

Grammar and the Inner World: Thinking about the Psychological Reality of Grammar

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Although linguistic theories such as generative grammar have affected other fields of study, the psychological reality of the grammatical descriptions has been questioned so far (Nakai, 1999). In Sato (2013), the psychological reality of the grammatical items whose abstraction level is much higher such as sentence structures: S(subject) V(verb) O(object) is discussed, and the conclusion is that details of grammar such as usages of words can be derived from a very simple starting rule. In this paper, several problems of specific grammatical items will be discussed in order to think about the psychological reality of grammar. All the items which are discussed in this paper are affected by the state of human mind. The state of IW, or human cognition, is to be considered so as to complete the description of grammar of language. Each specific grammatical item which is discussed in this paper must be taken a good example for thinking about the problem of the psychological reality of grammar concretely based on actual language use.

Key Words: grammar, the Inner World, the brain, psychology, linguistics

Introduction

Although linguistic theories such as generative grammar have affected other fields of study, the psychological reality of the grammatical descriptions has been questioned so far (Nakai, 1999). In Sato (2013), the psychological reality of the grammatical items whose abstraction level is much higher such as sentence structures: S(subject) V(verb) O(object) is discussed, and the conclusion is that details of grammar such as usages of words can be derived from a very simple starting rule. In this paper, the psychological reality of several specific grammatical items is considered. The Inner World (IW), whose existence is suggested in Sato (2013), is molded through human cognition in human brains. If so, IW is to affect the linguistic structures of grammar. It will be understood that certain specific grammatical items also can be explained clearly and sufficiently by giving consideration to how the real world around human beings is perceived in human brains, or in IW. The difference between the present and the past tenses, the problem of *so* 「そ」 in Japanese as a translation of *it* in English, the usage of the definite article in English and so on are referred to in this discussion.

The linguistic theories

Leading paradigms in linguistics are generative grammar and cognitive grammar. Nakajima (2013) treats generative grammar and cognitive grammar in order to explain *theory of grammar*. The two grammars should be taken up as representatives in the grammatical theories.

The difference of the two theories is with regard to how language is acquired. It leads to the structural difference of each grammatical description. In generative grammar, the existence of the Language Acquisition Device (LAD) is postulated, which is inherent in our brains, and, in addition, LAD is specific to human language. Chomskyan linguists insist that the knowledge of language, or grammar, exists in the brain innately (Uchida, 2013). On the other hand, in the paradigm of cognitive grammar, language is acquired through the human general cognitive faculty. The linguists do not hypothesize that the module specific to human language exists in our brains (Yamanashi, 2013).

When such linguistic theories are evaluated, the psychological reality of the grammatical descriptions is regarded as a problem in the fields related to linguistics. Nakai (1999), which handles the question of whether or not

linguistics is a natural science, begins the discussion by arguing over the psychological reality of the description of generative grammar. However, the discussion seems not to end in a valid conclusion. Hashida (2001) explains the theory and models of computation for natural language processing and refers to the psychological reality of the models. Yoshimura (2006) is a symposium on whether or not cognitive linguistics is serviceable for language education, and the question of psychological reality is also brought up from a position of developmental psychology in the discussion. In the field of psychology, a number of questions for the rules which had been presented in generative grammar were discussed repeatedly in the past (Nakai, 1999). However, they were not proved, and most of psychologists seem to have moved away from the linguistic perspective. When language is studied from the viewpoint of psychology, a model which can make researchers actually realize the psychological reality through it has to be needed.

The model of IW in the brain

The model of IW in the brain will be available to study language from the viewpoint of psychology. The linguistic model which is presented in Sato (1995) is the one that is constructed under the concept: how language can be acquired only by using the components which have been found in the brain at present: neurons, synaptic transmission, neural networks and so on. It has been used in order to discuss diverse disputed problems in the fields such as linguistics, psychology and brain sciences as it is summarized in Sato (2018). There seem, it would go without saying, to be many grammatical items and usages of words which reflect IW in the brain, or human cognition and knowledge of the world. Human beings can express almost anything with their own languages although each language has different entries of grammatical items. Should it depend on the likeness of the structure and the organization of IWs that all the human beings share in their brains?

The grammaticality

The grammaticality, which is one of the properties of human language, is shared among all the languages and can deal with all the sentences including so-called ungrammatical sentences. Sato (2010) discusses the grammaticality, which all the languages share as one of their properties. The discussion

is like this. Generative grammarians define the linguistic competence, or acquiring language, as an ability through which speakers can generate only grammatical sentences and eliminate all the so-called ungrammatical ones. However, in linguistic performance of all the languages, so-called ungrammatical sentences are generated and are responded to with the linguistic areas in the brain. They are tolerated and understood under the poetic license. In addition, when a situation appears which is unable to be described with the existing grammatical rules like a birth of cloning technology, a new grammatical rule can be created like *a new him* and *a mini her*. Furthermore, when grammatical judgements are made for a sentence in the linguistic research, it is very difficult for speakers of a language to arrive at a certain unanimous conclusion. In other words, both grammatical sentences and so-called ungrammatical ones are to be used when they are indispensable depending on a situation. The grammaticality as one of language properties ought to respond to all the linguistic expressions that are produced in language use for communication.

All the languages fulfil the same function in the brain, so that they share the same properties in the brain system. The concept of the grammaticality shows the essence straightforwardly.

The past and the present tenses in English

The difference between the past and the present tenses in English reflects the operability of the past and the present in IW in the brain. The topic which Sato (2014) discusses is psychological time in IW. In other word, it discusses how time is symbolized or treated in IW.

The present tense in English can be used only if events, or what are described, includes, or is concerned with, the present time in any way. When a time table is available at present, you can express expected times of arrival and departure in the future with the present tense because they are fixed at present. The present tense can contain, or express, events which have rather long-term duration. Present movements cannot be expressed with the present tense. The tense for movements expresses present practices. The present movements are expressed with the present progressive form (Sato, 2014).

In contrast with the present tense, the past form can express past movements directly (Sato, 2014). The past which is described with the past tense is the time which is cut off

from the present completely, and it is why the past tense is used for the past subjunctive mood (Sato, 2011). Past movements can be expressed with both the past form and the past progressive form (Sato, 2014). Why is there such a difference?

The characteristic of the past time in IW is that events in the past can be manipulated especially with language. In IW, memories of the past are remembered and are used for manipulation, so as for human beings to live a “good” life in the real world and to create something new (Sato, 1995, 2013). What are happening under people’s own eyes presently are hard to be rejected and have to be accepted as a fact. Then they become part of the past in IW. As opposed to it, events in the past in IW are something to be remembered and manipulated, consciously or unconsciously, in IW particularly for certain purposes. In other word, duration in the past can be interpreted as either a point or a term in IW (Sato, 2014)

The way psychological time is in IW makes the difference between the past tense and the present tense. Events in the present should be accepted undoubtedly and, on the other hand, those in the past can be recollected and manipulated in IW. It is understood again that the way time is got hold of in IW affects grammatical items of the tense.

The articles

The usage of the articles in English is also grasped fully by undertaking careful inquiries into the state of IW. It is said that the acquisition of the articles is difficult for Japanese because the grammar of Japanese has no entries of the articles and, in addition, the use of the definite article is also sometimes difficult even for native speakers of English (Ishida, 2002). Is it really true?

The standard of the use of the definite article, *the*, in English is imposed upon by giving consideration to *definiteness* (Ishida, 2002; Sato, 2012). Definiteness is considered as *givenness*. Ishida defines it: when the knowledge shared between the speaker and the listener in a certain conversation is taken as a reference frame, it is a concept showing whether or not the speaker judges that an object which should be denoted by a certain noun has to be the one that the listener also can identify specifically (p.110). In other words, it is very difficult to learn how to use the definite article as a rule. The use of the definite article is almost always decided through the relationship between speakers and listeners (Sato, 2012). In the case of missing the

definiteness, the indefinite article, or plural forms of nouns without any articles, or forms of nouns without any markers is used (Ishida, 2002; Sato, 2012).

As the discussions above show, the use of the grammatical item depends on inferences in IW. When the usage of the definite article is learned, it should be understood that the use is very difficult to express as a rule and IW always needs referring to.

Both English and Japanese speakers are influenced by their IWs in the same way. Ishida (2002) says that the use of the definite article is difficult because some languages have it and some do not. Do speakers of Japanese really not have such a way of expression? The author of this paper attended an academic meeting which was held in Hirosaki city, Aomori prefecture, which is in the northern part of Japan, quite a long time ago. On the way to Hirosaki University, the author asked an old woman in Japanese, “Would you tell me the way to Hirosaki University?” In answer to my question, she did not use the word, *university*. She just used the word, *gakko* [*school* in English]. “Do you want to go to *gakko*?” she replied. When she was young, there might have been only one school in the city. At that time, people in the city could have called the predecessor of the present Hirosaki University just *gakko*. The author felt that *gakko* is equivalent to *the school* in English.

It appears that almost all the cities and towns in the rural part of Japan have only one railway station. It means that the nearest station is just one in each area. The author asked his students what kind of expression they use when they want to know how their friends go to the nearest station. They said that they do not use the name of the station, or a proper noun, but a common noun for a station, *eki* in Japanese. “How do you go to *eki*?” The expression, *eki*, also has to be equivalent to a noun with the definite article, *the station*, in English.

The linguistic phenomena are interesting and important to think about the essence of language grammar. It appears that Japanese also has the way to express the feeling of definiteness.

It has been said that Japanese does not have the definite article and the concept of the definite article is hard to be learned by Japanese English learners. However, Japanese speakers also can express the similar nuances as the discussion above shows. Surely, it does not have any markers in order to express the definiteness. Maybe, any human IWs, or views of the world, should have similarity beyond differences in cultures and languages used. IWs in human

brains develop in similar natural surroundings, or the earth.

The Japanese translation of *it* in English

The Japanese demonstrative pronoun *so* 「そ」 is used as a translation of the personal pronoun *it* in English on the basis of listeners' cognition, or listeners' IWs. Sato (2007) discusses why *so* is used for both *that* and *it* as a Japanese translation and tries to make use of the result for English teaching in Japan. In the teaching in Japan, *kore* 「これ」 is usually used for *this*, *are* 「あれ」 for *that*, *sore* 「それ」 for *it* when they are translated into Japanese. However, *sore* has to be used for *that* in some cases. Japanese English teachers in Japan use *sore* in such a situation because there is no other choice, and they usually do it without explanation. Can it make learners get confused? The explanation in Sato is repeated here, and it is understood again that cognition, or IW, should be referred to in order to understand the linguistic situation.

Sato (2007) begins the discussion by explaining the systems of English and Japanese pronouns. It is said that English has more systematic pronoun system than Japanese. The English pronouns, *this* and *that*, are demonstrative ones. They are used so as to indicate something outside fundamentally. As opposed to it, *it* is a personal pronoun and is used so as to avoid repetitions of the same nouns in a linguistic context basically. On the other hand, Japanese has not developed a pronoun corresponding to *it*. Japanese pronouns, *ko*, *so* and *a*, are demonstrative. Accordingly, *it* has to be translated into Japanese by using Japanese demonstrative pronouns.

Ando (1986) illustrates the relationship between *this* / *that* in English and *ko* / *so* / *a* in Japanese with a diagram (p.218).

| | | | |
|-----------|--|-------------|---------------------------------|
| <i>ko</i> | | <i>this</i> | the domain of the first person |
| ----- | | | |
| <i>so</i> | | <i>that</i> | the domain of the second person |
| ----- | | | |
| <i>a</i> | | | the domain of the third person |

In English, both the domains of the second person and the third one are denoted by *that*. Probably, it would not confuse the users because demonstrative pronouns are often used with pointing the finger originally. Therefore, both *so* and *a* are translations of *that* primarily. The reason for which *so* is used

in order to translate *it* into Japanese has not been explained clearly so far. To begin with, even among linguists specializing Japanese, there is no established theory of the usages of *so* (Ando, 1986).

Sato (2007) tries to solve the problem bringing the concept of cognition, or IW, into the discussion. Japanese *so* is used for the domain of the second person. English *it* is used in a linguistic context and is used so as to avoid repetitions of the same nouns in the context. Because a receiver in the domain of the second person listens to what a sender in the domain of the first person has said, the sender can naturally guess that any understanding has resulted in IW of the receiver. Then, the sender can bring endophoric use into existence. Because the understanding exists in IW of the receiver, *so* has to be used for the use. The discussion shows that both the exophoric use and the endophoric one of *so* are explained naturally considering listeners' IWs; the two kinds of uses are connected spontaneously.

The relationship of the two uses of Japanese *so* is understood clearly by bringing the concept of IW into the discussion. The attitude that psychological reality of linguistic description is taken into consideration a little more may be needed in the research of language.

Future time expressions

There are, broadly speaking, two types in what happen in the future: things which human beings try to cause to take place or ones which happen spontaneously. Future time expressions such as *will* and *be going to* are explained like this (Wada, 2013, p.16).

will
the simple future ---- the future: it will happen naturally as time goes by.

“I will be seventeen next weekend.”

the volitional future ---- It expresses a subject's intention in a sentence. Someone tries to make something take place.

“The phone is ringing. I will answer it.”

be going to
intention / plan of a subject in a sentence ---- It expresses what is thought about or is planned in advance.

“We are going to have a party this weekend.”

near future --- It expresses inference about something happening in the near future.

“Look! There’s going to be a storm.”

However, Minamide (2014) explains the difference between the simple future and the volitional future like this (p.2014).

Although distinguishing the simple future and the volitional future clearly is often difficult, *will* is usually taken as the simple future a) in the case that the subjects of *will* are an inanimate subject b) in the case that stative verbs such as *be* are connected to *will* c) in the case that *will* is used with *think, be sure, perhaps, surely* and so on.

Why is it often difficult? It ought to be because grammatical rules are not ones that should be given absolute priority, and how to use the rules would depend on the way of cognition in IW. In other words, when the time, future, is weighed carefully, there ought to be, broadly speaking, two types in what happen in the future: things which human beings try to cause to take place or ones which happen spontaneously. When future time expressions are explained in a grammatical explanation, all the things which happen in the future can be put in the two categories somehow or other: the simple future and the volitional future. In the explanation of *be going to*, it seems that the different terms are given but they ought to be the volitional future which human beings try to cause to take place as soon as possible and the simple future which happens in a moment spontaneously. However, the distinctions do not have to be always used consciously by language users. Some contexts in actual language use and users’ attitudes to what happen in the future might often blur the distinction. As the discussion of the future time expressions shows, the grammatical explanation would depend on the features of the time, future, and how to perceive the actual world in IW in the brain.

Conclusions

The specific linguistic problems of the grammaticality, the tenses, the definite article, the pronouns, and the future time expressions have been discussed in this paper. Grammatical discussion of language may not be

completed without referring to the state of human mind. All the items which are discussed in this paper are affected by the state of human mind. The state of IW, or human cognition, is to be considered to complete the description of grammar of language. Each specific grammatical item which is discussed in this paper has to be taken as a good example in order to think about the problem of psychological reality of grammar concretely on the basis of the actual language use.

Notes

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