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A NEW COGNITIVE APPROACH TO ENGLISH IMPERATIVES*

1 INTRODUCTION

Imperatives are pervasive in our ordinary life, and their function is indispensable for basic human activities. Our concern in this paper is to explore human cognition relating to imperatives. English ones are syntactically defined as infinitival verb forms without overt subjects. They have been thus far considered under various kinds of linguistic theories. For instance, there are comprehensive analyses such as Bolinger (1977) and Davies (1986). As among the syntactic approaches, Henry (1995) discusses imperatives in Belfast English, which differs from Standard English. Clark (1993), in terms of Relevance Theory (see Sperber and Wilson 1995), deals with pseudo-imperatives accompanying conjunctions, *and* or *or*. Takahashi (1994) adopts a functional approach to an analysis of imperatives, establishing the basis of subsequent cognitive study in Takahashi (1999). Numerous attempts have been made to analyze imperatives, but little attention seems to have been given to the cognitive structure of the speaker in imperatives.

When it comes to the semantics of imperatives, our general understanding is that the speaker causes the hearer (not) to do something. This is by no means wrong, to be sure, but this viewpoint merely describes the causative aspect of imperatives. It remains to be seen how the speaker utters an imperative. In this connection, we do not know clearly how to define the hearer. If we use the term *the hearer* to refer to the addressee of an utterance, we are confronted with a pragmatic challenge. As an example, let us suppose that the speaker utters an imperative as an order. The problem is that the hearer may regard it as a suggestion, a request and so on, not as an order. So long as we accept the assumption that the hearer is objectively and independently located outside the cognition of the speaker, we will not fail to face this difficulty. For this reason, we establish a purely speaker-based theory. According to this, the hearer

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is defined as the hearer in the speaker's mind, and the hearer's cognition as the cognition inferred by the speaker. Our paper is concerned with imperatives, which the speaker recognizes as imperatives in his or her mind, so that we can evade the pragmatic problem with regard to a cognitive discrepancy above between the speaker and the hearer. Specifically, we offer a new theory based upon the essential cognitive faculty of human beings, and shed light on our cognitive structure by making the best use of linguistic data. Our research is intended to unveil the cognition interrelated with language. This article is located in one of such a project. The concrete objective here is to demonstrate that an examination of imperatives contributes toward exploring a more elaborate cognitive structure.

The organization is as follows. In the next section, ideas in developmental psychology are introduced, and we show that they serve as independent justification for our postulation that our cognition and our language interact with each other. Section 3 reveals that, following our assumption, we can account for imperatives in a unitary fashion. Not only is the cognitive structure of imperatives clarified, but also our approach gives a drastic solution to a semantic problem about the so-called negative imperatives. In section 4, considering peripheral imperatives, we modify the original hypothesis in some respects. This elaboration involves a wide range of consequences with regard to pseudo-imperatives, indirect speech acts, and compound words, as argued in section 5. The last section concludes our discussion and suggests directions for future research.

2 THE THEORETICAL FRAMEWORK

This section sketches previous research in developmental psychology, and a new concept is proposed as a theoretical framework in the present paper. Subsequently, we compare our propositions with previous work in linguistics, in the hope that such a comparison makes our standpoint in linguistic studies clearer. Finally, we discuss our methodology.

2.1 Permanence or Identity

When we see an object (=A) occluded by a hand or a cloth, we generally believe that it still exists. At the same time, we assume that the occluded object (=A') is identical to the original object (=A). When the occluded object (=A') comes into view again, we normally say that the appearing object (=A'') is identical to the occluded object (=A'). These cognitive judgments are based upon our assumption that the object (=A) has a kind of permanent nature; we regard three objects as identical, $A=A'=A''$. Thus, we seem to have the cognition of permanence.

A large number of studies concerning the notion of permanence have been carried

out in the field of developmental psychology since Piaget (1954).¹ Performing such experiments as we said above, he observed a young infant's reaction to hidden objects, and noticed that they did not search for the objects, although they saw them hidden. His conclusion is therefore that infants aged younger than 9 months lack the cognition of permanence. To put it the other way round, Piaget speculated that for them an object ceases to exist when it is out of sight. Conversely, we might say that adults possess the cognition of permanence. Subsequent experiments have sophisticated the Piaget's claim, in particular, concerning the age at which the cognition of permanence emerges. For instance, Baillargeon (1987) demonstrates that infants aged as young as 3.5 months have such cognition, contrary to 9 months in Piaget's claim. Next, the question would arise about how we react to the blocking of such cognition. Baillargeon (1987) and Baillargeon & Graber (1987) report that infants whose cognition of permanence is blocked by an unexpected or impossible event look reliably longer at such a situation, indicating an unnatural mental condition, that is, a mental change such as astonishment.²

In short, it is true that Piaget's observations are problematic with respect to the age, and the series of psychological results are by no means contradictory to the claim that since the very early stage of our life, we have the cognition of permanence, that is to say, identity in understanding of the external world.³ In addition, there is a close relation between the blocking of permanent cognition and a mental change. The expositions above can be summarized as follows:

- (A) Human beings have such cognition as permanence or identity toward the outer world, disregarding differences.
- (B) Emotive activity emerges when the cognition of permanence or identity is blocked for some reason.

Here, let us explain these ideas in simpler terms. As a presupposition, we cannot deny the objective fact that everything in the outer world is always changing, in a physically strict sense; nothing is the same in the outer world. Even an apparently identical or permanent object turns out to be different or temporary, in an exact sense. Nevertheless, we generally pay no attention to the difference itself. Instead, we tend to regard it as the same, at the level of our cognition. Suppose a specific case of cognition concerning a person whom we know well. He or she is always growing. It is known that every cell is renovated periodically. No moment is there when he or she behaves or thinks in precisely the same way. His or her status to others is different from person to person; he or she may be a teacher of English toward students, but at the same time, he or she can be a student toward an instructor of aerobics, and so on. In spite of these facts, we can identify him or her. Why is this cognition possible? The

¹ The gist of Piaget (1954) is described in Piaget (1970), Baillargeon (1987), and Baillargeon & Graber (1987). Studies concerning the notion of identity are also carried out in the field of philosophy (Noya (2002), Ikeda (2002)). The purpose in this paper is to verify and modify such a notion by examining linguistic data.

² For further details of experiments, see Baillargeon (1987) and Baillargeon & Graber (1987).

³ The cognition of permanence is to be that of identity in non-temporal terms, according to which we assume that the former can be reduced to the latter in this paper.

answer no sooner becomes obvious than we recognize that we have cognition such as (A). The cognition which regards differences as the same is essential to achieve a unitary analysis of the series of cognition above.

Let us proceed to consider the cognition (B). Imagine a person who is known as very healthy. According to (A), we have a permanent cognition that he or she is in shape. One day, however, if a doctor informs us of his or her serious illness, we might feel really shocked and sad. This process reflects the cognition (B). We had thought that the person was not suffering from illness, but in fact, we find our expectation to be wrong. When the previous cognition no longer works, some emotion occurs within us. Likewise, when our friend who we had thought was reliable deceived us, we will get angry. We can analyze this case, in the same way as we treated the previous case. We think that our friend does not deceive us, but our friend's deceit prevented the cognition from continuing. That is, when the precedent cognition is blocked, some emotion occurs within us.

We have not so far mentioned the relation with language. In fact, several experiments that we mentioned at the beginning of this subsection suggest that we have the cognition such as (A) and (B), prior to a full acquisition of language. This in turn implies that our proposal here is posited independently of pure linguistic ability. What should be noted in this connection is that we have no intention to refute linguistic competence or knowledge itself, of which Generative Grammar makes much. More precisely, the revelation of linguistic competence itself falls outside the scope of our research. The issue that concerns us lies in how our more general cognition exerts an influence upon linguistic performance such as speech acts. We shall refer to this view of language in more detail in the next subsection. The crucial point here is that the psychological ideas in (A) and (B), in this paper, serve as cognitive grounds for establishing a new linguistic theory based upon the cognition of human beings, independently of language itself.

2.2 Natural Course Theory

We refer to the cognition in (A) as NC (Natural Course), which is a kind of cognitive passage to bring the outer world to our cognition. Moreover, the framework grounded upon (A), in combination with (B), is called NCT (Natural Course Theory). In what follows, making use of NCT, we assume the following two postulations based on (A) and (B):

- (A') Our cognitive ability includes NC, by which we cognize a Phenomenon, a cognitively ordered segment of the outer world.
- (B') Speech acts, especially highly emotive ones, are motivated by the cognition, 'NC and its Block' (henceforth, NCB).

As stated in (A'), we refer to a cognitive cluster acquired by NC as Phenomenon; our cognition consists of groups of Phenomena. In this connection, we define our language as verbal signs that encode a Phenomenon. To put it another way,

expressions vary in accordance with how we segment a Phenomenon. This is essentially consistent with the spirit of cognitive linguistics that language is motivated by general cognitive ability. This is because a Phenomenon, by definition, is a cognitive outcome via NC. No less importantly, the view that language encodes a Phenomenon might offer us a hint on the nature of language. If we gave different verbal signs to each of the different (in a precise sense) things or events, the number of the ways of expressing them would be so immense that we could not handle language because of its complexity. Such a situation is by no means economical and does not match our sense of the reality of language. Interestingly enough, the very cognition of NC opens up one possibility of explaining the economical nature of language. Given the assumption that language encodes a Phenomenon, we can provide an automatic account of the fact that we, ignoring differences, communicate with each other by making use of the same verbal signs to signify discrete events or things, instead of employing different signs.

Next, let us consider the cognition of (B') in more detail. We begin by considering a typical emotive activity in our daily life, as shown in subsection 2.1. Suppose that someone suddenly shouts at us from behind. We will be surprised at the big voice. This cognitive structure being considered together with (A'), it follows that we cognize the Phenomenon that nobody suddenly shouts at us, and that someone's shout forced the cognition not to hold. Thus, our surprise originates in NCB caused by someone's sudden shout. In this sense, the emergence of our emotion is reducible to NCB. If we call this emotion 'illocutionary emotion,' it follows that our speech acts are motivated by this illocutionary emotion.⁴ Here, following (B'), we regard the speech act of imperatives as highly emotive in our natural language, and then analyze them in terms of NCB.⁵ Specifically, we assume that the speakers of imperatives have a cognitive structure in common with other emotive activities. For instance, let us imagine the situation in which the speaker tries to stop someone smoking. The speaker in this case has the cognition that the hearer does not stop smoking, in other words, the speaker cognizes the Phenomenon that the hearer smokes, and the speaker utters an imperative as an instantiation of NCB. (Fuller discussion will be presented in section 3.) Preliminary to an analysis based on a new NC cognitive concept, it is necessary to compare it with other cognitive factors. We will see what distinguishes the cognition of NC from other human cognitive aspects.

2.3 Comparison of NC with Other Concepts

We need to refer to the choice of our technical term, *Natural Course*, which reminds

⁴ The significance of emotion in understanding is emphasized in Damasio (1994) from a neurological perspective. His Somatic-Marker Hypothesis, where a marker is active behind making a decision, is of great concern to us. However, we leave the detailed consideration and comparison to future research.

⁵ Because we deal with imperative speech acts in terms of NCB, we do not maintain that other non-declarative sentences are not motivated by NCB. Rather, in NCT, human speech acts, more or less, are treated as NCB.

us of the notion of “natural path” in Langacker (1990). Here, we contrast Langacker’s *natural* with our *natural*. The focus of the former concept is upon the naturalness of alignment along an “Action Chain.” In our terminology, Langacker’s *natural* is concerned with the content of Phenomena, which we cognize via NC. Our *natural*, however, refers to the naturalness of our manner in cognizing Phenomena. The idea of NC thus represents naturalness, in that we have a tendency to adopt such a cognitive way automatically so long as we are not confronted with some element or situation that blocks such cognition. This also implies that the blocking of such a natural cognition means a marked or unnatural cognition. In this paper, we assume that unnatural mental states are closely related to mental changes such as emotive activities.

The concept of Figure and Ground mainly treats their distinction or their reversal. In cognitive linguistics, the characteristics of Figure and Ground have been exploited for the semantic description of complex sentences, as argued in Talmy (1978). We pay more attention to the cognitive strategy of understanding Figure, and, at the same time, the analysis of NC is also concerned with a pre-distinction of Figure and Ground. Given that Figure is perceived against Ground, it follows that cognition via NC enables us to cognize Phenomena against non-Phenomena. To put it another way, Phenomena serve as Figure, and non-Phenomena represent a cognitively pre-distinguished world.

ICM (Idealized Cognitive Model) is defined as a group model of the structure that consists of our knowledge under ideal situations. When we understand an individual event or thing, we check it with ICM. The difference in the degree of agreement with ICM produces a Prototype Effect. Thus, ICM functions as a cognitive model previous to an event or thing. By contrast, we assume that every time we cognize a Phenomenon, NC of the Phenomenon is cognitively activated. Furthermore, since most of our knowledge is based upon language, the cognition of Phenomena via NC serves as an input into our knowledge, laying one of the foundations for establishing ICM.

2.4 Methodology

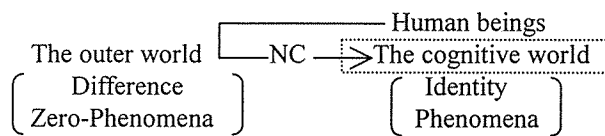
Methodologically, we pursue the cognitive structure from linguistic data. Given that one of the aims in cognitive linguistics is to reveal the structure of our cognition, this type of method is justified. Accordingly, we adopt a strategy of this kind consistently in our paper, which shows a part of our cognitive structure by making full use of the linguistic examination of imperatives. In the course of our exposition, it is argued that the cognitive structure proposed at the beginning of this section will be elaborated in several regards. The modification of a hypothesis is a valid process in scientific research.

There is one more thing to be noted in this paper. In linguistics, sentences marked by an asterisk ‘*’ are treated as ungrammatical, but in our paper, this symbol has a different meaning. The symbol indicates that such cognition corresponding to such an utterance is impossible. It is quite natural that we can have no sentence without

cognition, if we take the interaction between our cognition and our language into consideration. Hence, sentences with ‘*’ can serve as negative evidences in investigating our cognitive structure, thereby leading us to an understanding of an otherwise intangible structure in human cognition.

2.5 Summary

Here, it might be safe to summarize the main view concerning our cognition and our language. Given that all in the outer world is always changing, it is only a chaotic gathering of differences. Nevertheless, the objective outer world is not regarded as such; we do not recognize differences as differences themselves. We cannot help having the cognition of identity within differences. We propose the concept of Natural Course (NC) as our highly essential cognition, which supports our usual way of understanding the outer world. We refer to a cognitively or subjectively ordered part of the world as Phenomenon. The cognition of Phenomena against differences implies the fact that we segment the cognition of identity, distinguishing it from the other. In addition, we assume that language encodes a Phenomenon, which is acquired through NC. It does not encode the outer world directly. The arguments above are illustrated as in Figure 1:



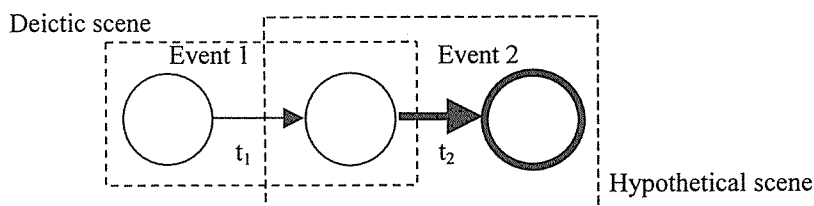
<Figure 1>

The outer world is an undifferentiated chaos, whose complexity is beyond our cognition. In Figure 1, we refer to such a chaotic state in the purely objective world that is not yet segmented by our cognition as Zero-Phenomenon, or non-Phenomenon. Our cognitive world, by contrast, consists of Phenomena acquired by cognition based upon NC. Human beings achieve such cognition via NC. It might be said that NC is an interface between the outer world and our cognition. In what follows, we see how an analysis based upon NC makes a meaningful contribution to cognitive research on language.

3 AN ANALYSIS OF IMPERATIVES

We begin by looking at cognitive analysis, the most relevant to our approach. What should be noted is that this previous analysis and ours are not exclusive but complementary. Takahashi (1999), based on the observations in Takahashi (1994), analyzes English imperatives in terms of Cognitive Grammar (see Langacker 1990).

Takahashi's cognitive event model of imperatives is shown as in Figure 2:



<Figure 2>

(Takahashi 1999: 206)

The idea of Figure 2 is as follows: the circle on the left is the speaker, the circle in the middle is the hearer, and the right one is the object of transitive verbs. Only the circle on the right can serve as the first person, the second person, or the third person. The arrow on the left is the directive (Event 1), whereas the right one corresponds to the action of the hearer (Event 2). The bold lines mean obligatory elements. Takahashi (1994) points out four features of English imperatives: “hypotheticality,” “non-pastness,” “second-person nature,” and “speaker commitment.” The last one is the degree of directive force, which the speaker applies toward the hearer carrying out the action. In Takahashi (1999), these four factors correspond to the elements in Figure 2. “Hypotheticality” means “hypothetical scene,” “non-pastness” is shown by the fact that t_1 (time₁) precedes t_2 (time₂), “second-person nature” is depicted as the circle in the middle, and “speaker commitment” is the arrow on the left.

It is true that this analysis provides a cognitive explanation for the causative aspect of imperatives, and that it describes a series of events in which the speaker orders the hearer to do something and then the hearer acts. Nonetheless, this account does not satisfy us. This is due to the fact that the cognitive structure of imperatives per se is not considered in detail. For example, we cannot tell under what cognition the speaker performs the speech act of imperatives. As for Figure 2, the content of the arrow from the speaker in Event 1 is not mentioned. Therefore, a theory that can explain the cognitive structure in the speaker's mind is required.

3.1 Imperatives as NCB

Given the assumption in section 2, it follows that the speaker utters an imperative sentence as NCB, namely, that NCB motivates an imperative speech act. Conversely, imperatives are motivated by illocutionary emotion of NCB. Accordingly, the speaker cognizes a Phenomenon via NC and blocks it. Let us consider typical examples in (1):

- (1) a. Open the door.
- b. Don't smoke.

In (1a), within the speaker's mind, the speaker acquires the Phenomenon through NC in which the hearer does not open the door, and blocks the NC. In the same way, the

speaker of (1b) acquires the Phenomenon through NC that the hearer smokes, and blocks the NC. It follows from this that the idea of NCB grounded on development psychology can be applied to a linguistic analysis of imperatives. In short, the cognitive structure of imperatives can be reduced to 'NC of a Phenomenon and its Block.' The point is that imperatives are uttered under the same cognition of NCB, regardless of whether they are grammatically affirmative or negative.

Now, by the application of NCB to an analysis of imperatives, does anything advantageous arise? In order to examine this, let us go on to other topics in the subsequent subsections.

3.2 *The So-Called Negative Imperatives*

This subsection shows that the application of NCB to imperatives brings a theoretical advantage with regard to the analysis of negative imperatives.

Davies (1986) points out that negative imperatives sound strange due to the compatibility of negation with the forwarding, or affirmative function of imperatives. Intuitively, since typical imperatives have an affirmative function of causing the hearer to do something, such a function seems to be inconsistent with the negative marker, *don't*. That is why the negation in imperatives appears to have a special status. Below, we demonstrate that Davies (1986) does not provide a convincing solution to the semantic challenge above, and then we offer an analysis based on NC as an alternative account.

According to Davies (1986: 48), "while a declarative sentence asserts a proposition, an imperative merely presents one." Davies goes on to say that the negation in imperatives is associated with either "presentation" or "proposition." Each attitude of the speaker is shown in (2a) and (2b):

- (2) a. I do not accept (I reject) the possibility of p's becoming true.
- b. I accept the possibility of not-p's becoming true. (Davies 1986: 72-73)

The negation in (2a) is connected to "presentation," whereas the negation in (2b) is linked to "proposition." Owing to the redefinition of imperatives, the semantic problem above disappears. Davies (1986) does not regard typical imperatives as forwarding or affirmative, concluding that the negation in imperatives has no special status; it is no longer distinguished from the negation in other sentence types. The problem, however, arises with respect to the actual treatment of the negation. Let us consider several examples in Japanese and English.

There are two kinds of negative markers in Japanese imperatives: *na* and *nai*. *Nai* is available for both imperatives and other sentence types, while *na* is limited to imperatives, as shown in (3):

- (3) a. hashiru na [Imperative]
 run not
 'Don't run.'

- b. hashira nai (koto) [Imperative]
run not
'Don't run.'
- c. *kare wa hashiru na [Declarative]
he NOM run not
'He does not run.'
- d. kare wa hashira nai [Declarative]
he NOM run not
'He does not run.'

These data indicating that imperatives pattern differently from the others in the negations contradict Davies's claim that there is no distinction of negations between imperatives and the others.

Moreover, even in English, negation in imperatives has a different status from the negation in other sentence types, unlike the claims in Davies (1986). For example, the separated negative form (i.e. *do not*) which is allowed in interrogatives cannot be used in imperatives, as the following contrasts show:⁶

- (4) a. Don't you speak to me like that.
- b. *Do not you speak to me like that.
- c. Don't you like coffee?
- d. Do not you like coffee? (Henry 1995: 50)

The *don't* of the so-called negative imperatives, unlike that of other negative sentence types, functions as one unit, so accounting for the contrasts illustrated in (4).

From these observations of Japanese in (3) and of English in (4), it is safe to say that the claims by Davies (1986) are not appropriate to elucidate all the data in (3) and (4). Should we then give up Davies's proposition? We might hesitate to do so. That is because Davies intends to solve the semantic paradox of the so-called negative imperatives. If we do not accept Davies (1986), we have to find another way to evade such a semantic problem. Yet, if we adopt Davies's solution, it is possible to avoid the problem, to be sure, but instead we are confronted with another problem concerning (3) and (4).

We maintain that our analysis based on NC provides a drastic breakthrough to this predicament. Imperatives, as we stated in the previous subsection, are uttered under the same cognition of NCB, irrespective of whether they are affirmative or negative. In other words, the grammatical difference between affirmation and negation turns out to be no more than superficial. Hence, the distinction between them disappears automatically. This implies that the problem with the so-called negative imperatives does not arise within our analysis, because the semantic problem in question originates from the grammatical distinction between affirmation and negation.

To summarize the discussion here, we demonstrated that Davies's approach is not decisive. Subsequently, as a conceptual consequence of the application of NCB to an analysis of imperatives, our approach provides an automatic solution to the semantic

⁶ We can also say that *don't* serves as one unit in the case of the so-called negative imperatives.

problem with the negation, which would arise unless we abolish the grammatical distinction between affirmative imperatives and negative ones.

3.3 Summary

In this section, it has been shown that the application of NCB to imperatives brings a theoretical advantage. Specifically, we resolved the problem regarding the semantics of negative imperatives. The analysis based upon NC, thus, offers the advantage that it does not require us to posit any additional assumptions over and above what is needed to analyze imperatives.

4 MODIFICATION

This section shows that our original hypothesis requires modifications in some respects. The arguments in support of the revision in this section are mentioned in section 5.

4.1 An Elaboration of Phenomena

4.1.1 Self-Controllability The concept of self-controllability has been exploited since Kuno (1970). It is true that this concept correctly predicts the difference between (5a) and (5b):

- (5) a. *Be tall!
 b. Be a good boy! (Kuno 1970: 352)

The predicate in (5a) is by no means self-controllable, accounting for the ungrammaticality, and the reverse holds in (5b). The analysis based on self-controllability appears to be supported by the possibility of progressive forms, as the following contrast shows:

- (6) a. *I am being a tall girl.
 b. I am being a good girl. (ibid.: 353)

Comparing (5) with (6), we can indeed draw an inference that self-controllability is not restricted to imperatives; imperatives exhibit the same behavior as other structures such as progressives. However, as Kuno himself points out, it is necessary to analyze imperatives separately from progressives. The reason for this claim is that we can find the verbs that permit progressive forms but disallow imperative forms. *Encounter* in

(7) is one example of its kind:

- (7) a. I am encountering great difficulties.
- b. *Encounter great difficulties. (ibid.: 352)

Moreover, a problem would arise with respect to a set of examples such as (8) (from Keyser & Roeper 1984: 384, and Kageyama 1996: 154):

- (8) a. *Happen, accident!
- b. *Emerge, new idea!
- c. *Occur, earthquake!
- d. Sink, boat!
- e. Close, door!
- f. Bounce, ball!

Kuno (1970) does not analyze the examples of intransitive verbs such as (8). Along the line of self-controllability, the exposition would be as follows. If we assume that animate subjects can typically select self-controllable predicates, it follows that no predicate in (8) is self-controllable. This wrongly predicts all the ungrammaticality in (8). However, some predicates can be used in imperatives, as shown in (8d-f). Even if we say that the subjects in (8d-f) can select self-controllable predicates, it remains to be seen why some are self-controllable but others are not. Next, let us consider the concept of self-controllability from the viewpoint of progressive forms. Compare (8a) with (9a), and (8d) with (9b), respectively:

- (9) a. The accident is happening.
- b. The boat is sinking.

If the possibility of progressive forms has a correlation with that of imperative forms, as pointed out in the discussion of (6), it is predicted that the sentences in (9) are self-controllable predicates, and that both are to be used as imperative forms. Yet, the sentence in (9b) has the corresponding imperative such as (8d), while that in (9a) does not. In any case, the possibility of progressive forms cannot give a unitary account of the data in (8).

4.1.2 Two kinds of Phenomena We have no choice but to rely on a semantic approach, not a syntactic one. According to our approach, the cognitive structure of imperatives is reducible to NCB; the speaker holds the cognition of a Phenomenon through NC, and blocks it. This wrongly predicts all the grammaticality of (8). That is, it would follow that any kind of imperatives should be generated so long as the speaker has the cognition of NCB. We shall come back to this issue in more detail later; suffice it for the present to say that our current system has no way of accounting for a series of facts in (8). Now, once our approach faces this difficulty, does it force us to abandon the analysis based on NC? Before concluding hastily, let us note the following two possibilities: one is that our approach is inappropriate only for some

imperatives such as (8), or they are exceptions, and the other is that the present system merely lacks enough delicacy to treat them. Our standpoint is the latter. Given the fact that the instances in (8d-f) have the same forms as typical imperatives, it is more reasonable to deal with the imperatives in (8) in a unified fashion. If such a treatment is proved possible, it is more consistent theoretically. The arguments below, then, are intended to prove the validity of our standpoint.

Our starting point lies in focusing upon the cognitive structure itself. We have so far paid little attention to the kinds of predicates, namely, the nature of Phenomena itself. Hence, we are now in a position to elaborate our cognitive structure more fully. Let us now consider several concrete examples. We return to the example in (5), repeated as (10):

- (10) a. *Be tall!
 b. Be a good girl! (Kuno 1970: 352)

What to be inferred from the linguistic data in (10) is that some Phenomena are to be blocked as an imperative, but others are not. It is quite natural and sensible to assume that these Phenomena are of two different types. The question to ask here is what differentiates one from the other. As one possible answer, we will refine the concept of self-controllability cognitively or epistemologically, adapting it to our framework of NC. Note that we draw no sharp distinction between two different types of Phenomena; rather we assume that they should be located on a scale of intentionality. More concretely, our claim is that the nature of a Phenomenon is determined, depending upon whether we regard the Phenomenon at issue as realizable by someone's intention. If we regard a Phenomenon as realizable by someone's intention, we will refer to the Phenomenon as an event-Phenomenon. On the other hand, if we do not cognize it in such a way, we will refer to the Phenomenon as a thing-Phenomenon. If we follow this definition, it could be said that the cognition of Phenomena itself belongs to an event-Phenomenon. This is because the cognition of Phenomena, unlike mere sensory operation, more or less relates to the intentionality. The difference between our cognition and our sensation might be compared to the contrast between listening to a noise and hearing it. In subsection 5.1, it will be considered that the argument above plays a crucial role in the discussion of pseudo-imperatives. The question that concerns us here is to what kind of Phenomenon the predicates in (10) belong. Given Kuno's observation that being tall is not self-controllable while being a good girl is self-controllable, it follows that the predicate in (10a) is a thing-Phenomenon, and the predicate in (10b) is an event-Phenomenon. From these arguments, we can draw the conclusion that the cognitive structure of imperatives concerns an event-Phenomenon, not a thing-Phenomenon. To put it the other way round, the cognitive structure of imperatives is 'NC of an event-Phenomenon and its Block.' This also implies that 'NC of a thing-Phenomenon and its Block of it' cannot serve as a cognitive structure in imperatives.

In short, we discussed the following two points, from the linguistic data in (10). First, the Phenomenon has two different aspects: a thing-Phenomenon and an event-Phenomenon. Secondly, only event-Phenomena can be included in the cognitive

structure of imperatives. The revised hypothesis in NCT is as follows:

- (A'') a. Our cognitive ability includes NC, by which we cognize a Phenomenon, a cognitively ordered segment of the outer world.
- b. Phenomena consist of two aspects with regard to someone's intentionality; thing-Phenomena and event-Phenomena.
- (B') Speech acts, especially highly emotive ones, are motivated by the cognition, NCB.

A consequence involved in this modification will be described in subsection 5.1.

According to the definition of the nature of Phenomena, when the speaker regards a Phenomenon as realizable by someone's intention, the Phenomenon belongs to an event-Phenomenon. A transitive usage typically reflects the above cognition, but not all the transitive predicates are event-Phenomena. Compare the following data. Both examples in (11) show transitive usages:

- (11) a. You read the book.
- b. You know the answer.

Nevertheless, the predicate in (11a) is an event-Phenomenon but the predicate in (11b) is a thing-Phenomenon. That is because in the former case, "you" can realize the content of the predicate by "your" intention, whereas "you" in the latter cannot. It is then predicted that the sentence in (11a) has an imperative form but the sentence in (11b) does not. This prediction is borne out, as shown in (12):⁷

- (12) a. Read the book.
- b. *Know the answer.

Since we have referred to transitive usages, it might be fair that we should also mention the relation between thing-Phenomena and intransitive usages. A Phenomenon, by definition, is regarded as a thing-Phenomenon when the speaker does not regard the Phenomenon as realizable by anyone's intention. This cognition is typically equivalent to an intransitive usage of unaccusative verbs, to be sure, but the intransitive predicates do not always correspond to thing-Phenomena. Both examples in (13) have intransitive usages:

- (13) a. You run fast.
- b. You disappear.

In spite of the intransitive usages in (13), the nature of Phenomena seems to be different. This is supported by following contrasts:

⁷ If we employ the concept of agentivity in Cognitive Grammar, the subject in (12a) has a typical agentivity, and (12b) is an extended example of (12a). This approach does not contradict our claim, but our emphasis is put on why an untypical agentive predicate in (16b) is identified with a typical predicate in (16a) in section 4.2.

- (14) a. Run fast.
- b. *Disappear.

Considering that the former can be used as an imperative and that the latter does not have an imperative form, we can infer that the Phenomenon in (14a) is an event-Phenomenon on the one hand; the Phenomenon in (14b) is a thing-Phenomenon on the other.

4.2 Identification

First of all, following the proposed distinction of Phenomena, let us return to the examples in (8), repeated as (15):

- (15) a. *Happen, accident!
- b. *Emerge, new idea!
- c. *Occur, earthquake!
- d. Sink, boat!
- e. Close, door!
- f. Bounce, ball!

The verbs in (15) belong to unaccusative verbs, as Kageyama (1996) points out. It is well known that the meaning of unaccusative verbs mainly concerns inherent nature. That is to say, they do not describe intentional predicates. In this sense, Phenomena encoded by such verbs are thing-Phenomena. What interests us here is that the use of ergative verbs matches the distribution of imperative forms. Only the imperatives of ergative verbs in (15d-f) are acceptable. Yet, the above exposition does not necessarily account for the problem concerning the reason why some verbs can be used as imperatives but others cannot. As we have already shown, imperatives concern the cognition of event-Phenomena, not thing-Phenomena. Surprisingly enough, even though the predicates in (15d-f) are thing-Phenomena, the imperative forms can be used. These peripheral imperatives suggest that a thing-Phenomenon is cognitively identified with another event-Phenomenon, thus permitting the use of imperatives. Hence, we need to explain why some thing-Phenomena could be construed as identical to other event-Phenomena. Before looking in detail at our proposal, we briefly sketch the data in (16-18):

- (16) a. You break the window.
- b. The window breaks.
- c. Break, window.
- (17) a. You break the promise.
- b. *The promise breaks.
- c. *Break, promise.
- (18) a. *You happen the accident.
- b. The accident happens.

c. *Happen, accident.

To begin with, the occurrence of the imperatives in (c) has no correlation with the existence of transitive usages in (a). This observation comes from the fact that the imperative in (16c) is acceptable whereas the sentence in (17c) strikes us as odd, in spite of the existence of transitive usages in (16a) and (17a). Moreover, neither does the occurrence of the imperatives in (c) have any correlation with intransitive usages in (b). This observation, in turn, stems from the fact the acceptability in (16c) and (18c) is different, although both have intransitive usages in (16b) and (18b), respectively. To sum up, what is drawn from the contrasts in (16-18) is that both transitive usage and intransitive usage have much to do with the occurrence of imperatives. We must establish a theory that reflects the observations above.

As we described earlier, the cognition involved in imperatives is an event-Phenomenon, not a thing-Phenomenon. Our first task is, then, to show how our theory based on NC reveals the tricky facts that even a thing-Phenomenon can be used in an imperative such as (16c). The next question to ask is how a Phenomenon can be identified with another. Leaving the second point aside for the moment, let us begin with a closer examination of the predicates in (16-18), in order to reveal how the Phenomena correlate with intransitive or transitive usages.

Applying the idea of intentionality to a series of examples in (16-18), we can say that the possibility of transitive usages is equivalent to event-Phenomena; if a transitive sentence is acceptable, the predicate is an event-Phenomenon. This is true of intransitive usages; if an intransitive sentence is acceptable, the predicate is a thing-Phenomenon. In short, the predicates in (16a) and (17a) are event-Phenomena, whereas those in (16b) and (18b) are thing-Phenomena. Note that the negated versions of (16a) and (17a) are also event-Phenomena, and that those of (16b) and (18b) are thing-Phenomena.

Now that we have demonstrated the correlation between intransitive or transitive usages and the nature of Phenomena, we need to proceed to consider the following two points. One is whether it is possible to cognize a thing-Phenomenon that is syntactically instantiated as an imperative; the other is whether such a thing-Phenomenon can be cognitively identified as an event-Phenomenon to be blocked as NCB. With both of them in mind, let us see how the examples in (16-18) are explained. In the case of (16), a thing-Phenomenon can be cognized, as we see from (16b). In this way, the thing-Phenomenon can be regarded as identical to an event-Phenomenon to be blocked, such as (16a). Therefore, the imperative form such as (16c) is adequate. Next, in (17), the fact that we cannot cognize a thing-Phenomenon in question means that the cognitive structure of imperatives remains incomplete. Since there is no thing-Phenomenon instantiated as an imperative, the corresponding imperative such as (17c) cannot be generated. Finally, in (18), a thing-Phenomenon can be cognized, as shown in (18b). However, such a thing-Phenomenon cannot be identified with any event-Phenomena, since we cannot cognize the event-Phenomenon corresponding to (18a). It is logically improper that a thing-Phenomenon is identified with the event-Phenomenon which we cannot cognize at all. Hence, the imperative form such as (18c) is inadequate. The discussion above is summarized as the diagram in (19):

(19)

	thing-Phenomenon	identification	NCB
(16)	✓	✓	✓
(17)	*	*	*
(18)	✓	*	*

The cognitive structure required for an instantiation of imperatives consists of two parts. One requirement is that a thing-Phenomenon to be exemplified as an imperative is cognizable; the other is that such a thing-Phenomenon can be identified with an event-Phenomenon, because the cognitive structure in imperatives includes an event-Phenomenon, not a thing-Phenomenon. Both demands being satisfied, we can acquire the cognitive structure suitable for imperatives as NCB.

Having explained a series of examples in terms of NCB, we must return to the second point we postponed earlier. Under what conditions and when can some thing-Phenomena be identified with other event-Phenomena?⁸ In order to investigate this, let us reconsider in detail two Phenomena concerning (16c), in which a thing-Phenomenon can be identified with an event-Phenomenon, so fitting the definition of imperatives, 'NC of an event-Phenomenon and its Block.' In (16), a thing-Phenomenon is that the window breaks, and an event-Phenomenon is that "you" break the window. Unless the event-Phenomenon occurs, the thing-Phenomenon does not follow in an accurate sense: no cause, no effect. Furthermore, the event-Phenomenon in (16) immediately precedes the thing-Phenomenon. From the relation between the two Phenomena in (16), it is inferred that a thing-Phenomenon can be identified with an event-Phenomenon immediately preceding the thing-Phenomenon, and that such a cognitive identification occurs when both are regarded as continuous or contiguous. That is, although a thing-Phenomenon is not the same as an event-Phenomenon, we can hold the cognition of identification under the condition of contiguity. This reminds us of the very NC, or the cognition that we regard difference as the same. It is of great importance that our system based upon NC can support the fact that we regard two different Phenomena as the same.

We have so far concentrated upon the identification under the situation in which two different Phenomena are contiguous. Next, we need to confirm whether two Phenomena are regarded as identical when both Phenomena do not have a contiguous relation with each other. Let us consider the following examples with a middle verb:

(20) a. The floor waxes easily.

b. *Wax, floor!

(Keyser and Roeper 1984: 384)

As Keyser and Roeper (1984) describes, a generally true proposition is stated in middle constructions. The Phenomenon in (20a) is therefore a thing-Phenomenon about "the floor." Now, what is an event-Phenomenon? Since an event-Phenomenon, by definition, is the Phenomenon implying someone's intention, the event-Phenomenon corresponding to (20a) would be that someone waxes the floor

⁸ Kageyama (1996: 145) also analyzes this issue in terms of Lexical Semantics. Specifically, he proposes "anti-causativization." Our claim is different from his claim in that the latter argues that the object itself can be identified with the agent or the causer itself.

easily. Up to this point, it has been shown that the cognition concerning (20) can hold both a thing-Phenomenon and an event-Phenomenon. Here, it is predicted that these two Phenomena can be regarded as identical if they are contiguous. However, as pointed out earlier, the thing-Phenomenon encodes a general statement, whereas the event-Phenomenon represents a particular event. It is logically not valid to conclude that they have a contiguous relation with each other.

We go on to consider whether two Phenomena can be regarded as identical even if they are not contiguous. We have already shown that it is possible even for a thing-Phenomenon to be used as an imperative utterance, when a thing-Phenomenon is identified with another event-Phenomenon. With this argument in mind, let us look at the unacceptability in (20b). The fact that the thing-Phenomenon cannot be used as an imperative indicates that the thing-Phenomenon is not regarded as an event-Phenomenon. Thus, when they are not contiguous, two Phenomena cannot be identified.

In short, the example of an ergative verb in (16) shows that a Phenomenon can be identified with another if both of them have a contiguous relation with each other. The example of a middle verb in (20), on the contrary, shows that two different Phenomena cannot be regarded as identical if they are not contiguous. These two observations lead us to the conclusion that two different Phenomena can be regarded as the same if and only if they are contiguous. The current claim in NCT is illustrated as follows:

- (A'') a. Our cognitive ability includes NC, by which we cognize a Phenomenon, a cognitively ordered segment of the outer world.
- b. Phenomena consist of two aspects with regard to someone's intentionality; thing-Phenomena and event-Phenomena.
- c. Two different Phenomena are to be regarded as the same if and only if they are contiguous.
- (B') Speech acts, especially highly emotive ones, are motivated by the cognition, NCB.

4.3 Summary

The final cognitive structure that we can propose in this paper is summarized as (A'') and (B'). The statement in (A'') concerns our general cognition, and the statement in (B') refers to a relation between our cognition and our language. Now that the cognitive structure has been elaborated, we have to proceed to prove that our proposal is applicable to another type of imperative or other linguistic data, in order to afford further supporting evidence of the sophistication in this section.

5 CONSEQUENCES

This section describes several consequences of our analysis. At the beginning of this paper, we proposed the application of NCB to the cognitive structure in imperatives. A closer examination of peripheral imperatives such as (10) or (15) in the previous section forced us to revise our original idea. As a result, we obtained an elaborated cognitive structure, in which the distinction between a thing-Phenomenon and an event-Phenomenon is of great significance, as shown in (A''), and then, in which the identification of the two Phenomena plays an important role in our discussion, as shown in (A'''). In what follows, we illustrate some consequences entailed by each of the modifications. We will see the consequences of the division and of the identification, in section 5.1 and 5.2, respectively. It will be shown that our system is not restricted to imperatives at all, but can be applied straightforwardly to other linguistic performances.

5.1 *Pseudo-Imperatives*

The main purpose of this subsection is to offer convincing evidence of the distinction between thing-Phenomena and event-Phenomena. We will show that such a distinction plays a crucial role in accounting for otherwise puzzling linguistic data concerning pseudo-imperatives, in the same way as ordinary imperatives.

5.1.1 The Observation of Data Before considering pseudo-imperatives, we need to define them. The provisional definition of pseudo-imperatives is as follows: imperatives with a conditional interpretation. Moreover, they normally accompany declaratives with a conjunction. According to the type of conjunction, they can be divided into two types: *and*-type and *or*-type. The former has an affirmative conditional interpretation, whereas the latter has a negative one. These two typical types are shown in (21) and (22):

- (21) a. Study hard and you'll pass the exam.
- b. If you study hard, you'll pass the exam.
- (22) a. Hurry up or you'll miss the train.
- b. If you don't hurry up, you'll miss the train.

The imperative in (21a) is an example of *and*-types, which is equivalent to an affirmative conditional in (21b). The imperative in (22a), in turn, is an example of *or*-types, which is equivalent to a negative conditional in (22b).

As far as (21) and (22) are concerned, *and*-types and *or*-types are to be treated in the same way. *And*-types, however, show different syntactic behaviors from *or*-types, in some environments. For example, the negative polarity item (henceforth, NPI) in (23), the subject other than the second person in (24), and the stative predicate in (25) are available for only *and*-types:

- (23) a. Eat any of those apples and she'll be delighted.
- b. ?Eat any of those apples or she'll be offended.
- (24) a. Pass his exams and he'll have no trouble.
- b. ?Pass his exams or there'll be trouble.
- (25) a. Be old and people are more sympathetic towards you.
- b. ?Be old or people won't help you. (Davies 1986: 208-209)

In fact, from these syntactic differences, Bolinger (1977) and Davies (1986) mention that *or*-types, unlike *and*-types, belong to ordinary imperatives rather than pseudo-imperatives. Since NPIs, subjects other than the second person and stative predicates are not acceptable in ordinary imperatives, the observation in the previous analyses appears to be valid. On a closer investigation, however, the fact seems to be more of a puzzle. Let us consider the following examples:

- (26) a. Say one word and I'll shoot.
- b. *Say one word and I'll praise you.
- (27) a. *Say anything.
- b. Say anything. [Threat]

In (26b), an NPI, *one word*, is odd regardless of the *and*-type. The sentence in (27b), by contrast, shows that an NPI, *anything*, can be used even in an ordinary imperative. These facts indicate that only the syntactic classification of pseudo-imperatives by *and*-types and *or*-types does not suffice for a comprehensive analysis.

5.1.2 Previous Analyses We need to unveil the cognitive structure in pseudo-imperatives, which can allow syntactic features that cannot be used in ordinary imperatives: NPIs, subjects other than the second person, and stative predicates. We utilize these syntactic factors as the syntactic definition of pseudo-imperatives, but the problem is that the cognitive or semantic definition of them remains unclear. We have so far defined pseudo-imperatives as conditional imperatives tentatively, but taken the fact in (26) and (27) into consideration, this working definition has to be adjusted. More specifically, the issue that concerns us is to explore the semantic diagnostics of pseudo-imperatives as in (26a) and (27b), and the cognitive structure of them. Candidates for it might be either the illocutionary force of threat in pragmatics or the interpretive representation⁹ in Relevance Theory. Below, let us consider these two ideas, respectively.

To begin with, illocutionary forces, as Takahashi (1994) has already suggested, constitute a continuum. If so, it is too difficult and arbitrary to segment each of the forces. In addition, if the illocutionary force of threat were proper for semantic diagnostics, a serious problem would arise with respect to the following example:

⁹ According to Clark (1993) and Sperber & Wilson (1995), the interpretive use of a representation is the use of a representation to represent some other representation.

- (28) What John needs is a bit of motivation. He should try to set up a company of his own. Own his own business and he'll be more inclined to work properly. (Davies 1986: 182)

It is evident that the imperative form in (28) is not a threat, but it co-occurs with a stative verb (*own*) and the third person subject (*he*). These elements are acceptable despite the fact that there is no illocutionary force of threat, which poses a problem. That is why the illocutionary force of threat is by no means a proper diagnostics for pseudo-imperatives.

Next, let us move on to interpretive representation in terms of Relevance Theory. Preliminary to the argument, we sketch the treatment of imperatives. The definition of imperatives in Relevance Theory (see Sperber & Wilson 1995 and Wilson & Sperber 1988, 1993) is that they are the descriptions of states of affairs in potential and desirable worlds. Clark (1993), along these lines, analyzes pseudo-imperatives. The main claim in Clark (1993) is that pseudo-imperatives should be treated as ordinary ones. Let us consider the following examples:

- (29) a. Open the window.
b. Come one step closer and I'll shoot. (Clark 1993: 104)

In (29a), the imperative describes that it is desirable and potential that the hearer opens the window. On the contrary, the imperative clause in (29b) communicates that the speaker thinks meta-representatively that the hearer has the thought that the hearer's coming closer is desirable and potential. To summarize, the utterance in (29a) is used descriptively, whereas the utterance in (29b) has an interpretive use. Both of them are examples of ordinary imperatives because they suit the above definition of imperatives in Relevance Theory. However, the problem with this analysis is that ordinary imperatives are divided into two types: one permits NPIs but the other does not, as shown in (26) and (27). Clark (1993) does not offer any semantic distinction between them.

In addition, some imperatives do not seem to describe any desirability, which is one of the features of the definition of imperatives. Let us consider the discourse in (30):

- (30) Life was hard in those days. Say one word out of turn and they'd dock you a week's wages. (Clark 1993: 114)

The speaker in (30) uses an NPI, *one word*, and a past event, neither of which is impeccable in ordinary imperatives. Furthermore, this imperative lacks the notion of desirability, according to Clark (1993). Now, is this a counterexample for the analysis in Clark (1993)? His answer is no. In fact, the pseudo-imperatives containing no desirability are regarded as "genuine" pseudo-imperatives," within Clark (1993). Since the speaker makes no reference to the notion of desirability, it follows that the imperative in (30) is a genuine pseudo-imperative. Still, let us compare (30) with (29b), repeated as (31):

- (31) Come one step closer and I'll shoot.

The utterance in (31) is an example of ordinary imperatives with an interpretive representation, according to the analysis in Clark (1993). Although NPIs co-occur with both of the sentences in (30) and (31), one belongs to genuine pseudo-imperatives and the other is classified as ordinary imperatives. Obviously, such a classification is theoretically unnatural and inconsistent. In fact, Clark (1993) gives merely an explanation to the effect that as for genuine pseudo-imperatives, Relevance Theory does not work well. Thus, an approach from Relevance Theory cannot become a decisive diagnostics for the pseudo-imperatives under discussion.

5.1.3 *Pseudo-Imperatives as NCB*

We now turn to an analysis for pseudo-imperatives, in terms of NC, but there are two points to note here. First, there should be a negative cognitive environment permitting the occurrence of NPIs somewhere in the cognition of pseudo-imperatives. This is obvious from the fact that NPIs can be used. In addition, from the fact that pseudo-imperatives allow stative predicates, it follows that thing-Phenomena, in which stative verbs are typically used, can be involved in the cognition of pseudo-imperatives. These facts being considered, our explanation must meet both of these two demands: the occurrence of NPIs and the involvement of thing-Phenomena in pseudo-imperatives.

Now, let us see how our mechanism works. We return to (29), repeated as (32), and begin by reflecting on the cognitive structure within the speaker:

- (32) a. Open the window.
b. Come one step closer and I'll shoot.

The speaker in (32a) cognizes the event-Phenomenon that the hearer does *not* open the window, and the speaker blocks the NC, as we have stated since the beginning of this paper. What should be noted here is that NPIs cannot be allowed in ordinary imperatives, although a negation, *not*, is included in the speaker's cognition. This implies that negations in Phenomena cognized via NC do not offer negative environments for NPIs. Since NC is the cognition to be blocked in imperatives, it is natural that negations in NC are of no relevance to NPIs, at the level of imperatives, or NCB. In short, the negative elements in NC are not expressions permitting NPIs.

We move on to consider an example of pseudo-imperatives such as (32b). The imperative belongs to pseudo-imperatives, because it is compatible with *one step* (NPI). The imperative in (32b) is uttered in the situation in which the hearer is about to approach the speaker, as Clark (1993) points out. To begin with, we consider two possibilities of NC. First, the speaker in (32b) holds the cognition of the event-Phenomenon that the hearer comes one step closer, and the speaker blocks the NC. Yet, if the speaker had such cognition, he or she would utter the imperative beginning with *don't come*. The speaker, in fact, utters another statement such as (32b), which suggests that the speaker does not have such cognition.

Another possible cognitive structure of the speaker in (32b) is that the speaker cognizes the event-Phenomenon that the hearer does *not* come one step closer, and the speaker blocks the NC. This cognitive structure is different from the first structure in

the content of NC; this structure includes a negative item, while the first structure does not. No negative elements in NC of Phenomena permit the occurrence of NPIs, as we stated in our argument of (32a). Given this, this cognitive structure predicts that it does not allow the occurrence of NPIs. However, the imperative in (32b) is compatible with an NPI, *one step*. This is problematic.

Up to this point, neither approaches work. It appears that we cannot extend the analysis based upon NC to pseudo-imperatives such as (32b), but it is far too early to conclude so. In fact, it is shown below that we retrieve the advantage of our analysis, by a closer introspection of the cognitive structure in the speaker.

The remainder of this subsection examines the applicability of NC to pseudo-imperatives. In (32b), the hearer is about to approach the speaker, as mentioned in Clark (1993). We regard it as the starting point for the cognitive structure in the speaker. As the next step, it is quite natural to assume that the speaker tries to make the hearer give up the cognition of approaching so that the hearer could not realize such a potential action. This indicates that the speaker thinks that the hearer is not aware of not-approaching. The speaker in (32b) urges the hearer to bear in the hearer's mind, the cognition of which the hearer is not yet aware.

Our system correctly accounts for these observations, providing a cognitive motivation for not only ordinary imperatives but also pseudo-imperatives. The cognitive structure of a pseudo-imperative in (32b) is as follows: the speaker cognizes the event-Phenomenon in which the hearer does not cognize the event-Phenomenon that "you," the hearer does not approach the speaker, and the speaker blocks the NC which the speaker holds, as an instantiation of NCB. The important point here is that the cognition of a Phenomenon per se is an event-Phenomenon, as pointed out in 4.1.2. Thus, our analysis provides an account of why NPIs are acceptable only in pseudo-imperatives. Since there is a negative element in the Phenomenon via the hearer's NC, not the speaker's NC to be blocked, this negative element can permit *one step*.

Now, how do we explain (28) and (30), repeated as (33) and (34), respectively?

- (33) What John needs is a bit of motivation. He should try to set up a company of his own. Own his own business and he'll be more inclined to work properly.
- (34) Life was hard in those days. Say one word out of turn and they'd dock you a week's wages.

The speaker (or the writer) in (33), in terms of NC, cognizes the event-Phenomenon that the hearer (or the reader) does not cognize the thing-Phenomenon that the person expressed by *he* does not own his own business. Recall here that the cognition of a Phenomenon is an event-Phenomenon. This is of great significance when we provide an account of why stative verbs and subjects other than the second person are only permitted in pseudo-imperatives.

Let us begin with the case of stative verbs. They are not acceptable in ordinary imperatives, as described in the previous analyses. By the definition of the nature of Phenomena in 4.1.2, the Phenomenon containing a stative verb is a thing-Phenomenon. Accordingly, the question with which we are confronted is why

thing-Phenomena are restricted to pseudo-imperatives. It is true that some pseudo-imperatives include thing-Phenomena, but even concerning such pseudo-imperatives, the Phenomenon to be blocked is still an event-Phenomenon. The reason for this is that according to our proposal, pseudo-imperatives have a nested cognitive structure, that is, a Phenomenon which the hearer cognizes is included within another event-Phenomenon to be blocked. The included Phenomenon can be either a thing-Phenomenon or an event-Phenomenon, since it is not to be blocked, in other words, it is not relevant to NCB. This is why stative verbs in thing-Phenomena are compatible with pseudo-imperatives, which have a meta-representative structure.

With this relation, we can also solve the difficulty regarding subjects other than the second person in pseudo-imperatives. Given the fact that ordinary imperatives fail to allow these subjects, it follows that they cannot occur within the Phenomena to be blocked, that is, event-Phenomena. Under the proposed analysis, pseudo-imperatives include another Phenomenon, in addition to the event-Phenomenon to be blocked. If the subjects at issue are contained in the included Phenomenon, it follows that they do not exist in the event-Phenomenon to be blocked. Hence, even the occurrence of these subjects does not violate our definition of imperatives.

Next, let us return to (34). The speaker (or the writer) in (34) cognizes the event-Phenomenon that the hearer does not cognize the event-Phenomenon that the hearer does not say one word out of turn, and the speaker blocks the NC which the speaker holds. An NPI, *one word*, is acceptable in (34), because the negative element in the Phenomenon via the hearer's NC, not in the speaker's NC to be blocked, can permit the NPI. As a further consequence, our approach provides a straightforward account of how the past event can be stated in pseudo-imperatives such as (34). Since NCB and the utterance co-occur, the Phenomenon to be blocked must not refer to the past. However, a Phenomenon via the hearer's NC, or a nested Phenomenon is not the direct object of NCB. That is why it is possible for such a Phenomenon to refer to the past.

Finally, we emphasize the difference between Clark (1993) and our discussion. We follow the idea of meta-representative cognition, but our idea is different from Clark's claim in its range. We maintain that the meta-representative cognitive structure covers all the imperatives compatible with the elements that are not allowed in ordinary imperatives, such as stative predicates and NPIs. By contrast, Clark's idea is restricted to imperatives with negative interpretation such as (29b), in which an undesirable state of affairs is uttered.

The arguments above prove that our approach is still theoretically defensible for the analysis of pseudo-imperatives. No less importantly, we can account for the occurrence of NPIs, stative verbs, subjects other than the second person, and the past tense, whose occurrences are limited to pseudo-imperatives. The cognitive structure in pseudo-imperatives being brought to light, we can also offer a convincing cognitive or semantic diagnostic for pseudo-imperatives. The cognitive structure in ordinary imperatives is 'NC of an event-Phenomenon and its Block,' on the one hand, and the cognitive structure in pseudo-imperatives is 'NC of an event-Phenomenon that the hearer does not cognize a Phenomenon (whether thing or event) and its Block,' on the other. Note that both are reducible to 'NC of an event-Phenomenon and its Block,' or NCB. What distinguishes one from the other is whether there is a meta-representation.

Thus, our approach can account for an otherwise puzzling set of data. In short, the proposal of the distinction between thing-Phenomena and event-Phenomena in 4.1.2 supports our arguments, at the same time presenting a cognitive refinement of the descriptive analyses of Bolinger (1977) and Davies (1986).

5.2 *Other Consequences*

As we described earlier, from linguistic data of unaccusative imperatives in (15) and (16), we inferred that a thing-Phenomenon could be identified with an event-Phenomenon if and only if both Phenomena are cognitively regarded as contingent or adjacent. There is a piece of supporting evidence for our proposal. Below, we will consider indirect speech acts, compound words, and metonymy, all of which can serve as the immediate consequences of our proposal in section 4.

5.2.1 *Indirect Speech Act* Let us consider typical examples of indirect speech acts:

- (35) a. Can you open the box?
 b. Open this box, please.

It is well known that an interrogative such as (35a) has an illocutionary force of request such as (35b). With respect to this issue, there are two recent studies based on cognitive linguistics.¹⁰ Panther & Thornburg (1998, 1999) deal with indirect speech acts, in terms of the cognition of metonymy. Indirect imperatives have a metonymic relation to direct ones. In a similar way, Yamanashi (2001) analyzes this issue from the viewpoint of Cognitive Grammar. In terms of our reference-point ability (see Langacker 1993), an indirect imperative is regarded as the reference point of a direct imperative. We essentially agree with both of ideas, but the problem is that little attention seems to be paid to the cognition of identification itself, which should be contained somewhere at the level of our cognition. Here, we put an emphasis upon the very cognition of identification, providing a cognitive basis for the cognition of metonymy or reference-point.

To begin with, we need to unveil the nature of the Phenomenon in (35a). Whether someone possesses ability has nothing to do with his or her intention. Therefore, we can say that the Phenomenon about “your” ability to do something is a typical thing-Phenomenon. This correctly predicts that the Phenomenon cannot be used in imperatives, as (36) shows:

- (36) { *Can/*Can’t } open the box!

¹⁰ There are many important analyses such as Searle (1975) or Leech (1983), with respect to indirect speech acts, but we refer only to recent cognitive approaches for the purpose of comparing them with our cognitive analysis.

In the case of (35a), the Phenomenon that the hearer can open the box is a thing-Phenomenon, but the Phenomenon that the hearer opens the box, in turn, is an event-Phenomenon. Both of the Phenomena are closely related; the thing-Phenomenon is a necessary condition for the event-Phenomenon. To put it another way, if “you” cannot open the box, the speaker cannot order “you” to do so. In this sense, both are contiguous. Our claim, then, predicts that the thing-Phenomenon can be regarded as identical to another event-Phenomenon. This suggests that the cognitive structure in (35a) can be ‘NC of an event-Phenomenon and its Block,’ not NC of a thing-Phenomenon and its Block.’ It is obvious that this structure falls within our definition of imperatives, and we can provide an account of how even the utterance in (35a) can share an illocutionary force with imperative forms.

5.2.2 *Compound Words* Next, let us turn to the following compound words:

- (37) a. *te-gaki*
 b. *hand-writing (=a)*

The compound word in question does not mean literally that someone writes letters by his or her hand itself. The letters are written down by a pen or a pencil. However, this does not indicate that a pen writes letters by itself. A transitive or causative action is implied to some degree. As similar examples, *te-nui* (*hand-sewing*), *te-yaki* (*hand-baking*) and so on can be cited. As for all the cases, a kind of instrument covertly intervenes in the process of events. By contrast, the examples in which no instrument is implied are illustrated in (38):

- (38) *te-zukuri* [*handmade*], *te-saguri* [*grope*], *te-zawari* [*feel*] ...

In these examples, human hands themselves serve as an instrument to do something. There is no discrepancy between compound words and their meanings.

With these observations in mind, let us see how they are explained under the framework proposed here. The compound words in (37) consist of an event-Phenomenon where someone conveys a force to a pen or a pencil intentionally and the thing-Phenomenon that some letters are written on the paper. What matters here is that both Phenomena are extremely close to each other in that the event-Phenomenon accompanies the thing-Phenomenon. If we employ the claim proposed in section 4, it follows that we can regard both as identical. This is how we can offer a cognitive account of a potential discrepancy between the form and the meaning such as (37).

There is another example of interest. Consider the following contrasts of compound verbs:¹¹

¹¹ Kageyama (1996: 186) analyzes *tearu* constructions in terms of Lexical Semantics.

- (39) a. e ga kokuban ni kai-tearu
 picture NOM blackboard LOC drawn
 'There is a picture drawn on the blackboard.'
- b. ji ga jozuni kake-teiru
 letters NOM well can-write
 'You can write letters well.'

In what follows, it is shown that we can extend the account of (37) to this issue. Before looking at our analysis, we begin by observing the data. The nature of a Phenomenon, to some extent, is diagnosed by whether the verb in question is compatible with *wazato* (intentionally), or whether it can be used in an imperative, as the following tests illustrate:

- (40) a. wazato kai-tearu
 b. *wazato kake-teiru
- (41) a. *kai-teare!
 b. *kake-teiro!

The predicate in (40a) implies an event-Phenomenon, as shown by the co-occurrence with *wazato*, but strangely enough, the unacceptability of the imperative form in (41a) indicates that the predicate also shows the nature of a thing-Phenomenon. The same tests disclose that the predicates in (40b) and (41b) are absolutely thing-Phenomena. Now, how does our system explain these complicated facts in (40) and (41), in particular, (40a) and (41a)?

We pointed out that a Phenomenon can be construed as identical to another, under the condition of contiguity. Preliminary to the detailed discussion of compound words, let us look at them analytically. The compound verbs in question consist of two verbs, or two components: the component of main verbs, on the one hand, and the component of the following verbs, on the other. We begin by considering the Phenomena encoded by main verbs, *kaku* in (39a) and *kakeru* in (39b). According to our definition of the Phenomenon, a Phenomenon in *kaku* is an event-Phenomenon, whereas a Phenomenon in *kakeru* belongs to a thing-Phenomenon, which involves someone's ability. Next, verbs such as *aru* and *iru* represent a state or an existence, as we can see from the following:

- (42) a. hon ga aru
 book NOM exist
 'There is a book.'
- b. Taro ga niwa ni iru
 Taro NOM garden LOC is
 'Taro is in the garden.'

It is therefore possible to say that a Phenomenon encoded by *aru* or *iru* is a thing-Phenomenon.

We are now ready to analyze compound verbs, *kai-tearu* and *kake-teiru*. First of

all, in the case of *kai-tearu*, the event-Phenomenon where someone draws a picture on the blackboard is immediately accompanied by the thing-Phenomenon in which the picture is drawn. Satisfying the condition of contiguity, this predicts the identification of these two Phenomena. There are two possibilities of understanding. One is that the event-Phenomenon of *kaku* and the thing-Phenomenon of *aru* are regarded as the same, functioning as an event-Phenomenon compatible with *wazato*, a marker of event-Phenomena. The other is that both Phenomena are regarded as the same, functioning as a thing-Phenomenon that does not allow an imperative form. Thus, the double behaviors of *kai-tearu* as illustrated in (40a) and (41a) can be best explained by these two possibilities.

The same does not apply to *kake-teiru*. More specifically, it is difficult to find a contiguous relation above between a faculty (*kakeru*) and an existence (*iru*). This in turn predicts that both Phenomena are not regarded as the same, because the identification requires two Phenomena to be contiguous. Even if such a kind of identification were to happen, no problem would arise with our claim. Since both the Phenomenon of a main verb and the Phenomenon of *iru* belong to thing-Phenomena, there is no possibility that they will function as an event-Phenomenon through identification, unlike *kai-tearu*. This is why *kake-teiru* cannot co-occur with *wazato* as in (40b) and cannot permit imperative forms as in (41b). Our revised approach thus provides a straightforward account of a semantically puzzling complexity in compound words.

5.3 Summary

A unified account of pseudo-imperatives, indirect speech acts, and compound words strongly supports our claim that Phenomena are divided into two types and that a Phenomenon can be regarded as identical to another under a certain condition. To summarize the main point in this section, the division of Phenomena makes it possible for us to provide an account of several features characteristic of pseudo-imperatives in the same way as we treat ordinary imperatives. For example, NPIs, stative predicates, subjects other than the second person, and the past tense are argued in terms of NC. Furthermore, the subsequent two arguments independent of imperatives adequately justify the modification of our cognitive structure in section 4. Specifically, a Phenomenon has two different aspects, according to its nature. The nature lies in the intentionality, which essentially inherits the concept of self-controllability in Kuno (1970). Moreover, these two Phenomena can be regarded as the same under the condition in which they are contiguous.

6 CONCLUSION

In this article, we have investigated our cognitive structure, through the examination of imperatives. Since it is too difficult for us to unveil the human complex cognitive structure directly, we have no choice but to depend upon a model and its verification. This paper, in the spirit of cognitive linguistics, pays attention to the close relation between language and cognition, and proposes a new approach to the cognitive structure in imperatives.

We began by considering psychological features in section 2. According to previous research in the field of developmental psychology, human beings have the following characteristics:

- (A) Human beings have such cognition as permanence or identity toward the outer world, disregarding differences.
- (B) Emotive activity emerges when the cognition of permanence or identity is blocked for some reason.

These notions being exploited as cognitive grounds independent of language, we subsequently posited the following two concepts in (A') and (B') within linguistics:

- (A') Our cognitive ability includes NC, by which we cognize a Phenomenon, a cognitively ordered segment of the outer world.
- (B') Speech acts, especially highly emotive ones, are motivated by the cognition, NCB.

In section 3, on the basis of these notions, we proposed a new approach to the cognitive structure of imperatives. As its immediate consequence, we can provide an automatic solution to the semantic problem concerning negative imperatives. Given the fact that this problem stems from the grammatical distinction between affirmative sentences and negative ones, it follows that our approach, in which such a division is not assumed in the cognitive structure, does not posit the problem that presupposes such a grammatical distinction between affirmative sentences and negative ones.

A closer examination of imperatives in section 4 forced us to elaborate our system, in particular, the concept of Phenomena. Up to this point, we have paid little attention to the nature of Phenomena, but it was shown in this section that there were two different types of a thing-Phenomenon and an event-Phenomenon. This distinction hinges upon the notion of intentionality, but it should not be drawn sharply; we treated it on a scale. We defined less intentional Phenomena as thing-Phenomena, and more intentional as event-Phenomena. In this connection, the Phenomenon involved in the cognition of imperatives is an event-Phenomenon. The original hypotheses are elaborated as follows:

- (A'') a. Our cognitive ability includes NC, by which we cognize a Phenomenon, a cognitively ordered segment of the outer world.
- b. Phenomena consist of two aspects with regard to someone's intentionality; thing-Phenomena and event-Phenomena.

- (B') Speech acts, especially highly emotive ones, are motivated by the cognition, NCB.

In order to verify the validity of the sophistication in (A''), we investigated pseudo-imperatives in subsection 5.1. To begin with, we emphasized the necessity of semantic or cognitive analysis, by showing that only the syntactic view cannot cover the whole data of pseudo-imperatives. We proceeded to introduce the notion of meta-presentational cognitive structure based upon NC. This, in combination with the proposal of two different types of Phenomena, provides a semantic or cognitive account of why the occurrence of NPIs, the subjects other than the second person, and stative verbs is restricted to pseudo-imperatives.

A further consideration of the constraint on peripheral imperatives with unaccusative verbs or ergative verbs showed the necessity of a closer elaboration of (A''); we need to establish the condition in which two Phenomena are identified. A detailed examination of predicates with ergative verbs revealed that a contiguous relation played a crucial role in such identification. The final cognitive structure proposed in this article is illustrated as follows:

- (A'') a. Our cognitive ability includes NC, by which we cognize a Phenomenon, a cognitively ordered segment of the outer world.
 b. Phenomena consist of two aspects with regard to someone's intentionality; thing-Phenomena and event-Phenomena.
 c. Two different Phenomena are to be regarded as the same if and only if they are contiguous.
 (B') Speech acts, especially highly emotive ones, are motivated by the cognition, NCB.

As the immediate consequences of such an elaboration, we looked at indirect speech acts and compound words in subsection 5.2. Each of them appears to belong to distinctive linguistic usages, but we have demonstrated that both can be dealt with in a unitary way. Although two different Phenomena are included in their cognitive structure, they are regarded as the same due to a contiguous relation of two Phenomena. This is reducible to the cognition of (A''c).

Thus, our system proposed in this article has far-reaching consequences, thereby leading to a better understanding of our general cognitive structure. It should be noted here that a careful examination of imperatives could yield crucial insight into the consideration of human cognitive structure. Imperatives, in which our emotive cognition is overtly exemplified, are good linguistic data for cognitive research. In future, we would like to confirm that the idea of NC contributes to a further elaboration and verification of our inner structure, by analyzing not only other features of imperatives but also other human utterances.

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