LINGUISTICS

ON THE NOTION "POSSIBLE GRAMMATICAL CHANGE": A LOOK AT A PERFECTLY GOOD CHANGE THAT DID NOT QUITE MAKE IT[1]

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It seems something of an article of faith that the processes of language learning are of particular relevance for linguistic change. While changes in adult grammars are admitted to be possible, they are believed to be fewer and less radical than innovations introduced by children.[2] Recently David Lightfoot (1979: Chapters 3 and 7) has further specified where to look for potential changes by suggesting that, in syntax, re-analysis is likely to take place in "opaque" contexts in accordance with the so-called Transparency Principle, which "requires derivations to be minimally complex and initial underlying structures to be close to their respective surface structures" (1979:122). The purpose of re-analysis, then, is to remove offending derivational complexity.

This paper will examine one area of English grammar from the viewpoint of the Transparency Principle to see if changes of the expected sort occur in children's grammars. Although 'offending complexity' (apart from cases such as multiple self-embedding) must be an intuitive concept, it seems to me worthwhile to pursue this kind of inquiry, if only to produce some new facts for scholars to work on.

The specific area of English grammar that I shall analyse is the derivation of *yes/no* questions. I shall argue that children construct an underlying form that is different from the adult form. Furthermore, the innovation is of a kind attested in Middle English. However, I shall try to show that a number of conditions (other than that of derivational transparency) obtained in Middle English that do not obtain in Present-Day English. Since the change occurred in Middle English, but has not done so in Present-Day English, I shall claim

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[1] An early version of this paper was presented at the Fifth International Conference on Historical Linguistics, Galway, Ireland, April 7, 1981.

[2] For a short survey of this view from Hermann Paul onwards, see King (1969 : 78).

that derivational transparency is not a sufficient condition for this kind of change.

If difficulty of learning measures complexity at all, English *yes/no* questions must be a good candidate for a derivation that is of "offending complexity". The difficulties of learning the intricacies of English questions are well known to foreign-language teachers, and we shall see that native children, too, have difficulty arriving at the correct generalizations. The following sentences will illustrate the nature of the problem:

1. They will go.
2. Will they go?
3. They left.
4. Did they leave?

The derivation of (4), as opposed to (2), is opaque in that (4) cannot be related to any declarative sentence in the obvious way that a sentence with an auxiliary like *will* can. In other words, the *do* in (4) does not seem to have a source.

The acquisition of questions by native children is a complicated process. My interpretation of this process is based on the data presented and discussed by Klima and Bellugi-Klima (1969), Gruber (1969), Cancino, Rosansky and Schumann (1978), and Fletcher (1979). My analysis is perhaps not totally uncontroversial, but the possible bones of contention will not affect the argument about the specific innovation discussed here.

At the earliest stage, only intonation questions occur (*You like it?*). At the second stage, questions with an inverted *do* (*will, can*) appear. However, in spite of their superficial resemblance to adult questions, these questions are probably not derived by the Subject-Auxiliary Inversion rule of the adult grammar. The initial *do* is simply a question marker (i.e. a sentence-initial particle marking sentence modality)[3] attached to a fully developed declarative sentence. That is, questions are not transformationally derived but rather are generated in the base by the rule "S→QM+NP+VP".[4]

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[3] There is a tendency for language learners to treat sentence modality as a sentence-initial particle. Thus Wode (1980) notes that second-language learners frequently produce sentences like *Doesn't John go home* pro *John doesn't go home* when negation is being drilled. It is also interesting to note that negation is treated as a sentence-initial element in some types of negation in Black English and in Nonstandard Southern White English: *Ain't nobody seen it* 'No one has seen it'.

[4] This view is supported by the following evidence:

1. *Do, will* and *can* may occur in questions earlier than they do in declaratives (with *do* this is invariably the case). It follows from this that questions cannot be related to declaratives by a rule of Inversion;

2. Although apparent inversion occurs in *yes/no* questions, inversion is not found in *Wh*-questions (*Where my spoon goed?*). This suggests that both *do* and *Wh*- are

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The device of forming questions by adding a question particle to a declarative sentence is by no means rare in language. However, I shall not speculate on why the change from inversion questions to question-particle questions is an unlikely one in Present-Day English. Suffice it to say that initial question particles tend to occur in verb-initial languages (although there are quite a few exceptions) and that this new device (i.e. the question particle) would radically change the look of Present-Day English; for example, *Did he be reading?* would be a grammatical sentence.[5]

After the "apparent inversion" stage a stage occurs that clearly suggests the child has a question inversion rule in his grammar. Fletcher's data (1979: 272) show that, after *do* first occurs in questions, its use is later extended to declaratives (e.g. *My balloon did pop*, where *do* is unstressed). In other words, the child has made the grammar transparent by providing a reasonable underlying structure for questions like *Did it pop?*

The interesting thing about a form like *It did pop* is that it is a historically attested grammatical construction. A periphrastic way of expressing tense arose in Middle English from an earlier causative construction through a semantic shift: at some stage the earlier *He did write a letter* 'He had someone write a letter" came to be interpreted 'He wrote a letter' (Ellegård 1953). By the seventeenth century the periphrastic formation had become part of Standard English grammar. After this its use rapidly declined and although it did not become obsolete in Standard English until about 1850, its use was already stigmatized by eighteenth-century grammarians.[6] As far as I can see, there are no signs that the periphrastic construction might be re-introduced in Present-Day English.

I shall now introduce a number of conditions which I feel tend to favour the rise of periphrastic formations of the type *went>did go* and I shall try to determine whether they obtained in Middle English and whether they perhaps obtain in Present-Day English.

1. There is a syntactic pattern available. This condition obtained in Middle

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realizations of the same category, i.e. the sentence-initial marker of sentence modality, and there is a unified way of generating all questions, viz. "S→QM+NP+VP";

3. In early questions, the main verb rather than *do* shows tense, which suggests that *do* is not analysed as a verb (*Did I saw it?, Did I caught it?*). These forms occur at a stage where past tense forms like *goed* and *doed* occur as well. This rules out the possibility that *caught* and *saw* might be unanalysed chunks not necessarily consisting of a verb and a tense marker.

[5] "Radical" is a relative term, of course. I have actually heard a native child use questions like *Did you can sit?* 'Were you able to get a seat?'.

[6] For a survey of seventeenth and eighteenth century attitues to the use of *do* in affirmatives, see Visser (1969: 1505—1509). For modern dialectal use, see my 1976 paper in *Neuphilologische Mitteilungen*.

English, where a causative pattern of the form *He did write a letter* 'He had a letter written' existed. Also, there was a pro-verb *do*, as in *Henry likes wine and so does Bill*, which could be used independently of the main verb to carry tense and person. In Present-Day English, periphrastic *do* occurs in dialect and children's speech. Notice also the existence of the emphatic *do*, as in *I do hope you'll get well soon.*

2. There is a need to integrate a considerable amount of foreign lexical material into one's native language. Speakers appear to be reluctant to attach native grammatical endings to foreign words. The use of a native auxiliary to carry the necessary inflections makes it possible to avoid unwanted hybrids.

There is some recent evidence that periphrastic verbal forms of the type *walked>did walk* arise in connection with borrowed lexical items. In her study of Californian Spanish, where borrowings from English are frequent, Carol W. Pfaff (1976) shows that the use of English verbs is relatively free in sentences with a Spanish auxiliary; that is, when the information about tense, mood, and person is not placed on the foreign word (e.g. *¿Donde estas teaching?* 'Where are you teaching?'). However, in cases where the foreign word should be inflected, a new form occurs that has no equivalent in Spanish grammar: tense, mood, and person are placed on a periphrastically used verb *hacer*, as in *Su hija hace teach* 'His daughter teaches'. (One might note in passing that *hacer* like Middle English *do* has a causative meaning in the pattern *hacer*+infinitive, as in *Me hizo salir* 'He made me leave'). The resemblance between the Middle English development and the Contemporary Spanish development is striking. In both cases the constructions arise when there is a large influx of foreign words: in English the rise of periphrastic *do* coincides with the peak of the period of intensive borrowing from French (1250—1400). Today this condition does not obtain in English.

3. There is a need to simplify the grammar for communicative purposes, i.e. conditions for pidginization obtain. There is a lot of evidence that periphrastic constructions arise when some or all speakers involved in a communicative situation master the language of communication imperfectly. There are several instances of periphrastic formations in pidgins and creoles. Just to give two examples, in Trinidadian English, the form *does give* occurs instead of *gives*, and in Gullah the form *been* is used periphrastically to mark the past tense, as in *I been see that man* 'I saw that man'.

Whether this condition obtained in Middle English is not quite clear, but it is likely that it did, in view of the fact that the barons at least occasionally must have had some kind of need to communicate with the non-French speaking population without an interpreter. Also, there must have been a transitional stage where primarily French-speaking parents had to communicate with their primarily English-speaking children (an analogous situation obtains in some Finnish families today). This kind of situation, of course,

is highly favourable to language simplification. It is clear that this condition does not obtain in Present-Day English.

4. There is a learning problem. The periphrastic form makes the grammar transparent and, at the same time, makes the morphology simpler. Here the use of the periphrastic form may be a manifestation of a general learning strategy: the learner temporarily simplifies the code in order to be able to communicate although his mastery of the language is not yet complete. The difference between this kind of simplification process and (3) is that while structures developed under (3) are more or less permanent, (4) is a transitory stage that disappears (if none of the other conditions obtains) as the learner proceeds toward a complete mastery of the language.

The language acquisition data presented above suggest that condition (4) obtains in Present-Day English. The evidence from second-language learning is even more convincing, considering the frequent errors of the type **Do I must do it?*, **Does he be going?*, and **We do* [də] *go to school.*

Whether question formation presented a learning problem in Middle English crucially depends on the rise of the auxiliary verb category. When there was no auxiliary verb category distinct from full verbs, questions could have been formed by a unified rule of subject-verb inversion. However, if Middle English already had an auxiliary verb category distinct from true verbs, the question formation rule may have become a rule of offending complexity requiring re-analysis of the grammar. The introduction of *do*, or to be more specific, the re-interpretation of the verb *do*, would have provided a form necessary for the simplification of the question formation rule. That is, the rule "Invert the subject and the auxiliary, or the main verb and the subject if there is no auxiliary" was replaced by the simpler rule "Invert the subject and the auxiliary". Although the dating of a development such as "a full verb becomes an auxiliary" is problematic, it would seem that the rise of at least the modal auxiliary category co-incides with the rise and establishment of periphrastic *do* (Lightfoot 1979: Chapter 2), in which case the periphrastic form probably made the task of the learner easier.

5. There may be a tendency for inflections to be replaced by auxiliary words preceding their heads. It is well known that in Middle English auxiliary verbs and prepositions replaced earlier inflections. Also, the change from OV to VO may have favoured the pre-position of the tense marker (with respect to the main verb), as there is a tendency for VO languages to have prefixes rather than suffixes. Whether these tendencies are still operative, I do not know.

The following table summarises the conditions that I feel favour the rise of verbal periphrasis of the type *He went>He did go*. It also indicates whether a particular condition obtained in Middle English or obtains in Present-Day English:

Condition	Middle English	Present-Day English
1. Syntactic structure available?	YES	YES
2. Need to assimilate foreign lexical material?	YES	NO
3. Need to simplify the code for communicative purposes?	YES	NO
4. Helps to make an opaque derivation transparent?	YES, if auxiliary verbs (such as modals) formed a category distinct from true verbs; otherwise, NO.	YES
5. General trend?	YES	?

To the above should be added two factors that in my view are likely to constrain any potential change.

First, it might be the case that, although some of the above conditions are met, the form available is stigmatized. There is good evidence (Davis 1972) that the use of *do* in Middle English was perfectly respectable. Also, seventeenth-century grammarians do not stigmatize the periphrastic formation but rather give it as an alternative to the simple form. On the other hand, the contemporary dialectal use of *do* is regarded as non-standard and uneducated.

Second, it might be the case that, while a particular innovation (such as *do* in affirmatives) will make the derivation of a particular sentence type transparent, it may complicate the grammar elsewhere. I would like to comment on the second problem in some detail.

Supposing a new auxiliary verb *do* were introduced into affirmative sentences, how would it fit in the total grammar of English? Specifically, the question that arises is whether *do* is like *will*, *have*, or *be*, or whether *do* should perhaps form a category of its own. What I hope to establish here is that the grammatical status of *do* has always been somewhat problematic.

Since *do* disappears from children's grammars before categories such as the perfect are firmly established, language acquisition does not throw any light on this problem. Some insight might be gained by writing a phrase structure rule that would treat *do* as a deep structure element and trying to work out what kind of grammar would generate the structures required in adult grammars. Without changing the look of Present-Day English too radically, there are at least two grammars that would generate the expected output. One can either treat *do* as a member of the M(odal) category and then account for the unwanted constructions by rather *ad hoc* transformations (this is basically the solution given in Culicover 1976: 63—88). Or one can generate

do by a phrase structure rule such as the one below:

$$\mathrm{AUX} > \mathrm{TNS} \begin{Bmatrix} \mathrm{(M)\ (HAVE{+}EN)\ (BE{+}ING)} \\ do \end{Bmatrix}$$

Both solutions treat *do* as a highly marked verb: somehow it is and is not like the other auxiliaries. Furthermore, there does not seem to be any empirical evidence for deciding between these two solutions.

Of course, whether this kind of indeterminacy is a constraint on a potential change is a question that cannot be answered until more is known about factors blocking various "possible" developments. On the other hand, one has a hunch that the disappearance of *do*, which, incidentally, coincides with the growth of the verb phrase, may be due to the difficulty the language learner experiences in determining what kind of verb it really is.

Evidence from modern dialects, which show a lot of variation in the use of *do* in affirmatives, also suggests that the grammatical status of *do* is indeterminate. In Somerset, *do* is only used when there is no other auxiliary in the sentence (*He do go* 'He goes' and *He did/done go* 'He went' are idiomatic but **He (has) done gone* 'He has gone' is not), whereas in Irish English *do* occurs with *be* (*They do be milking*), and in some American English dialects forms such as *They (have) done gone* 'They have gone' can be found. This shows that the degree of auxiliariness of *do* varies from dialect to dialect.

The picture that emerges from language history is equally problematic. If the purpose of *do* was to make the derivation of questions transparent, one would expect it and the other auxiliaries to be mutually exclusive, i.e. one would expect it to occur in sentences such as *He did make it*, but not in sentences like *He may do write a letetr*. However, not only did *do* occur with other auxiliaries in Middle English, as shown by examples (5) to (8), but it also occurred with main verbs that showed inflections; that is, tense was marked twice in those cases (examples 9 and 10);

(5) *may do write* (6) *did do make* (7) *have do made* (8) *had do made* (9) *have done made* (10) *did made*.[7]

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[7] The types listed here date from 1426 to 1465. Instances of these types can be found in Dietze (1895), Engblom (1938), Ellegård (1953), Mustonoja (1960), Visser (1969 and 1973), and Davis (1973). Dietze (1895 : 16) quotes two examples of *do* with *be* (*A Rede lyon that dide rawmpyng be* and *A crosse of gowles therein did be*). Both occur in a Scottish poem dating from the early sixteenth century. In British dialects *do* does not seem to have occurred with *be* (Ellegård 1953 : 164). The above patterns are often used in a causative (rather than a periphrastic) sense, i.e. sentences such as *I have doon examyned þe jnstrument* mean 'I have had the instrument examined' rather than 'I have examined the instrument'. However, this will not affect the point that I am trying to establish here, viz. that the syntax of *do* shows a great deal of variety.

For the double marking of tense, see Dietze (1895 : 13). Mustanoja (1960 : 606) questions the reliability of the evidence for the type 'Thalestris did wroot to kyng Alexandre in þis manere' in Middle English.

Syntactically, the picture is clear: *do* occurs next to the main verb and can be preceded by various auxiliaries but its function is opaque. In early Modern English *do* shows a distribution that is radically different from the situation in Middle English. While in Middle English *do* occurs after modals and *have*, in early Middle English *do* and the other auxiliaries are mutually exclusive (Closs Traugott 1965). Obviously, by early Modern English, *do* had become highly marked as to its syntactic distribution, while its function had become transparent: it carried tense inflections in cases where there was no other auxiliary. What the historical data show, then, as do the dialectal data discussed above, is that *do* easily lends itself to a number of different analyses.

It seems reasonable to interpret this kind of fluctuation in the syntax of *do* as evidence of the verb's rather indeterminate nature. However, since it does occur as some kind of auxiliary verb in affirmative sentences, the indeterminacy cannot be "introlerable", so to speak. On the credit side, it makes the derivation of certain *yes/no* questions transparent by supplying a reasonable underlying form. Furthermore, it simplifies the morphology and thus reduces memory strain. These are definitely factors that help make language learning easier. But if the use of *do* makes language learning easier, why has it not been re-introduced into English grammar? One answer is that it does not serve the purposes of adult communication. But if it is true that a successful change must serve the purposes of adult communication, as the case of *do* suggests, then the processes of language learning may be far less relevant for linguistic change than has been believed so far. Specifically, the case of periphrastic *do* suggests that the formal requirement of derivational transparency in syntax (which seems to be able to predict innovations in child grammars) is not a sufficient condition of language change, although it may call one's attention to certain critical areas of grammar. Ultimately, language is, perhaps, regulated by external factors to such an extent that trying to predict grammatical changes on the basis of formal principles of grammar is an exercise in futility, for under certain conditions speakers seem to be able to tolerate a great deal of disturbing derivational complexity. In order to be able to predict change, one would have to know precisely what these "certain conditions" are.

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