

# **A Relevance Theoretic Approach to Process of Grammaticalization: *be going to* with Conceptual Information<sup>1</sup>**

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Cho, E Jin. 2002. A Relevance Theoretic Approach to Process of Grammaticalization: *be going to* with Conceptual Information. *SNU Working Papers in English Language and Linguistics* 1, 190-203. In the relevance theoretic framework, the process of grammaticalization has been defined as the steps of encoding procedural information (weak grammaticalization) and of removing conceptual information (strong grammaticalization). This paper proposes that there should be an intermediate stage between fully lexical and fully grammatical expressions, because the points of encoding procedural information on one item and those of removing conceptual information from it are not always the same. *Be going to* provides an example of the grammaticalized items encoding not only procedural information (tense marking) but conceptual information (physical or mental processes). In order to show that it cannot be extracted as an operator from the meaning of a sentence, I define an operator as an item which has no conceptual information and argue that this approach solves Haegeman's problem (1989) on the synonymy of *be going to* and *will*. (Seoul National University)

**Keywords:** grammaticalization, information type, operator, *be going to*

## **1. The process of grammaticalization**

Grammaticalization is a process whereby an autonomous word becomes a grammatical element (Warner, 1993). The present paper is concerned with problems of previous studies about the process of grammaticalization, related to the relationship between distinction of grammatical/lexical words (or expressions) and of procedural/conceptual information in the relevance theory framework.

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### 1.1. Conceptual and procedural information in relevance theory

Wilson and Sperber(1993) define two kinds of information type: conceptual information and procedural information. Conceptual information is encoded for 'information about the representations to be manipulated', while procedural information is for 'information about how to manipulate them(conceptual representations)'. That is, the former provides the input, or stimuli, and the latter provides constraints on conceptual representations. Nicolle(1998) suggests two assumptions:

- (1) there isn't the intermediate type information between them, and
- (2) a single expression can encode both information  
(Jakendoff, 1983; Nicolle, 1998).

I accept these two assumptions as bases for my investigation of process of grammaticalization.

### 1.2. Previous studies

#### 1.2.1. Gradualness of grammaticalization

It is generally accepted that grammaticalization is gradual process(Bybee *et al.*,1994; Nicolle 1998). The shift from lexical to grammatical expression occurs on a continuum which has fully grammatical and fully lexical expressions on each end(Figure 1). Bybee *et al.*(1994) assumes that lexical and grammatical encoding correspond to conceptual and procedural encoding. However, their assumption is incompatible with the first assumption (1) of the information type that there is no intermediate information type between conceptual and procedural information.

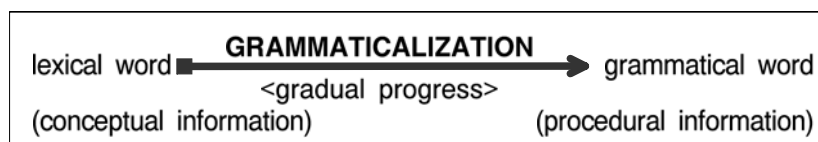


Figure 1. Process of grammaticalization from Bybee *et al.*(1994)

### 1.2.2. Instantaneousness of grammaticalization

Givon(1991), on the contrary, argues from the evidence of verb serialization that grammaticalization is cognitively not a gradual process, but rather an instantaneous one. He claims that the minute a lexical item is used in a frame that intends it as a grammatical marker is grammaticalization, *i.e.* there is no intermediate stage between grammatical and lexical encoding(Figure 2). We could infer from Givon that grammatical expression can encode procedural information only and lexical expression can encode conceptual information only in the relevance framework. In that case, we can explain the fully grammatical words such as future marker *will*, and discourse marker *well* in (3)(Jucker, 1993), and the fully lexical words like any content words such as *wall paper*, *love*, etc(Traugott & Heine, 1991).

(3) *Well*, what are we waiting for?

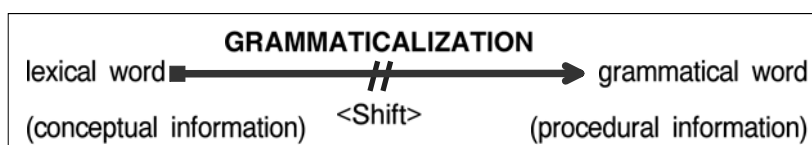


Figure 2. Process of grammaticalization from Givon(1991)

That model of the process of grammaticalization is also problematic, though it can overcome the incompatibility of Bybee *et al.* above, for it cannot explain why the expressions which are classified as grammatical markers(henceforth, grams) according to the dichotomy above, such as *be going to* as a future marker and *get*-passive construction as a voice marker have different meaning from ones of future marker *will*, and *be*-passive construction in (4)(Haegeman, 1989) and (5)(Hundt, 2001):

- (4) a. I will/shall leave next week.  
       b. I am going to leave next week.  
 (5) a. The fax wasn't sent.  
       b. The fax didn't get sent.

In addition, all exponents of procedural encoding are not grams: discourse connectives such as *so*, and *after all* have procedural

information(Blackmore, 1988), but are not grammatical markers(Nicolle, 1998). *So* and *after all* constrain the processing of fully propositional conceptual representations with respect to the implicatures which a speaker intends an addressee to compute, whereas grams, such as modality, tense, aspect, and case markers, constrain the construction or identification of propositional conceptual representation.

### 1.2.3. Grammaticalization as an addition of procedural information

Nicolle(1998) supported Givon's definition of grammaticalization, with the concept of semantic retention. He claims that if an expression can encode both conceptual and procedural information, then grammaticalization (the development of a procedural semantics) need not result in the loss of lexical(conceptual) semantic features. Consequently, he regards a point of grammaticalization as the time when an expression come to encode procedural information in addition to its conceptual semantic content(Figure 3.).

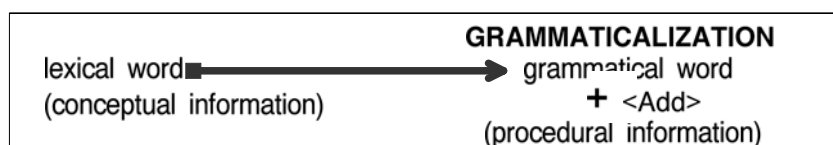


Figure 3. Process of grammaticalization from Nicolle(1998).

The stages involved in the development of *be going to* in Nicolle(1998) would be as follows:

- (6) i. Lexical: physical progression  
(Generalization results in ...)
- ii. Lexical: general progression  
(Inference results in ...)
- iii. Grammatical: future time reference

According to (6), the *be going to* construction encodes both procedural information concerning future time reference and conceptual information concerning general progression. Retaining the meaning from conceptual information in *be going to* structure causes the anomaly of the conversation in (7a).

- (7) [Immediately following ringing of telephone] (Nicolle's (31))
- a. ?I'm going to get it.
  - b. I'll get it.

However, the process cannot apply to the case of discourse marker *well* in (3), which is grammatical expression encoding procedural information only (Jucker, 1993). It is in the stage of grammaticalization where it doesn't need to retain its original conceptual information for its contemporary meaning. It can be treated as procedural information with grammatical sense such as tense (past, non-past), aspect (progressive), modality, and mood (interrogative, imperative, etc.).

According to Nicolle (1998), the stages involved in the development of *will* are like following:

- (8) i. Lexical: desire used with first person subjects  
(Metaphorical extension results in...)
- ii. Lexical: intention with first person subjects  
(Inference results in...)
- iii. Grammatical: prediction about future events with first person subjects.  
(Generalization results in...)
- iv. Grammatical: prediction about future events (any subject).  
(Further generalization results in...)
- v. Grammatical: prediction in general

He assumes that grammaticalized expression retains its lexical meaning. Then, the grammaticalized *will* should have its lexical meaning like desire and intention. If the grammaticalized *will* came from its use with first person subject, we should prove no occurrence of ungrammaticalized *will* with its lexical meaning in Present day English. As a result, this model cannot explain the case of pure future marker *will*, as well as discourse marker *well*, which is grammatical expression encoding procedural information only.

Thus it is hard to say that procedural encoding means the stage of grammaticalization itself, and, therefore, the distinction is needed between these grammatical expressions with procedural information only and the grammatical expressions with both conceptual and procedural information like *be going to*.

### 1.3. The existence of the intermediate stage of grammaticalization

I assume that there are six possible categories of expressions by sense, *i.e.* its function - grammatical or lexical - and information types - procedural, conceptual or both., as laid in table 1:

encoding \ sense information type	Grammatical	Lexical
Procedural	A	F
Conceptual & procedural	B	C
Conceptual	E	D

Table 1. Categories of expressions by sense and information encoding

The expression with lexical sense encoding only conceptual information(E) and with grammatical sense encoding only procedural information(F) seem unlikely. We can infer from this unlikeliness of expression belonging to categories of E and F, that there is certain connection between grammatical sense and procedural information encoding, and also between lexical sense and conceptual information encoding. I classify the expressions referred in the previous studies as following:

- (9) A. expression with grammatical sense encoding procedural information (*e.g.* most modal, tense, aspect markers, case markers, and discourse marker *well*)
- B. expression with grammatical sense encoding procedural and conceptual information (*e.g.* *be going to* construction, and *get-passive* construction)
- C. expression with lexical sense encoding procedural information and conceptual information (*e.g.* discourse connectives *so*, *after all*, and *but*)
- D. expression with lexical sense encoding conceptual information (*e.g.* content words)

The regard for the models of the sequence of grammaticalization and its correspondence to information types by Bybee *et al.*(1994), Givon(1991) and Nicolle(1998) should be considered again here. They assume that encoding procedural information is a necessary and sufficient condition for grammatical sense of expression. Bybee *et al.* and Givon also assumed that conceptual encoding is a necessary and sufficient condition for lexical sense of expression. I revise their assumption that encoding procedural information is a necessary condition for grammatical sense of expression but not a sufficient condition. In other words, all expression of grammatical sense encodes procedural information, but all expression encoding procedural information doesn't necessarily have grammatical sense. Also, encoding conceptual information is a necessary condition for lexical sense of expression but not a sufficient condition.<sup>2</sup>

Thus, I claim the full process of grammaticalization as following:

$$(10) D \rightarrow B / C \rightarrow A$$

At the time of grammaticalization, lexical items don't have to step entirely these four stages of semantic change. They have possibility to change the meaning in the several ways like (11), whereas they cannot change their meaning in the reversed order like (12) because of the unidirectionality of grammaticalization.

$$(11) a. D \rightarrow B / C \rightarrow A$$

$$b. D \rightarrow B / C$$

$$c. D \rightarrow A$$

$$(12) * D \rightarrow A \rightarrow B / C$$

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2 Traugott and Heine(1991, introduction) calls for the licensing conditions of grammaticalization:

a. Semantic context: The degree of grammaticalization depends on whether its semantic content or the inferences one can draw from it serve the purposes of creating texts, that is, of producing discourse.

b. Perceptual salience: Although the expected end of a process of grammaticalization is usually zero, in fact there are "graveyards" that appear to block or at least delay the process of total loss.

c. Frequency: The form has to be used frequently.

We can assume that the stage B can be distinguished from the stage C in (9). However, The distinction between B and C isn't handled in the present paper.

As a result, the new model of the process of grammaticalization is suggested in Figure 4. There is an intermediate stage between fully lexical expression encoding conceptual information only and fully grammatical expression encoding procedural information only. In the intermediate stage, an item encode both conceptual and procedural information, no matter what it is lexical or grammatical expression.

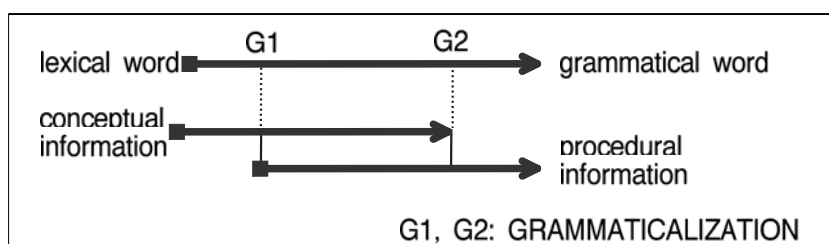


Figure 4. The revised process of grammaticalization

I claim that there are two points of grammaticalization. The process of grammaticalization on G1 in figure 4 is the same as the point of grammaticalization of *Nicolle* (figure 3). At the point of G1, lexical expression encoding conceptual information only (D in (9)) encodes procedural information in addition (G1: weak grammaticalization). At the point of G2, conceptual information encoded by weakly grammaticalized expression is removed to be grammatical expression encoding procedural information only (A in (9)) (G2: strong grammaticalization).

The distinction between one of the stage of weak grammaticalization, B, and the final stage of strong grammaticalization, A is needed for investigation and explanation of *be going to* against *will* in the following section.

## 2. *be going to* with conceptual information

*Be going to* construction as tense marker and *get*-passive construction as voice marker are put in the category B in (9), while their counterparts such as future tense marker *will* and passive voice marker *be* are in the category A in (9). Thus, the existence of conceptual information as well as procedural information in B results in the semantic difference.



## 2.1. Operator with no conceptual information

Klinge(1993) considers *be going to* to encode only conceptual information, and *will* to encode only procedural information on the contrary. He explained the difference between *will* and *be going to*, by using the following schema in (13):

(13) OPERATORS[PROPOSITIONAL CONTENT]

According to Klinge, the 'propositional content'(henceforth, PC) encodes call conceptual information capable of representing the concepts that go into a situation type; the 'operator' encodes procedural information specifying how the conceptual information carried by the propositional content is to be processed. The procedural information conveyed by operators makes little sense without the propositional content and the operator has the propositional content in its scope.<sup>3</sup>

It seems to make sense that *will* is an operator because it encodes procedural meaning:

(14) They will have arrived two hours ago. (Klinge's (74))

(15) WILL[PREVIOUS[They arrive two hours ago]

Because he considers *be going to* to encode conceptual information, *be going to* is treated not to be an operator in (17) nor to embed operators in its propositional content in (18):

(16) \*They are going to have arrived two hours ago(Klinge's (76))

(17) NON-PAST[\*BE GOING TO[PREVIOUS[They arrive two hours ago]]]

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<sup>3</sup> Consider the following sentences from Klinge(1993, (10)-(16)):

- a. John buys Mary's ticket.
- b. John bought Mary's ticket.
- c. John has bought Mary's ticket.
- d. Did John buy Mary's ticket?
- e. Buy Mary's ticket, John.
- f. John will buy Mary's ticket.
- g. John would buy Mary's ticket.

We can illustrate the propositional content of these sentences as follows(Klinge's (18)):

- h. OPERATORS[John buy Mary's ticket]

- (18) NON-PAST[They be going to \*(PREVIOUS[They arrive two hours ago])]

His treatment for *will* and *be going to* in the operator and the propositional content is explained as the following:

- (19) a. He will leave                      WILL[NON-PAST[He leave]]  
       b. He is going to leave            NON-PAST[He be going to leave]

It is strange, however, that *be going to* cannot take a role of an operator in sentences. As we considered in the previous section, and in the previous studies from Haegeman(1989) and Leech(1987), *be going to* encodes procedural information as well, and, therefore, we ought to explain why *be going to* cannot be an operator.

It is the reason that *be going to* also encodes conceptual information. I revise the licensing condition of the operator like (20).

- (20) OPERATORS cannot encode conceptual information.

In other words, conceptual information should be encoded in the propositional content. It shows that *be going to* is always a part of propositional content, and under the scope of any operators.

## 2.2. *be going to* from weak grammaticalization: solving problems of Haegeman(1989)

Haegeman(1989) gives very different view from Klinge that *be going to* and *will* as processing constraints in the same relevance theoretic framework as Klinge. Although she explains the procedural information encoding of *be going to* well, there are lots of sentences which cannot be solved in her study, because she distinguished *be going to* and *will* into utterance processed by context - present or future.

According to Haegeman, *be going to* occurs with the present time conditionals only, assuming that the antecedent of a conditional sentence serves as a context setter:

- (21) a. ?You're going to be fired if you ever go near his computer.

- b. You'll be fired if you ever go near his computer.
  - c. You're going to be fired if you go on like that.
- (Haegeman's (35))

If (21) is acceptable because *be going to* assume a present time context, then (22) ought to be unacceptable because *will* indicates that the relevance context is future (Nicolle, 1997):

- (22) You will be fired if you go on like this. (Nicolle's (39))

However, (22) is perfectly acceptable. Consequently, I claim that the difference between *be going to* and *will* is not a pragmatical one, but a semantic one, *i.e.* it depends on their internal encoding information, rather on the context.

There can be serious problems when we make the past forms for (19):

- (19') a. He would leave.  
b. He was going to leave.

While (19a) and (19b) are the truth-conditional equivalence, (19'a) and (19'b) have different truth conditions: in (19'a) he wasn't here, having already left; in (19'b), he was here, not leaving and preparing to leave. This problem of the truth-conditional equivalence of *be going to* and *will* was called by Haegeman:

- (23) a. The Queen would arrive three hours later.  
b. The Queen was going to arrive three hours later.
- (Haegeman's (45))

Saying that in the event that the Queen did not arrive, (23a) appears to be false, but (23b) is probably true, Haegeman offers no complete analysis. The non-past sentences of (23) have equivalent truth conditions like (24), while their operator structures are different:

- (24) a. The Queen will arrive three hours later.  
b. The Queen is going to arrive three hours later.
- (24') a. WILL[the Queen arrive three hours later]

b. NON-PAST[the Queen be going to arrive three hours later]

In (24'a), the PC is [the Queen arrive three hours later]. Thus, it can be paraphrased like:

(25) The PC, [the Queen arrive three hours later], turns out to be description of a potential world situation.<sup>4</sup>

In (24'b), the PC is [the Queen be going to arrive three hours later]. In its conceptual meaning, *be going to* contain its information of "on the way to." In the case of present tense in (24), therefore, the truth condition of these two sentences seems the same, in spite of the difference of their PC.

Then, the operator structures of (23) can be described as below:

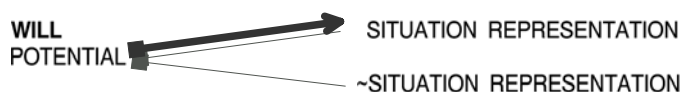
(20') a. PAST[WILL[the Queen arrive three hours later]]  
b. PAST[the Queen be going to arrive three hours later]

At the reference time of PAST tense, the PC of (23'b) seems to guarantee the truth condition of (23'b) that the Queen did not arrive, because the Queen was on the way(or preparing to arrive three hours later at the point of the past time reference. On the other hand, the paraphrase of (23'a) is suggested like the following:

(26) The PC, [the Queen arrive three hours later], turned out to be description of a potential world situation.

In (23a), the PC is one of the potential situations at the point of past reference time from the view of utterance time of speaker. Therefore, the PC in (23'a) cannot guarantee the truth condition of (23a), rather the operator *will* in the scope of the past tense operator sets the truth

<sup>4</sup> Klinge(1993) describes the meaning of *will* as that the PC, or the situation representation turns out to be a true description of a world situation, as illustrated like:



condition.

### 3. Conclusion

We can define the process of grammaticalization as the steps of encoding procedural information(weak grammaticalization) and removing conceptual information(strong grammaticalization). There seems to be difference of degrees to which each item can be reached by the licensing conditions of grammaticalization, as I don't make complete analysis here. There is an intermediate stage between fully lexical expression encoding conceptual information only and fully grammatical expression encoding procedural information only. In the intermediate stage, an item encodes both conceptual and procedural information, no matter what it is lexical or grammatical expression.

The existence of the intermediate stage in grammaticalization explains the difference between future marking *be going to* and *will* in the sentence structure. According to that, Haegeman(1989)'s problematic sentences related to the meaning of *be going to* and *will* can be solved on the level of semantics.

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