A Study of the Auxiliary DO in English

Jung-Kon Jo
(Seoul National University)

Jo, Jung-Kon. 2004. A Study of the Auxiliary DO in English. SNU Working Papers in English Language and Linguistics 3, #-. The use of the auxiliary DO is one of the most striking features of present-day English and there has been a wide range of analyses of the auxiliary DO, but its status and distribution is where most grammarians disagree. This paper shows that there are some auxiliaries including DO to which Kim (2000)'s English Conversion Lexical Rule cannot apply. It further shows that the very fact that the auxiliary DO lacks its semantic value makes it necessary for the auxiliary DO to be understood in a different perspective from other auxiliaries when discussing the relation between negation, stress and scope. It also presents a way to deal with Sag’s(2001) anti-focus property of the polarized auxiliaries by developing type constraints on stressed auxiliaries and employing the multiple inheritance hierarchy. The partition of STRESS will be added to Warner’s(2000) partial inheritance hierarchy of finite auxiliaries and the approach of Minimal Recursion Semantics will be used in the course of developing some constraints on the types stressed and unstressed. The conclusion is that the multiple inheritance hierarchy coupled with the approach of minimal recursion semantics provides a clearer and more succinct account of the auxiliary DO in negation than the lexical rule. (Seoul National University)

Keywords: auxiliary, do, scope, stress, negation, lexical rule, multiple inheritance hierarchy, minimal recursion semantics, HPSG

1. Introduction

The Auxiliary DO plays a central role in present-day English. Though the status and distribution of the auxiliary DO is where most grammarians disagree, one obvious fact is that in nonauxiliary finite verb phrases, the negative marker not requires the so-called do-support phenomenon.

In this paper we will look at three major recent approaches to the auxiliary DO, Kim (2000)', Sag’s(2001), and Warner’s(1993, 2000) and suggest a way to derive stressed and unstressed DOs and to explain the scope relation between auxiliaries (including DO) and negation, without using lexical rules but only with appeal to the multiple inheritance hierarchy.
I will argue that there are some auxiliaries including DO to which Kim's (2000) English Negation Conversion Lexical Rule (ECLR) is not applicable.

Our analysis, which makes the best of Warner's (2000) explanatory framework of the multiple inheritance hierarchy of Head-Driven Phrase Structure Grammar without resorting to the lexical rules, will provide a clear account of the relation between negation, scope, and stress in English auxiliaries, particularly in the auxiliary DO, which the alternative analysis of English auxiliaries using lexical rules can not.

2. Basic Properties of the Auxiliary DO

Like other auxiliaries, the auxiliary DO is also subject to NICE properties as shown in (1):

(1) a. She did not hurt him. /*She hurt not him.
   b. Does he go? /*Does he?
   c. They don't like the job. /*They liken't the job.
   d. I didn't watch the game on TV, but he did. /*I didn't watch the game but he watched.

There are various other properties ranging from emphasis to lack of finite forms which the auxiliary DO shares with modal auxiliaries.

On the other hand, there are some properties of the auxiliary DO that distinguish it from other auxiliaries. One is that the auxiliary DO does not take a nonfinite auxiliary as its VP complement. Thus periphrastic DO never occurs in constructions with be and have as in (2):

(2) *They didn't have left.

To sum up, the auxiliary DC is similar to other auxiliaries in many ways except that DO does not have any intrinsic meaning and its VP complement should be restricted to [AUX-]. And DO's lexical entry within the framework of HPSG will be as in (3):
3. Previous Analyses of the Auxiliary DO and the Negator NOT

3.1 Sag's Analysis

Sag (2001) assigns the feature [AUX+] not to the auxiliaries but only to the polarized auxiliaries as shown (4):

(4) a. He has gone to the store. [AUX-]
    b. Kim did not/TOO/SO go to the store. [AUX+]  

Sag (2001) assumes that the feature [AUX+] is only attributed to the NICE properties. Although nonauxiliary verbs are all specified as [AUX-] as in previous accounts, the lexical entries for the auxiliary verbs in his analysis are in fact unspecified for the feature AUX, and hence may take part in auxiliary and nonauxiliary constructions alike. This subtle reinterpretation and redistribution of the feature AUX holds the key to understanding the properties of the exceptional auxiliary DO. His analysis of auxiliaries is based on the fact that the specifications [AUX] are associated with auxiliary constructions, rather than what are normally called auxiliary verbs. He assumes that there is a general head-complement construction for all finite VPs in English. He proposes that this finite construction be constrained as shown in (5):
(5) fin-up:

The constraints in (5) finely account for the well-known fact that the auxiliary verb DO occurs only with the NICE properties. That is, DO cannot appear in the finite construction unless it is polarized as in (6):

(6) a. *Tracy did leave.
    b. Tracy DID leave.
    c. Tracy did TOO/SO leave.
    d. Tracy did not leave.
    e. Tracy didn’t leave.

And DO can only appear in those constructions that are particular to auxiliary verbs (i.e. whose head daughter must be [AUX+]), such as subject-auxiliary inversions and VP ellipsis as in (7):

(7) a. Does Kim like vindaloo?
    b. Boy, do I like vindaloo!
    c. Kim did ___.

He asserts that this set of facts is well predicted if it is simply assumed that DO, in addition to being inherently finite, is lexically specified as shown (8):
Sag's way of analyzing the auxiliary DO is innovative in that his limiting of [AUX+] only to the NICE constructions instead of to auxiliary verbs blocks the occurrence of unfocussed DO in positive declaratives. Will, however, will be specified as [AUX-] despite the fact that the will in the example is evidently used as an auxiliary though it lacks any polarity items in Sag's terms. In this light, his analysis of auxiliaries with [POL] features needs to be more refined. So we will not take [POL] features as a tool of our analysis of the auxiliary DO. In this case, we will have to figure out a way to block the occurrence of unfocussed DO in positive declaratives. Instead we will employ [AUX+] for all auxiliaries.

3.2 Kim's Analysis

To account for a striking property of VP Ellipsis after not following finite auxiliaries, Kim (2000) proposes a lexical rule, as in (9):

(9) English (Negation) Conversion Lexical Rule I

---

1) In Sag's analysis, there are three kinds of polarized auxiliary forms:
   (i) Not-contracted forms: haven't, won't, etc.
   (ii) Forms selecting a polarized adverbial (but, SC, or TOC) as a complement, e.g. Kim will not/SO/TOC.
   (iii) Positively polarized forms, i.e. focused finite auxiliaries, e.g. Kim WILL/DID go to the store.
The Lexical Rule above, which converts an auxiliary verb taking a VP complement into a verb taking the negator *not* as an additional complement, allows the negator *not* to be the sister of the finite auxiliary as represented in (10):

\[ \text{(10)} \]

\[ V[\text{AUX+}, \text{fin}] \quad \text{Adv}_1 \quad \text{VP} \]

The addition of the restriction [unstressed] to the output of the Lexical Rule is motivated by the scope relation between the head verb and its added complement *not*. As illustrated, the output semantic content of the Lexical Rule specifies that the added complement *not* takes wide scope over the head. But one thing to notice is that this semantic condition holds only when the auxiliary verb is not stressed.

The dummy DO is not different in this regard. This fact is illustrated in (11):

\[ \text{(11)} \]

a. He DID not come, (didn’t he/*did he)?

b. He did not go to school yesterday, (did he / *didn’t he)?

We assume that the stressed DID in (11a) scopes over the whole negative VP, *not come*, thus bringing the scope relation *(do(not(comes)))*. In (11b), *did* is unstressed and the converted complement *not* takes wide scope over *did* as predicted by Kim’s Lexical Rule. But Kim’s Lexical Rule can not produce DID in (11a), as the rule says nothing about stressed auxiliary verbs. Now the
need arises for an independent way to produce stressed auxiliaries such as CAN and DID. So in my proposed analysis I will propose an approach different from that taken by Kim’s(2000) Lexical Rule. We will discuss the problems of his Lexical Rule later.
3.4 Warner's Analysis

As we are going to base our analysis on Warner's (2000), we introduce in more detail his analysis of English auxiliaries. While developing his earlier lexicalist analysis (1993) of auxiliaries, Warner (2000) suggests an entirely new analysis within a hierarchy of unifiable information in an effort to avoid using the device of lexical rules.

3.4.1 The Distribution of Not

In Warner's (2000) analysis, the distribution of not has two components. One use of not is that it occurs with finite auxiliaries. This use of not corresponds to "sentential negation" and it will be introduced as an element on the ARG-ST (and COMPS) Lists of auxiliaries as in (12):

\[\text{(12)}\]

The negation in this structure may have either wide scope (including the semantics of the auxiliary) or narrow scope (excluding it), depending on the particular auxiliary involved: for instance, for *should* it has narrow scope, for *could* it has wide scope, and for *may* it has either, depending on the meaning.
of *may*.

The other use of *not* is concerned with "constituent negation"; this *not* may precede a variety of phrases, and can be introduced as their initial modifier, forming a constituent with them as in (13). This will include the occurrences of *not* in [*vp not VP*], where VP is nonfinite.

(13) a. May we either *not go* or leave early?
    b. Paul may have been *not drinking*.

### 3.4.2 Accounting for Negation Scope via Minimal Recursion Semantics

Within Warner’s (2000) approach the feature structure for *could in John could leave* will include the information in (14):

(14) A typical modal: *could in John could leave*

In (14), the relation of *could in LISZT* is the token identical value of KEY. The mismatch between *h3* and *h1* is because some other element (a modifier or quantifier) may scope between *could* and its subordinate verb. The other handle, *h1*, is the handle of the relation which gives the semantics of the head verb of the complement of *could*. These handles are constrained by the condition SC-ORDERS (*h3 ≥ 1*).
In adjunct structures, the head is selected by the modifier by means of an attribute MOD on the modifier (Pollard and Sag, 1994). In (15), MOD's value (MOD | Y | IV | NDLE) defines the handle value of the KEY of the syntactic head, and a condition in SC-ORDERS states that the argument of not either has a handle identical to that of the modified element or a handle that outscopes it, hence $h6 \geq 1$:

(15) Not

4. An Analysis in terms of the Multiple Inheritance Hierarchy

We will raise some questions as to Kim's English Negation Conversion Lexical Rule. As a possible answer to the questions raised in the analysis of the negated DO based on Kim's Lexical Rule, I will provide an account of stressed/unstressed DO's scope relation with the negator not without using the lexical rules or movements-relating structures solely by relying on the organization of information within an inheritance hierarchy to make relevant generalizations.

4.1 The Problems of Lexical Rules


(16) English (Negation) Conversion Lexical Rule
The auxiliary derived from the lexical rule is both unstressed and outscoped by the negator not when the Adv in the COTENT 3 includes ARG 2 meaning that not outscopes the input auxiliary. The problem is that the Lexical Rule cannot derive all the English auxiliaries: for example, unstressed should as in should not leave cannot be derived from his lexical rule as should takes scope over the negator not (obligatory (not (leave))). We might propose another lexical rule to cover unstressed auxiliaries which take scope over the negator not. But if we apply different lexical rules to different auxiliaries, we will lose the foundation for establishing the lexical rule whose motivation is to reduce redundancy and stipulation in the lexicon. Assuming that one of the basic properties of lexical rules is their idiosyncrasies, we might expect that there exist lexical exceptions to the scope of negation. But the best overall account would be the one which most appropriately reduces the amount of idiosyncrasy. Therefore to assume a different lexical rule for deontic modals such as should would be undesirable.

Now let's apply his Lexical Rule (4) to DO in did not go to school. The negative marker not is also predicted to take scope over DO as the content value of not takes the content value of DO of the input as its argument. But if DO is a semantically empty verb, the futility of the discussion on whether or not the negator not outscopes DO will impair the motivation of adding the condition [unstressed] to the output of the lexical rule, considering that the very motivation of his rule is to define the scope relation (thus the semantic relation) between the head verb DO and its added complement not. Even if DO is stressed and as a result not does not outscope DO, that is, not is outscoped by DO, here again the scope relation between the two has nothing to speak of as long as DO is no meaning carrier.
4.2 The Adoption of the Multiple Inheritance Hierarchy

Clearly we do not want all information contained in lexical entries is simply listed. One mechanism for reducing the redundancy of the lexicon is a hierarchy of types. Our motivation for employing types is to define feature appropriateness in order to avoid having to specify values for features that are irrelevant to particular classes (such as COUNT for prepositions) and to state constraints on feature structures. The concept of hierarchical types (or sorts) is essentially assigning words to specific categories and assigning those categories to superordinate categories. The constraints each type carries correspond to properties shared by all members of that type. The hierarchical inheritance further ensures that a type inherits all the constraints of its supertypes. Thus a word assigned to a type obtains all the features and constraints associated with its supertypes, in addition to its own constraints. Thanks to the organization of the lexicon in this hierarchical manner, we can now save ourselves the trouble of stating redundant information for each lexical entry. That is, the only information we need to encode in a lexical entry is the information that is not inherited from the supertypes of that lexical entry.

By the adoption of the multiple inheritance hierarchy and by the use of partitions which form dimensions of choice, we will throw a light on how English auxiliaries, in particular the auxiliary DO, interact with the negation and stress in terms of scope relation. Our analysis by means of this mechanism of the multiple inheritance hierarchy enables us to do without lexical rules in explaining the NICE properties of English auxiliaries.

4.3 The Behavior of Auxiliary DO in Negation

First of all let's look at the partial inheritance hierarchy of Warner (2000) as in (17) below, which is located on the left side of the dotted line.
We suggest adding another partition, STRESS, on the right side of the dotted line to his established partitions, NEGATION and INVERSION, and will see how this additional partition successfully deals with the auxiliary DO's scope relation with regard to the negator *not*, as our suggestion develops.

Warner's (2000) partition NEG FORM has its subtypes, *wide neg scope* and *narrow neg scope*. But his partition does not show how *wide neg scope* and *narrow neg scope* are related to the stress condition on the corresponding auxiliary. In addition, his partition has no room to integrate into the multiple inheritance hierarchy, auxiliaries which are stressed but not negated, that is, such auxiliaries as are involved in constituent negation as in (18):

(18) He COULD not leave.

However our added partition STRESS designed to make clear the interrelationships between negation, scope, and stress paves the way for mapping the stress condition of the auxiliary, negated or not, into its scope relation.

Now in order to make the buildup of the partition STRESS effective, we need to set up a boolean-valued feature STRESS, i.e., STRESS+ (abbreviated STR+) vs. STRESS- (STR-), defining it as one of the head features whose value
the mother will inherit and linking the syntactic head feature value to the semantic feature value of CONTENT by means of the constraints of SC-ORDERS (for the definition of SC-ORDERS see below). This linkage between the syntactic feature STRESS and the semantic feature SC-ORDERS will prove to serve to clarify the scope relations between the auxiliary and the negator not.

We also need to develop some constraints on the types stressed and unstressed which belong to the partition of STRESS. To do that, we make the best use of the approach of Minimal Recursion Semantics (MRS) introduced by Ann Copestake, Dan Flickinger, and Ivan A. Sag (1999).

Let's give rough definitions on some terms:

. **EP** (elementary predication) is a single relation with its associated arguments (for instance, beyond (x, y)). In general an EP will correspond to a single lexeme.

. **Handles** (h1, h2, etc.) are tags which match up scopal argument slots with the EPs. They enable us to grab hold of EPs.

. **Handle constraints** or **icons** (which we will call SC-ORDERS in our analysis) contain a bag of constraints on the outscopes partial order.

On our approach CONTENT is specified for attributes which include LISZT, KEY, NEG and SC-ORDERS. The value of LISZT is the relevant list of relations; that of KEY is a particularly designed relation within LISZT; normally it is a relation which a phrase shares with its head; in NEGATION type negated contains CONTENT | NEG <[not rel]>; and the value of SC-ORDERS is a set of constraints on the outscopes order of handles (h1, h2, etc.).

In the partition of STRESS, the type stressed in (19) below contains its syntactic STRESS+ value on the relevant auxiliary's head, and its semantic CONTENT value is somehow reflected in the constraint on the handle values, though not explicitly shown as a feature in the CONTENT bracket. If an auxiliary gets stressed, the auxiliary should outscope the negator not which forms a constituent along with the following VP. We assume that the stressed auxiliary will syntactically include the semantics of the following [VP not VP] and the higher VP headed by the stressed auxiliary will be like this:
What the type stressed stipulates is that the second member of the ARG-ST list of the stressed finite auxiliary verb cannot be polarized adverbials such as not, SO, and TOO:

(20)  

a. He can not go to school.
b. *He [CAN [not] [go to school]].
c. He [CAN [vp not go to school]].
d. *He [DID [not] [go to school]].
e. He [DID [vp not go to school]].
f. He DID go to school.

When the auxiliary is unstressed, the second member of its ARG-ST list can be the negator not as in (20a), forming sentential negation. In contrast, when the auxiliary verb is stressed, not cannot occur in sentential negation as in (20b) and (20d) but can occur only in constituent negation as in (20c) and (20e). Of course stressed auxiliaries may occur without the negator not as in (20f). So the constraints on the type stressed forbid stressed auxiliaries to occur in sentential negation. But neither Kim's (2000) Lexical Rule nor Warner's (2000) inheritance hierarchy says anything about this stressed auxiliary. Therefore our analysis can be claimed to be an improvement on their analyses.

When the auxiliary gets unstressed, there are two possibilities of scope relation between the auxiliary and the negator not. On the one hand, when the auxiliary is both unstressed and outscoped by the negator not as in (20a), we simply add to SC-ORDERS the constraint h6≥ 1 as shown (21), where h2 is the handle value of the auxiliary and h5 is the handle value of the not relation. In case there exists a quantifier or modifier which outscopes between the auxiliary and the negator not, we state like h6≥ 1 instead of h5 ≥ 1. All finite auxiliaries both unstressed and outscoped by not will inherit from both the types unstressed and wide scope.
(21) unstressed and wide neg scope

On the other hand, when the auxiliary gets unstressed and outscopes the negator not as in should not, we add to SC-ORDERS the constraint $h_2 \geq i$ as shown (22):

(22) unstressed and narrow neg scope

At this point we'd like to raise a question of whether unstressed DO in I did not see it inherit from the types unstressed and wide neg scope of (21) or from the types unstressed and narrow neg scope of (22). Let's assume unstressed DO inherits from the type unstressed and narrow neg scope of (22). As there is no semantics in DO, $h_2$ will be identified with $h_1$, so $h_2 = h_1$. In turn the SC-ORDER $h_2 \geq i$ can be replaced by $h_1 \geq i$, which means VP$[h_1]$ outscopes the negator not$[h_6]$, which is an evident contradiction. But if we
assume that unstressed DO belongs to the type *unstressed and wide neg scope* of (21), the SC-ORDERS will cause no contradiction. If h2=hl, the scope order h6 ≥ ? can be replaced by h6 ≥ 1, which causes no contradiction as the constraint h6 ≥ 1 is already contained in the lexical entry of the negator *not*. Neither does the constraint h2=hl contradict the constraint h2 ≥ 1. So we tentatively conclude that unstressed DO in *I didn’t see it* belongs to the *unstressed and wide neg scope* of (21).

Given the constraints on the types *stressed* and *unstressed*, we can add another partition STRESS to Warner’s (2000) as in (23) below:
Any member of type negated must inherit from both of the NEG FORM and NEG SCOPE, and so must any member of INVERSION and STRESS inherit from types inverted/not inverted and stressed/unsfressed respectively. But for expository convenience, we leave the partition INVERSION out of account in this discussion.\(^2\)

In inverted yes-no question the normal scope of sentential negation with
not/-n't is wide. But in a question like Did nobody come?, the scope relation with the auxiliary DO and the negation is more likely to be complex than is seen. This seems to be one more area to work on further. We leave this issue for further study. Once negation-type sorts and stress-type sorts are declared, together these define a large number of phrase types through the multiple inheritance network that the sort classification defines. For example, the respective subtypes of type negated cross-classify the subtypes of the partition STRESS; a sentence headed by a negated, unstressed, finite auxiliary outscoping not will inherit from all the types of not arg, wide neg scope and unstressed, so rightly predicting such sentences as I could not go and I did not see it, a sentence headed by a negated, unstressed, finite auxiliary outscoping not will inherit from all the types of not arg, narrow neg scope and unstressed, rightly predicting a sentence like You should not smoke; a sentence headed by the stressed auxiliary followed by [VP not VP] will inherit from both types not negated and stressed, predicting sentences like I COULD not leave and I DID not go to school as expected; and a sentence headed by a negated, contracted, stressed, finite auxiliary will inherit from n't form, stressed, and either neg scope, predicting sentences like I COULDn't leave (wide neg scope) and You SHOULdn't do it (narrow neg scope).

As we have seen in section 4.1, we cannot derive from Kim's (2000) Conversion Lexical Rule a sentence as in (24):

(24) He should not have been drinking, should he? -- Narrow scope negation: obligatory(not)

But in our analysis by adopting the multiple inheritance of type hierarchy, say, by cross-classifying type negated and type unstressed, we successfully manage to draw such a sentence as in (24).

Another advantage to our analysis using the multiple inheritance hierarchy is that it can respond to Sag's (2001) claim that auxiliaries selecting polarized adverbials such as not, SO and TOO should be unstressed. What the partial inheritance hierarchy (23) fails to explain is that stressed auxiliaries cannot cooccur with SO and TOO. Somehow this fact should be dealt with in relation to the type constraint stressed in (19), which means that

---

2) In inverted yes/no question the normal scope of sentential negation with not/-n't is wide. But in a question like Did nobody come?, the scope relation with the auxiliary DO and the negation is more likely to be complex than is seen. This seems to be one more area to work on further. We leave this issue for further study.
(23) still needs to be more finely grained. As stressed auxiliaries do not inherit from type *not* *arg*, possibilities do not exist that the polarized auxiliaries such as those negated by *not* will be focussed.

Neither do we have to enrich the lexical rule to cover such an unstressed auxiliary *should*/*should not* have *been drinking* nor do we feel it necessary to accept the lexical idiosyncrasy in order to admit *must*/*must not* *drink* into the lexical rule. The only remaining question is whether *DO*, in all probability, is sensitive to the scope distinction with respect to the negation. For now we assume unstressed *DO* is regarded as outscoped by the negator *not*, inheriting from relevant types *not* *arg*, *wide neg scope*, and *unstressed*. One remaining property of the auxiliary *DO* we have not touched on is that if *DO* is positive, then *DO* needs to be stressed. As for the unstressed *DO*, there needs to be found a way to block it from occurring in the positive declaratives and to formalize the blockade with the framework of HPSG. But for now we leave it for further study in the future. In Sag(2001), the *fin-vp* construction requires matching values for *AUX* and *POL*. Thus the verbal head should be [*AUX-] unless the head daughter is polarized. This allows *DO* to head such a construction only if it is polarized. I feel more or less sympathetic to his treatment of the puzzling distribution of *DO*. But I still find it difficult to fully side with his approach, as I commented in section 3.2. See Warner(1993) and Kim(2000) for *DO*’s distribution in terms of ‘tense realization condition’.

The application of the multiple inheritance hierarchy to our analysis predicts the following combination of type inheritance with regard to the auxiliary *DO*.

\[ \text{not arg} + \text{wide scope} + \text{unstressed} \quad : \quad \text{He did not work hard, did he?} \]
\[ \quad \text{not(did(...))} \]

\[ -\text{’t form} + \text{wide scope} + \text{unstressed} \quad : \quad \text{He didn’t work hard, did he?} \]
\[ \quad \text{not(did(...))} \]

\[ \text{not negated} + \text{stressed} \quad : \quad \text{He DID not take your advice.} \]
\[ \quad \text{did(not(...))} \]

\[ \text{not negated} + \text{stressed} \quad : \quad \text{He DID take your advice.} \]
\[ \quad \text{(did(take))} \]

This multiple inheritance hierarchy makes it possible to provide all the possible occurrences of auxiliaries with respect to negation, scope and stress.
4.4. The Consequence of the Proposed Analysis

Our analysis using the multiple inheritance hierarchy permits should to inherit from both types narrow neg scope and unstressed, gaining explanatory adequacy, much more to derive all other auxiliaries, stressed or not, from the multiple inheritance hierarchy. Our analysis does not have to assume lexical idiosyncrasies as far as deontic auxiliaries are concerned. In addition, our analysis finely allows the auxiliary DO to interact with the negation and stress. Besides, our analysis covers what Sag (2001) points out as the antifocus property of the polarized auxiliaries. Finally, though we make the best of Warner’s (2000) approach as an analytical tool, we at last manage to incorporate the relation in English auxiliaries between stress and scope into the more enriched partition than he originally designed, which is a sure evidence of further improvements on his analysis. These and other advantages will lend support to our analysis.

5. Conclusion

The status and distribution of the auxiliary DO is where most grammarians disagree. We have seen that the auxiliary verb DO is similar to other auxiliaries in many respects. But its distribution is far more restricted than other auxiliaries and one more peculiarity about the auxiliary DO is its intrinsic lack of meaning. I have argued that Kim’s (2000) English (Negation) Conversion Lexical Rule cannot be generalized because of its limited applicability. Thereby I suggested discarding the lexical rule approach in favor of the multiple inheritance hierarchy approach. Kim’s analysis of scope facts of negation in relation to stressed/unstressed DO is difficult to justify because his own analysis of DO as a meaningless dummy operator cannot do justice to the debate over the scope which itself is a semantic condition. We cannot possibly debate over the semantic condition on the element which has no intrinsic meaning. I also presented a way of integrating the anti-focused constraint of the adverb selecting polarized auxiliaries by using an inheritance of sort hierarchy instead of the lexical rules. Although our analysis is open to doubt in many ways, it may, nevertheless, provide an opportunity to cast doubt on the established analysis of DO and pave the way for further study.
REFERENCES


Iuna-Kon lo
english47098@hanmail.net