

Interpretation of Implicit Arguments in Conjoined Sentences in Relevance Theory*

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Lee, Soo-Jae. 2003. Interpretation of Implicit Arguments in Conjoined Sentences in Relevance Theory. *The Linguistic Association of Korea Journal*, 11(3), 1-22. In this paper I discuss the Fillmore's (1986) verbs of Indefinite Null Complements (INC) and Definite Null Complements (DNC) and account for the behavior of the verbs with regard to implicit arguments. More specifically, I deal with the question of when an argument of a verb is left implicit and how a hearer retrieve the content of the implicit argument of the verb used. Within the framework of Relevance Theory I have argued that to achieve an optimally relevant communication the speaker would not use implicit null arguments unless it is clear from the immediate context what is meant. If the content of the implicit argument is hard to retrieve in a particular occurrence, the speaker helps the hearer to recover its content by constraining the interpretation of the referent of the implicit argument in the immediate context, e.g. by using explicit arguments.

Key words: implicit argument, complement, INC, DNC, Relevance Theory

1. Introduction

The English verb system usually distinguishes transitive verbs from

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intransitive ones. The distinction, however, is by no means clear-cut since many verbs, such as *drink*, *eat*, *read*, *believe*, *accept*, *leave*, *decline*, *follow*, *find out*, etc., can be used either way, i.e. with either an overt argument or an argument that is not explicitly expressed.¹⁾

The purpose of this paper is to address the question of when an argument is left implicit and to account for the behaviour of the verbs with regard to implicit arguments. More generally, I am concerned with the way of achieving communication in the presence of these implicit arguments. The following two specific questions deal with the interpretation of implicit arguments from the perspectives of the participant roles in conversation:

- (1) When can a speaker leave an argument implicit?
- (2) How does a hearer retrieve an implicit argument?

In an attempt to address these questions, I review in section two previous studies on implicit arguments and consider some of the consequences of Sperber and Wilson's (1986/1995) *Relevance Theory*. Thus section 3 gives a brief outline of *Relevance Theory* and presents an account of the interpretation process. In section 4, I argue that within a relevance-theoretic framework, we can easily explain when a speaker can leave the argument of a verb implicit and how a hearer recovers the content of the implicit argument of the verb used. In section 5 I show definite and indefinite interpretation of null complements in Korean and presented five types of verbs with implicit arguments. Section 6 concludes the paper.

1) The problem with the dichotomy of transitive and intransitive verbs was observed by Jespersen. He points out that it is preferable to speak of intransitive uses of transitive verbs in case the objects of the transitive verbs are omitted (Jespersen 1927, Vol. II, Part III, cited from Lehrer 1970: 227).

2. Previous Studies on Implicit Arguments

2.1 Transformational Account of Implicit Arguments

To account for when a direct argument of a verb can be left implicit, various researchers (e.g. Katz and Fodor 1964, Bresnan 1978, Fillmore 1986, among others) have argued that verbs have to be represented in such a way that their internal arguments are marked for omission. In Transformational Grammar, for example, it is assumed that a range of transitive verbs allow their objects to be deleted. Hence, Katz and Fodor (1964: 81ff) derives (3) from (4a) or (4b) by an object deletion transformation.

- (3) John is reading.
 (4) a. John is reading something.
 b. John is reading it.

Bresnan (1978) treats verbs like *read* and *eat* as syntactically intransitive but functionally transitive, capturing the semantic relationship between (3) and (4) by the lexical mapping rule in (5):²

- (5) read: V, [___ NP] NP¹ READ NP²
 [___], (∃y) [NP¹ READ y]

2.2 Fillmore's (1986) Proposal

With regard to implicit arguments Fillmore (1986) distinguishes two types of verbs in terms of the referent's identity for the unexpressed arguments:

2) Square brackets represent syntactic contexts or subcategorization frames, and the formulas to the right are called functional structures; so, the verb *read* has two syntactic contexts. The syntactic and functional structures for the transitive verb *hit* and intransitive verb *sleep* can be represented as follows:

hit: V, [___ NP], NP₁ HIT NP₂ *sleep*: V, [___], NP₁ SLEEP

Indefinite Null Complements (INC):³⁾ The referent's identity is either unknown or irrelevant. Verbs like *drink*, *eat*, *read*, *sew*, *write*, etc. cannot occur with an implicit argument if there is a possible referent in the preceding context. The implicit arguments are considered to "be obligatorily disjoint in reference with anything saliently present in the context."

Definite Null Complements (DNC): The referent's identity must be recoverable from the context. Verbs like *accept*, *object*, *follow*, *wait*, etc. can occur with an implicit argument only if the missing information is accessible and salient in the previous context.

The difference between these two types of verbs is illustrated by the following examples (Groefsema 1995: 140):⁴⁾

- (6) a *John brought the sandwiches but Ann didn't eat - she ate the cakes instead.
- b. The guide left but the tourists didn't follow - they followed the courier instead.

According to Fillmore, (6a) is ill-formed since *eat* is an INC verb and the implicit argument of *eat* should be disjoint in reference with anything present in the context. Thus although there is a salient referent, i.e. *the sandwiches* in the first clause, *eat* cannot refer to *the sandwiches*. Hence we get the interpretation in (6a'):

- (6a') *John brought the sandwiches but Ann didn't eat (anything) - she ate the cakes instead.

3) In GB syntax *arguments* are taken as subjects, objects, etc. and topics, heads, etc. are non-arguments or operators. Also, there is a clear distinction between the terms *argument* and *adjunct*. The former is a more necessary part in a sentence, but the latter is not. Fillmore (1986) uses the term *complement* as a cover term including subjects, direct objects, indirect objects, and even prepositions which are not arguments.

4) These examples are originally due to Ingham (1989).

The implicit argument of *eat* is taken to be a proform, i.e. *anything*. The sentence is ill-formed on Fillmore’s approach because of the presence of two contradictory assumptions, that is, *Ann didn’t eat anything* and *she ate the cakes instead*. (6b), however, is well-formed because *follow*, a DNC verb, can occur with an implicit argument only if the referent of the implicit argument can be retrievable from the context. Hence, the implicit argument of *follow* can refer to *the guide* in the preceding sentence.

2.3 Counter Arguments against Fillmore’s (1986) Proposal

Fillmore (1986) proposes that the INC verbs cannot occur with an implicit argument if there is a salient referent in the preceding context. I take this statement to mean that when a speaker uses an INC verb with an implicit argument in the presence of a potential referent in the preceding context, the implicit argument of the verb has to be restricted to that potential referent. More specifically, the speaker has to use a referring expression, for example, a pronoun to constrain the interpretation of the implicit argument to the salient referent. Consider (7a) and (7b):

- (7) a. Tom picked up a glass of wine and drank.
 b. Tom picked up a glass of wine and drank it.

In my understanding, Fillmore argues that *drink* in (7a) cannot refer to the *glass of wine*. In the next section, after I introduce Relevance Theory, it will become more apparent how the hearer of (7a) would interpret *drink* as referring to the *glass of wine*. I will argue that regardless of the verb’s being used with an implicit argument as in (7a) or with an explicit argument as in (7b) the speaker would interpret *drink* as referring to the *glass of wine*. Supposing that there is a difference between the interpretations of these sentences, I claim that this difference arises due to the fact that the starting point and the end point of the path in (7b) must be unique, and the pronoun *it* in it

marks the temporal endpoint of the event; hence we get a sense that the event is completed.⁵⁾ Although the amount of wine drunk in (7a) is unspecified, (7b) is interpreted as expressing that Tom drank the whole glass of wine. With respect to INC verbs I would like to argue, contrary to what Fillmore claims, that even when we use such verbs with an implicit argument, if there is a potential referent in the immediate context we interpret the implicit argument of the verb as referring to that referent.

Furthermore, I argue that DNC verbs, i.e. *follow*, *accept*, *decline*, *reject*, *object*, *find out*, etc. can occur with an implicit argument but to be able to use such verbs with an implicit argument, the speaker first has to set a context communicating what is to be followed, accepted, declined, rejected, objected, found out, etc. That is probably why in the case of DNC verbs inserting a pronoun to constrain the interpretation of the implicit argument would be redundant: the context is already constructed and moreover there is nothing else to which the implicit argument can refer. The verb *follow*, for instance, necessarily implies that there must be something set ahead of you for you to follow. You can follow a person, a path, a certain approach or a religion, etc. Similarly verbs such as *accept*, *decline*, *reject* imply the presence of something, e.g. an offer that you may accept, decline, reject, etc. That is why (8b) is more felicitous than (8a) below.

- (8) a. ?Joe gave a lecture on molecular biology, but I couldn't follow.
 b. Joe gave a lecture on molecular biology, but I couldn't follow it.

The issues raised in the preceding paragraphs will be accounted for

5) Yaang, Byeong-seon, in discussion after the presentation of this paper, rightly pointed out that (7b) involves aspectual properties, giving it an accomplished reading. So, the sentence (i) below with the adjunct phrase *in five seconds* is good since drinking the whole or the rest of something, especially quickly is implied, whereas (ii) with it is ill-formed:

- (i) *Tom picked up a glass of wine and drank in five seconds.
 (ii) Tom picked up a glass of wine and drank it in five seconds.

within a relevance theoretic framework. In the next section I will briefly outline Sperber and Wilson's Relevance Theory.

3. A Brief Outline of Relevance Theory

In their book *Relevance*, Sperber and Wilson (1986) develop an account of inferential communication designed to explain how hearers recover what speakers intended to communicate. Their account is based on the assumption that we pay attention to information which is relevant to us. Sperber and Wilson (1986:107) define the notion of *relevance* as a relation between a propositional P and a set of contextual assumptions {C}: a given proposition P is relevant in a given context {C} if it has at least one contextual implication. Following this, there are a variety of possible contexts and hence a variety of possible interpretations of P, which means that every utterance has a variety of interpretations all compatible with the information linguistically encoded. However, not all of the interpretations are available to the hearer simultaneously. There is a degree of accessibility of contextual assumption. In processing new information, for example, we do not check all the assumptions to see contextual effects. Hearers are equipped with the criterion of *relevance* for evaluating possible interpretations of a sentence and this criterion induces the hearer to select a single optimal interpretation.

In order to explain why we go to one interpretation rather than the other Sperber and Wilson appeal to least-effort strategy, arguing that the first interpretation arrived at from the interaction of a new information and the most accessible context is the one intended by the speaker: the available context with the least processing cost is the most accessible context.⁶⁾

6) In his book *Human behavior and the principle of least effort* Zipf (1949) postulates that all human behavior is motivated by the urge to minimize effort. He demonstrates that every individual's movement, of whatever sort, will always be over paths and will always tend to be governed by one single principle, *the Principle of Least Effort*. The principle of least effort also applies to speech. He

Sperber and Wilson (1986) argue that the key to an explanation of human verbal communication lies in the criterion of *relevance* and define this criterion in terms of the interaction of contextual effects and processing effort needed. Contextual effects are achieved when newly presented information interacts with a context of existing assumptions. Contextual effects cost some mental, i.e. processing effort to derive. As Wilson and Sperber (1993) put it, the processing effort required to understand an utterance depends on two factors: the effort of memory and imagination needed to construct a suitable context, and the linguistic and psycholinguistic complexity of the utterance itself. Greater complexity implies greater processing effort, and the greater the processing effort needed to derive contextual effects the less relevant the utterance will be.

Thus, the fundamental idea in Relevance Theory is that in processing an utterance a hearer looks for an optimally relevant interpretation, that is, an interpretation that achieves enough contextual effects to be worth the hearer's attention and puts the hearer to no gratuitous effort in achieving those effects. What Sperber and Wilson call the *Principle of Relevance* is the thesis which states that "Every utterance communicates the presumption of its own optimal relevance." (Sperber and Wilson 1986: 158). Therefore the criterion of relevance defined in terms of contextual effects and processing effort entitles the hearer to expect to achieve adequate contextual effects for no unjustifiable processing effort.

With regard to the accessibility and selection of the contexts for interpretation Sperber and Wilson (1986: 138) say the actual context for the interpretation of utterance is constrained by the organization of the individual's encyclopedic memory and the mental activity in which he is engaged. If there were no constraints on constructing assumptions, the hearer could expand any number of contextual assumptions, so deriving a variety of possible interpretations and even unintended interpretation or misinterpretation. In Relevance Theory, constraints on relevance

identifies two opposing forces, the speaker's economy and the auditor's economy in describing the expenditure of effort in speaking and listening process.

minimize the hearer-processing effort. If the hearer does not have an appropriate assumption immediately available, he will exert some effort to search for one.

4. Solutions to Interpretation of Implicit Arguments

Let us now turn to a discussion of how we can explain some of the issues raised in section 2 within the framework of Relevance Theory. To begin with, consider the sentence in (9).

(9) John brought the sandwiches and Ann ate.

According to Fillmore's analysis, since the implicit argument of *eat* must be disjoint in reference with anything saliently present in the context, (9) can only be interpreted as (9')

(9') John brought the sandwiches and Ann ate (something else).

I argue that within a relevance-theoretic framework, we can provide two explanations as to why it is impossible to interpret (9) as (9'). The first explanation has to do with the processing effort required in interpreting an utterance. We have already seen that one of the factors that processing effort depends on is the effort of memory and imagination needed to select a context which bears out the guarantee of the relevance of the utterance. The questions we need to address at this point are how a hearer selects a suitable context and what sorts of contexts or contextual assumptions can be available to the hearer in processing an utterance.

Sperber & Wilson propose that at the start of processing some new information there is an initial context consisting of assumptions left over from the immediately preceding deductive process. The contextual assumptions can be stored in long-term memory (LTM) or short-term memory (STM) or they may be perceived from the immediately observable environment. In the processing of (9), when the hearer

interprets the clause *John brought the sandwiches* and is about to process the next clause, his or her STM will most likely contain assumptions derived from the processing of the first clause, e.g. John brought something to eat, a sandwich is some type of food, an act of eating can take place, etc. These assumptions are referred to as the *immediate context* by Sperber and Wilson. Thus when the hearer is about to process the second clause, the most accessible context, that is, the immediate context will contain assumptions derived from the first clause and the hearer will interpret the implicit argument of *eat* as referring to *the sandwiches* that John brought. Therefore, having found an interpretation that satisfies the criterion of relevance, the hearer does not have to look any further. Undoubtedly, a speaker who intends the hearer to interpret (9) as (9') is not helping the hearer to recover the intended interpretation in the optimally relevant way. Recovering (9') from (9) would require an unjustifiable amount of processing effort.

The second explanation follows from the role of the discourse connectives *and* & *but* in the interpretation process. In interpreting *and*-conjoined utterances, as Carston (1993) puts it, the hearer treats the state of affairs described as temporally, casually or consequentially related. Such relations, however, are not encoded in the linguistic meaning of the sentences uttered. Thus in interpreting such sentences the hearer has to complete the logical form into a propositional form by enriching the logical form with the assumptions derived from the initial context. If the assumptions derived from the initial context do not suffice to complete the logical form into a propositional form, then the hearer can extend the context by adding assumptions stored under the encyclopedic entries of concepts already present in the context or in the assumption schemas, i.e. the so-called mental scripts held in LTM. Let us consider the processing of (10) through (12):

- (10) Tom is under age and he cannot drink.
- (11) Mary has a sore throat and she cannot drink.
- (12) After the operation to clear the esophagus, Lisa ate and drank all evening.

In the interpretation of (10), conceptual addresses for words *under age* and *drink* activate a mental script or in relevance theoretic terms, assumption schema concerning the relation between being under 21 and not being allowed to purchase or drink alcoholic beverages in public places. Thus with the assumptions constructed from this assumption schema, the hearer instantly assumes that Tom's not being allowed to drink follows from her age and furthermore interprets the implicit argument of *drink* as referring to *alcoholic beverages*. In (11), on the other hand, the assumptions constructed from the assumption schema held in memory instruct the hearer to interpret the implicit argument of *drink* as referring to any *liquid* other than *alcoholic beverages*. Having a sore throat brings about assumptions about being sick, not being able to eat and drink easily. Thus the hearer interprets the implicit argument of *drink* as referring to any liquid that soothes the throat and evidently the alcoholic beverages are out. Also in (12), the activities of eating and drinking are mentioned in the context of the operation of the esophagus, assumptions about what is involved in eating and drinking as physical activities become immediately accessible. This gives rise to contextual effects, such as that she was hungry and thirsty at the time, that she was physically comfortable, etc.

Concerning inferential process of conjoined sentences Blakemore (1987) suggests that discourse connectives should not be seen as encoding concepts. They encode procedural constraints on the inferential phase of comprehension. Proceeding along these lines, it is plausible to argue that what the discourse connective *and* does is to constrain the inferential process that the hearer is expected to go through. Thus I argue that in sentences (9) through (12) the function of the connective *and* is to instruct the hearer about how the proposition it introduces is to be processed. Furthermore, it indicates that the proposition is to be placed in a certain inferential relation with some other, usually the one expressed by the immediately preceding utterance. As Blakemore points out, such discourse connectives contribute to relevance by guiding the hearer towards intended contextual effects.

Blakemore (1987) and Carston (1993) treat an *and*-conjoined sentence

as a single pragmatic unit. According to Blakemore a hearer is entitled to assume that he or he will not be required to expend processing effort gratuitously, i.e., effort demanded will be adequately rewarded by contextual effects. Therefore, a hearer presented with a conjoined sentence has to undertake the processing that follows from extra lexical and syntactic structure involved in conjoining. Blakemore concludes that the conjuncts may be relevant in their own right but it is the conjoined sentence that carries the presumption of optimal relevance. In Relevance Theory *and*-conjoined utterances are treated to constitute a single utterance and so carries the presumption of relevance as a whole. That is probably why in processing sentences like (9), we interpret the implicit argument of the verb as referring to the salient referent present in the preceding context. If, however, in a conjoined sentence each conjunct was to carry the presumption of its own relevance we would not have been able to interpret the implicit argument of *eat*, for example as referring to *the sandwiches*. The implicit argument would just be *something*, and undoubtedly it would cost the hearer more processing effort to construct a suitable context. Thus we would not necessarily expect it to refer to the salient referent in the preceding context in (9). *Ipsa facto*, it seems plausible to argue that when INC verbs occur out of context, i.e. in isolation, their conceptual addresses only make available information about their logical entries. I take logical entries of such verbs to contain information about selection restrictions that they may put to their arguments. Thus the verb *eat*, for example puts the selection restriction food, the verb *drink*, liquid, the verb *read*, written material, etc. Therefore, when such verbs occur in isolation, the implicit arguments would just be referring to *something*, and something in the case of *eat* would be food, in the case of *drink* would be liquid, etc.

Let us now turn to the discussion of the *but*-conjoined sentences introduced earlier. Sentences (6a-b) are repeated below as (13a-13b).

- (13) a *John brought the sandwiches but Ann didn't eat - she ate the cakes instead.

- b. The guide left but the tourists didn't follow – they followed the courier instead.

As discussed earlier, on Fillmore's analysis (13a) is ill-formed whereas (13b) is fine. With respect to (13a), I argue that the interpretation of the implicit argument of *eat* as not referring to *the sandwiches* might have something to do with the discourse connective *but* and the negated nature of the second clause. Apparently, *not eating* implies either eating nothing or not eating a particular thing. Thus we should be able to interpret (13a) either as *John brought the sandwiches but Ann didn't eat any (sandwich) or John brought the sandwiches but Ann didn't eat anything.*

On a relevance-based approach, we can argue that if the speaker of (13a) wants the hearer to recover and is helping the hearer to recover the content of the implicit argument, he or she would constrain the intended referent of the implicit argument by inserting a referring expression such as *any*. Thereby the interpretation of the implicit argument would be constrained to *the sandwiches*. By doing so, the speaker would save the hearer processing effort because what the presence of *any* would communicate to the hearer is that the referent of *any* is retrievable from the immediate context. Hence, according to relevance theory, hypotheses about the intended reference of referring expressions are not recoverable by linguistic decoding alone. In evaluating referential hypotheses the speaker first considers the immediate context and see if any of the concepts presented in the context when substituted for the referring expression yields a propositional form consistent with the principle of relevance.

To sum up, the implicit argument of an INC verb like *eat* can be regarded as referring to the salient referent in the preceding context. Since an *and*-conjoined sentence communicates the presumption of relevance as a whole when what is eaten is unspecified, in the presence of a salient referent in the immediate context the hearer will instantly regard the implicit argument as referring to this referent. I propose to treat a *but*-conjoined sentence as consisting of two conjuncts each

carrying its own presumption of relevance. On this proposal, the implicit arguments of INC verbs in *but*-conjoined sentences, can not refer to the salient referent in the immediate context, since a *but*-conjoined sentence does not communicate the presumption of its relevance as a whole. The interpretation of the implicit argument then cannot be constrained to the referent in the immediate context, hence it could only be represented with a pro-form.

How do we explain the DNC verbs, then? Verbs such as *follow*, *wait*, *accept*, *object*, *judge*, *answer*, *refuse*, *decline* necessarily imply the mentioning of something to be followed, accepted, declined etc. in the preceding discourse. Thus the speaker does not need to constrain the referent of the implicit argument by inserting a pronoun, since it is already evident to what the implicit argument refers. Furthermore, inserting a pronoun would cost the hearer more processing effort. This proposal predicts that an utterance of (14) would in principle give rise to the same interpretation as (15) but is more costly than (15) in processing:

(14) Steve invited me for his graduation party and I accepted it.

(15) Steve invited me for his graduation party and I accepted.

The linguistic realization of *it* in (14) would increase processing effort because the hearer has to go through the process of recovering the phonological form of *it*.⁷ Thus, it is (15) which is optimally relevant in accordance with the principle of relevance since (15) would cost the hearer less effort although the contextual effects recovered from (14)

7) Some (e.g. a participant in the Spring Conference of LAK on May 17, 2003) can argue that the interpretation process of (15) is more effortful than (14) since they think that the presence of the argument in (14) would save the hearer the effort to identify its referent. However, it is the other way in relevance-theoretic interpretation of the utterance. The interpretation of (14) increases the processing effort since the hearer has to go through the processing of the phonological form *it*, whereas that of (15) saves the hearer processing effort since the contextual assumption, i.e. the Steve's invitation of his graduation party is immediately accessible, and searching for the referent of the unexpressed *it* doesn't take time.

and (15) are the same.

5. Interpretation of Implicit Arguments in Korean

Many languages including Japanese and Korean allow definite null arguments freely. In Korean often only the verb is overtly expressed and the understood arguments of the verb may receive a definite interpretation in context. However, there is a certain type of verbs which is similar to Fillmore's INC in which null arguments are interpreted to be indefinite. Below I will present two types of verbs with respect to the referent's identity.

Indefinite Interpretation of Null Complements (INC):

gongbuhada 'study' *jenwhahada* 'telephone', *ssauda* 'fight', *yeonaehada* 'be in love with', *kisseuhada* 'kiss', *ihonhada* 'divorce', *yakhonhada* 'be engaged to', *unjenhada* 'drive', *dodukjihada* 'steal', *seonghuironghada* 'sexually harass', *yorihada* 'cook'.

Definite Interpretation of Null Complements (DNC):

chatda 'look for', *sada* 'buy', *cupda* 'pick up', *mannada* 'meet', *ttaerida* 'hit', *boda* 'see', *kkujitda* 'scold', *surakhada* 'admit', *alacharida* 'notice', *jugida* 'kill', *hapkyeokhada* 'pass (the exam)', *meokda* 'eat', *masida* 'drink', *ilkda* 'read', *sseoda* 'write', *kurida* 'draw'.

Fillmore provides a test to distinguish the two types of unexpressed arguments in English. He notes that while it is perfectly acceptable for a speaker to admit ignorance of the identity of an indefinite null complement, it sounds odd for a speaker to admit ignorance of a definite null complement. So, (16a-b) sound odd, for in general one does not wonder about what one already knows. That is, in interpretation of utterances with definite null complements it provokes processing difficulties on the part of the hearer.

(16) *Definite Null Complements (DNC)*

- a. [?]geu saram eoje manna-ss-eo. nugu manna-ss-eulkka.
 the man yesterday meet-Past-Dec who meet-Past-wonder
 'He met someone yesterday. I wonder whom he met.'
- b. [?]geu hoesa eoje surakha-ess-eo. mueos surakhae-ss
 the company yesterday admit-Past-Dec what admit-Past
 -eulkka.
 -wonder
 'The company admitted something yesterday. I wonder what
 the company admitted.'

(17) *Indefinite Null Complements (INC)*

- a. geu saram eje kyelhonha-ess-eo. nugu-hago
 the man yesterday marry-Past-Dec who-with
 kyeolhonhae-ss-eulkka.
 marry-Past-wonder
 'He got married yesterday. I wonder whom he married.'
- b. geu saram eje ssau-eoss-eo. nugu-hago
 the man yesterday fight-Past-Dec who-with
 ssau-eoss-eulkka.
 fight-Past-wonder
 'He fought someone yesterday. I wonder whom he fought.'

The distinction between INC and DNC is also evident in dialogues (18) and (19) where the hearer gives an automatic response to the speaker.

- (18) A: na kyeolhon an-hae.
 I marriage not-do
 'I will not marry anyone.'
- B₁: wae kyeolhon an-hae?
 why marriage not-do
 'Why don't you get married?'
- B₂: [?]nugu-hago kyeolhon an-hae?
 who-with marriage not-do
 'To whom don't you want to get married?'

- (19) A: na bo-ass-eo.
 I see-Past-Dec
 'I saw it.'
 B₁: ?wae bo-ass-eo?
 why see-Past-Q
 'Why did you see it?'
 B₂: mueos bo-ass-eo?
 what see-past-Q
 'What did you see?'

Again, in connection with the coreference relation in two types of verbs above, I will present two contrasting examples of Korean to test for the distinction between definite and indefinite interpretation of null complements.

- (20) a. ?nae-ga Suni-hante coeun saram_i sogahaeju-ess-neunde,
 I-Nom Suni-to good person introduce-Past-Conn
 Suni-neun $\emptyset_{i/j}$ kyeolhon an-ha-n-de.
 Suni-Top marriage not-do-Non Past-Dec
 'I introduced Suni a good man_i but she said that she doesn't
 want to marry him_{i/j}.'
 b. ?nae-ga Suni-hante coeun saram sogahaeju-eoss-neunde,
 I-Nom Suni-to good person introduce-Past-Conn
 Suni-neun \emptyset kyeolhon an-ha-n-de. euisa-hago
 Suni-Top marriage not-do-Non Past-Dec doctor-with
 kyelhon-ha-n-de.
 marriage-do-Non Past-Dec
 'I introduced Suni a good man but she said that she doesn't
 want to marry anyone. She said that she intends to marry
 a doctor.'
 (21) a. nae-ga Suni-hante orange juice_i sa-cu-eoss-neunde,
 I-Nom Suni-to orange juice buy-give-Past-Conn
 Suni-neun $\emptyset_{i/*j}$ an-masi-n-de.
 Suni-Top not-drink-Non Past-Dec

'I bought Suni orange juice but she said that she doesn't want to drink it_{i/*j}.'

- b. nae-ga Suni-hante orange juice sa-cu-eoss-neunde,
 I-Nom Suni-to orange juice buy-Past-Connective
 Suni-neun \emptyset an-masi-n-de. coffee masin-de.
 Suni-Top not-drink-Non Past-Dec coffee drink-Dec
 'I bought Suni orange juice but she said that she doesn't want to drink it. She says that she wants to drink coffee.'

Following the arguments above and the senses of the verbs employed, the verbs with implicit internal arguments seem to fall into five types. In the first two types of verbs which can have implicit internal arguments the information about the unexpressed arguments is unnecessary and redundant because it is already supplied by the verb itself. These two types of verbs are not affected by discourse context and the interpretation of implicit arguments are specific. The third type of verbs is similar to those of Type V in that the interpretation of implicit arguments is definite; however, these two are different in that in the former the verb complements are more predictable. Type IV and Type V refer to indefinite and definite interpretation of verb complements, respectively.

Type I: These are verbs of noun incorporation direct arguments of which simply rename the event that the verb is describing, so-called cognate verbs. (*chumchuda* 'dance', *kkumkkuda* 'dream', etc.)

Type II: The verb itself conveys information about the argument. The direct arguments of verbs belonging to this type are so clearly understood that the argument itself need not be mentioned at all. (*kkeudeogida* 'nod (one's head)', *jada* 'sleep', *imsinhada* 'be pregnant', etc.)

Type III: These verbs are usually treated to put selection restrictions on their internal arguments. Thus, *meokda* 'eat', for example, puts the selection restriction

'food', and *masida* 'drink' puts 'liquid' on their internal arguments. (*masida* 'drink', *meogda* 'eat', *ilkda* 'read', *sseuda* 'write', *geurida* 'draw', etc.)

Type IV: Indefinite Interpretation of Null Complements (INC):

gongbuhada 'study' *jeonwhahada* 'telephone', *ssauda* 'fight', *ihonhada* 'divorce', *yeonaehada* 'be in love with', *kisseuhada* 'kiss', *unjenhada* 'drive', *dodukjihada* 'steal', *seongpokhaenghada* 'sexually harass', *yorihada* 'cook'.

Type V: Definite Interpretation of Null Complements (DNC):

chatda 'look for', *sada* 'buy', *cupda* 'pick up', *mannada* 'meet', *ttaerida* 'hit', *boda* 'see', *kkujitda* 'scold', *suraghada* 'admit', *aracharida* 'notice', *jugida* 'kill',

6. Concluding Remarks

In this paper, I have tried to account for when a speaker would leave the arguments of the verbs implicit and how a hearer can retrieve the content of the implicit argument of the verb used within the framework of Relevance Theory, limiting myself to discussing the Fillmore's (1986) INC and DNC verbs.

While Fillmore argues that the implicit argument of INC verbs must be disjoint in reference with anything saliently present in the preceding context, I have proposed that the implicit argument in *and*-conjoined sentences is treated as referring to the potential referent in the preceding context. As discussed earlier, the assumptions derived from the immediate context or the assumption schemas constructed from the conceptual addresses of the constituents of a sentence guide the hearer to an optimally relevant interpretation. Having found an interpretation that satisfies the criterion of relevance, the speaker does not have to look any further. Doing otherwise would put the hearer into gratuitous processing effort and detract from relevance.

I have further proposed that in *but*-conjoined sentences, the implicit arguments of INC verbs might not be referring to the salient referent in the immediate context because in the presence of the discourse

connective *but*, the sentences might be carrying their own presumptions of relevance rather than communicating the presumption of relevance of the conjoined sentence as a whole. Although, it is apparent that this proposal about the connective *but* is speculative, a relevance-theoretic analysis of *but*-conjoined sentences might prove that this is a right approach to pursue.

Moreover, within the framework of Relevance Theory, I have argued that to achieve an optimally relevant communication the speaker would not use verbs without an explicit argument unless it is clear from the immediate context what is meant. Relevance Theory assumes that the speaker is actively helping the hearer to recover the intended interpretation. Hence if the content of the implicit argument is hard to recover in a particular occurrence, then the speaker has to help the hearer by constraining the interpretation of the implicit argument of the referent in the immediate context.

As far as DNC verbs are concerned, I have argued that the very nature of these verbs demonstrates that the speaker cannot use these verbs with implicit arguments unless an immediate context from which the hearer can retrieve the content of the implicit argument is provided.

Lastly, from the examination of the English verb system I tried to group the verbs in Korean based on the senses of the verbs, semantic role of the implicit arguments. As observed in many Asian languages where null complements are freely used in discourse or conversation unlike English, the interpretation of implicit arguments in Korean seems to heavily rely on context as well as word meanings. Although I tried to group verb complements into five types the list is provisional and incomplete and requires further study.

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