The 'Errant' Scope of Question in Turkish:

A Word Grammar Account

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Abstract

Previous studies dealing with the position of the interrogative clitic in Turkish, such as Besler (2000) and Aygen (2007), seem to be based on the assumption that the position of the interrogative clitic naïvely corresponds to the scope of question. However, Zimmer (1998) and Göksel and Kerslake (2005) point out that there are cases where the interrogative clitic is located in the pre-verbal position and attached to a word which is the dependent of the predicate, but the scope of question is the whole of the proposition rather than its specific part. In this article, I would like to argue that an analysis based on Word Grammar, a kind of dependency-based theories, successfully deals with these types of the 'errant' scope of the question, by showing a rich network concerned with semantic structure where some concepts concerned with the speech-act such as a speaker and an addressee are introduced, following Hudson (1990) and Hudson (2010).

1 Introduction

It is a well-known fact that the interrogative clitic (hereafter IC) *mI*[1] in Turkish forms yes-no or alternative questions. Unlike most other Turkic languages, *mI* in Turkish appears in various positions in a sentence so as to focus a particular part of the sentence. Let us first consider example (1) (Uzun, 2000: 301):

(1) a. Ali kitab-ı Ayşe-ye ver-di mi?
Ali-Nom book-Acc Ayşe-Dat give-Past:3sg Q
'Did Ali give Ayşe the book?'
b. Ali kitab-ı Ayşe'ye mi ver-di?
Ali-Nom book-Acc Ayşe-Dat Q give-Past:3sg
'Is it to Ayşe that Ali gave the book?'
c. Ali kitab-ı mı Ayşe'ye ver-di?
Ali-Nom book-Acc Q Ayşe-Dat give-Past:3sg
'Is it the book that Ali gave Ayşe?'
d. Ali mi kitab-ı Ayşe'ye ver-di?
Ali-Nom Q book-Acc Ayşe-Dat give-Past:3sg
'Is it Ali who gave Ayşe the book?'

From these examples in (1), we can say that IC occurs not only in the sentence-final position but also in the sentence-middle position, in order to focus on the specific part of the sentence. If IC occurs with the verbal complex (i.e. the predicate) of the sentence, the scope of question is the whole of the sentence; on the other hand, when IC appears in sentence-middle and attaches to the specific word, then IC turns only the word immediately preceding itself into question. Taking these facts into consideration, as we shall see later, previous analyses have concentrated on how to predict the proper syntactic position of IC without violating any morpho-syntactic rule.

They have not, however, taken the Zimmer's (1998) discussion into consideration; in some cases the scope of question is the whole of the proposition but IC at surface occurs in the pre-verbal position, which means that the position of IC does not always correspond to the semantic scope. In this article, therefore, I would like to argue that an analysis based on Word Grammar (hereafter WG) successfully handles the cases where the position of IC is at the pre-verbal position but the scope of question covers the whole of the sentence, by a rich

[1] Following traditions of Turkish linguistics, variable vowels are shown by the capital letter in this article. For example, *mI* can occur as *mi*/*mu*/*mü*/*mı*.

conceptual network proposed by Hudson (1990, 2007, 2010, among others).

2 A Brief Review of Previous Analyses

Besler (2000) and Aygen (2007) are outstanding studies which account for the appropriate positions of IC (which they call Q-particle). In these literatures, the assumptions about where IC is base-generated and moves afterwards are different from each other. Nevertheless, they both conclude that IC moves in order to focus either the whole of the sentence or the specific element of the sentence.

For all their well-developed analyses, it is worth pointing out that they ignore the fact that there are cases where IC is located in the preverbal position and attached to the word which is the dependent of the predicate, but the scope of question is the whole of the proposition rather than its specific part. In fact, as we shall see below, not only Zimmer (1998) but also Göksel and Kerslake (2005) point out this phenomenon; above all, Zimmer (1998) points out that the "standard accounts", in which Besler (2000) and Aygen (2007) are thought to be included, fail to deal with the use of IC in certain types involving idiomatic expressions and some other types of sentences. Let us first consider (2), quoted in Zimmer (1998):

(2) Dalga mı geç-iyor-sun?
wave Q pass-Prog-2sg
'Are you (just) wasting time?'

In (2), the noun *dalga* 'wave' and the verbal predicate *geçiyorsun* '(you are) passing' combine with each other, constituting an idiom whose meaning is 'wasting time'. In addition, the sentence (2) is a kind of yes-no questions and IC occurs in the preverbal position. Considering a series of example in (1), we may well predict that the scope of question is limited to the specific part *dalga*, but the scope of the question is actually the whole of the sentence rather than *dalga*. The similar cases are also found in less idiomatic sentences such as (3a) below:

(3) a. Nermin okul-a mı git-miş?
Nermin-Nom school-Dat Q go-Evi-3sg
'Has Nermin gone to school?'
b. Nermin okul-a git-miş mi?
Nermin-Nom school-Dat go-Evi.-3sg Q
'Has Nermin gone to school?'

According to Göksel and Kerslake (2005: 294), the two questions exemplified in (3) cannot be used in the same context, although both turn the whole sentence into question. (3a) is used 'when the speaker has an assumption about the situation s/he is asking about, usually because there are non-linguistic clues (visual or perceptible by other senses)' (ibid.). On the other hand, sentences like (3b) are 'out-of-the-blue questions, where the speaker has no assumption about the situation' (ibid.).

It is worth pointing out that Zimmer suggests the pragmatic form for yes-no interrogative questions (which he calls 'focus questions') as in (4) (Zimmer, 1998: 480):

(4) (X) Y *mI* Predicate (with sentence stress on Y)

In (4), X and Y are variables where Y is substituted by either a candidate for a role, or a state of affairs that the speaker has in mind, and *mI* (naturally enough) stands for IC. His argument seems to be good enough to account for the phenomena in question, but I would like to point out that it is not clear at all where we should place this formulate in the whole of grammar: he argues that it is the pragmatic form, but at once it must be the syntactic form because it consequently mentions word order. In short, it is necessary to propose the whole image of grammar at which the interrogative sentence is located. Additionally, it may be problematic that (4) itself does not explain when Y is substituted by a state of affair rather than a role, although Zimmer (1998) points out that this mismatch is seen in an idiomatic expression and some other expressions. To put it briefly, if we can predict the condition under which the mismatch happens, the analysis becomes more explanatory.

In summary, we have to explain the mismatch between the position of IC and its scope in meaning, to which most of previous studies do not refer. I would like to argue that a WG account successfully explains this mismatch, although Yoshimura (2010), which is based on WG, has also ignored this kind of mismatch. In the following sections, I will introduce the framework of WG (Section 3) and analyse every type of yes-no interrogative sentence marked by IC (Section 4).

3 Word Grammar: An Introduction

WG is a general theory of language structure, which Richard Hudson has been developing since early 1980s. In what follows, I would like to introduce the framework of WG to the extent that it is necessary for the discussion.

3.1 A Conceptual Network

WG treats the language structure as a network where concepts about words are linked in some relations. One of important relations between concepts in WG is the 'isA' relation, namely the model-instance relation between a general concept and a specific concept. For example, the English noun *cats* is an instance of a lexeme CAT, and of a plural noun, at the same time. These are described in terms of 'isA relation' in WG. As we can see in Figure 1 below, the word *cats* inherits several properties from two higher (and different) concepts.

In addition to the isA relation, most other relations are shown by links with arrows pointing from the word to other concepts. This is based on the following assumptions in WG: language structure consists of innumerable concepts stored (and learnt) in humans' mind, a word is a kind of concepts, and there are two kinds of concepts, namely 'entity concepts' (e.g. 'cat', 'plural noun' in Figure 1) corresponding to people, things, activities and so on, and 'relational concepts' (e.g. 'sense', 'form' in Figure 1) which link a concept to another. WG also assumes that most concepts are learned (Hudson 2007: 232) to the extent that they are defined in terms of existing concepts a person stores in his/her mind. This is called Recycling Principle in WG, which enables us to make use of a rich semantic network without making semantic structure too complex.

Let us take a small network about a word *cats* for example. WG treats a word and its form as separate concepts, so a 'form' relation between CAT: plural at word-level and {cats} (in words, 'the form of CAT: plural is {cat}') is recognised. Similarly, there is also a 'sense' relation between CAT: plural and its target meaning that can be labelled 'cat' (in other words, the sense of CAT: plural is 'cat'). These relations are shown by a curved arrow with a label written in an ellipse as shown in Figure 1. Note that WG clearly distinguishes words from forms. This is helpful if we account for the formal characteristics of IC. That is, the distinction enables us to show that IC in Turkish is a syntactically independent element but a part of a larger word-form in morpho-phonology level (Yoshimura 2010). Another point is that the inflectional notion 'plural' is thought to be inherited by a noun, accordingly it is an instance of the more general category, 'word'.

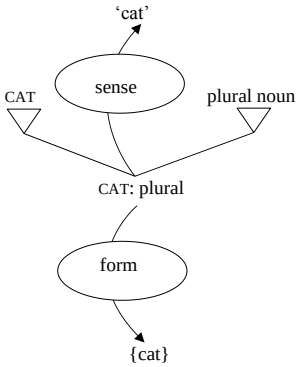

Figure 1. A Small Network of the Word *cat*

In WG, isA relation is represented by a straight line with a triangle, the base of which directs to the category. Taking Figure 1 for example, the word represented CAT: plural is an instance of (i.e. isA) the lexeme CAT. At the same time, it also 'isA' plural noun. As I said earlier, WG allows a concept to inherit properties from multiple super-categories.

3.2 A Word's Properties in WG

According to Hudson (2010), one of the significant difference between WG and other theories is to clearly distinguish word types with tokens. One of the reason to do so is to explain various language-internal structure such as syntax and semantics. In this line of analysis, for example, tokens are kinds of actions, so it is helpful to illustrate tense and aspect in semantic structure, because their utterance-time are deeply relevant to event-time. For example, the time of referent of the past-tense verb is always followed by the time when the word token is uttered.[2] A token is categorized by being linked to some type, then it can inherit all the properties of this type.

One may well ask what the properties of a word are, or if any, how many properties there are. Notice that, it is pointless to establish a definition of a word; rather, as we have seen so

[2] Hereafter I shall not make a notational distinction between types and tokens in order to avoid complexity of notation.

far, words are also instances of concepts, thus a word in itself should be a concept where there is a bundle of properties. Hudson (2010: 114-116) introduces a handful of relational properties of a word, such as meaning, a realization (i.e. a form and sounds), a word-class, and so on. For the discussion in this article, the properties 'speaker' and 'addressee' are important, as we shall see below. Notice that here, too, the distinction between types and tokens is important: some properties belong to tokens, but not to types.

According to Hudson (2010), properties such as a speaker and an addressee of a word belong primarily to word-tokens. In this article, too, I shall follow the idea of the type-token distinction proposed in Hudson (2010), in order to introduce two important concepts for explanation of the semantic structure of the interrogative sentence: the speaker and the addressee of a word.

3.3 Sense, Referent and Semantic Phrasing in WG

In WG semantics, the distinction between 'referent' and 'sense' is important as in other theories: a word's sense is some general category, and its referent is typically some particular instance of this category. This distinction is clearly represented in the network diagram. Consider the following simple sentence, whose semantic network is illustrated in Figure 2:

(5) Bir kedi gel-di.
A cat-Nom come-Past: 3sg
'A cat came.'

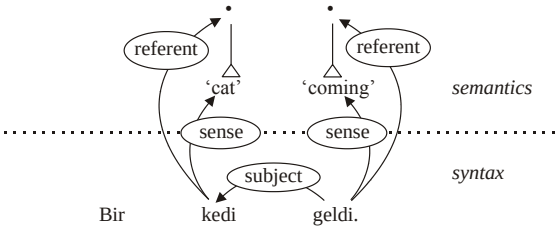

Figure 2. Sense and Referent

Figure 2 above shows this distinction, where the referents of words and their sense are linked by the isA relations. Notice that the dotted nodes are concepts which are difficult to find natural-language names; it may seem to be problematic, but in WG this does not matter because any nodes (or relational links) are simply mnemonics for our own purposes and have no theoretical status (Hudson, 2007:18). In any case, the sense/referent distinction plays an important role in our purpose; as we shall see below, it is supposed that IC in Turkish shares a referent with any other word. Usually it is the preceding word of IC that shares the referent, but if the word has no referent (or does not refer to any particular concept), then IC shares the referent with its adjacent word, i.e. the referent of the predicate.

Another point that plays a crucial role in our analysis is that a word's sense is affected by some other words, i.e. dependents. In WG, this is demonstrated by a hierarchical structure which is called semantic phrasing. Hudson (2010: 228) assumes that there are at least four patterns that a word's meaning is affected by a dependent. Of these, the default pattern (i.e. the dependent's referent combines with the word's sense), coreference (i.e. the dependent's referent merges with the word's referent), and idioms (i.e. the dependent changes the word's sense in an irregular way, which is exemplified in (2)) are necessary for the discussion.[3] Let us consider these patterns below.

First, we consider the default pattern: combination of the dependent's referent with the sense of its parent. Taking our stored example *Köpek havladı.* '(A/the) dog barked',[4] the word token *köpek* 'dog' is the subject of the predicate word token *havladı* 'barked', so *köpek* modifies the meaning of *havladı* which is inherited from the lexeme HAVLA-. The point is that the sense of HAVLA- is simply 'barking', but as we have seen so far, word-tokens has their own senses; in this case, the word token *köpek* changes not the sense of the lexeme HAVLA-, but that of the word token *havladı*. This becomes clearer from examples such as (6):

(6) köpek havla-dı, fakat daha önce
dog-Nom bark-Past:3sg but more before
öyle bir şey tek bir kez ol-muş-tu.
such a thing only one time be-Rep-Past:3sg
'The dog barked, but which had only once happened before.'

In (6), the reading of the sentence should be that there are two incidents of '(the) dog bark-

[3] The last type of semantic phrasing is predicative pattern, where a word's sense combines with that of its dependent. See Hudson (2010: 232-233) for more detail.

[4] This ambiguity depends on the context: there is no obligatory definite determiner in Turkish, although *bir* can be an indefinite determiner.

ing', so the relation between *havladı* and the demonstrative *öyle* (possibly with the following noun *şey* 'thing') must be identity-of-sense anaphora. Accordingly, the subject of the first clause *köpek* modifies the sense of *havladı*, rather than the referent of it. This is of course true of other languages such as English. As Hudson (2010: 229) points out, if we hanged *some dogs* (in English) into *some big dogs*, the dependent *big* changes the sense into 'big dog', but does not change the referent set into a big set.

Turning to the meaning of the dependent, it is the dependent's referent which modifies the parent's sense. This is clear from the fact that some nouns such as pronouns and proper nouns, which can be the subject of the predicate, have only their referents but do not have any sense. To conclude, the referent of a dependent word, by default, modifies the sense of its parent word. Our stored example *Köpek havladı*. is, therefore, analysed as in Figure 3 below:

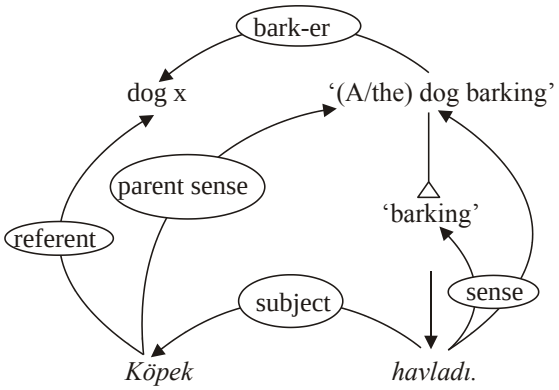

Figure 3. The Small Semantic Network of '*Köpek havladı*' in Turkish

In Figure 3, a new link labelled 'parent sense' (Hudson, 2010: 229) is introduced. By this link '(A/the) dog barking' and more basic sense 'barking' is successfully distinguished. This link is helpful when we show the details of modification by dependents, because there may be two or more dependents of a word.

The second pattern is coreference, where the two words share the same referent. Taking *a cat* in English for example, both words refer to a single concept: a single countable dog. It may seem that the very similar analysis applies to the translation equivalent *bir kedi* in Turkish. Assuming that *bir* is an instance of pronoun, this word confirms that the referent is again a single entity, and that it is indefinite. Like the analysis proposed in Hudson (2010: 229-230), the co-reference of these two words, i.e. *bir kedi* ('a cat'), is reflected in Figure 4, which is, in consequence, a slightly developed illustration of Figure 2:

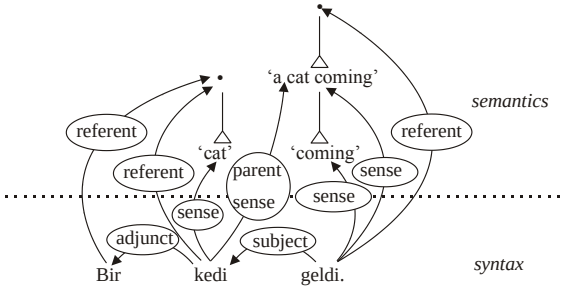

Figure 4. The Small Network of '*Bir kedi geldi*' in Turkish

One may argue that there is no other 'article' than the indefenite *bir* in Turkish, but co-reference relation is in fact needed for some cases because there are a handful of 'determiners' (including pronouns) which indicates the definiteness or the indefiniteness of their following noun.[5] According to Göksel and Kerslake (2005), there is a handful of determiners which are thought to function as the articles (i.e. *a*/*an* and *the*) in English. It seems, therefore, that we can assume that this type of semantic phrasing is also applicable to Turkish.[6]

According to Hudson (2010), coreference is not only found in pronouns, but also in some auxiliary verbs and prepositions. In English, the combination between auxiliary and the main verb such as *will bark* show that their co-referent is a single event, whose time is set in the future, and in another combination between a noun and the preposition such as *a book by Dickens*, the prepositon *by* shares the referent of *Dickens*, where it associates the author Dickens with the book as a result (Hudson 2010: 230). As I suggested, this semantic phrasing pattern applies to IC and its pair word in Turkish.

The last type is idiomatic combination, where the effect of the dependent is unpredictable. In English, a very well-known example is

[5] WG assumes that there is no point to recognize a category 'determiner' in English for several reasons (Hudson, 1990); I assume here that the same is true of Turkish. That is, there is no need to recognize the category 'determiner' in Turkish. Instead, this category can be recognized as a subcategory of 'pronoun'.

[6] For more detail about determiners in Turkish, see Göksel and Kerslake (2005: 201-203).

the combination KICK THE BUCKET, whose meaning is, say, 'dying'. The analysis of this example in terms of WG is as Figure 5 (Hudson, 2010: 234) shows:

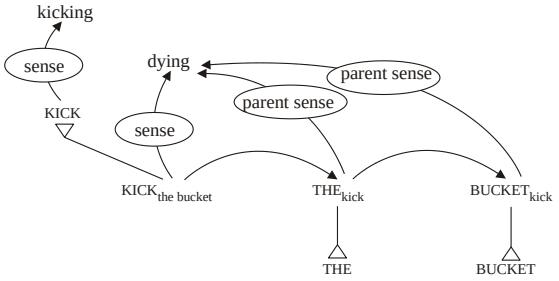

Figure 5. The Idiom 'KICK THE BUCKET' (Hudson 2010: 234)

The point of Figure 5 is that each of the words in the idiom is a special sublexeme of an ordinary lexeme. Above all, the sense of KICK$_{\text{the bucket}}$ is 'dying' rather than 'kicking', which is possible because KICK$_{\text{the bucket}}$ isA KICK but KICK$_{\text{the bucket}}$ has its own sense 'dying'. The solution that WG offers is the process called Default Inheritance: the specific property of the sub-category overrides the default. So in this case, the sense of the sublexeme KICK$_{\text{the bucket}}$, 'dying', overrides the default sense of the more general lexeme KICK.

The analysis is also applicable to examples in Turkish. There are so many idioms in Turkish, where they demonstrate some kind of gradient, in that the senses of some idioms are predictable from individual words, but the others do not. Our concern here is, of course, how to explain idioms whose meaning cannot be deductible from each word. One of our stored examples is *dalga geç-* 'wasting time', where *dalga* is the noun whose basic meaning is 'wave', and *geç-* is the verb whose meaning is 'passing'. So this example is clearly an idiom because the whole meaning cannot be predictable from individual lexemes. Taking the analysis of the example from English shown in Figure 5 into consideration, the WG account of the idiom in question will be like Figure 6 below:

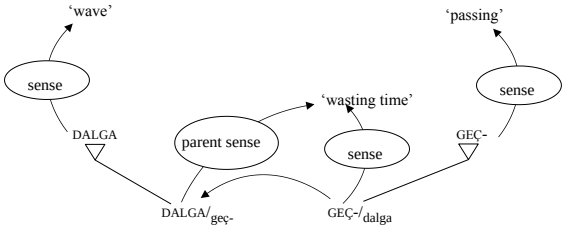

Figure 6. The Idiom DALGA GEÇ-

3.4 Two New Concepts: 'Factuality' and Its 'Knower'

Our concern is the semantic structure of the interrogative sentences in Turkish. The semantic structural difference between the declarative and the interrogative sentence is, if any, crucial in our analysis. Let us begin by discussing the following question sentences.

(7) a. Siz ne ye-di-niz?
you(Hon)-Nom what eat-Def. Past-2pl
'What did you eat?'
b. Siz yemek ye-di-niz mi?
you(Hon)-Nom meal eat-Def.Past-2plQ
'Did you have a meal?'

Example (7a) is a kind of WH-questions, where there is no IC in the sentence.[7] In contrast, IC marks the so-called yes-no question as in (7b), and if WH-word and IC co-occur in the sentence, the sentence will not be grammatical unless the sentence is interpreted as an echo-question of the whole sentence.

Taking the data shown above into consideration, WG introduces new relational concepts that are, even though they are somewhat tentative, responsible for their illocutionary force such as declaration, command, and question: 'knower' and 'factuality' (Hudson 1990). In WH-questions, the speaker does not know some information about the event, such as who does it and what the person does. The speaker therefore asks the addressee a question, assuming that the addressee knows it. In the speaker's mind, therefore, the addressee is the 'knower' of the concept which the speaker wants to know. These are illustrated in Figure 7 below, where the rather plain sentence *Kim geldi?* 'who came?' is analysed, and 'addressee' links come to the concept which the knower of the person who came, from both *kim* and *geldi*.

[7] Except for the so-called echo questions, WH pronouns and IC do not co-occur in Turkish.

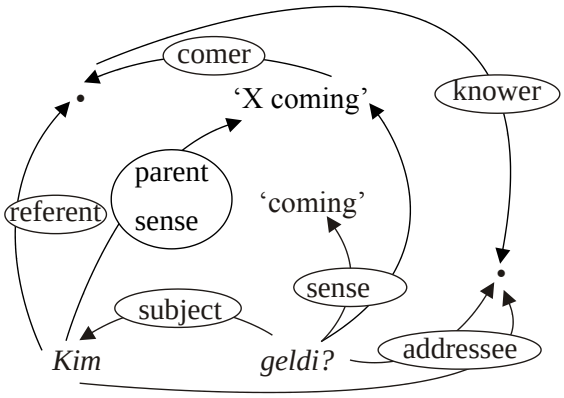

Figure 7. The Analysis of *Kim geldi?* 'Who came?' in Turkish

Another concept 'factuality' is a relational property whose value is either factual or non-factual (Hudson, 1990: 223), which intelligibly corresponds to the yes-no question. Factuality involves a choice-set (Hudson, 2010): either factual or non-factual, and they are contradictory each other. In the case of yes-no questions too, as well as WH-questions, the speaker assumes that, regardless of whether the speaker's guess is right or not, the addressee is the knower of the factuality of the referent in question. The analysis of our stored example in (7b), an example of yes-no questions, will be like Figure 8. It should be noted that labels for syntactic relation between words are omitted for the sake of simplicity.[8]

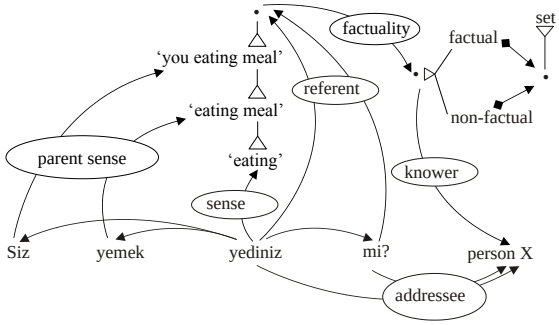

Figure 8. 'Factuality' and 'Knower' for the Functional Explanation of Yes-no Question

As I said earlier on, I suppose that IC has no sense in itself, but shares the referent of the word to which it attaches: the verbal predicate in this case. This is simply because it is hard to imagine the typical meaning of IC and it does not affects the sense of any word. Instead, I suggest that IC by default has to share the referent of the word immediately before itself, and the concept referred by IC is what the speaker want to ask whether it is factual or non-factual. In other words, I suggest, the reason why IC occurs in various positions in the sentence is to co-refer to the concept which is what the speaker likes to ask.

As we saw in Section 1, IC appears not only in sentence-final, but also in sentence-middle to show the scope of question. I shall deal with the scope of question according in order basically to the position of IC in the next section; at this stage, it is sufficient to confirm that the function of the interrogative sentence can be explained by a rich network provided by semantic (and possibly pragmatic) network in WG.

4 The Analysis

One may doubt whether WG can explain the scope of question which is exhibited by the position of IC in syntax and morphology, because it does not use phrase structure which works well in showing the scope of question by some asymmetry in phrase structure such as c-command. I suggest that, however, it is easy for WG to provide a solution to the problem by displaying the scope of question in the area of semantic networks whose logic is quite similar to the rest of language structure including syntactic dependencies.

We have already seen the cases where IC comes up in the sentence-final position in 3.4. If the assumption that attaching IC to the predicate of the sentence turns the whole clause into a question is right (except for some cases we have pointed out in Section 2), then this statement is easily shown in a WG network as in Figure 8. As we have seen so far, the problem lies in the cases where IC occurs in the preverbal position but the scope of question is different.

4.1 IC in Sentence-middle Focussing on the Specific Part of the Sentence

In the cases of *mI* in a sentence-middle position, the scope of question is restricted to a particular word (or constituent if it is applicable). This is easy to display in the WG network; let us show the network of our earlier example (1b) in Figure 9.

[8] At the upper right of Figure 8, there are two straight arrows with a diamond at its base. These arrows show that they are members of a particular set and they are exclusive each other. Such relation is called 'or-relation' (Hudson, 2010).

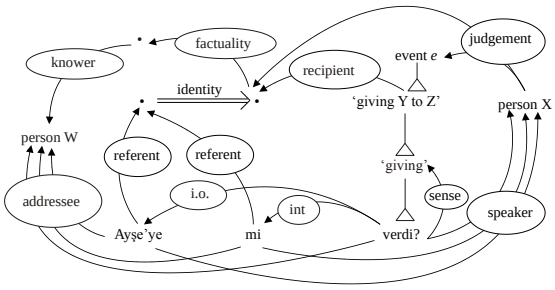

Figure 9. IC in Sentence-middle and the Scope of Question Is Specific

There are several points to be made in Figure 9. First, the speaker tries to identify the recipient of 'giving something (Y) to someone (Z)'. Second, it is assumed that the speaker creates a node for the recipient of giving, as an unknown entity, and he/she judges that, it is identified as the co-referent of *Ayşe'ye* and *mi*, a known entity. WG accounts for this by introducing identity relation, represented by drawing an arrow with double straight lines (Hudson 2007: 44). By distinguishing the co-referent node and the unknown one, we can show that the recipient of 'giving' rather than the existence of 'Ayşe' is questioned.[9] And lastly, the speaker is thought to ask whether this identification (or the identified entity) is factual or non-factual, and assumes that the knower of factuality is the addressee. Although it is much complicated than the cases where IC occurs in sentence-final, the scope of question is shown in much the same way as Figure 8. In this way, we can straightforwardly explain the relation between the scope of question in semantics and the position of IC in syntax, wherever IC surfaces in the sentence. For example, if IC occurs immediately after the first word of the sentence, then this first word and IC share the same referent, and the scope of question will be focussed on the referent of the word to which IC attaches. The approach proposed here dispenses with any theoretical apparatus such as move-α or the movement of the Q-particle in LF level, which makes the explanation simpler than those of Besler (2000) and Aygen (2007).

Another point is that, as Göksel and Kerslake (2005) point out, in such cases the speaker of words has an assumption about the situation; in this case, an assumption is that the event (written as 'event *e*' conventionally) is ultimately a kind of 'giving'. This is successfully represented by transitive isA relations, so in Figure 9 there must be a relation recognized from the speaker to the referent of the verbal predicate, which can be labelled 'judgement' (or possibly 'assumption'). In addition, the speaker makes another assumption that it is the person 'Ayşe' who the other person ('Ali') gave the book to. We can in turn recognize a relation between the referent of the proper noun *Ayşe* and the speaker of the utterance, with the label 'judgement' too. It is important to notice that these two judgements about the situation intelligibly correlate with the so-called categorical judgement (cf. Kuroda, 1972), which consists of two separate acts, namely 'the act of recognition or rejection of material and the act of affirming or denying what is expressed by the predicate about the subject' (Kuroda, 1972: 154).

As we shall see in the next subsection, the framework I have suggested so far applies to the cases where IC is in the preverbal position but the scope of question is thought to be extended to the whole of the meaning of the sentence.

4.2 The "Errant" Cases

Let us begin with the cases of highly idiomatic expressions. What I suggest here is that in our stored example (2), the noun *dalga*, a part of the idiom *dalga geç-*, do not have any referent because this noun does not refer to any specific concepts in this case. Accordingly, when IC is attached to such nouns, IC cannot share the referent with the noun; instead, however *ad hoc* it sounds, I suggest that IC thus selects the other referent of the adjacent word, i.e. the predicate as its coreferent. This can also be the reason why IC has to have a referent: it allows us to explain why such 'errant' cases occur only when IC appears in the preverbal position.

The analysis of our earlier example in (2) can be, therefore, shown as in Figure 10.

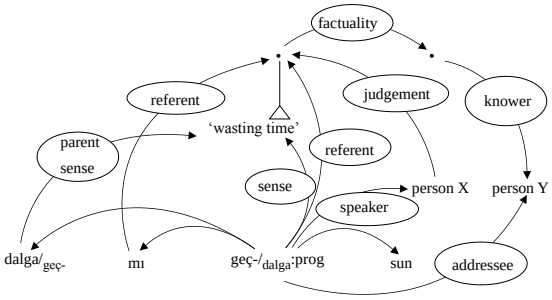

Figure 10. The Analysis of the Sentence *dalga mı geçiyorsun?* 'Are you wasting time?' in Turkish

[9] I would like to thank one of reviewers who suggested this line of analysis.

Considering the contrast between the 'ordinary' patterns of the scope of question, the most important point in Figure 10 is that there is only one judgement carried out by the speaker: a judgement about whether the event is an instance of 'wasting time' or not. This clearly corresponds to what we call the thetic reading, where the speaker simply likes to confirm whether the event itself is factual or non-factual.

The remaining problem is the analysis of cases where the meaning of the predicate is less idiomatic, with IC being located at the immediately preverbal position. We have already seen such cases exemplified in (3a), where IC attaches to the preverbal word *okula*, but the scope of question is the whole of the sentence, showing that the speaker has an assumption that the person in question has gone somewhere or not. In this case, too, the similar explanation to the cases of highly idiomatic expressions is possible. That is to say, the speaker's judgement is oriented towards the referent of the predicate. The analysis of the example (3a) will be like Figure 11 below, where the referent of the noun *okula* 'to school' is not recognized:

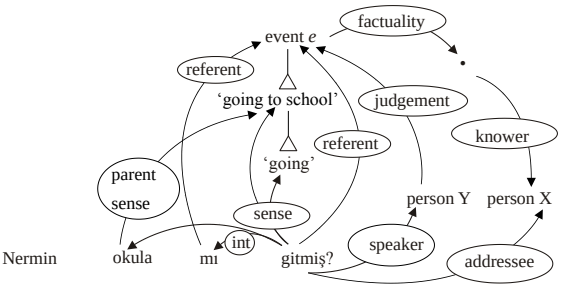

Figure 11. The Analysis of the Sentence *Nermin okula mı gitmiş?* 'Has Nermin gone to school?' in Turkish

Finally, we have to show how the grammar permits IC to show the errant scope. The problem is that IC shares the referent with the preceding word in semantics by default, but in the errant case it does not. A solution offered in WG is to apply default inheritance, the logical operation in the theory. That is, we assume that there are several subtypes (i.e. sub-lexemes) of IC including one that has the errant scope of question. By definition, all subtypes including IC in emphatic and subjunctive use isA IC, the more general category, and each subcategories inherit all properties unless they already have their own conflicting properties. The isA hierarchy of some types of IC in Turkish is illustrated as in Figure 12:

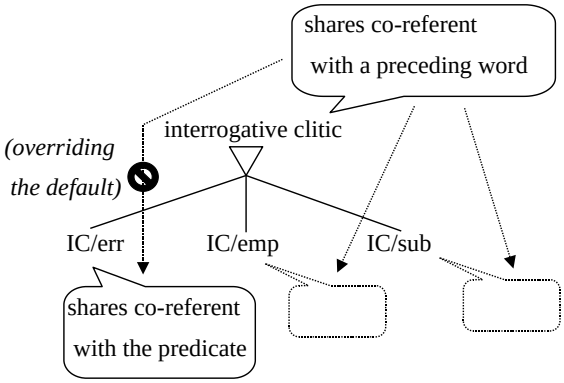

Figure 12. The IsA Hierarchy of IC in Turkish

In figure 12, IC/err (i.e. IC whose scope is errant) has its own property in that it shares the referent with the predicate of the sentence and therefore overrides the default one. The point is that the theory allows exceptions, so even the errant scope of question does not cause any problem in the grammar.

To sum up, the mismatch between the position of IC and its scope of question is purely the matter of semantics and/or pragmatics, as Zimmer (1998) and Göksel and Kerslake (2005) point out. This mismatch may seem difficult to incorporate into grammatical structure at first sight. However, this is easy for an analysis using WG to account for this mismatch, by recognizing a handful of concepts relevant to the speech act. WG provides a rich network of concepts, most of which are open-ended except for a limited number of primitive concepts such as the isA relation. This conceptual network enables us to refer to semantico-pragmatic factors in grammar.

5 Conclusion

In this article, I argued that our analysis in terms of WG covers all the patterns which concern IC and its scope of question. The analysis is applicable regardless of whether IC is in the sentence-final position or the sentence-middle position. Also, it is unnecessary to assume any syntactic movement rule, which is taken for granted in some works within the Generative Grammar framework such as Besler (2000) and Aygen (2007). What is more important is that there are cases where there is a mismatch between the position of IC and the scope of question. We solved the problem by recognizing a rich network including concepts

relevant to pragmatics, which compensates for some weak points Zimmer (1998) has: relating pragmatic factors to syntactic structure and predicting when the mismatch concerned with IC between semantics and syntax happens.

The analysis offered so far, contrary to Previous analyses such as Besler (2000) and Aygen (2007), dispenses with any syntactic rules such as movement of IC. In this sense, other non-transformational theories seem to handle the mismatch between the position of IC and the scope of question. However, not many non-transformational framework can deal with this mismatch. That is to say, the concepts 'speaker' and 'addressee' are not available unless a distinction between word-types and word-tokens is made in the theory because 'speaker' and 'addressee' are typically concerned with word-tokens rather than word-types. As I pointed out in 3.1, they are clearly distinguished in WG. To avoid complexity, I have not shown this distinction in diagrams drawn throughout this article.

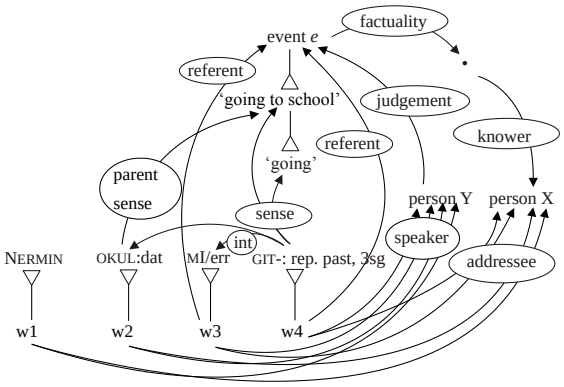

Figure 13. An Elaborated Analysis of Figure 11

As shown in Figure 13, it is easy to demonstrate this distinction in WG: tokens are labelled as 'w1', 'w2', and so on. Each word token, assumed to be linked to a corresponding word-type, and the relational properties 'speaker' and 'addressee', therefore comes up from tokens rather than types. If most other theories, as Hudson (2010: 111) points out, pay very little attention to this distinction, then our WG-based analysis is among a few theories which can correctly incorporate the speech-level concepts into the rest of grammar.

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