

# Auxiliary reduction in English: Procliticization of subject NP to C+T head\*

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**Im, Chegyong. (2012). Auxiliary reduction in English: Procliticization of subject NP to C+T head.** *The Linguistic Association of Korea Journal*, 20(4), 1-24. To explain the properties of reduced auxiliaries in English, some studies presume the interaction with syntactic structures, and others claim pure phonological approaches. Many proposals employing the syntactic mechanism, however, still depend on the superficial facts with the rules describing their syntactic processes such as displacement and deletion. Though we agree that auxiliary reduction in English is a phonological phenomenon, we argue that some syntactic mechanisms affect the phonological process of reduction. We argue that the phonological reduction of auxiliaries, i.e., encliticization of auxiliary verbs is partly affected by the subject incorporation to the auxiliary verb, i.e., procliticization of subject elements. So the goal of this study is to show that the process procliticization in English can be explained with the mechanism of "Specifier Incorporation to Head" operated under the Specifier Incorporation Principle (SIP) suggested in van Gelderen (2006) along with the notion of C-to-T feature inheritance (Chomsky (2004, 2005)).

**Key Words:** auxiliary reduction, encliticization, procliticization, Specifier Incorporation Principle, C-to-T feature inheritance

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## 1. Introduction

Although the term "clitic" has been used in a fairly free and unconstrained manner, it is generally assumed that a clitic in English is referred to as a phonological (or Simple) clitic<sup>1)</sup>, the terminology introduced by Zwicky (1970). Various notions and categories of clitics in English have been suggested by many scholars and their properties are assessed in terms of the general typological parameters<sup>2)</sup>. Our concern, however, is limited to the so-called auxiliary reduction in which the auxiliaries are seemingly reduced and attached to their host, the subject. Some auxiliary verbs have reduced forms and they seem to cliticize to their host.

- (1) a. Fred's tall (Fred is tall)  
 b. Fred's already eaten (Fred has already eaten)  
 c. Fred'll do it (Fred will do it)

|               |         |
|---------------|---------|
| (2) Full form | Reduced |
| is            | 's      |
| are           | 're     |
| am            | 'm      |
| has           | 's      |
| have          | 've     |
| had           | 'd      |
| will          | 'll     |
| would         | 'd      |

English is unusual in that all the elements with clitic forms have their own

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1) In contrast, the object pronouns cliticized in Romance languages are called morphosyntactic (or Special) clitics. Their positions with respect to the other elements in a sentence follow a distinct set of principles. They are not our concern in this paper.

2) Dixon (2007) shows the cliticization of the approximately sixty grammatical elements in English including nominal determiners, prepositions, conjunction and relators, subject, object and possessive pronouns, auxiliaries, *there* and *not*. He suggests a wide concept of cliticization caused by the phonological syllabification such as liason or hiatus.

non-clitic forms<sup>3</sup>).

Some syntactic accounts have been suggested to explain the phonological phenomenon of the auxiliary reduction. The suggestions, however, are based on the movement theory with the notion of trace. Armed with the recent notions and principles of Economy (Chomsky 2001, 2004; van Gelderen 2004, 2006), we try to show that the so-called auxiliary reduction in English is not the result of the encliticization of the auxiliary to its host noun but affected by the procliticization of the subject NP to the auxiliary, the Head composed of C+T.

For this purpose, we show how syntactic accounts are related with the superficial phenomenon of the auxiliary reduction in chapter 1. Chapter 2 explicates the theoretical backgrounds such as the Specifier Incorporation Principle (van Gelderen 2004, 2006) inspired by the processes of morphologization and lexicalization (Givón 1979). In chapter 3, our proposal based on C-to-T feature inheritance (Chomsky 2004) is suggested. Chapter 4 concludes the paper.

## 2. Syntactic vs. phonological approaches

In order to provide a principled account of *wh*-movement, Radford (1988) argues that there are certain phonological facts which cannot be accounted for without invoking both an abstract level of underlying structure and a transformation of *wh*-movement mapping that changes underlying structure into the associated *S*-structure. He assumes that under certain conditions, auxiliaries seem to permit contracted forms. We can freely choose either the full form or the contracted form in the following sentences (Radford 1988:475).

- (5) a. Mary is good at hockey, and Jean is good at volleyball.  
 b. Mary is good at hockey, and Jean's good at volleyball.

However, if we omit *good* in (5b), auxiliary reduction is impossible.

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3) The relation is proper subset since there are sentences in which only the full verb is possible.

(6) Gapping

- a. Mary is good at hockey, and Jean is good at volleyball.
- b. \*Mary is good at hockey, and Jean's  $\emptyset$  at volleyball.

The same constraint is also applied for the following sentences where wh-element is displaced.

(7) Wh-movement

- a. How good do you think Mary is \_\_\_\_\_ at linguistics?
- b. \*How good do you think Mary's \_\_\_\_\_ at linguistics?

Similar facts obtain in the following constructions where an adjective is preposed out of the AdjP.

(8) Adjective preposing

- a. Tired as he is \_\_\_\_ of his job at the carwash, Fred can't find anything better.
- b. \*Tired as he's \_\_\_\_ of his job at the carwash, Fred can't find anything better.

Radford (1988:475) simply suggests the following informal rule;

- (9) Contracted forms cannot be used when there is a 'missing' constituent immediately following.

The rule (9) implies that there are some syntactic constraint related to the reduction<sup>4</sup>). However, we can find instances which do not allow reduction

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4) Another example of syntactic constraint related to reduction is wanna contraction. When there is a gap/a trace between *want* and *to* from which position an argument has moved as in (ii), wanna contraction is impossible.

- (i) a. Who do you wanna to beat \_\_\_ ?  
b. Who do you wanna beat?
- (ii) a. Who do you want \_\_\_ to win?  
\*b. Who do you wanna win?

where there is no missing constituent immediately following (Park 1989:818).

- (10) A: He's not to blame, I tell you.  
 B: But he is/\*'s to blame.

The reason is that in (10B) *is* is contrastively focused. The example sentences in (10) provide a convincing evidence showing that reduction is not a syntactic phenomenon but a phonological phenomena.

Another syntactic observation originates from Zwicky (1970) and Baker (1971) who assumed that a syntactic operation was involved in the attachment of reduced auxiliaries to their host. Cliticization applies within the syntax, optionally displacing the auxiliary verbs from its basic position and adjoining it to what precedes. This has been called the cliticization rule which interacts with the assignment of stress. When sentence stress applies to the output, the auxiliary is no longer in a position to take stress and appears in a weak form. They argue that if cliticization occurs, the reduced form is chosen from the Lexicon. If it doesn't, the weak form is chosen. The result of these operations undergoes the regular phonological process. A derivation of the sentence *Jack's leaving* is given in (11) (Anderson 2007:4).

- (11) [[Jack]<sub>NP</sub> [is]<sub>aux</sub> [leaving]<sub>VP</sub> (output of syntax)  
 [[Jack] is]<sub>NP</sub> [t] [leaving]<sub>VP</sub> (cliticization)  
 [[Jack] is]<sub>NP</sub> [t] [ˈleaving]<sub>VP</sub> (sentence prosody)  
 [[Jack]z]<sub>NP</sub> [t] [ˈleaving]<sub>VP</sub> (allomorph selection)  
*Jack's* *leaving* (voice assimilation)

This sort of syntactic approach has some problems. If the reduced auxiliary forms a structural unit with what precedes, the whole unit should be displaced. The following examples, however, show that it's impossible (Anderson 2007:4).

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If we assume that the syntactic information carried until the end of the computation is transferred to SM interface, the information decides on the optionality of wanna contraction. See chapter 3 for further discussion.

- (12) a. I think John's/is at the door.  
 b. Who<sub>i</sub> do you think [e]<sub>i</sub>'s/is at the door?  
 c. \*Who's do you think at the door?<sup>5)</sup>

So far we have seen that syntactic observations do not satisfactorily explain the auxiliary reduction. Rather, the phonological view seem to be right which asserts that an unstressed weak element is supposed to have the property of cliticizing to its host. Kim (1999:430) puts it as the following;

- (13) Cliticization occurs to minimize the pronunciation of function words.  
 (14) Cliticization occurs when function words are unstressed.

Based on the observations of (7)-(10) and generalizing (13) and (14), she proposes the following.

- (15) Cliticization is not allowed where a host and a clitic are in separate intonational phrases<sup>6)</sup>, even though they are adjacent.

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5) The behavior shown in (12) can be contrasted with the following negation contraction.

- (i) a. Jones won't/will not be at the office tomorrow.  
 b. Won't Jones be at the office tomorrow?  
 c. \*Will not Jones be at the office tomorrow?

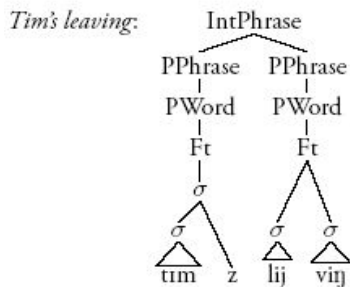
The contracted unit should be displaced altogether; otherwise, the structure is ungrammatical. Zwicky & Pullum (1983) argue that the contracted negative is not a clitic but that the contracted form *won't* itself is a negative verb considering the notion of Lexical Selection. In Dixon (2007), *not* is one of the sixty grammatical elements that can be cliticized. We follow the position of Anderson (2005) and Dixon (2007) in that the cliticization is a phonological phenomenon occurring after the syntactic computation.

6) Intonational phrasing is syntactically free but semantically constrained. Kim (1999) assumes Selkirk (1984:291)'s Sense Unit Condition presented as the following;

- (i) Two constituents  $C_i$ ,  $C_j$  form a sense unit if (a) and (b) is true of the semantic interpretation of the sentence:  
 (a)  $C_i$  modifies  $C_j$  (a head)  
 (b)  $C_i$  is an argument of  $C_j$  (a head).

A more elaborated proposal is suggested in Anderson (2005, 2007). Adopting the notions of Selkirk (1995), he assumes that the reduced forms are really just “reduced” in the sense that they are the product of independently necessary purely phonological principles governing rapid speech. For instance, the location of the reduced auxiliary in the phonological structure is the following (Anderson 2005:58).

(16)

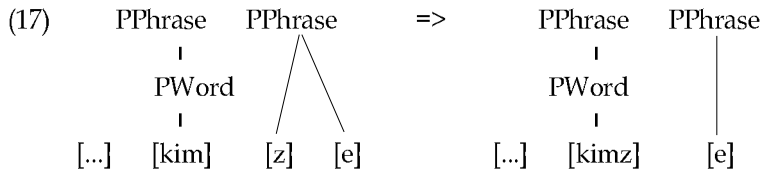


The reduced auxiliaries in English are lexical variants of full forms, consisting of a single consonant. They are "prosodically deficient" since a single consonant cannot constitute a syllable in English. They cannot be a foot, or a prosodic word (PWord) on its own. They go with the word on their left, even if they are syntactically more closely related to the material to their right.

He assumes that a phonological phrase is built to correspond to each syntactic maximal projection, including the VP's. When the reduced auxiliary is adjoined to the word on its left, it ceases to be a part of its original PPhrase, since it becomes a part of syllable that is in turn part of a PWord that is part of a different PPhrase. More elaborated process of (16) will be the following.

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Selkirk (1984) grouped the clitics in English into two classes; those produced by rules of syntactic restructuring, e.g., *to* contraction, *not* contraction, and the encliticization of *have* and personal pronouns (*I could've* and *I saw'em*) and those produced by rules of rhythmic restructuring, e.g., auxiliary contraction, and the encliticization of prepositions and articles.



The result of the process shows that the material corresponding to the VP is left with no phonetic content; unacceptable as a PF form, a violation of a fundamental principle of prosodic structure. The observation leads Anderson to propose the following constraint (Anderson 2005:59);

(18) \*<sub>[PPhrase φ]</sub>: Phonetically empty PPhrases are disallowed.

He argues that the constraint explains the well-formedness of the following constructions as well as that of (6)-(8).

(19) a. John is/\*'s, my dear, a bastard.

b. John, my dear, is/'s a bastard.

(Anderson 2005:61, cited from Bresnan 1978)

(20) Fred is/\*'s TOO going to fix it.

(Anderson 2005:62, cited from Pullum and Zwicky 1998)

We agree with Anderson in that it is really possible to reduce the limitations on the appearance of reduced forms of the auxiliaries to consequences of their phonological shape<sup>7)</sup>. An auxiliary that is prosodically deficient cannot appear

7) Kaisse (1985), however, points out that the reduced forms of the auxiliaries are lexically idiosyncratic, not derivable by general phonological rules.

i) While all of *would*, *could* and *should* have parallel forms of this type ([wəd], [kəd], [ʃəd]), only *would* has the idiosyncratic reduced form 'd based on the following observations.

ii) The two otherwise homophonous verbs *has* (one an auxiliary, and the other a main verb of possession) differ in that only the auxiliary has the reduced form 's, although both can appear without stress.

a. Fred's adopted a new car, and his sister Joanna has a cat, too. vs



in a prosodic structure where its independently motivated phonology will lead to a violation of the general principle (18). But we also believe that there should be some syntactic considerations indirectly implicated in the prosodic structure. The following chapter explores the possibility diachronically as well as synchronically.

### 3. Theoretical backgrounds

#### 3.1 Grammaticalization of subject

Language constantly takes structure and condenses it -via syntacticization - into syntactic structure. Syntactic structure in time erodes via processes of morphologization and lexicalization (Givón 1979;83).

(21) Diachronic process of syntacticization

discourse → syntax → morphology → morphophonemics → zero

Givón also argues that syntax is not a formal and autonomous level of structural organization in language, but a dependent, functionally motivated entity whose formal properties reflect - perhaps not completely, but nearly so - the properties of the explanatory parameters that motivate its rise. Based on the argument, he suggests the following four processes which he believes explain a number of substantive parameters of language (Givón 1979;82).

(22) a. diachronic: loose parataxis → tight syntax

b. ontogenetic: early pragmatic mode → later syntactic mode

c. pidgins-creoles: nongrammar → grammar

d. register level: unplanned-informal speech → planned-formal speech

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his sister Joanna's a cat, too.

iii) The verb *is* also has uses both as a main (copular) verb and as an auxiliary, but unlike *has*, both of these have reduced forms.

b. Fred's new cat is a Maine Coon; this cat here's that kind too, but Joanna's thinking of getting an Abyssinian.

One of the most acclaimed properties of subjects, that of grammatical agreement on the verb, is fundamentally a topic property and that it arises diachronically via the reanalysis of topic into subject and - simultaneously - of an anaphoric pronoun into a (normally verb-bound) agreement morpheme (Givón 1979;84).

- (23) a. My ol' man, **he** rides with the angels =>  
           TOPIC    PRO    V  
       b. My ol' man **he**-rides with the angels  
           SUBJECT  AG-V

The grammaticalization of topics into subjects does not mean that the language has lost the topic construction but only that it has gained grammatical agreement as an added morphological coding property for its grammatical subject<sup>8</sup>).

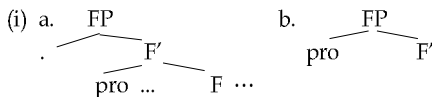
If the initial evolutionary stage of syntax is one where pragmatic relations are important (e.g. Bickerton 1990), the emergence of Merge will have the effect of incorporating the pragmatic material into a syntactic structure. This also occurs in grammaticalization-it is actually the start of the whole process.

Van Gelderen (2006) argues that the two principles Head Preference Principle (HPP)<sup>9</sup> and Late Merge Principle (LMP)<sup>10</sup> take lexical material that is

8) Thompson (1987:3) suggests animacy, pronominality, specificity, identifiability, proper nounhood, length and givenness for the basic variables of the subjecthood. He considers the subject in English to be the grammaticalization of discourse topics.

9) Head Preference Principle (HPP): Be a head, rather than a phrase. (van Gelderen 2006:6)

This means that a speaker will prefer to build structures such as (ia) rather than (ib). The FP stands for any functional category and the pro(noun) is merged in the head position in (ia), and in the specifier position in (ib). Other categories, such as adverb or preposition, work the same way:



10) Late Merge Principle (LMP): Merge as late as possible (van Gelderen 2006:10)

already part of the structure and change the position of it. There are also a number of changes where a new element comes from outside of the sentence, e.g. a special pronoun being incorporated into the CP to indicate subordination, and an emphatic topic pronoun becoming the subject (in Spec TP). This can be expressed by means of a principle that incorporates (innovative) topics and adverbials in the syntactic tree:

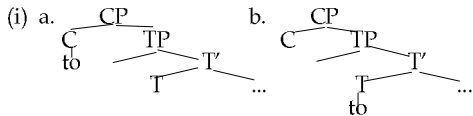
(24) Specifier Incorporation Principle (SIP)

When possible, be a specifier rather than an adjunct.

What this means is that speakers tend to use the Phrase Structure rules, rather than loosely adjoined structures. With (24) added, typical changes can therefore be seen as (25):

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Chomsky (2005:14) suggests that a real difference between the two kinds: external merge is relevant to the argument structure, whereas internal merge is relevant for scope and discourse phenomena. This indicates a crucial difference between the two kinds of operations that is expressed in LMP. LMP works most clearly in the case of heads. Thus, under Late Merge, the preferred structure would be (ia) with *to* base generated in a higher position (here C but nothing hinges on that), rather than (ib) with *to* in a lower position (here T) and moving to a higher position.



This is indeed what has happened in a number of changes. There is evidence that Modern English speakers prefer (ia) over (ib):

- (ii) a. It would be unrealistic to not expect to pay higher royalties (BNC-CSS 245).  
 b. It would be unrealistic not to show them to be human (BNC-CBF 14312).

Corpus data show this preference, e.g. the adverb probably splits the infinitive in 22.7% of the cases in the (mainly written) British National Corpus, but in an American spoken corpus (CSE) it does so a 100%. The prescriptive rule against split infinitives is thus alive and most obvious in British written varieties. Such external rules interfere with Economy.

- (25) a. Head > higher Head > 0 (=LMP)  
 b. Adjunct > Spec > Head > 0 (=SIP/LMP and HPP) Phrase >

The change in (25a) is the one from lower head (either lexical or grammatical) to higher head, via LMP. The change in (25b) shows that either an adjunct (via SIP) or a lower phrase (via LMP) can be reanalyzed as specifiers, after which the specifier is reanalyzed as head (via HPP).

### 3.2 Supporting evidences for the principles

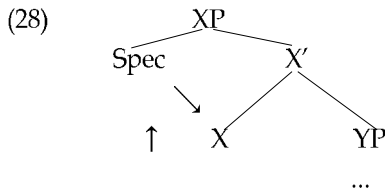
The introduction of the *wh*-relative into English provides an evidence for the principles mentioned above. In Old English, there are a number of relative strategies, but by Early Middle English, the complementizers *þat* and *þe* are typical. This is predicted under the HPP since those forms are heads (see van Gelderen 2004: 83-87). By later Middle English, this form is ‘competing with the *wh*-pronoun still present in present-day English (be it mainly in written English). The first instances of *who* occur in epistolary idioms that are very similar to those in French letters of the same period. For instance, in many of the collections of letters from the fifteenth century, the same English and French formulaic constructions occur, such as in (26) from Bekynton and (27) from the Paston Letters:

- (26) a laide de Dieu notre Seigneur, Qui vous douit bonne vie with the-help  
 of God our lord, who us gives good life and long  
 et longue.  
 ‘With the help of God, our Lord, who gives us a good and  
 long life.’ (Bekynton, from Ryden, p. 131)
- (27) be the grace of God, who haue yow in kepyng  
 ‘by the grace of God, who keeps you’ (Paston Letters 410)

The *wh*-pronoun is in the specifier position (since it can pied pipe a preposition and is inflected). This shows that, for creative reasons, speakers can start to use the specifier again.

To show that the three principles mentioned so far are responsible for

cyclical change, let's see what happens when we combine the effects of the HPP and the LMP, as in (28). The HPP will be responsible for the reanalysis, as a head, of the element in the specifier position; the LMP will ensure that new elements appear in the specifier position:



This scenario works perfectly for changes where a negative object such as Old English *nawiht* 'no creature' becomes a Spec and subsequently a head *not* of a NegP and for a locative adverb being reanalyzed as part of the higher ASP(ect)P. The SIP would enable the Specifier position to be filled from the outside.

So far, van Gelderen (2006) shows that the emergence of syntax could have followed the path that current grammaticalization also follows and one that children take as well. In particular, Merge brings with it, a set of relations and a set of Economy Principles, from which grammaticalization and language change follow. The economy principles she has been discussing are of the non absolute kind: if there is evidence for a pronoun to be both a phrase and a head, the child/adult will analyze it initially as head unless there is also evidence in the grammar (e.g. from coordination) that pronouns also function as full DPs.

### 3.3 Two approaches to incorporation

The notion of incorporation was introduced in Baker(1987) where he maintains that noun heads move in the syntax to take up their incorporated surface positions inside the verbs. One of the examples useful for our proposal is the following from (Huauhtla) Nahuatl.

- (29) a. Ø-neč-maka-Ø-k paʔtli  
 3SG-1SG-give-PST-SG medicine  
 'He gave me medicine.'
- b. Ø-neč-paʔ-maka-Ø-k  
 3SG-1SG-medicine-give-PST-SG  
 'He doctored me.'

(Anderson 2005:228, cited from Merlan 1976)

In (29a), the nominative argument as well as the dative argument is incorporated to the verb. In (29b), "medicine" is incorporated to the verb, producing the incorporated meaning of "doctor".

Adopting the notion of incorporation leads us to decide when the operation occurs. If we assume that the construction of units are words from material that gives the appearance of having been combined within syntax, it raises a serious problem for most versions of the Lexicalist Hypothesis. The syntactic analysis treats Noun Incorporation as a syntactic process by which an argument of the verb is actually displaced from its syntactic argument position and adjoins to the verb. One of the proponents of this proposal, Sadock (1980, 1986), argued that from the apparent need to form words in the syntax by moving a noun into the same word as a verb, the Lexicalist prohibition against syntactic manipulation of the internal form of words must be wrong<sup>11</sup>).

The alternative to these syntactic movement analyses is the lexical account of Sapir (1911), Mithun (1984), and Anderson (1992) (Anderson 2005:226). In this lexical analysis, the noun plus verb combinations, e.g., "noun incorporation" is built in the lexicon, not in the syntax. The formation of such [V[Nstem<sub>1</sub>] stem<sub>2</sub>] combinations, with [Nstem<sub>1</sub>] interpreted as a specific argument of [Vstem<sub>2</sub>], is surely within the scope of the type of regularity found in the lexicon. In this light, the noun incorporation is similar to the case of "synthetic compounds": duck hunting ([N[Nduck][N[vhunt]ing]]) is a compound of [Nduck] and [vhunt].

We argue that noun incorporation is a syntactic process in which a noun is

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11) Baker (1995) also argues that noun heads move in the syntax to take up their incorporated surface positions inside the verbs. His theory is based on the general notion of Head Movement in syntax.

incorporated to an (auxiliary) verb by Merge. The noun comes into syntax in [Spec,CP] as described in (28). As argued above (Givón 1979), the emergence of Merge will have the effect of incorporating the pragmatic material into a syntactic structure. We maintain that the cliticization of the subject materials in English as well as in Romance languages is the result of the grammaticalization of topics into subjects. When a full DP with [F] loses its informational power and becomes a weak or reduced form, it can be cliticized to the verb. This view, however, presupposes the assumption of C-to-T feature inheritance (Chomsky 2004, 2005). We will discuss the theory in detail along with our arguments in the next chapter.

## 4. Proposal: Specifier to head incorporation

### 4.1 Subject [F] incorporation to auxiliary verb

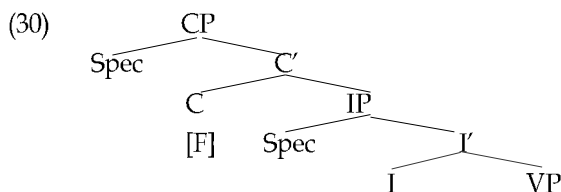
The cliticization in the examples (1) has been considered as auxiliary reduction, which means that auxiliaries are reduced and attached to their (preceding) hosts. But we believe the theory suggested in chapter 2 explains the phenomena more properly. We claim again that the cliticization in the examples (1) is not the result of auxiliary reduction but the subject [F] incorporation into the auxiliary verb.

We suggest that C-to-T Feature Inheritance provides a more elaborated theory for (28) to show the detailed process of subject incorporation. Chomsky (2004, 2005) hypothesizes that T inherits its  $\Phi$ -features from C<sup>12</sup>). All features associated with T are not the property of T but rather belong to the phase head C. The Goal head T inherits the tense features, agree features and edge features including the EPP feature of the probing head C when it is in the c-command domain of C. So T is just a receiver of the phase head features of C.

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12) "T functions in the Case-agreement system only if it is selected by C, in which case, it is also complete. Further, in just this case T has the semantic properties of true Tense. These cannot be added by the  $\Phi$ -features, which are uninterpretable; they must therefore be added by C. Hence T enters into feature-checking only in the C-T configuration..." (Chomsky 2004:13)

We believe that if C has the feature like [ $\pm$ Focus] ([F] from now on) suggested in Rizzi (1997) as well as those ordinary features, the [F] feature can be inherited to T, too<sup>13</sup>).



If the feature [F] is inherited to T, the Probe-Goal relationship between the subject with the feature [F] and the head I with  $u[F]$  is established. And then the incorporation is an option. The general syntactic conditions such as displacement and deletion seem to be the important factors to decide the PF form of the Sub+Aux structure. If these conditions operate during the derivation of the structure, how can we assert that cliticization is a PF phenomenon? We have to find a way to show that syntactic cliticization affects the final PF form of the material.

Following Chomsky (2001) and Halle & Marantz (1993), we assume that lexical items are selected as feature bundles. When the features are spelled-out at syntax-phonology interface, the phonological form is determined. As argued above, cliticization occurs when the subject with feature [F] is merged with H [Aux]. The merger itself, however, doesn't guarantee the cliticization at PF. The operation Transfer delivers the syntactic information of cliticization to the point of spell-out. The phonological mechanism processes the information, and optionally realizes it. The decision involves phonological and prosodic constraints suggested in (17) and (18). Now we have to clarify the properties of the feature [F] that makes cliticization possible.

The first phenomena we observe is that auxiliary reduction do not always occur when the subject is a full DP. Kim (1999) argues that while the reduction

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13) As an anonymous reviewer points out, the possibility of the feature Topic/Focus inheritance to T or a is suggested in Miyagawa (2010). Yang (2011), however, argues that the operation of canonical feature inheritance should be highly restricted: the application is possible for unmarked IMs or optional movements with "checkable" features.



of *is* and *has* takes place regardless of the nature of the preceding word, the reduction of *will*, *have*, *am* and *are* is restricted. Radford (1997) shows that contraction is not possible when the host DP is a full DP.

- (31) a. \*John and you've got a lot in common.  
 b. \*The Masai've been driven out of their homelands.  
 c. \*Di'd like to be an ambassador for Britain.

(Kim 1999;437, cited from Radford 1997)

Our proposal should predict the reason for the impossibility in (17); the host DPs do not have topichood. But the following examples might show that's not a full story.

- (32) a. My car'll be outside<sup>14</sup>.  
 b. Sue'll visit us soon.

If (32) is allowed, that's because the DPs have one of the characteristics of topichood; shared knowledge among the participants of the conversation.

The problem of this argument is that the full DPs are phrases rather than heads. In chapter 2, some evidences are provided to show that the principles of LMP and HPP ensure the incorporation of subject to auxiliary. The principle HPP predicts that a pronoun is merged in the head position rather than in the

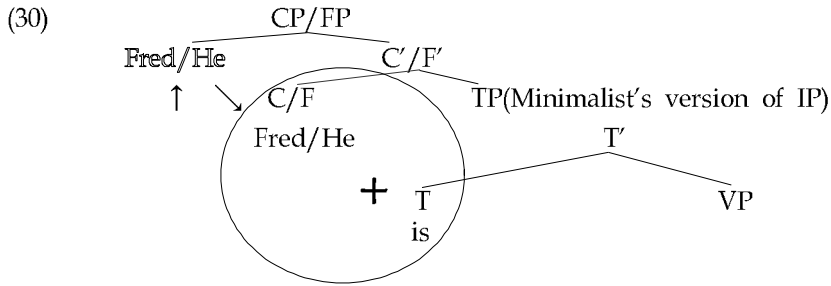
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14) The following is exemplified as the case in which auxiliary reduction does not apply. (Kim 1999; 437, ft. 5)

- (i) a. \*Sue'll  
 b. \*The car'll

In some school grammar books, the contraction of *will* is described as an optional operation between spoken/written expressions. The optionality reflects the deictic distance of the DP when uttered in a conversation. *Sue'll* or *the car* in (i) is ungrammatical/(phonologically) unacceptable not because *Sue* and *the car* are full DPs but because they are not topic/given information. When the same DPs are topic/given information they are procliticized to the auxiliary as in (32). A further research based on the corpus analysis is needed to consolidate our proposal.

specifier position<sup>15</sup>). We suggest that the structure (30) combined with (28) describe the syntactic process of procliticization of the subject material to the auxiliary verb of the sentence: "Fred's/he's gone."



The principle SIP ensures the merger of the subject "Fred/He" in [Spec,CP] position<sup>16</sup>). The subject material becomes a head by the principle HPP<sup>17</sup>). Along with C-to-T inheritance, incorporation or head-to-head movement occurs between C/F and T. Then the procliticization of the subject material "Fred/He" to the auxiliary verb "is" occurs.

15) Baker (1987)'s theory of head-movement explicated in 2.3 also supports the articulated-INFL account of clause structure. (Anderson 2005:229)

16) Adopting the principle SIP as in (30) might cause a serious problem for the usual bottom-to-top hypothesis of building a structure plus the theory of thematic roles. If the thematic roles only concern the semantic interpretation at LF as assumed in the Minimalist Program (Chomsky 1993, 1995), the operation Merge need not involve the VP internal subject hypothesis. Employing the notion of internal merge (Chomsky 2004), the problem of thematic interpretation may be solved with the notion of chain that would be characterized by all the positions into which a given element has been merged. A more radical view is worth considering. If we don't assume derivations in  $C_{HL}$ , the problem of head-to-head movement will be eliminated. Hypothetically, merge of subject and verb occurs simultaneously with other mergers. The final concatenation for the representation depends on cartography suggested in Rizzi (1997), Cinque (1999), among others. See Brody (2000, 2002), Starke (2001), Surányi (2006), Boeckx (2008), Im (2007, 2008, 2012) for the possibility of eliminating the notion of projection and movement.

17) We cautiously suggest that when a full DP such as *Fred* loses its informational power, i.e., when it bears a given information, it can have a pronominal property, becoming a pro-like category.

## 4.2 Some implications

In addition to (23b), some examples of optional procliticization of the subject pronouns to the verb are found in Dixon (2007:588)<sup>18</sup>.

- (31) a. *she* /ʃi:/ → /ʃi=/ as in /ʃi=wént/ *she went*  
 b. *he* /hi:/ → /(h)i=/ as in /(h)i=kráid/ *he cried*  
 c. *we* /wi:/ → /wi=/ as in /wi=lá:ft/ *we laughed*  
 d. *it* /ít/ → /it=/ as in /it=réind/ *it rained*  
 e. *you* /jú:/ → /ju=/ or /jə=/ as in /if jə=w nt/ *if you want*

Some more examples can be found in AAVE. One of the distinguished features of African American Vernacular English (AAVE) or Black English is pronominal apposition (PrA), i.e., repetition of noun subject with pronoun, repeating the subject for emphasis as in (32)<sup>19</sup>. We argue that the pronouns in (32) is procliticized as in (23b).

- (32) a. My father, he's poor.  
 b. My mother, she's died.

If Givón (1979)'s proposal on the processes of language-internal development in (21) and (22) is on the right track, pidgins and creoles can be the evidence for the property of ontogenetic process: early pragmatic mode → later syntactic mode. Since a pidgin<sup>20</sup>) exhibits an enormous amount of internal

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18) Among the subject pronouns, I /ái/, and they /ðéi/ do not reduce to be clitics.

19) As defined by many linguists, AAVE is a hybrid language, containing elements of Euro-American English ("standard English") and elements of West African Languages (surviving Africanisms from Yoruba, Ibo, Ewe, etc.). PrA is common in Yoruba.

(i) Eya me, ot cu.  
 'My mother, she has died.'

20) A pidgin is a simplified language that develops as a means of communication between two or more groups that do not have a language in common, while a creole is a stable natural language developed from the mixing of parent languages; creoles differ from pidgins in that they have been nativized by children as their primary language, with the result that they have features of natural languages that are normally missing from

variation and inconsistency, both within the output of the same speaker as well as across the speech community, it is an extreme case of the pragmatic mode of communication. Pidgin mode has no consistent grammatical word-order and little or no use of grammatical morphology. The rate of delivery is slow and halting, with many pauses. Verbal clauses are small, normally exhibiting a one-to-one ratio of nouns to verbs. Although identifying subject and predicate is difficult, identifying the topic and comment is easier. Some examples relevant to our research are as follows<sup>21</sup>):

- (33) a. this man ninety-two ...  
 b. me Hawaii come ...  
       (Givón 1979:100, cited from Bickerton (1975))  
 c. Fantom, yu pren tru bilong mi. Inap yu ken helpim mi nau?  
    'Phantom, you are a true friend of mine. Are you able to help me  
    now?'  
       (<http://logos.uoregon.edu/explore/socioling/pidgin.html>)

While (33a) and (33b) show the typical topic-comment constructions, (33c) is topic + pronominal apposition construction as in (23b) and (32). We believe that the construction (33c) is on the way to the procliticization of the subject followed by the grammaticalization of the topic.

## 5. Conclusion

The old view that the function words can be weakened and cliticized to the lexical words should be reconsidered. The syntactic theories developed recently employ the syntactic notion of "head" with which other peripheral satellites such as specifiers and adjuncts are involved. In this respect, so-called auxiliary reduction in English can be analyzed as the procliticization of the subject material to the [H, TP] that inherits the feature F[±Focus] from C, not the

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pidgins. (cited from Wikipedia)

21) The first two lines are from a Japanese Pidgin-English speaker in Hawaii and the third one is taken from a famous comic strip in Papua New Guinea.

encliticization of the auxiliary to the subject. Based on the economic principles of van Gelderen (2006)'s, HPP, LMP and SIP, we show that the merge of the subject material with the feature F is possible without resorting to VP-internal subject hypothesis. We argue that the information that the merged subject with the feature F can be procliticized is transferred to PF interface, where phonological reduction occurs following the phonological rules suggested in Anderson (2005).

## References

- Anderson, S. R. (1992). *A-morphous morphology*. Cambridge: Cambridge University Press.
- Anderson, S. R. (2005). *Aspects of theory of clitics*. Oxford: Oxford University Press.
- Anderson, S. R. (2007/2008). English reduced auxiliaries really are simple clitics. Paper presented at the Israeli Association for Theoretical Linguistics meeting. Also in *Lingue E Linguaggio*, VII(1), 1-18.
- Baker, C. L. (1971). Stress level and auxiliary behavior in English. *Linguistic Inquiry*, 2, 167-181.
- Baker, M. (1987). *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Bickerton, D. (1990). *Language and species*. Chicago: University of Chicago Press.
- Boeckx, C. (2008). *Bare syntax*. Oxford: Oxford University Press.
- Bresnan, J. (1978). *Contraction and the transformational cycle*. Bloomington, IN: Indiana University Linguistic Club.
- Brody, M. (2000). Mirror theory: Syntactic representation in perfect syntax. *Linguistic Inquiry*, 31, 29-56.
- Brody, M. (2002). On the status of derivations and representations. In S. D. Epstein & T. D. Seeley (Eds.), *Derivation and explanation in the Minimalist Program* (pp. 19-41). Oxford: Blackwell.
- Chomsky, N. (2001). Beyond explanatory adequacy. *MIT Occasional Papers in Linguistics*, 20 (pp. 1-54). Cambridge, MA: MITWPL.
- Chomsky, N. (2004). Beyond explanatory adequacy. In A. Belletti (Ed.),

- Structures and beyond* (pp. 104-131). Oxford: Oxford University Press.
- Chomsky, N. (2005). On phases. Unpublished manuscript, MIT.
- Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press.
- Dixon, R. M. W. (2007). Clitics in English. *English Studies*, 88(5), 574-600.
- Gelderen, E. Van. (2004). *Grammaticalization as economy*. Amsterdam: John Benjamins.
- Gelderen, E. Van. (2006). Economy of merge and grammaticalization: Two steps in the evolution of language. Unpublished manuscript, Arizona State University.
- Givón, T. (1979). From discourse to syntax. *Syntax and Semantics*, 12, 81-112.
- Halle, M., & Marantz, A. (1993). Distributed morphology and the pieces of inflection. In K. Hale & S. J. Keyser (Eds.), *The view from building 20* (pp. 111-176). Cambridge, MA: MIT Press.
- Im, C. G. (2007). Move is occur: The first step to eliminate movement. *The Linguistic Association of Korea Journal*, 15(4), 197-221.
- Im, C. G. (2010). Survival strategies for tough constructions. *Studies in Modern Grammar*, 60, 87-112.
- Im, C. G. (2012). Multiple subject constructions in Korean: A purely derivational 3D merge approach. *Linguistic Research*, 29(1), 197-215.
- Kaisse, E. M. (1985). *Connected speech*. New York: Academic Press.
- Kim, Y-S. (1999). English cliticization and intonational phrase. *Studies in Generative Grammar*, 9(2), 429-465.
- Marantz, A. (1997). No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *Proceedings of the 21st Annual Penn Linguistics Colloquium: Penn Working Papers in Linguistics*, 4(2), 201-225.
- Merlan, F. (1976). Noun incorporation and discourse reference in modern Nahuatl. *International Journal of American Linguistics*, 42, 177-191.
- Mithun, M. (1984). The evolution of noun incorporation. *Language*, 60, 847-894.
- Miyagawa, S. (2010). *Why agree? Why move? Unifying agreement-based and discourse configurational languages* (Linguistic Inquiry Monograph 54). Cambridge, MA: MIT Press.
- Park, N-S. (1989). Weight as a linguistic variable with reference to English. *Language Research*, 28(2), 803-894.

- Radford, A. (1988). *Transformational grammar*. Cambridge: Cambridge University Press.
- Radford, A. (1997). *Syntactic theory and the structure of English: A minimal approach*. Cambridge: Cambridge University Press.
- Rizzi, L. (1997). The fine structure of the left periphery. In L. Haegeman (Ed.), *Elements of grammar* (pp. 281-337). Dordrecht: Kluwer.
- Roméro, C. (2005). *The Syntactic evolution of modal verbs in the history of English*, Unpublished doctoral dissertation, Université Paris III - La Sorbonne Nouvelle.
- Sadock, J. (1980). Noun incorporation in Greenlandic: A case of syntactic word formation. *Language*, 56, 300-319.
- Sadock, J. (1986). Some notes on noun incorporation. *Language*, 62, 19-31.
- Sapir, E. (1911). The problem of noun incorporation in American languages. *American Anthropologist*, 13, 250-282.
- Selkirk, E. O. (1984). *Phonology and syntax: The relation between sound and structure*. Cambridge, MA: MIT Press.
- Selkirk, E. O. (1995). The prosodic structure of function words. In J. Beckman, L. W. Dickey, & S. Urbanczyk (Eds.), *Papers in optimality theory: Vol. 18 of UMass occasional papers in linguistics*(pp. 197-213). Amherst: UMass.
- Starke, M. (2001). On the inexistence of specifiers and the nature of heads. Unpublished manuscript, CASTL.
- Surányi, B. (2006). Towards a purely derivational approach to syntax. *The Even Yearbook* 7 (pp. 1-25). Department of English Linguistics, Eötvös Loránd University, Budapest.
- Thompson, S. (1987). Information flow and 'dative shift' in English discourse. Unpublished manuscript, UC Santa Barbara.
- Zwicky, A. M. (1970). Auxiliary reduction in English. *Linguistic Inquiry*, 1(3), 323-336.
- Zwicky, A. M. (1977). *On clitics*. Bloomington: Indiana University Linguistics Club.
- Zwicky, A. M., & Pullum, G. K. (1983). Cliticization vs. inflection: English *n't*. *Language*, 59(3), 502-513.
- Yang, D. H. (2011). On the notion of feature inheritance. *Studies in Generative Grammar*, 21(1), 141-154.

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