# On Concession

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**Yong-Beom Kim. 2002. On Concession.** *Language and Information 6.1*, 71–89. This paper proposes that concession should be analysed in terms of inferences based on the likelihood of event occurrence and that an alternative set of events should be presupposed in such inferences. In order to give an empirical content to this proposal this paper discusses the pragmatic aspects of the English word *even* and the Korean morpheme *-lato* and claims that the notion of likelihood is the basis of the pragmatic inference of concession and the quasi-universal quantification effect. It is also claimed that unexpectedness, which is conceptually tied to concession, on the other hand, pertains to the same kind of pragmatic inference but presupposes the existence of an alternative set of individuals instead of an alternative set of situations. **(Kwangwoon University)**

**Key words:** concession, unexpectedness, likelihood, alternative set, scalar implicature, quasi-quantification effect, introduced-if, standing-if

## 1. Introduction

This paper attempts to explain linguistic inferences of concession and unexpectedness. Concession and unexpectedness are claimed to be important semantic contents of the English word *even* and its Korean counterpart *-(la)to*. In this paper, the notion concession will be approached from discourse perspectives as well as from formal perspectives. In section 2, I will review some of the claims made in some of the previous representative analyses of concession. The intuitive discussions of different semantic levels and semantic relations involving concession will be the background of the formal treatment of the topic in the ensuing sections. Section 3 will be devoted to defining concession and unexpectedness in a rigorous way.

This paper will adopt Crevels' (2000) categorization of different levels of concessive meanings, but will reject König and Siemund's (2000) claim that concessive constructions implicate a type of presupposition. Many formal proposals regarding *even* in English and *-(la)to* in Korean posit the scalar implicature ap-

proach following Fauconnier (1975) as in Kay (1990) and Bennet (1982). This paper benefits from the discussions in these papers.

## 2. Previous studies

In this section, Crevels' (2000) taxonomy of concession clauses will be introduced and I will also review various proposals made in König and Siemund (2000), Barker (1991), Kay (1990) and Bennet (1982).

### 2.1 Crevels' View

Crevels (2000) posits four different levels of concessive meanings as exemplified in (1)

(1)  a. Although it is raining, we're going for a walk.

    b. He's not at home, although his car is parked in front of the house.

    c. Even though I am home a bit late, what are your plans for this evening?

    d. I speak and write Serbian, Albanian, Turkish and Dutch, but I cannot express my true feelings in any other language than Romani. Although, now that I come to think of it, I have done it many times ...
       (Crevels 2000:317)

(1a) is an example of content concession, which relates phenomena, involving a physical world domain. The raining and walking events are physically realized in the real world and they are related in terms of *concession* to be defined later. On the other hand (1b) shows epistemic relationship that relates the speaker's premise and a conflicting conclusion. Although the two events [his not being at home] and [his car being parked in front of the house] are real world events, there is a difference between (1a) and (1b) in the relations of the two subevents. In (1a) the relations between the two subevents are more direct in that one event physically impedes the occurrence of the other. In (2b), however, there is no such direct relation, but the speaker infers that one event can be a sign of the failure of the other. In (1c) the concessive meaning should be assessed at the level of speech act. That is, the fact that someone comes home late can make it difficult to perform a kind of speech act such as asking about evening plans. On the other hand, in (1d), concession can be imagined at the textual level. In this case what he has already said or written in the text turns out to be more or less incompatible with what he will say or write next. In this paper, two types of concessive meanings will be dealt with, i.e., content and epistemic concession types will be analysed in a formal way.

    Let us return to (1a) and (1b). In (1a) the rain is physically preventing people from going out or directly reduces the likelihood of their going out for a walk. On the other hand, in (1b), the subevent his car being parked in a certain place does not physically block his being in a certain place or lessen the likelihood of his not

being at a certain location. Instead the speaker infers that he is not at home on the basis of the location of his car. In fact, if (1a) and (1b) are translated into Korean, different morphemes can be used in the consequent clause. Compare (2) and (3).[1]

(2)  a.  cikum pi-ka      oko      issta hate-lato sanpo-lul kakeyssta.
          now    rain-nom coming is    although walk-acc go-will
          'Although it is raining now, (I) will go for a walk'

(3)  a.  Ku-uy  cha-ka   cip      ap-ey    issta-hatelato ku-nun cip-ey
          he-poss car-nom house front-at is-although    he-top  home-at
          epsul   kes-ita
          be-not will
          .'Although his car is parked in front of his house, he will not be at home'

     a'.  ?Ku-uy cha-ka   cip      ap-ey    issta-hatelato ku-nun cip-ey    epsta.
          he-poss car-nom house front-at is-although    he-top  home-at is-not
          'Although his car is parked in front of his house, he is not at home'

(1a) and its Korean counterpart (2a) have an indicative mood ending in the consequent clause whereas the Korean counterpart for (1b), i.e., (3a) has a non-indicative mood ending. If we use an indicative mood ending as in (3a') it becomes a little marginal in acceptability and has a meaning somewhat different from what (1b) is intended to express.

In this paper, the two types of concessive clauses, i.e., content types and epistemic ones will be dealt with, and this paper claims that there is no need for such division as far as semantics of concession is concerned. I will return to this issue in Section 3.

## 2.2 Konig and Siemund's assumption

König and Siemund (2000, K&S, hereafter) observed that the speaker asserts the propositions of the two related clauses in question against the background assumption that the two types of situations are generally incompatible. This can be schematically summarized as in (4).

(4)  *Although p, q* implicates a presupposition *if p', then normally ~q'*.

Then, what is presupposed is that if $p'$ holds true, then normally $q'$ does not hold true. This paper will reject this simplistic way of analyzing concessive meanings, but adopt some of the proposals made in Fauconnier (1975) and Bennet (1982). According to K&S, the concessive statement such as (5) would contain a presupposition as shown in (6).

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1. The English examples in (1) can be translated into Korean by using the verbal morpheme *-ciman*, but, as will be discussed later, it has a different meaning.

(5) Although it is raining now, I am going to go out for a walk.

(6) [if it is raining now] then normally [I am not going out for a walk]

It is not clear how *normally* fits into the interpretation of the second clause of (6), since *normally* is an adverb that fits into generic or general statements instead of the ones depicting a specific 'progressive' stage-level incident as depicted in (6).

Furthermore, K&S's presuppositional approach fails to capture some of the important meanings that are intuitively felt with concessive expressions. Consider the example in (7).

(7) Although Einstein tried to solve the math problem, he could not solve it.

If we apply K&S's proposal to (7b), its main content of the interpretation would be as shown in (8):

(8) [If Einstein tried to solve the math problem] then normally [he could solve it]

Apart from the problems of the compositionality involving *normally*, (8) fails to capture the important aspect of the meaning contained in (7), that is, the math problem was such a difficult one that even Einstein could not solve it. In what follows, it will be shown that concession crucially involves pragmatic inference based on likelihood of events/eventualities in more than one situation.

In fact, K&S's presuppositional approach may be attempting to account for only one aspect of the meaning of the English sentence (1a) as shown below. As indicated in footnote (1), the examples in (1) can alternatively be translated into Korean using the verbal particle *-ciman* as shown in (9) without losing the core meaning of the sentence.

(9) a.   cikum pi-ka      o-ciman   sanpo-lul kakeyssta. (← (1a))
         now   rain-nom come-but walk-acc go-will
         'It is raining now, but (I) will go for a walk'

   b.   Ku-uy  cha-ka   cip    ap-ey   iss-ciman   ku-nun cip-ey
        he-poss car-nom house front-at is-although he-top  home-at
        epsul kes-ita. (← (1b))
        is-not-will
        'His car is parked in front of his house, but he will not be at home'

   b′   Ku-uy  cha-ka   cip    ap-ey   iss-ciman   ku-nun cip-ey   epsta.
        he-poss car-nom house front-at is-although he-top  home-at is-not
        'His car is parked in front of his house, but he is not at home'

However, this Korean connective morpheme corresponds to *but* in English, and according to many linguists, *but* denotes a conventional implicature (see Levinson (1983: 127, for instance). The translations in (9) do not lose truth conditional meaning of (1a), but they do not capture the important implicatures pointed out in connection with (7).

## 2.3 Bennet's Proposal

The notion concession seems to have much to do with the lexical item *even* in English and with *-(la)to* in Korean. Many proposals regarding *even* in English and *-(la)to* in Korean posit the scalar implicature following Fauconnier (1975), or a universal quantification approach as in Barker (1991), or implicature theory as in Bennet (1982). This paper adopts some of the points from both Fauconnier's and Bennet's proposals on this issue. Consider Bennet's examples in (10) and (11).

(10) Even if he drank just a little, she would fire him

(11) Even if the bridge were standing, I would not cross

Let us consider (11), first. (11) could be uttered in a situation where the speaker is watching over the raging waters of the river and the ruins of the bridge. The whole utterance (11) can be true whether [the bridge were standing] holds true or not. On the other hand (10) has a reading that the conditional clause is a pure conditional. Thus, according to Bennet (1982) if he does not drink at all, he will not get fired. In order to distinguish these two different semantic facts, the examples like (10) are dubbed as 'standing-if' conditionals and the ones such as (11) are categorized as 'introduced-if' conditionals. 'Standing-if' conditionals are called so since *if* is outside the scope of *even*, and, thus, it looks as if *if* 'stands' in one place, while *even* moves around semantically looking for its scope. Thus, (10) could be felicitously uttered by rewording the sentence a bit: "If he drank even just a little, ...." Thus, Bennet handles *even* and *if* separately, so *even* does not automatically introduce conditionality.

In the case of 'introduced-if' conditionals, *even* is more tightly linked with *if* since the scope of *even* is 'if the bridge were standing' and its scope is unique and fixed.[2] Therefore, in (11), using *even* means introducing conditions to the utterance and its name comes from these characteristics.

Although I agree with Bennet that the basic meaning of *even* can be extended to concession clauses, I depart from him and would introduce an alterative set or sister members into the analysis of concession. My proposal is not drastically different from Bennet (1982) since he also assumes 'neighbor',[3] which is a set of

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2. Bennet states that he could not think of any phrases that could give rise to scope ambiguity in the case of 'introduced-if' clauses. He thinks that one possible candidate is "even if the bridge were down, ...", which is pragmatically infelicitous in this case as he admits. (Bennet 1982: 411)
3. Bennet proposed a felicity condition as summarized below, and let us call this condition $C_{Be}$.

   (i)  S is true, and mutually believed by the speaker and the hearer, and salient for them (i.e, it has just been authoritatively asserted);

   (ii) the truth of S* and that of $S_j$ can naturally be seen as parts of a single more general truth;

   (iii) it is more surprising that S* is true than that $S_j$ is true. (Bennet 1982: 405-406)

alternative sentences without *even*. However, I disagree with Bennet and claim that (10) has two readings as shown in (12). This has been independently pointed out by Lycan (1991).

(12)   (i) He would get fired however little he drank (i.e., if he drank)
       (ii) He would get fired whether he drank just a little or not

In the case of (12i) the alternative set will be various amounts of liquor drunk, i.e, {A LITTLE, MORE THAN A LITTLE, QUITE A LOT, MUCH, VERY MUCH, ... }. This will be the potential scope of *even* in (12i). On the other hand, (12ii) will presuppose an alternative set of propositions such as {HE DRANK A LITTLE, HE DRANK MUCH, HE DRANK VERY MUCH, HE DRANK NOTHING ... }. The elements of this set are potential scope of *even* in the reading of (12ii).

In fact, these two readings can be translated differently into Korean as shown in (13a) and (13b).

(13)   a.   Ku-ka   cokum-ilato swul-ul    masi-myen, ku-nun hayko toyl kes-ita
            he-nom a little-even liquor-acc drink-if      he-top fired  get  will
            'If he drinks even a little amount of liquor, he will get fired'

       b.   Ku-ka   cokum swul-ul    masi-te-lato, ku-nun  hayko toyl kes-ita.
            he-nom a little liquor-acc drink-even-if he-nom fired  get  will
            'Even if he drinks a little amount of liquor, he will get fired'

What is assumed in this paper is that events or situations can act as basic objects just as individuals or properties do. This approach will not only open up a possibility of such an interpretation as shown in (12ii), but we can also dispense with the dichotomy of 'even-if' clauses of Bennet's. First, the ambiguity of (10) is explained off by specifying the scope of *even*. In (12i) the scope ranges over the amounts of liquor drunk or other expressions, and in (12ii) its scope involves propositions denoting events or situations. Note that the alternative set for (12ii) includes as its member HE DRANK NOTHING. Thus, he would get fired no matter how he behaves. This is the kind of reading that 'introduced-if' conditionals have. Thus, 'introduced-if' conditionals can be seen as resulting from the general scope phenomena of *even*, since we can say its scope ranges over propositions (or events). Second, this proposal can also account for the two readings in (14).

(14) Even if they sent us a helicopter, I would not cross the river.
     (i) If they sent us even a helicopter, I would not cross the river.
     (ii) No matter what means were available, I would not cross the river.

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(S* is a sentence without *even* such as *Tom ran* and it is obtained by eliminating *even* from, for instance, *Even Tom ran* and $S_j$ will be neighbors (i.e., alternatives) which correspnd to such sentences as *Jane ran*, *Bill ran*, ... etc. I will use the same notation throughout this paper since other authors also stick to this convention.)

Since (14) can be stated in the same situation as (11) can, (14) would have to have only one reading (i.e., (14ii)) if we followed Bennet (1982). However, as shown in (14), it can have two readings. (14i) can have that interpretation under the assumption that the speaker is being forced to cross the river but that he is very nervous about his safety and very reluctant because of lack of a proper cause, so it connotes that sending him even a helicopter would not force him to cross the river. In (14i) the scope of *even* is [a helicopter]. Thus, we can imagine that if he were provided with a good cause and better safety measures, he may be willing to cross the river. This again shows that *even* moves around for its scope within the type of clause that Bennet dubbed as 'introduced-if'. This seems to indicate that 'introduced-if' is not a necessity but that it can be dispensed with.

Returning to (12) again, this paper wants to point out that concession requires an alternative set including a set of situations that have the lowest likelihood of occurrence. Setting up such very unlikely situations or conditions will naturally allow us to imagine a more probable situation using our inference ability based on ordinary background knowledge, as shown in (15)
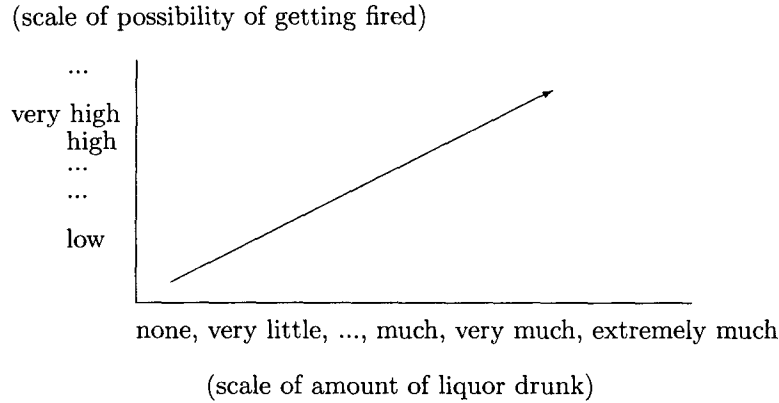
(15) [If he drinks JUST a little, he will get fired ] → [If he drinks a little, he will get fired] → [If he drinks quite much, he will get fired] → [If he drinks much, he will get fired] ...

Let us assume that the boss is puritanical or very strict on liquor consumption as when the Prohibition Amendment was enforced in the 1930's in the U.S. Then, as shown in (15), according to our background knowledge, we can infer that if he gets fired because of a very small amount of liquor consumption, or under less strict conditions, then he would get more easily fired for any larger amount, or under more strict conditions.

What can be inferred here is that in a more strict situation he is more likely to get fired. For the interpretation in (12i) kinds of scalarly ordered objects and their relations as shown in (16) can be posited to explain pragmatic inferences, and this can be a basis of our inference.[4]

(16) scalarly orderd objects and possible pragmatic inference

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4. See Kay (1990 : 67-70) for a similar treatment of scales. This kind of treatment is originally due to Fauconnier (1976).

(scale of possibility of getting fired)

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 ...
very high
  high │                              ↗
  ...  │
  ...  │
       │
  low  │
       └─────────────────────────────
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none, very little, ..., much, very much, extremely much

(scale of amount of liquor drunk)

Likewise, the interpretation of (12ii) somehow has to posit a sequential order in terms of likelihood of the various situations. However, the chosen or stated alternative is taken to be placed as a less likely precursor for the event depicted by the consequent clause to happen. I believe this triggers a series of inferences as shown in (15).

## 2.4 Barker's Universal Quantification Approach

Barker (1991) distinguishes between 'connection conditionals' and 'semifactuals'. These two notions roughly correspond to Bennet's 'standing-if' and 'introduced-if' conditionals, respectively. Connection conditionals bear a logical or causal nature between two subevents as in (12i) or in (17a). In semifactual cases, one event does not affect its consequent event as shown in (17b).

(17)  a.  If the United States had used nuclear arms in Vietnam, it would have won the war.

      b.  Even if the United States had used nuclear arms in Vietnam, it would still have lost the war.

Barker argues that Bennet's felicity condition (as shown in footnote 3) is not appropriate and cannot cope with the counterexamples as shown in (18).

(18)  a.  Looking out the window expecting to find only family members in the front yard, I see three figures and remark truly, *There's Pa and Grandma outside and even **Ronald Reagan!** My audience rejoins, Even **Reagan** is outside!*

      b.  Someone reading the prize winners' list remarks, *Only three people won a prize out of a hundred this year, Brian and Smart won a prize, of course, but last year's worst student was the other, Smith!* To which in reply it is exclaimed, *Even **Smith** won a prize!*

    c. It is asserted, *Out of a thousand people few died of the disease, two old ladies, a child, a young woman, surprisingly, and even the man everyone thought completely invulnerable!* To which it is replied, *Even he died of the disease.*

Barker argues that the *even* statements in (18a), (18b) and (18c) are infelicitous but that the felicity conditions suggested by Bennet are satisfied (See footnote 3). According to Barker's argument, for instance, in the case of (18b), $C_{Be}$ is satisfied for (i) ($S_j$) *Brian and Smart won a prize* is mutually believed by the speaker and the hearer, (ii) $S_j$ and ($S^*$) *Smith won a prize* are parts of the single more general truth, *three people won a prize*, (iii) $S^*$ is more surprisingly true than $S_j$. However, utterance (18b) sounds awkward to native speakers of English. As I will argue later, Bennet's $C_{Be}$ is not responsible for the failure to account for the infelicity found in (18).

As an alternative to Bennet's proposal, Barker proposes a universal quantification approach as shown in (19). Let us call the conditions in (19) $C_{Ba}$.

(19) (i) $S^*$ and $S_j$ are asserted as universal instantiation cases of an implied and stated $S_u$.

     (ii) $S^*$ is an extreme instance of $S_u$.

According to Barker, English universal quantifiers are used in a restricted sense where the extent of the restriction is vague and context dependent. The use of *even* is usually to indicate the extent of the generalization. For instance, suppose someone asserts *Everyone from the company was at the party*. This utterance may mean that literally every executive and the employee went, or just the usual party goers went or those from the speaker's circle of friends went. In this case *Even Tom came* can define the extent of the universal quantification. If Tom is one from the speaker's circle, it may mean everyone in the speaker's circle went to the party. Although this proposal looks plausible in some sense, the $S_u$ *everyone in the speaker's circle went to the party* seems to allow exceptions since the following utterance sequence is possible. Suppose Jack, Bill and Dave are the most likely people to appear at the gathering of this sort.

(20) A: Was everyone from the company at the party?
     B: Well, even Tom came. But Jack, Bill, Dave ... all those guys weren't there.

The above sequence of utterances does not seem to show that *even* has a force of universal quantification. As will be argued later, *even* may simply implicate likelihood of occurrence but does not have a strong or strict assertion force such as universal quantification.

Now let us look at some details of Barker's analysis. In other words, how can the universal quantification approach deal with the concessive meanings of *even*? According to Barker (1991: 15), in the case of 'standing-if' conditionals, (21a) can be regarded as saying (21b):

(21) a. Even if he drank an ounce of whisky he would get drunk.
     b. If he drank any amount of whisky, he would get drunk.

In (21a) the speaker quantifies over amounts of whisky. This may be trivial, but, if we are strict, we can see there arises a discrepancy in interpretation between (21a) and (21b) since the amount quantified in (21a) is one ounce and more of whisky; whereas the one in (21b) is all the possible portions of whisky. Barker applies the same analysis to 'introduced-if' conditionals equating (22a) with (22b) or (22c).

(22) a. Even if the bridge were up, I would not cross the river.
     b. I would not cross the river whatever means were available.
     c. If any sort of means were available, I would not cross the
        river. (Barker 1991: 16)

So we may imagine that all the possible 'means of crossing the river' is universally quantified in (22a). But this approach may face counterexamples as shown in (23) and (24).

(23) A: The bridge is broken and the water has swollen a lot.
     B: Even if the bridge were up, I would not cross the river.
        *(thinking they have to cross the river)*
        Can we get a helicopter?

(24) a. Even if it were sunny, we would not go fishing.
     b. Even if it were sunny, we would go fishing.

The utterances in (23) seem to show that it is hard to delimit the range of objects to be quantified over or that there are exceptions to the universal quantification treatment.

Furthermore, the contrasting utterances in (24) also show that some other factors or approaches are to be taken into account to take care of the seemingly contradictory situation. We could not simply think of 'possible weather conditions for fishing' as the domain of quantification, since (24b) is also a plausible utterance if the fisher considers cloudy days a better condition for fishing. According to the second clause of $C_{Ba}$ in (19) the two extreme S*'s are possible for the same situation type *fishing* as shown in (25).

(25) a. If it were sunny, we would not go fishing.
     b. If it were sunny, we would go fishing.

This contradiction in (25) shows that sentence level analysis is not enough for the analysis of *even*. It seems that what needs to be incorporated into the $C_{Ba}$ in (19) is the speaker's belief of the situation.

## 2.5 Kay's Analysis

Initially Kay (1990) follows Fauconnier (1976) and proposes a scalar model to explain the universal quantification effect. He defines informativeness as a relation holding between two propositions relative to a scalar model. A more informative sentence unilaterally entails a less informative one in a scalar model which, in turn, is defined as a set of background assumptions shared by the speaker and the addressee at the time of utterance.

According to Kay *even* is a scalar operator in that it relates two propositions in the same scalar model. In other words, it relates the proposition expressed by the sentence in which *even* occurs to the one taken to be already in the context. This means that if *even* marks a sentence or a proposition, then such marking makes it more informative than the original sentence without *even*. For instance (26a) entails, and thus more informative than, (26b), and these sentences are more informative than (26c) in a scalar model.

(26) a. John can even jump seven feet
     b. John can jump seven feet
     c. John can jump five feet.         (Kay 1990:68)

However, Kay seems to need to modulate his proposal in order to take into account some of the seemingly non-scalarly ordered objects as shown in (27)

(27) Georges a bu un peu de ruhm, un peu de vin, un peu d'armagnac un peu de calva et meme un peu de cognac.
     Grorge drank a little rum, a little wine, a little armagnac, a little calvados, and even a little brandy. (Kay 1990:72)

In this case it is hard to tell what kind of semantic dimension is involved and exactly what the ordinate is. Kay assumes that it could involve either diversity or the quantity of George's intake of liquor, but no one can actually guarantee whether or not one of the two is involved, either, for we can , for instance, imagine that the price of the liquor or the taste of the liquid may matter, which may vary in this case according to the personal taste or the bar's price policy.

In other cases Kay also provides an unwarranted analysis. Consider the following Kay's example in (28).

(28) He can't speak Spanish and he's even lived a year in Spain.

According to Kay , the first clause of (28) can be taken to implicate (29):

(29) that he is deserving of criticism.

Furthermore, he claims that the whole sentence (28) implicates (30):

(30) that he is deserving of severe criticism.

The latter implicature is taken as the stronger statement in a scalar model; whereas the former is the weaker. This analysis also seems to be inadequate in that setting up the semantic dimension 'criticism' is ad hoc, as in the case of (27).

## 3. Pragmatic inferences

In this section the notions *concession* and *unexpectedness* will be formally defined on the basis of pragmatic inferences and our background knowledge. For this purpose, I will define *likelihood* in terms of our cognitive inference pattern.[5] In doing so I will distinguish between probability and likelihood. Probability is a statistical notion that has a relatively well defined status, so likelihood will be defined in terms of probability.

Intuitively speaking, the likelihood of an event is a relative notion that always accompanies many factors. For instance, the likelihood of my participating or not participating in a certain conference will vary according to who comes to the conference, how much traveling funds I can get, how long the trip takes, whether or not there is a more important meeting at my university, to name a few. However, what is usual is that we do not make a fuss by listing all those possibilities, but allude to the most relevant case as shown in (31)

(31) The guest speaker will come to the conference although he is not provided with the travel funds.

For instance, what is expressed in (31) are the relations between the guest speaker's presence at the conference and the matter of his travel funds. This relation is not a cause-result relation or cause-effect relation or any other easily definable one. The travel fund matter somehow has an influence on his traveling. In other words, we can presume that the lack of travel funds may reduce his possibility of attendance. Thus, what is expressed in (31) is only a portion of the factors involved in his trip.

Before going any further, we need to distinguish between events and situations. Events are seen as abstract semantic entities, usually denoted by a proposition. Thus we could think of an abstract singing event and a dancing event, separately or compositionally. On the other hand, a situation could still be thought of an abstract semantic object but it is a more inclusive notion such that it could admit various kinds of events in one situation at the same time. Therefore, the relation between an event and a situation can be stated as a 'holds-true' or 'compatibility' relation. So an event *e* can hold true or not true in (i.e., compatible or not compatible with) situation *s*. Further, we can think of inference relations between (sets of) events and between (sets of) situations. However, in many case

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5. The notion 'likelihood' is not new to linguistics. It has beeen intuitively used by such authors as Wilkinson (1996: 194-198) and Lahiri (1998: 86-88) while they deal with the scope of *even* in English and negative polarity items in Hindi, respectively.

the two terms can be used interchangeably since an event is always hooked to a situation in the real world and situations can be characterized by events.

Given these distinctions we can talk about likelihood and other notions in terms of events and situations. Now, to lay a basis for further discussions, we will define the term *likelihood* in relational terms as follows.[6]

(32) Likelihood

Given distinct events $e_a$, $e_b$, and event variable $e_i$,

$e_a$ has greater likelihood of occurrence than $e_b$ in relation to some $e_i$

(i.e., $\exists\, e_i [$ Likelihood $(e_i \sim e_a) >$ Likelihood $(e_i \sim e_b)])$[7]

if and only if

(i) $e_a$ has greater probability of occurrence than $e_b$ in relation to some $e_i$

(ii) the speaker and the addressee has the belief that (i) is true

        in a given situation of utterance.

What we attempt to highlight in (32) is that we can think of a combination of events and their likelihood of occurrence since some such sequences of events are seen as forming bases of the definition of concession in this paper, although we can consider a possibility of occurrence of one event by itself. For instance, we can mention possibility of rain on its own. However, we could also mention the same kind of possibility in relation to the freezing temperature of the day. The necessity for this complication will become evident in section 3.1. Furthermore, according to the second clause of this definition, the speaker and the addressee have to believe in such relational state of affairs.

Of course, human beliefs and statistical reality do not always correspond to each other, since human beliefs do not always reflect realty correctly. In this sense the notion defined in (32) may not be a direct reflection of statistical probability but simply reflects the speaker's or addressee's mind. Based on this notion we will define concession and unexpectedness in the next sections.

## 3.1 Concession and Inference

In this section we will attempt to give a formal definition of concession. Concession will be defined as involving four objects; one is the event depicted by the

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6. The term likelihood itself is borrowed from Wilkinson (1996) and Lahiri (1998), but the definition provided here is my own. One referee pointed out that defining 'likelihood' in terms of probability is neither desirable nor necessary and that it should be treated as a primitive notion. He thinks that the notion is at best a relational notion in the belief world of the discourse participants since it cannot be a true reflection of the state affairs of the real world. I agree to this criticism in some sense of the term and I could treat it as a primitive notion. However, the terms as used here is rather a cognitive notion and may have to somehow mirror the real world to a certain degree. This paper pretheoretically assumes that a notion such as likelihood should be formed within one's mental domain on the basis of real world experience or knowledge such as statistical probability. In other words the discourse participants are assumed to have some realistic background knowledge as to whether or not an event can easily occur in realtion to another, not to mention believe it.

7. The notation 'A~B' used in definition (32) is intended to mean 'A and B occur sequentially or concurrently in a relevant manner', although in many cases it will be a relation of implication since concession involves conditionality. I would not attempt to pin down on the notion *relevance* here. See Sperber and Wilson (1995).

consequent clause ($e_b$ in (33)); the second is an event that denotes the least likely condition for the consequence to happen ($e_a$ in (33)); the third is an event variable ($e_i$ in (33)); the fourth is the set of alternative events (E in (33)). The meaning of concession arises when a situation or event happens in spite that the preconditions for the event are in such a configuration that they are the least likely precursors to the event in a certain situation. The notion *concession* posited in this paper can be articulated as shown in (33):

(33) Concession[8]

> Given events $e_a$, $e_b$, an event variable $e_i$ , and a set of alternative events E, the statement translatable into ($e_a \sim e_b$) involves concession if and only if

> (i) the speaker infers, and expects the addressee to make inference $\exists e_i [ \,[S(e_a \to e_b) \subseteq S(e_i \to e_b)]$ while the discourse participants are attuned to (ii),

> (ii) $\exists e_i [\text{Likelihood}(e_a \sim e_b) \leq \text{Likelihood}(e_i \sim e_b)] \geq \text{Likelihood}(e_t \sim e_b)]$, and where $\text{Likelihood}(e_t \sim e_b)$ is a threshold level,[9] and

> (iii) for some $e_i$ , $S(e_i)$ is distinct from $S(e_a)$, where $S(e)$ is a set of situations that are compatible with event e, and $e_i \in$ E.

Let me exemplify this definition in detail. Suppose we have a freezingly cold day ($e_a$), then many natural corresponding actions will follow, although we can still think of a less natural event such as going out with only a T-shirt on ($e_b$).

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8. The original formulation of the first clause of the definition (i) was this : $\exists S_i \exists e_i [S(e_a \to e_b) \Rightarrow S_i(e_i \to e_b)]$ and the second clause was $existse_i[\text{Likelihood}(e_a \sim e_b) \geq \text{Likelihood}(e_i \sim e_b)]$. However, as one referee pointed out, the first clause may not mean anything if S is a fuction that gives out a set of situations for a given event or a combination of events. In the original formulation what is intened is that given a set of situations that are compatible with a certain utterance, we can think of the existence of other sets of situations that are ordered in accordance with a scale of likelihood. The second clause is also too loose, as the same reviewer pointed out, since there can be some utterances that can satisfy the second clause but does not sound acceptable as shown below. The following examples are provided by the forementioned reviewer.

(i) Chelswu-uy pwumonim-un chelswu-ka pan-eyse ildung-ul hayto
    C.-poss        parents-top   c.-nom   class-in   top-acc   do-though
    kkwucwung hasinta.
    scold
    'Chelswu's parents scold him although he tops the list in his class'

(ii) ??Chelswu-uy pwumonim-un chelswu-ka pan-eyse kkolci   taum-ul hayto
     C.-poss          parents-top   c.-nom    class-in   bottom next-to do-though
     kkwucwung hasinta.
     scold
     'Chelswu's parents scold him although his standing is next to the bottom in his class'

So we may need a kind of threshold level in our definition so that if the relevant condition passes this threshold, then we may be able to talk about concession.
9. The threshold level of likelihood is not easy to define within the scope of this paper but I assume that it converges with the mean value of the greatest probability and the zero level probability of $e_b$.

According to (33i) and (33ii) the discourse participants know that this sequence of events has lower possibility of occurrence than other sequences. That is, although he knew that the event going out with scanty clothing on could have been more natural in some other situations than the situation in question, he somehow needed to choose the less likely option of action (or inference). That is, the event of going out with only a T-shirt on could have been more natural in some other situations, but he somehow chose the option in spite of a less favorable condition. This seems to be an intuitive meaning of concession. If the event variable ($e_i$) can be assigned to a large number of events, we can have a long sequence of inferences as previously shown in (15).

As Bennet (1982) mentioned and as many others agree, *even* can denote unexpectedness or surprise. This paper claims that unexpectedness can be derivable from (33) with a little modulation of the definition. In case of concession, what matters is the existence of alternative events that are more likely to happen than the events in question (i.e., the *even* event). This complex definition of concession involving events and likelihood seems to capture the intuitive meaning of concession since concession seems to presuppose an occurrence of an event in very unlikely situations. In this vein Kay's example like (27) and (28) can be easily accounted for without postulating any ad hoc semantic dimension or ordinate. For instance, (27), in my analysis, implicates that George is somehow less likely to drink brandy. It does not specify whether it is because of either the quantity, or the variety of the liquid, or its price, or his taste.

## 3.2 Unexpectedness

Now, given the definition of concession, unexpectedness can be accounted for by looking at individuals as alternatives instead of dealing with events. Consider (34).

    (34) Even Bill passed the oral test.

Suppose that a class is taking an oral test over a few days and that everyone is worrying about it. Further, suppose Bill was a very unlikely person to pass the test. However, if in fact he passed the exam, someone can comfort other students by saying (34). In this case, the speaker infers, and expects the addressee to infer, that Bill's passing the test will implicate other students' passing.

Thus, in this case, the alternatives will be other students in the class, the speaker and the addressee can infer in a manner similar to the one shown in (35). which is 'individual analogue' of (33).

    (35) Given an individual $s_a$ , an individual variable $s_i$, and set of alternative individuals, the statement translatable into '$P(s_a)$' involves unexpectedness if and only if

(36)　(i)　the speaker infers, and expects the addressee to infer $\exists s_i[P(s_a \Rightarrow P(s_i)]$ while
discourse participants are attuned to (ii), and

(ii)　$\exists s_i[\text{Likelihood}(P(s_a)) \leq \text{Likelihood}(P(s_i)) \geq \text{Likelihood}(P(s_t))]$
where $\text{Likelihood}(P(s_t))$ is a threshold level.

The degree of unexpectedness will increase as the value of the variable $s_i$ can be assigned to larger number of individuals, even to those individuals who are very unlikely to satisfy the predicate P. The same pattern of reasoning seems to be true with concession. That is, concessive meaning gets 'stronger' if the event variable $e_i$ can be assigned to a larger number of events and situations respectively in (33).

It should be further noted that if everyone shares the knowledge that Bill is a less likely person to pass the test, the use of *even* is redundant as shown in (36), but in this case *Bill* has a higher pitch than others part in English and in Korean.

(37)　Well, ... BILL passed the oral test.

(38)　BILL-i　hapkyekahay-ss-nuntey, mwue. (Korean)
　　　Bill-nom pass-pst-con　　　　well/what
　　　'Well, (I am saying) Bill passed (What makes you worry?)'

There may be other ways to convey both the expressed and implicated meaning of (37) in Korean, since this language has a variety of pragmatically oriented particles such as *-to*, *-mace*, *-kkaci*, *-cocha*. What is clear in this type of expression is that there are inferences that virtually have the effect of universal quantification, although it is based on likelihood.

As argued in Hong (1983) and Yoon (1988), the Korean particles *-to* and *-lato* can express a kind of surprise or emphatic meaning as shown in (38).

(39)　a.　Einstein-to　ku　mwunchey-lul mos pwul-ess-ta.
　　　　　Einstein-too the problem-acc　not　solve-pst-de
　　　　'Even Einstein could not solve the problem'

　　　b.　Chelswu-to　ku　mwuncey-lul pwul-ess-ta
　　　　　Chelswu-too the problem-acc　solve-pst-de
　　　　'Even Chelswu solved the problem'

　　　c.　?*Chelswu-lato ku　mwuncey-lul pwul-ess-ta
　　　　　Chelswu-too　　the problem-acc solve-pst-de
　　　　'Even Chelswu solved the problem'

　　　d.　Chelswu-lato ku　mwuncey-lul pwul-ess-ul　　kes-i-ta
　　　　　Chelswu-too the problem-acc solve-pst-mod thing-is-de
　　　　'Even Chelswu could have probably solved the problem'

(38a) can be readily interpreted as 'unexpected' in a way as proposed in (35), since Einstein's not being able to solve the math problem is against our background knowledge. This means that in the interpretation of (38a) $s_i$ can be assigned to almost any individual and this increases the degree of unexpectedness. In (38b), however, this type of inference may not be readily available. Nevertheless, if the discourse participants are aware of, and attuned to, the contingent fact that Chelswu is very unlikely person to solve the problem, then we can infer from (38b) that his solving the problem can be surprising or unexpected. Here again, $s_i$ can be assigned to many able students and this can increase the degree of unexpectedness.

Furthermore Korean has an explicit concession marker *-lato* as shown in (38c) and (38d). It should be noted that the concessive marker *-lato* calls for a modal marker in Korean as the contrast between (38c) and (38d) indicates. This is consistent with the claim of this paper that it involves alternative events or situations as shown in (33). Modals are usually seen as introducing alternative situations. This seems to fit in the observations made in Korean linguistics. That is, *-lato* introduces sentence-level semantics. (38d) differs from (38a) and (38b) in that the former always expresses concession whereas the latter can have another interpretation. Thus, (38d) can be interpreted as containing events or situations as its component parts (i.e., alternatives), not individuals. Thus, (38d) may have to be interpreted by the pattern in (33) instead of (35).[10] Especially the situation depicted is less likely to happen in the real situation, thus being unrealistic, and this seems to be one of the points where concession differs from the mere 'unexpectedness' case where there is no alternative situation imagined.

As we have seen above, concession and unexpectedness in English and Korean involve 'likelihood-based' pragmatic inferences and this enables us to infer many alternative expressions. According to our definition in (33) and (35), we can say English *even* can express concession and unexpectedness while Korean *-lato* can expresses concession and Korean *-to* can express unexpectedness.

## 4. Conclusions

This paper has argued that concession should be analysed in terms of inferences based on likelihood of event occurrence. This paper has discussed the pragmatic aspects of the English word *even* and claims Bennet's dichotomy of 'standing-if' and 'introduced-if' can be dispensed with in the analysis of *even* and that such

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10. This may explain why Barker's example, repeated below, is inadequate in rebuffing Bennet (1982).

18. b. Someone reading the prize winners' list remarks, *Only three people won a prize out of a hundred this year. Brian and Smart won a prize, of course, but last year's worst student was the other, Smith!* To which in reply it is exclaimed, *Even* Smith *won a prize!*

    *Even* may be felicitously used in a modal context in usual cases. In fact (18b) can be greatly improved if the even-sentence is stated as *Even* Smith *could win the prize!* Note that none of the examples in (18) contain modal auxiliaries.

dichotomy can be handled by extending the scope of *even*. It is also claimed that Kay's strict scalar interpretation cannot cope with various uses of *even* where setting up ordinates is unwarranted.

This paper also pointed out that Barker's universal quantification approach cannot deals with many apparent counter-examples and that what *even* introduces is a quasi-universal quantification, i.e., likelihood of occurrence. This paper has also discussed the Korean morpheme *-lato* and claims that the notion of likelihood is the basis of the pragmatic inference of concession and the quasi-universal quantification effect involving this word. It is also claimed that unexpectedness, which is conceptually tied to concession, involves the same kind of pragmatic inference as concession but presupposes the existence of an alternative set of individuals instead of an alternative set of situations.

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