Lee will show up
     ('Both will show up' is OK). (Oliver Omrod, p.c.)

With *even*, it is suspended. 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. 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 total negation of the maximization of the relevant *wh*-domain is possible if the bound is the lowest like *hana* or *one* in any language. The emphatic concessive adversity reaches maximization reversely. (1) has the original assertion part (5) and the likelihood hierarchy implicature part (6):

(5) $\neg\exists x[\mathbf{one}(x) \wedge person(x) \wedge x\ came]$ (assuming that **one** is true of
     any entity that contains at least one atomic part) 'No one came.'
(6) For every cardinality natural numeral predicate U, U' such that
     $\forall x[\mathbf{U}(x) \rightarrow \mathbf{U'}(x)]$,
          likelihood ($\hat{}\neg\exists x[\mathbf{U}(x) \wedge person(x) \wedge x\ came]$))
          >likelihood ($\hat{}\neg\exists x[\mathbf{U'}(x) \wedge person(x) \wedge x\ came]$))
     (If a numeral U is larger than U,' then U's not coming is more likely.)
     [The implicature part is fully scalarly defined here unlike Lahiri's]

Positive scalarity is reversed to negative scalarity in (6). Lahiri's (1998) formalization along with Rooth's (1985) about simple alternatives as opposed to **one** fails to show any relative scalarity based on concession, unlike the above formalization. The maximality of U above is that of the relevant *wh*-domain, which can hardly be definite, and the minimality of U' is **one**.

2.2. Not the Lowest but any Indefinite Lower Bound.

The process of conflict itself except full scalarity and its ultimate motivation was well captured in Lahiri (1998). Lack of concessivity and scalarity in Rooth and Lahiri, however, leads to the failure of distinguishing between (contrastive) focus and concession. (Contrastive) focus induces simple alternatives and simple alternatives to 'three' include not only numbers larger than 'three' but also numbers smaller than 'three,' whereas concession requires 'three' with CNC as a lower bound in the quantitative scale from the least as expected in the discourse, denying propositions with larger numbers scalarly. This may cause difficulty treating a case of NPI with a non-lowest bound in a scale such as (7), (8), and (9a,b):

(7) sey saram -to   an   w   -ass   -ta
     three person-CNC not   come-PAST-DEC
(8) SAN NIn   -MO   KO -nakat -ta
     three person-CNC come-NEG-PAST
     (a, b) 'Not even three persons came.' (≈'Less than three came.').
(9) a. Mary-nun sey muncey-**to** *(mot) phul-ess-e   [- mondai-o mitsu- **mo** (deki-na-katta)]

-TOP three problem-CONCESS not solve-PAST-DEC
'Mary could ?*(not) **even** solve three problems.'
b. Mary could ?*(not) **even** solve three problems.
Scalar Implicature: Mary could solve less than three problems.

(9a) involves concessivity down to a lower bound 'three problems' 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 (10) can be paraphrased into concessive clauses in (11). CT is also based on concessivity. (12) shows how scalarity works with the lowest natural number 'one' and the CT marker in K (and J). One person cannot but mass can have partitions. The former with –*nun* cannot occur with negation but the latter can as in (12b) and (13). A weak NPI 'one person'- *i--ra-to* but not a CT or the strong NPI can occur in a momotone-decreasing context like a conditional, as in

  (10) a. Mary solved [three problems – L+H*LH%].
      b. Mary-ka sey muncey-**nun** phul-ess-e [- mondai-o mitsu-**wa -**]
      ~> 'Mary solved not more than three problems.'
 (11) a. *Even* if (Although) Mary solved three problems, she didn't solve ---.
      b. Mary-ka sey muncey-**nun** phul-ess-e-*to*, te –nun not phul-ess-e
 (12) a. han   saram-**un** o-ass-e   as opposed to (3), with -**to**, NPI S
          one   person –CT came
        Scalar Implicature (conventional): 'More than one person did not come.'
      b. * han saram-**un an** 'not' o-ass-e Not scalar; no lower affirmative possible.
 (13) soju han pyeng –**un an** masi-ess –e Mass-partitions, OK scalar
 (14) han   saram-*i--ra-to* (weak NPI) o-ki-**nun** (CT) hay-ss-e/o-ass-e (did/came) ((but not satisfied))
 (15) a. han saram- *i--ra-to* (weak NPI)/*han saram-
          one person be-DEC-CONC
         un/*han saram-to) o-**myen**,   sicakha-kess-ta
         -CT   -CNC come-COND start-will-DEC
         'If one person *i--ra-to* (weak NPI) comes, I will start.'
      b. han saram –i o-a-*to*   sicakha-kess-ta

         'Even if one person comes I will start.'

  (16) ku-nun tasi-**nun** o-ci anh-ass-ta/*w-ass-ta [*tasi* 'again'-*nun*: NPI]
       'He did not come ever again.' [though he came once].

CT is concessive admission of the uttered part and the speaker's intent is to convey the polarity reversed scalar implicatures denying a stronger element, if the uttered part is affirmative, and to convey those affirming a weaker element in the scale evoked in the context.

2.3. The Genesis of Free Choice and Negative Polarity: Concessive Clause.
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Another concessive is *ever*, typically attached to *wh-*, and its equivalents in other languages, forming Universal Concessive Conditionals (UCCs) (König 1986, Gawron 2001)(e.g., *John would accept whatever* (**every*) *salary they offered*). If the main clause happens to be negative, it develops into NPIs. Depending on the discourse presupposition of the clause, it may require a modal main predicate (FC), interrogative etc. (settle-for-less, weak NPI) or negative main predicate (strong NPI). This is demonstrated in Russian, as in (17).

  (17) a. ***kto by ni*** prishol (concessive (conditional)), my (ne) budem privetstvovat. (A. Ogloblin p.c.)
          'Whoever would (may) come, we would (not) greet him' (If *kto ni prishodit*

<Indicat> occurs, a predicate like 'asks the time' follows.

Discourse presupposition: less desirable persons (not easy/likely to greet from the beginning) Then: we would greet him.

Discourse presupposition: the opposite – desirable ones, then a negative predicate ('not greet'.) follows, making the concessive construction. ***ni-kto***.

    b. We would (did) not greet ***any*** (?*undesirable) persons (even the most desirable persons (including undesirable ones).

Adversely going down to the weakest endpoint on a quantity (*hana-to* or *sey muncey-to*/*mondai-o mitsu-mo*) or quality (*amu-to*, *dare-mo*) scale (easy/likely for the other party to win) is making concession and if even in that situation it is not the case regarding the given predication then it is also not the case in all the relevant alternative stronger situations in the scale. Here, *amu*, *dare-* or *any*/*what*[Indef] are the weakest predicates, as witnessed in (18).

    (18) Whatever happens, we will not give up and go to the beach tomorrow.

3. The Scalar Nature of Contrastive Topic

Here type-subtype inter-type scalarity and subtype intra-type scalarity are distinguished and CT's inherent tendency of subtype intra-type scalarity even in individual entities is advocated. Further, scope relations between scope bearers and CT and CT's narrow-scope nature are shown, together with non-narrow-scope topicalization effect, which has to do with presupposition. Contrastive Predicate Topic and the scope relation between CT and REASON clause are also explored. All the so-called 'scope ambiguity' and Constituent negation are also proposed to be underlyingly associated with Contrastive (Predicate) Topic.

3.1. Intra-Type Scalarity.

Note that Ladd's (1980) following example shows that there is a whole-part (poset) relation between 'the state of New York' and 'Ithaca' in concessive admission of CT (19AB):
  (19) A: Harry's the biggest fool in the state of New York.
       B: In ITHACA$_{CT}$, maybe.   [-*nun* or –*wa* CT situation]
       C: In THE WHOLE WORLD$_F$, maybe. [Contrastive Focus situation] (metalinguistic negation assumed)

Consider another kind of scalar interpretation of nominals. This is adaptation from van Rooy's (2004), who does not introduce fall-rise here but it is a typical CT situation.

  (20) Q: Which Beatle's autograph do you have
       A: George Harrison's$_{CT}$.
         $\sim$> ¬John Lennon's, though   Ringo Star's
            "Standard" partition: 4 Beatles $\sim$> 16 cells.
       Autographic prestige:
       Star < Harrison < {Lennon, McCartny}

Van Rooy does not distinguish between a semantic scale arising from the hierarchy of the sum of Beatles' autographs and the individual Beatles' autographs on one hand and a pragmatic scale arising from different weights among different alternative Beatles. He addresses the latter type of scale. Without any CT contour on (20A), it may have an exhaustive interpretation with "standard" partition, evoking no particular scale among alternative Beatles. What I advocate is not the part-whole poset scale but the weight or prestige scale among alternative Beatles, an intra-type scale. If we use the Contrastive

(fall-rise) Contour on the answer "George Harrison's," preferably with the question 'Do you have John Lennon's autograph?' the scalar implicature is unmistakable and because of the linguistic device used (a contrastive pitch contour in English or a morpheme + a high tone in Korean) it is a conventional implicature. It cannot be cancelled. The scale has the intra-type elements. In a nutshell, Contrastive Topic is employed to convey this kind of implicature, concessively admitting the uttered proposition.

(21) is negative and an affirmative proposition with a weaker value than 'well' in the scale is implicated, such as 'but I know a little bit.' This is sharply distinguished from an utterance without CT-marking: *cal molla* 'I don't know it well,' which can be used when the speaker knows (almost) nothing about it. Chierchia's (2002) discussion lacks the idea of CT. The CT marker, which is a functional category in K and J, has a high tone. It can be attached to adverbs as well as nominals. Observe:

(21)   cal   **-un**   moll-a
         well-CT   no-know-DEC
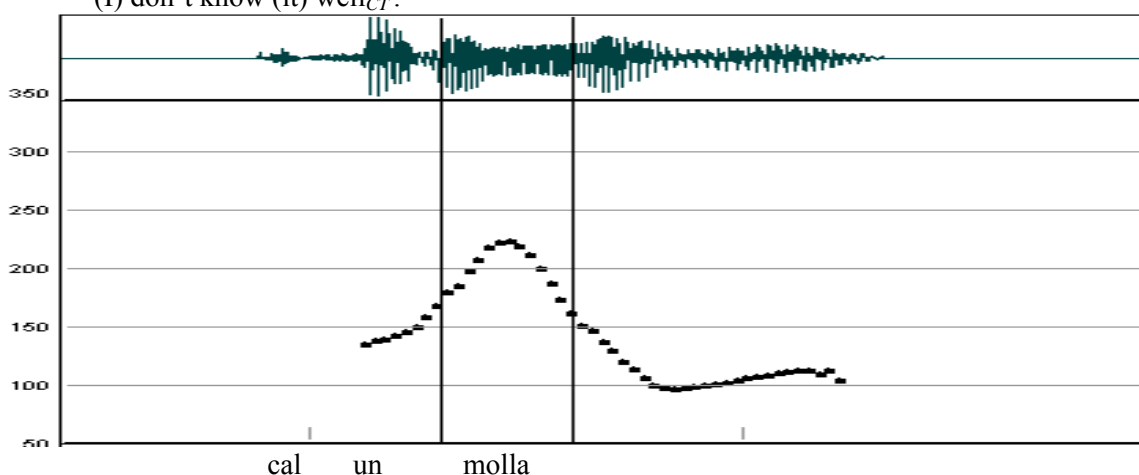   '(I) don't know (it) well$_{CT}$.'

Figure 1. Adverb CT

3.2. Contrastive Predicate Topic.

CT is not limited to nominal type; it is also applied to property (predicate) type:

(22) She ARRIVED$_{CT}$. $\sim$> ¬She went on the stage [- -*wa* shitta -]
(23) She PASSED$_{CT}$ $\sim$> ¬She aced the exam.

(22) evokes a scale of {arrive < go on the stage} in context and (23) 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 evoked by both pragmatic and semantic entailments. On the predicate part we can have such as a CT: "All the abstracts DID$_{CT}$ get accepted. $\sim$> but there may be withdrawals. Rooth's (1996) simple alternatives by F-marking cannot explain why fall-rise requires the relevant type of scalar implicatures. See Lee (2000) for further examples of scalar Contrastive Predicate Topic.

3.3. CT Requires a PA 'but,' whereas Contrastive Focus an SN 'but'

(24) I am not ecstatic, but I am happy. [pero, aber = PA]
(25) a. I am not happy, I am ecstatic.

b. I am not happy but (I am) ecstatic. [sino, sondern = SN]

In (24), the first conjunct without the second one constitutes an S with a conversational scalar imlicature of 'but I am happy,' depending on the context. 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, C. 2003, 2000) .If we have the 'but' part explicitly as in (24), it is a PN (pero in Spanish and aber in German, see Schwenter (2000)). This corresponds to my example (22).

(25), 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 (or cancelled/suspended) 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 (24)). (25) fits my definition of CF, with an accommodated question 'Are you happy or ecstatic?' (26) is an SN (*sino* and *sondern*). In Korean, we use '-*nun*' (or -*wa* in J) attached to 'ecstatic' and 'but' (-*ciman*) for (24) but '-ka' (or -ga in J) and -ra (similar to 'and') for (26). (26) is Horn's metalinguistic negation. I dealt with it and sharply distinguished it from CT (Lee, C. 1999).

3.4. CT as a Narrow-Scope Bearer.

CT has been claimed to have narrow-scope over other scope-bearers. I agree with the claim, although Buring (1997) disagrees. I claim that the narrow-scope CT is scalar, as in (20). If a CT is fronted to the initial position of a sentence it tends to get topicality effect with wide scope unlike *in situ*.

(26) 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 (23), 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. Linguists say (21) is ambiguous but REASON > NEG if it has no CT marker and no high tone. If –*ci* gets a high tone, REASON < NEG.

(27) pwuca –yese   kyelhon-ha-ci anh-ass-e
       rich-be-because marry   not   REASON > NEG (no high)
      '(He) didn't marry (her) because she is rich.' REASON < NEG (high tone)

In the written text 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*, (21) gets the REASON < NEG reading, 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$_{CT}$] or [It is not because she is rich$_{CT}$ that he married her]. 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. .
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. 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 (Lee in preparation).

4. The Exclusive –*MAN* 'ONLY' is Scalar as Well as Logical but Unlike –*TO* 'EVEN' and –*NUN* (CT)

Unlike –*to* 'even' and –*nun* the CT marker we have 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 and 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 K and J. In English, *only* in (28a), (29a), (30a) and (31a) are scalar but their counterparts in Korean are not –*man* 'only' but some other expressions. Consider:

(28) a. I *only* talked to a secretary. [scalar or logical (mbiguous)]
     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]
(29) 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]
(30) 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
(31) a. I became only a secretary. [scalar]
     b. na-nun pise-ka toy-ess-ul ppwun-i-ta
     c. na-nun pise pakk-ey mos –toy-ess-e

The Korean counterpart of the scalar reading of (28a) is (28b). In (28b), an exception phrase *pakkey* 'except' has been employed together with an ability modality negation marker *mot* 'not able to,' denoting unfavorable circumstances. (28c), with –*man*, can only denote exhaustivity. A parallel relation of scalarity holds between (29a) and (29b). (29c), 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 (30), *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 (26), (27) and (28):

(32) 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)
(33) Yumi-nun sakwa-rul ilpwu/celpan/3-pun-uy-2-man mek-ess-ta

-TOP apple-ACC some/half/2/3　　　only ate
　　　　'Yumi only ate some/half/2/3 of the apples.'
　(34) *Yumi-nun　sakwa-rul motwu/taypwupwun-man mek-ess-ta
　　　　　-TOP apple-ACC all/most　　　-only ate
　　　　'Yumi only ate all/most of the apples.'
　(35) 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.']

In *taypwupwun-man* 'only most' in (34), if -*man* is replaced by –*nun*, the sentence becomes quite all right with the implicature of 'not all.' The quantifier *taypwupwun* 'most' in Korean, on the other hand, leans toward the positive totality and seems to block the attachment of –*man*, which otherwise requires exclusion of a higher alternative 'all.' (35) shows that –*man*, applied to a predicate, denies a stronger one, turning out to be scalar. Different scalar 'limiting' meanings arise below. The correspondence for (36) in K. is still another expression.

　(36) Only yesterday did we have a phone-call from her.
　(37) Only yesterday, we had a phone-call from her. (Taglicht 1984, Harada et al 1992)

Some quantificational operator head *ONLY* may be posited so that its agreement association with its marker and its scopal behaviour (38) may be explained (Y. Lee 2003) and for blocking implicatures (Sauerland 2004) in my Contrastive Focus (or Horn's metalinguistic negation) situation (39). But scalar meanings involved in *only* are semantically/pragmatically important.

　(38) a. Sue-man(-un)　motu-ka　cohaha-n-ta　　(In the underlying order, ($\forall$ > only) [not ambiguous])
　　　　　--only-TOP all-NOM like
　　　　　(i) 'All like only Sue.' ($\forall$ > only) (ii) 'Sue is the only all like.' (only > $\forall$) [ambiguous]
　　　b. Sue-man-ul　　motu-ka　　cohaha-n-ta
　　　　　-only-ACC　all　-NOM　like
　　　　　'All like only Sue.' ($\forall$ > only) [not ambiguous]
　(39) They did not play MANY of Beethoven's symphonies. They played ALL of them.

5. CONCLUSION.

The concessive markers –*to* and -*mo* evoke scales strategically to make a negative or modal assertion/request, combined with an Indefinite, whereas the Contrastive Topic markers –*nun* and –*wa* evoke scales to convey conventional implicatures of denial of a stronger element (or affirmation of a weaker element). The two mechanisms are systematically related via negativity and concessivity. The Exclusive marker –*man* is more logical than *only* and is also scalar with inherently scalar quantificational expressions. The scalar meanings of *only* are expressed by the exceptive phrase –*pakkey* and negation. The denial force in -*man* is entailed and –*man* does not involve concessivity unlike in the other markers.

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