

SEMANTIC EXTENSION OF THE VERB OF BREAKING IN THAI AND JAPANESE¹

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Abstract

The fact that a lexical item has semantic variations when combined with other linguistic elements is a central issue in lexical semantics. A number of researchers claim that a lexical item has one basic meaning, and that other extended meanings are triggered in context by a process whereby the semantic structure of the lexical item is adjusted in certain details so that it is semantically compatible with its neighboring lexical items. This paper aims to examine how this process actually works as it applies to a transitive verb occurring with subject and object arguments. A study of the Thai transitive verb HAK "break" and its corresponding verb ORU in Japanese is presented. Arguably, all seemingly discrete meanings of HAK are interrelated and so are those of ORU. The basic meaning of each verb corresponds to the most concrete event and is the most cognitively salient. It consists of a number of "facets", which represent different

physical resulting states of an entity undergoing an action denoted by either HAK or ORU. Two mechanisms are found to derive the extended meanings. First, only some facets of HAK and ORU are promoted. Second, HAK and ORU are figuratively interpreted. The other objective of this study is to show semantic differences between HAK and ORU. It is demonstrated in this paper that so-called "corresponding" words in different languages, especially verbs, hardly have exactly the same meaning.

Introduction

The fact that a word form is associated with more than one meaning is recognized as one of the central issues in lexical semantics. This phenomenon has received an increased attention in recent years especially by cognitive linguists and computational semanticists. It also raises a number of theoretical questions, for example, whether a lexical item in question constitutes a case of polysemy or homonymy; in case of polysemy, whether there is a core semantic element unifying all of the seemingly discrete meanings of the word form in question. This paper is another attempt to investigate the relationships between the word form and the meanings it is associated with. In accounting for semantic variations of a lexical item in context, it is claimed by cognitive linguists and computational semanticists that a lexical item has one basic or default sense and that other extended senses are triggered in context. The derivation of the extended senses from the basic sense is implemented by a process whereby the semantic structure of a lexical item is adjusted in certain details to make it semantically compatible with the neighboring lexical items. This process is referred to as "co-composition" by

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Pustejovsky (1995) and as “accommodation” by Langacker (1987). This paper aims to examine in detail how the process of co-composition or accommodation actually works as it applies to a transitive verb occurring in combination with its subject and object arguments. A corpus-based semantic investigation of the Thai transitive verb *hàk* ‘break’ and its corresponding verb *oru* in Japanese is presented in this paper as a case study. This paper will demonstrate that the semantic extension by means of the same mechanism occurs across languages even in typologically different languages such as Thai and Japanese⁴. This paper also aims at confirming the hypothesis that the so-called “corresponding verbs” in different languages, even the ones which express an action as basic as to disjoin something with force, do not have the same range of meanings. This paper shows that the glosses, which are usually represented in English, do not always reflect the accurate meanings of words in languages. In the next section, we will review some theoretical issues that are usually associated with the studying of the relationships between word forms and their meanings.

2. Ambiguity, polysemy and vagueness

The phenomenon in which a word form is associated with more than one meaning often leads to the question of how to categorize the word form in question. The task of categorizing a word form is tantamount to that of characterizing the relationship between the phonological

shape of a word and the meaning(s) it is associated with. This task involves such notions as “ambiguity”, “polysemy” and “vagueness”. These three notions will be examined in detail in this section.

In lexical semantics, the definition of the term “polysemy” involves the distinction between polysemy and ambiguity on the one hand and the distinction between polysemy and vagueness on the other. The term “ambiguity” can be alternatively called “homonymy”. Ambiguity is traditionally defined as a case in which two or more distinct meanings are associated with a given phonological form. Distinct lexemes emerges as a result of semantic distinctness. A classic example of ambiguity is *bank*, which means “financial institution” and “land adjoining a body of water”. Vagueness refers to a case in which non-distinct meanings are associated with a phonological form. The non-distinct meanings can be unified under a single, more general meaning. A standard example of vagueness is *aunt*, which can refer to a father’s sister and a mother’s sister. Thus, ambiguity or homonymy can be defined in terms of separation of meanings whereas vagueness can be defined in terms of unity of meanings. Lyons (1977: 550) and Zwicky and Sadock (1975:2) utilize the notion of lexeme in defining these three terms. That is, lexical ambiguity or homonymy involves two lexemes each of which has a distinct sense; polysemy involves a single lexeme with distinct senses and vagueness involves a lexeme with a single but non-specific and non-distinguished meaning. These definitions thus indicate that polysemy is located halfway between ambiguity and vagueness. As Deane (1988:345) puts it, “Polysemy seems somehow to straddle the border between identity and distinctness”.

⁴ Thai is known as an isolating and head-initial language whereas Japanese is known as an agglutinating and head-final language.

Several cognitively oriented linguists who study the relationships between word forms and meanings come to the same conclusion regarding the demarcation between ambiguity, polysemy and vagueness. For example, Geeraerts (1993) argues that the distinction between vagueness and polysemy is not clear-cut in that "what appear to be distinct meanings from one point of view turn out to be instances of vagueness from another". Tuggy (1993) comes to the same conclusion as Geeraerts regarding the demarcation between these notions. He studies them within the Cognitive Grammar framework (Langacker 1987) and argues that ambiguity and vagueness are located at the opposite ends of a continuum with polysemy located in the middle. In discussing linguistic categorization, Taylor (1995) also states that there is a fuzzy boundary between polysemy and ambiguity, which he refers to as homonymy, because relatedness of meaning is both a gradient and subjective notion. Thus, according to these linguists, the notions of ambiguity, polysemy, and vagueness are no longer seen as classical categories with fixed boundaries. Rather, they are regarded as more or less unfixed points located on a continuum. Lakoff (1987) provides a slightly different definition of the term polysemy. According to Lakoff, all instances of sense variations are a case of polysemy even though some of them are so close that we cannot notice the difference in meaning. Lakoff points out a number of weaknesses of the Classical Theory of categorization and proposes the radial approach⁵ to categorization.

⁵ The prototype approach to categorization postulates two types of category, namely, the prototype and radial categories. The prototype is the most central or typical instance of a

In summary, there seems to be an agreement among linguists working within the cognitive linguistic framework that there are blurred distinctions between ambiguity, polysemy and vagueness. This is why this paper does not aim to determine whether the association of a transitive verb form associated with a number of meanings constitutes a case of polysemy, ambiguity, homonymy or vagueness. Rather, it aims at analyzing how the extended meanings of the verb emerge in context. In the next section, we will present the meanings of the verbs *hàk* and *oru* which are apparently discrete and independent from one another. They result from a preliminary semantic analysis of the verbs occurring in combination with different subject and object arguments.

3. Semantic variations of the verb of breaking in Thai and Japanese

Before we embark on a semantic analysis of the Thai and Japanese verbs under investigation, it is necessary to review the fundamental concepts of semantic variations of a word form as set forth by Cruse (2000) as below.

3.1 Semantic variations of a word form in context

The meaning of a word form is elusive because it can vary from context to context. Semantic variations of a word form can be very gross with no apparent connection between them as in *They moored the boat to the bank* and *He is the manager of a local bank*, through different but intuitively related meanings, as in *My*

category. Radial categories are extensions of the prototype. They are less typical and may differ from the prototype in one or more features.

father's firm built this school (school here refers to the building) and *John's school won the Football Charity Shield last year* (school here refers to the people in the school), to hard-to-distinguished variations, as in *Alice can walk already and she's only 11 months old* and *I usually walk to work* (Cruse 2000: 105). In the case of *bank*, there is a sharp semantic boundary between the readings. In the case of *walk*, a semantic boundary between the readings is hardly perceptible. The case of *school* lies in the middle. The sharper a semantic boundary between two readings is, the more discrete or distinct the readings will be. According to Cruse (2000), the highest degree of distinctness coincides with antagonism. Antagonistic readings of a word form compete with one another in the speaker's mind. It is impossible for the speaker to focus his/her attention on antagonistic readings at once. Antagonistic readings are therefore fully discrete, such as the two readings of *bank* in the examples above. It is always the case that all word forms have semantic variations which can be gross or subtle to varying degrees when they co-occur with other word forms in sentences. According to Cruse (2000), of all meanings of a word form, the meaning which would come to mind in the absence of any context is called "the default meaning". Some meanings are "established" because they have a high degree of entrenchment⁶ in the

speaker's mind whereas some others are non-established. The meaning of *walk* as standing up and walking unaided in *Alice can walk already and she's only 11 months old* exemplifies the non-established meaning (Cruse 2000: 105). The meanings of a word form can be semantically related or arbitrary. The latter case is the case of ambiguity, such as the meanings of *bank* in the examples above. As for the former case, it has been pointed out that there are varying degrees of semantic relatedness. Furthermore, individual speakers differ in their judgements of relatedness.

Cruse (2000) postulates three types of semantic variations of a word form which fall short of full sensehood but still retain a certain degree of discreteness. The three types of semantic variations are *facets*, *perspectives* and *subsenses*. Facets are fully discrete but non-antagonistic readings of a word. They are characteristically of distinct ontological types. However, they do not represent distinct concepts. Rather, they are fused into a single conceptual unit. For example, the word *book* displays two facets because it can refer either to a physical object or to the text it embodies. Perspectives also show a certain degree of discreteness without antagonism. However, they are less discrete and less autonomous than facets. Perspectives represent different views of looking at an entity, such as looking at it from in front, from the sides, from behind, from on top, etc. These different views are perceptually distinct but are unified by the mind into a single conceptual unity. One of the examples given by Cruse (2000: 117) is *house*, which can be thought of as an example of

⁶ The notion of entrenchment was first introduced by Langacker (1987) to explain how new expressions are formed and remain deeply rooted in language. According to Langacker (1987), there is no sharp boundary between units and nonunits. Linguistic structures are conceived as falling along a continuum scale of entrenchment in cognitive organization. A novel structure with repeated use becomes progressively entrenched to the point of becoming a unit. Units are variably

entrenched depending on the frequency of their occurrence.

a particular architectural style, as a dwelling, as a piece of property or as a piece of construction work. Each meaning is argued to represent a perspective of the word *house*. Subsenses are semantic variations which show a lower level of both discreteness and antagonism than full senses. An example given by Cruse (2000: 119) is *knife*, which has many readings. It can be thought of as a tool, a weapon, a surgical instrument or cutlery.

The three types of semantic variations postulated by Cruse (2000) are not full senses of words nor subtle variations within a single sense resulting from modulation⁷. Full senses of words are both fully antagonistic and fully discrete whereas subtle variations within a single sense are neither. An example of the subtle variations within a single sense is *baby* which can refer to either a babyboy or a babygirl. It is obvious that facets, perspectives and subsenses lie between the two extremes of full senses and subtle variations. In the next section, we will identify meanings of the verb of breaking in Thai and Japanese when it occurs in combination with other words in sentences. It should be noted that the three types of semantic variations postulated by Cruse are not distinguished from one another in many cases. Even his example of *house* is debatable because it can be argued to display facets, not perspectives. Therefore, the distinctions between these three types of semantic variations are dubious. In this paper, we aim at identifying semantic variations of the verb of breaking in Thai and Japanese by using the criteria that they display a certain degree of discreteness and relatedness

with one another. It is therefore possible that some postulated readings are intuitively felt to be full senses whereas some others are not. However, all readings are arguably not subtle variations of the word arising from modulation. It should be noted that most examples given by Cruse to illustrate his three types of semantic variations are nouns. This paper is an attempt to apply his notions of semantic variations to verbs across languages.

3.2 Semantic variations of the verb of breaking in Thai and Japanese

In carrying out a linguistic analysis of a non-English language, it is customary to use English as the metalanguage in expressing the meanings of the non-English data. However, it should be borne in mind that English glosses and translations do not express the exact meanings of the words, phrases, and sentences under investigation as will be pointed out below. The present study is even more complicated because two non-English words which are supposedly corresponding ones are examined. The English word, namely, *break* is inevitably used as the gloss for these two non-English words. In case of Japanese, it is noted that there are two Japanese words which apparently correspond to *break* in English, i.e. *kowasu* and *oru*. For many people, the word *kowasu* might come to mind first. However, if we semantically compare *hàk* in Thai and *kowasu* in Japanese on the one hand and *hàk* and *oru* on the other, it turns out that *hàk* in Thai is closer in meaning to *oru* than to *kowasu* in Japanese. *Hàk* as a transitive verb in Thai is defined as "fold a hard entity with sudden or violent force in such a way that it becomes disjointed or reduced to pieces". *Kowasu* in Japanese is defined as "change

⁷ See the definition of "modulation" in the next section on relatedness between semantic variations.

the shape of something and make it useless or dysfunctional by using force". On the other hand, *oru* is defined as "apply force to a straight line or a flat object at a point or a line and make two (or more) lines or flat objects". Therefore, *oru* is chosen as the corresponding word of *hàk* even though there are still some differences in meaning between them. All Thai-Japanese dictionaries also provide *oru* as the equivalent of *hàk*. Despite some differences between *hàk* and *oru*, the same gloss, i.e. 'break', is used for both *oru* and *hàk* for convenient purposes. It should be kept in mind that there are differences in meaning between *hàk* in Thai, *oru* in Japanese and *break* in English as will be pointed out below.

3.2.1 Semantic variations of *hàk* 'break' in Thai

In examining the corpus citations of this transitive verb in Thai, it is found that this verb, which occurs in combination with different noun arguments, designate a multiplicity of meanings which are discrete to different degrees. It should be noted that the meanings that are listed below result from a preliminary semantic analysis. The meanings of *hàk* listed below represent a tentative list of meanings of this verb which exhibit discreteness and relatedness to varying degrees. It is inevitable that the identification of meanings involves a certain degree of subjectivity on the analyst's part. The meanings of *hàk* 'break' are as follows.

1.For X to disjoin or reduce something to pieces with sudden or violent force

Example:

(1) <i>khǎw</i>	<i>hàk</i>	<i>kìymáy</i>	<i>pen</i>
<i>sǎw</i>	<i>thôn</i>		
he	HÀK	branch	as
two	piece		

'He broke the branch into two pieces.'

2.For X to deduct money, expenses, tax

Example:

(2) <i>phǎm</i>	<i>dây</i>	<i>kamray</i>	<i>náy</i>
<i>mâak</i>	<i>lǎj</i>	<i>hàk</i>	<i>khâacháycaay</i>
<i>lææw</i>			
I	get	profit	little
very	after	HÀK	expenses
already			

'I got only a small amount of profit after deducting the expenses.'

3.For X to harvest, to collect ears of corn

Example:

(3) <i>nít</i>	<i>òk</i>	<i>pay</i>	<i>hàk</i>
<i>khâawphôot</i>	<i>thîi</i>	<i>râi</i>	<i>tææcháw</i>
Nít	exit	go	HÀK
corn	at	field	early

'Nit went out to harvest corn very early.'

4.For X to take away marks in an examination

Example:

(4) <i>khruu</i>	<i>hàk</i>	<i>khanææn</i>
<i>mâak</i>	<i>kænpay</i>	
teacher	HÀK	marks
many	too	

'The teacher took away too many marks.'

5. For X to turn away the steering wheel

Example:

- | | | |
|-----------------------|------------|-------------------|
| (5) <i>khonkhàp</i> | <i>hàk</i> | <i>phuaymalay</i> |
| <i>yàaykràthanhăñ</i> | | |
| driver | HÀK | steering wheel |
| abruptly | | |

'The driver abruptly turned the steering wheel.'

6. For X to crack the knuckles

Example:

- | | | |
|-------------------------|-------------|------------|
| (6) <i>dèkphuuchaay</i> | <i>khon</i> | <i>nii</i> |
| <i>chôp</i> | <i>hàk</i> | <i>níw</i> |
| boy | classifier | this |
| like | HÀK | finger |

'This boy likes to crack the knuckles.'

7. For X to cut prices

Example:

- | | | | |
|-----------------|------------|-------------------------|----------------|
| (7) <i>ráan</i> | <i>nii</i> | <i>hàk</i> | <i>raakhaa</i> |
| <i>sínkháa</i> | <i>loj</i> | <i>yáaymáynáachitúa</i> | |
| shop | this | HÀK | price |
| products | descend | | unbelievably |

'This shop reduced the prices of its products unbelievably.'

8. For X to conquer a town

Example:

- | | | | |
|----------------------|------------|-----------------|-------------|
| (8) <i>khâasutik</i> | <i>hàk</i> | <i>mutay</i> | <i>khâw</i> |
| <i>maa</i> | <i>dây</i> | <i>phaaynay</i> | <i>nun</i> |
| <i>duan</i> | | | |
| enemy | HÀK | town | enter |
| come | can | within | one |
| month | | | |

'The enemies could conquer the town in one month.'

9. For X to turn light to a different direction; to refract

Example:

- | | | | |
|----------------------|--------------|-------------|-------------|
| (9) <i>lenkæwtaa</i> | <i>thiam</i> | <i>khǎj</i> | <i>khǎw</i> |
| <i>hàk</i> | <i>sæxɛj</i> | <i>dây</i> | <i>dii</i> |
| <i>mâak</i> | | | |
| eye lens | artificial | of | his |
| HÀK | light | can | good |
| very | | | |

'His artificial eye lens can refract light very well.'

10. For X to disparage; to slight; to belittle someone

Example:

- | | | | |
|-----------------|-------------------|------------|---------------|
| (10) <i>kææ</i> | <i>klâa</i> | <i>hàk</i> | <i>liam</i> |
| <i>chǎn</i> | <i>ruŭtu</i> | | |
| you | dare | HÀK | corner, angle |
| I | question particle | | |

'Don't you dare belittle me!'

11. For X to betray someone, to doublecross someone

Example:

- | | | | |
|------------------|------------|----------------|-------------|
| (11) <i>khǎw</i> | <i>pen</i> | <i>khon</i> | <i>chôp</i> |
| <i>hàk</i> | <i>lǎj</i> | <i>phutuan</i> | |
| he | be | person | like |
| HÀK | back | friend | |

'He is the kind of person that tends to deceive his friends.'

12. For X to break one's heart, to discontinue a romantic relationship with someone

Example:

(12) <i>khǎw</i>	<i>tàt</i>	<i>rák</i>
<i>hàk</i>	<i>sawàat</i>	<i>thəə</i>
<i>yàaŋmâypranîi</i>		
he	cut	love
HÀK	romantic love	she
without sympathy		

‘He ended a romantic relationship with her without sympathy.’

13.For X to force oneself to get rid of one’s feeling toward something/someone

Example:

(13) <i>thəə</i>	<i>tôŋ</i>	<i>hàk</i>	<i>cay</i>
<i>yàakhàat</i>	<i>càak</i>	<i>săamii</i>	
she	must	HÀK	heart
divorce	from	husband	

‘She had to force herself to divorce her husband.’

14.For X to force someone

Example:

(14) <i>khǎw</i>	<i>hàk</i>	<i>khəə</i>	<i>súu</i>
<i>wǎæn</i>	<i>nay</i>	<i>raakhaa</i>	<i>thùuk</i>
<i>càak</i>	<i>chǎn</i>		
he	HÀK	neck	buy
ring	in	price	cheap
from	I		

‘He forced me to sell him a ring at a low price.’

15.For X to embarrass someone

Example:

(15) <i>khǎw</i>	<i>hàk</i>	<i>nâa</i>	<i>phǒm</i>
<i>klaaŋ</i>	<i>thîiprâchum</i>		
he	HÀK	face	I
middle	meeting		

‘He made me lose face in the meeting.’

We may make some observations of the meanings of *hàk* listed above as follows. First, some meanings of *hàk* are intuitively felt to be distinguished from each other but yet related to each other in some way. Secondly, some meanings are perceived as literal whereas some others are perceived as metaphoric, which result from figurative interpretation. Thirdly, many combinations of *hàk* with the direct object nouns are apparently idiomatic. Therefore, the occurrences of *hàk* with its direct object nouns in these cases seem to be arbitrary. We will argue later that those occurrences of *hàk* and their direct object nouns are motivated and that all meanings of *hàk* are interrelated. In the next section, we will discuss semantic variations of *oru* in Japanese.

3.2.2 Semantic variations of *oru* ‘break’ in Japanese

As in the case of *hàk* ‘break’ in Thai, the transitive verb *oru* which co-occurs with different noun arguments exhibit a diversity of meanings. A preliminary, corpus-based semantic analysis of *oru* gives rise to a tentative list of meanings as follows.

1.For X to apply force to a straight line or a flat object at a point or a line and make two (or more) lines or flat objects

Examples :

(16) <i>Boo-o</i>	<i>ni-hon-ni</i>	<i>ot-te</i>
<i>hasi-tosite</i>	<i>ukat-ta</i>	
stick-ACC	two-CL-into	ORU-ing
chopsticks-as	use-PAST	

‘(I) broke the stick into two and used them as chopsticks.’

- (17) *Siitu-o huta-tu-ni*
ot-te simat-ta
 sheets-ACC two-CL-in
 ORU-ing stow away-PAST

'(I) folded the bed sheets in two and stowed them away.'

2. For X to count (by bending fingers)

Example:

- (18) *Kare-wa yubi-o ot-te*
10 kazoe-ta
 he-TOP finger-ACC ORU-ing
 10 count-PAST

'He counted (up to) 10 by bending his fingers.'

3. For X to sit down (by bending one's legs at the knees), to come to a halt, to give up doing something

Examples:

- (19) *Uma-wa totuzen moro-hiza-o*
ot-ta
 horse-TOP suddenly both-knee-ACC
 ORU-PAST

'The horse suddenly knelt down/sat down (by bending its both knees).'

- (20) *Kare-wa hasiri-tukare-te*
hiza-o ot-ta
 he-TOP run-get tired-ing
 knee-ACC ORU-PAST

'He got tired from running and came to a stop.'

- (21) *Katu made hiza-o oru*
wakeniwaikanai
 win till knee-ACC ORU
 cannot

'I cannot give up and stop fighting till I win.'

4. For X to surrender, bow (by bending oneself at the waist)

Example:

- (22) *Inaka-no wakazoo-ni*
kosi-o oru ki-ni
nar-anai.
 country-GEN youngster-to
 waist-ACC ORU feeling-in
 become-not

'(I) don't feel like obeying/bowing to the youngster from the countryside.'

5. For X to interrupt (i.e., to stop something in the middle)

Example:

- (23) *Kyuugeki-na en-daka-ga keiki-*
kaihuku-no kosi-o oru daroo
 sudden yen-high-NOM economic-
 recovery-GEN waist-ACC ORU will

'The sudden rising of yen will probably interrupt the economic recovery.'

6. For X to pluck, to break off, pick up (flower)

Example:

- (24) *Kare-wa kirei-na hana-o*
ot-te atume-ta
 he-TOP beautiful flower-ACC
 ORU-ing collect-PAST

'He plucked and collected beautiful flowers.'

7. For X to destroy, make something dysfunctional

Example:

- (25) *Kare-wa matti-no ziku-o*
ot-te sute-ta
 he-TOP match-GEN stick-ACC
 ORU-ing throw away-PAST

'He broke the matchsticks and threw them away.'

8. For X to end one's literary career (by breaking one's tool)

Example:

- (26) *Kare-wa 40-sai-de*
hude-o ot-ta yoo-da
 he-TOP 40-years old-at
 writing.brush-ACC ORU-PAST appears

'It appears that he ended his literary career at 40 years old.'

9. For X to make efforts

Example:

- (27) *Kare-wa musuko-no seikoo-no*
tame-ni hone-o ot-ta
 he-TOP son-GEN success-GEN
 purpose-for bone-ACC ORU-PAST

'He made efforts for his son's success.'

10. For X to return (a phone call)

Example:

- (28) *Dewa, ori-kaesi odenwa*
simasu
 well, ORU-returning phone
 will do

'Well, (I) will return (your call).'

11. For X to give in/stop turning a deaf ear (to other people's opinion)

Example:

- (29) *Tokiniwa ga-o oru*
koto-mo hituyoo-da
 sometimes self-ACC ORU
 to-also necessary-be

'Sometimes it is necessary to give in (to somebody else' opinion).'

12. For X to create (folded paper)

Example:

- (30) *Kanozyo-wa zyoozu-ni*
turu-o oru
 she-TOP well-in
 crane-ACC ORU

'She folds (origami) crane very well.'

Some observations about the postulated meanings of the Japanese verbs above can be made as follows. Firstly, one may find that some meanings are too broad and consist of at least two distinct meanings, such as the first, the third, the sixth, and the seventh meanings. However, we argue that these meanings constitute single meanings of their own. This is evidenced by the fact that the English translations corresponding to each of these uses of *oru* are semantically close to one another. It just happens that English does not have a single verb which corresponds to *oru* with each of these uses. Secondly, some meanings may be perceived to be fully discrete, fully antagonistic and deserve the status of full sensehood, not merely semantic variations, such as the fourth, the ninth, and the eleventh meanings. We will argue below that these meanings are metaphoric and that they extend from the basic meaning.

4. Relatedness between semantic variations

In this section, relatedness between the meanings of *hāk* and of *oru* as postulated in the sections above will be accounted for in terms of Cruse (1986)'s principle of lexical semantics and Cruse (2000)'s principle of contextual variability of word meaning. According to Cruse (1986), the meaning of a word form seems to be infinitely variable and is dependent on the context in which the word form appears even though the syntactic context remains the same. However, discrete units of meaning can be identified which are stable in some ways across contexts. These discrete units of meanings are referred to as "sense" by Cruse. Cruse (2000) states that there are three ways in which the meaning of a word form can vary according to contexts, namely, *modulation*, *selection* and *coercion*. In the case of modulation, a single meaning can be modified infinitely by different contexts. Each context emphasizes a certain semantic trait while obscuring or suppressing others. The semantic variation caused by modulation is continuous and fluid. Modulation gives rise to various meanings of a word form of varying degrees of semantic relatedness. Thus, modulation can be defined as variations within a single meaning. Modulation corresponds to Lakoff's notion of polysemy. Modulation is exemplified below.

Examples from Cruse (2000: 121-122)

(31) Our maths **teacher** is on maternity leave.

(32) The **coffee** burnt my tongue.

(33) The children formed a **circle** round the teacher.

In (31), the word form *teacher* refers to a female teacher. In (32), the word form *coffee* refers to hot coffee. The word form *circle* in (33) does not refer to a geometrically exact circle, which is the central, prototypical meaning of this word form. Rather, its meaning is vague in that it covers a range of possible dispositions of the children and that it is not clear what arrangements are excluded. Examples (31) and (32) illustrate semantic variations in which the central meanings of the word forms are augmented. On the other hand, example (33) illustrates a semantic variation in which the central meaning of the word form is impoverished.

In the case of selection, the semantic variation proceeds in discrete jumps rather than continuously. A word form typically incorporates a bundle of meanings. For example, the word form *book* may refer to a physical object or the text it embodies. Another example is *house* which can be used to refer to a place to live in, a piece of property, an example of architectural style or a piece of construction work (Cruse 2000: 117). Selection operates by suppressing the readings which give rise to some sort of semantic clash with the context. The reading which is compatible with the context will be selected.

It sometimes happens that no established meanings of a word form is compatible with the context. Because speakers are supposed to convey an intelligible message, this will trigger a search for a reading that is compatible with the context by means of meaning extensions such as metaphor or metonymy.

It is now evident that semantic variations of a word form does not occur in isolation from its syntagmatic context. In addition to Cruse, two other major linguists also discuss the effects of syntagmatic context on the meaning of a word form, namely, Langacker (1987) and Pustejovsky (1995). Langacker (1987) claims that a composite structure or, in other words, a complex category, not only requires a simple syntagmatic combination of linguistic components, but also a process whereby a semantic structure is adjusted in certain details to make it semantically compatible with its context. An example given by Langacker is the verb *run*. The meaning of *run* must be adjusted in certain respects as it occurs in combination with humans as its subject, and then extends to four-legged animals such as horses, dogs, and cats. This process is called “accommodation” by Langacker. The other linguist who discusses the effects of context on the meaning of a word form is Pustejovsky (1995). In discussing the theory of Generative Lexicon, Pustejovsky (1995) aims at creating a computational system which can capture the generative nature of lexical creativity and sense extension. According to Pustejovsky, the phenomenon in which the meaning of a word form varies in different syntagmatic contexts results from a generative mechanism called “co-composition”. It is thus the co-composition which operates on the basic meaning of a word form by making reference to the semantics of the co-occurring nouns to produce contextualized meanings of a word form. We can see that Cruse, Langacker and Pustejovsky, have the same opinion that the meaning of a word form can vary as it is combined with different arguments even though all of them use different terms to refer to the same phenomenon. It is noted that the terms “accommodation” as

defined by by Langacker (1987) and “co-composition” as defined by Pustejovsky (1995) each cover the three types of contextual variability of word meaning postulated by Cruse, namely, modulation, selection and coercion. However, none of them discusses in detail the exact process of meaning extension. We will examine this process further by using the verb of breaking in Thai and Japanese as a case study.

4.1 Relatedness between semantic variations of *hàk*

In this section, we will analyze the relatedness between the meanings of the verb *hàk* postulated above. The first meaning of the verb is the most basic because it is the most semantically neutral and require minimal contexts. The basic meaning has a privileged status because it corresponds to the most concrete event, which is readily accessible to intuition and which has the highest degree of entrenchment and cognitive salience in Langacker’s sense. It should be noted that the physical action denoted by this verb which corresponds to its basic meaning, namely, “to disjoin or reduce something with sudden or violent force”, brings about certain necessary consequences or resulting states which befall the broken entity. That is, the broken entity becomes deformed, destroyed or dysfunctional and smaller in size. Last of all, a path formed by a straight and linear entity becomes deviated as a result of breaking. All of these four semantic elements are incorporated in the basic meaning of the verb *hàk*. The term “semantic trait” will be adopted in this study to refer to these four elements which are extended in different ways from an action of physically breaking something. In order for the basic meaning of the verb *hàk* to obtain, its

direct object argument must have certain properties. That is, the entity indicated by this argument must be concrete, hard, has a potential to be useful or serve some purpose and can be perceived to form a path. An entity having these properties can be considered a prototypically breakable object. We can see that the verb *hàk* needs an appropriate syntagmatic context, namely, the presence of the direct object argument with certain semantic properties, so that the basic meaning of the verb will obtain. This corresponds with Cruse's statement that the meaning of a word is dependent on its context. The other meanings of the verb are arguably extended from the basic one in some way. The fourteen extended meanings of *hàk* can be classified into three types as follows.

1. *The first type of extended meaning*

The first type of extended meaning is expressed by *hàk* occurring in combination with its nonprototypical direct object argument. For example, the entities indicated by nonprototypical direct object arguments are nonphysical, or physical but not hard and not able to form a path. This type of extended meaning consists of seven meanings as below. Please note that the verb *hàk* is not given an English gloss but will be represented as HÀK to prevent confusion.

- (a) The second meaning :
to deduct money, expenses, tax.
Example: *hàk khâachâycaay* 'HÀK expenses.'
- (b) The fourth meaning:
to take away marks in an examination.
Example: *hàk khanææn* 'HÀK marks.'

- (c) The seventh meaning :
to cut prices.
Example : *hàk rakhaa* 'HÀK prices.'
 - (d) The eighth meaning :
to conquer a town.
Example : *hàk muan* 'HÀK a town'
 - (e) The ninth meaning :
to refract light.
Example: *hàk sææŋ* 'HÀK light.'
 - (f) The twelfth meaning :
to break one's heart, to discontinue a romantic relationship with someone.
Example: *hàk sawàat* 'HÀK a romantic relationship with someone.'
 - (g) The thirteenth meaning :
to force oneself to get rid of one's feeling toward something/someone.
Example : *hàk cay* 'HÀK the heart.'
- We can see that most entities indicated by the direct object arguments of *hàk* in the examples above are nonprototypical direct object of this verb in that they are nonphysical objects. The extended meanings of this type are derived from semantic interaction between the verb *hàk* and its nonprototypical direct object arguments called "accommodation" by Langacker or "co-composition" by Pustejovsky. It should be noted that the verb *hàk* can incorporate all of the four semantic traits mentioned above only in the case that its direct object argument is prototypically breakable object. In the case that its direct object argument is semantically nonprototypical, the meanings of the verb *hàk* will revolve around only one of the four semantic traits because the nonprototypical direct object of *hàk* promotes some semantic trait of

hàk whereas demotes some others. The direct object arguments of *hàk* indicating (a) money or expenses as in the second meaning 'to deduct money', (b) marks in an examination as in the fourth meaning 'to take away marks', and (c) price as in the seventh meaning 'to cut prices', promote the semantic trait that the size of a broken entity becomes smaller. The direct object arguments of *hàk* indicating (a) the steering wheel of a car as in the fifth meaning 'to turn away the steering wheel of a car', and (b) light as in the ninth meaning 'to refract light', promote the semantic trait that a broken entity becomes deviated. The direct object arguments of *hàk* indicating (a) town as in the eighth meaning 'to conquer a town', and (b) love as in the twelfth meaning 'to end a romantic relationship with someone', and (c) heart as in the thirteenth meaning 'to force oneself to get rid of a feeling toward something/someone' promote the semantic trait that a broken entity becomes destroyed.

In short, this type of extended meaning is expressed by *hàk* occurring in combination with nonprototypically breakable objects. It is not possible to physically break the objects of this type. These extended meanings result from semantic interaction between the verb *hàk* and its direct object arguments because the nonprototypically breakable objects promote only one of the four semantic traits while suppressing the others.

2. The second type of extended meaning

The extended meanings of this type are indicated by idiomatic expressions containing *hàk* as follows.

- (a) The tenth meaning :
to disparage, to belittle someone.

Example : *hàk liam*, literally, 'HÀK an angle.'

- (b) The eleventh meaning :
to betray someone, to doublecross someone.

Example : *hàk lăy*, literally, 'HÀK the back.'

- (c) The fourteenth meaning :
to force someone.

Example : *hàk khoo*, literally, 'HÀK the neck.'

- (d) The fifteenth meaning :
to make somebody lose face.

Example : *hàk năa*, literally 'HÀK the face'.

It should be noted that the entities indicated by the direct object arguments of the verb *hàk* above are NOT nonprototypical entities for an action of breaking something physically because they are concrete and linear entities which are hard and can form a path. However, the literal meanings of these expressions are pragmatically odd because the entities indicated by the direct object arguments are not the things which we typically break. We can see that most of these objects above are body parts. Therefore, the literal meanings of all of the four expressions above must be interpreted idiomatically in order to obtain the intended meanings. The literal meanings of the verb phrases above are important in that they motivate the idiomatic meanings of the phrases. For example, the word *liam* 'angle' in the tenth meaning must be interpreted metaphorically as trickiness, canniness or shrewdness. The angle and these abstract entities are common in that they are perceived as something pointed. To break an angle is to destroy an angle,

which entails the elimination of pointedness. To get rid of pointedness in this case is metaphorically interpreted as to get rid of somebody's trickiness, caniness or shrewdness. This action implies the action of disparaging or belittling somebody, which is the intended meaning of this phrase. In the fifteenth meaning, the word *nâa* 'face' in the Thai culture is associated with honor and dignity. To break the face in this case is to destroy one's honor and dignity, which can suggest the meaning of making someone lose face.

Notice that the process of accommodation and co-composition do not play as crucially a role in obtaining the second type of extended meaning as they do in obtaining the first one. It should be noted that the direct object arguments of *hàk* expressing the first type of extended meaning still retain their literal meanings. They "impose" their meanings upon the verb, which gives rise to semantic variations of the verb.

3. The third type of extended meaning

The extended meanings of the third type include the following meanings.

(a) The third meaning :

to harvest, to collect (ears of corn).

Example : *hàk khâawphôot*, literally 'HÀK corn.'

(b) The fifth meaning :

to turn the steering wheel.

Example : *hàk phuaymaalay*, literally 'HÀK the steering wheel.'

(c) The sixth meaning :

to crack the knuckles.

Example : *hàk níw*, literally 'HÀK fingers.'

The three extended meanings above are derived from another kind of semantic extension, namely, inferencing. It should be noted that the literal meanings of the verb phrases are pragmatically possible although they do not occur frequently in discourse. However, it is often the case that the context of situation of these verb phrases occurring in real utterances is the factor which gives a clue that they must not be interpreted literally. Rather, inferencing must be performed on the literal meanings of these verb phrases. Real-world knowledge must also be used in obtaining the intended meanings which are called "implicational inferences" or "implicatures". These implicatures are based on either all of the four semantic traits of the physical action of breaking such as in the third meaning 'to harvest corn', or only one of the four traits of this action such as in the remaining two meanings. However, the phrase *hàk khâawphôot* does not simply convey the physical action of breaking ears of corn. The context of situation might indicate that one physically breaks ears of corn as an action of harvesting or collecting ears of corn from a cornfield. Another example is the phrase *hàk níw* which literally means 'break fingers'. The literal meaning is perfectly fine. However, the meaning 'to crack the knuckles' will be found more frequently in discourse than the literal meaning. The meaning 'to crack the knuckles' is based on the semantic trait that the paths which the fingers form are deviated. In this meaning, the fingers are not reduced to pieces. In short, the three verb phrases are characterized by the fact that they express both the literal meanings and the implicatures. Real-world knowledge and the context of situation play a crucial role in arriving at the intended interpretation. It is obvious that the process of accommodation or co-

composition applies so that the intended meanings of *hāk* will obtain.

In short, there are three types of extended meaning of *hāk*. The first type of meaning of *hāk* obtains in the case that the entity indicated by the direct object is not a prototypically breakable entity. The second type of extended meaning of *hāk* is a part of the idiomatic interpretation of the verb phrase. The object indicated by the direct object is not the thing that we typically break even though it is concrete, hard and has a potential to form a path. The third type of meaning of *hāk* is derived by inferencing. In sum, it is apparent that the basic meaning of a verb has quite a complex conceptual structure. It is apparent that the direct object arguments of the verb play a crucial role in the interpretation of the verb especially in the first and the third types of extended meaning. We can see that all of the seemingly unrelated meanings of *hāk* are actually related with one another. Most meanings are found to extend in different ways from the basic one.

4.2 Relatedness between semantic variations of *oru*

The first meaning of *oru* is obviously the most basic because it is the first meaning which comes to mind in isolation of context. It also corresponds to a concrete event. The physical action of applying force to a straight line or a flat object at a point or a line and making two or more lines or flat objects brings about a number of consequences as follows. An affected linear object may become destroyed or dysfunctional. In addition, a path formed by the affected object becomes deviated. These consequences are likely to take place. There may be other consequences

which probably take place. The affected entity may become separated into two or more pieces. In addition, a new entity such as a paper crane may result from the action of folding (paper). All of these consequences called "semantic traits" in this paper are incorporated in the basic meaning of *oru*. In order for the basic meaning of *oru* to obtain, the noun functioning as its direct object must have certain properties. That is, it must be either linear or flat. In addition, it must not be too hard to modify its shape with one's hands. The other meanings of *oru* are argued to extend from the basic meaning in some way. The ten extended meanings of *oru* can be classified into subtypes as follows.

1. The first type of extended meaning

The meanings which are classified as the first type of extended meanings are as follows.

- (a) The second meaning:
to count (by bending fingers).

Example: *yubi-o oru* 'finger-ACC ORU'

- (b) The third meaning:
to sit down (by bending one's legs at the knees), to come to a halt, to give up doing something.

Example: *hiza-o oru* 'knee-ACC ORU'.

- (c) The fourth meaning:
to surrender, bow (by bending oneself at the waist).

Example: *kosi-o oru* 'waist-ACC ORU'

- (d) The fifth meaning:
to interrupt.

Example: *keiki-kaihuku-no kosi-o oru*
 'economic-recovery-GEN waist-ACC
 ORU'

- (e) The tenth meaning:
 to return a phonecall.

Example: *ori-kaesi denwa-suru* 'ORU-
 back phone'

- (e) The eleventh meaning:
 to give in/ stop turning a deaf ear (to
 other people's opinion).

Example: *ga-o oru* 'self-ACC ORU'.

This type of extended meaning is expressed by *oru* occurring with the direct object argument expressing a body part or the body except the tenth meaning. The body parts expressed by the direct object arguments of *oru* either have the linear shape, which forms a path, or are parts of the body parts which have the linear shape, such as the knees or the waist. When these nouns occur in combination with *oru*, they promote the semantic trait that the paths formed by the linear body parts are deviated after they were bent. Inferencing is then performed on the literal meanings of *oru* in combination with its object arguments in order to obtain the intended meanings. It requires some real-world and cultural knowledge to infer on the functions of bending fingers, bending one's legs at the knees, bending oneself, bending oneself at the waist. As for the second meaning, inferencing enables us to interpret *yubi-o oru*, glossed as 'finger-ACC ORU' as 'to count' because counting is done in Japan by bending fingers one by one. The third meaning is derived by inferencing on the literal meaning of *hiza-o oru*, which is to bend the legs at the knees. When one bends one's legs at one's knees, it implies that one sits down, or stops moving. Furthermore, the meaning

'stop' can be metaphorically understood as 'give up'. The verb phrase *kosi-o oru*, which exemplifies the fourth meaning, literally means 'to bend one's body at the waist'. In the Japanese culture, bending one's body at the waist is taken to be bowing, which is an expression of paying respect. The meaning of surrendering is an implicature of paying respect. On the other hand, the verb phrase *keiki-kaihuku-no kosi-o oru* literally means 'to bend the waist of the economic recovery'. In this case, 'to bend the waist of something' is tantamount to 'to bend the path of something right in the middle while it is in motion', which is metaphorically interpreted as 'to interrupt'. As for the eleventh meaning, the literal meaning of *ga-o oru*, which exemplifies this meaning, is 'to bend oneself'. Our real world knowledge suggests that bending oneself can be an expression of giving in/opening one's ears to somebody's opinion.

As for the tenth meaning, namely, to return a phonecall, this meaning is expressed by the compound verb *ori-kaesu* occurring with the implied direct object argument expressing the image-schematic PATH of a phonecall. This extended meaning also revolves around the semantic trait of *oru* that the path formed by an affected entity is deviated.

2. The second type of extended meaning

The meanings which are classified as the second type of extended meaning are as follows.

- (a) The seventh one:
 to destroy, to make something
 dysfunctional.

Example: *matti-no-ziku-o oru*
 'matchstick-ACC ORU'.

- (b) The eighth one:

to end one's literary career.

Example: *hude-o oru* 'writing.brush-ACC ORU'

(c) The ninth one:
to make efforts:

Example: *hone-o ot-ta* 'bone-ACC ORU'

The entities denoted by the direct object arguments in the examples above are concrete ones. They promote the semantic trait that these entities are destroyed. In the eighth and the ninth meanings, inferencing is also performed after the meaning of destruction has been obtained. In the eighth meaning, the literal meaning of the example *hude-o oru* is to destroy the writing brush, which is the tool for literary work in the Japanese culture. It can be inferred that to destroy one's writing brush is to end one's literary career. As for the ninth meaning, the literal meaning of the example *hone-o oru* is to break the bones. This expression is used in the context of working. This unrealistic action implies that, in order to get a piece of work done, one has to exert one's energy and going through hardships which are as hard as breaking one's bones. So, working until one breaks the bones is an exaggeration of making efforts in doing something.

3. The third type of extended meaning

There is only one meaning which falls into this type of extended meaning, i.e. to pluck, to break off, to pick up (flower), which is the sixth meaning. This meaning is exemplified by *hana-o (ta-) oru* 'flower-ACC (hand-) ORU'. This type of extended meaning is expressed by *oru* occurring with the direct object argument expressing a PART of an affected entity. This extended meaning of *oru* has the focus on

the part separated from the whole after undergoing a physical action expressed by *oru*. This suggests that semantic trait of separation is promoted.

4. The fourth type of extended meaning

The fourth type of extended meaning, which is the twelfth meaning, i.e. to create (folded paper) as in *turu-o oru* 'paper.crane-ACC ORU', is expressed by *oru* occurring with the direct object argument that expresses an entity CREATED by folding paper. This meaning draws on the semantic trait of *oru* that an entity made of folded paper may be created from the concrete event expressed by *oru*.

5. Polysemic pushing as a mechanism which gives rise to semantic variations of a verb

In principle, the meaning of a verb can vary infinitely as it is combined with a different noun argument. On this basis, some researchers such as Lakoff (1987) and MacWhinney (1989) consider that all instances of semantic variations are a case of polysemy even though the differences in meaning are so close and subtle, such as the following examples in Thai: *hàk máy* 'break a twig', *hàk khanǒmpaṅpṅ* 'break a piece of toast', *hàk sǎw aakàat* 'break an antenna'. In this section, we will discuss the mechanism which enables semantic variations of a verb to emerge in syntagmatic contexts by presenting MacWhinney's Competition Model (MacWhinney 1989) because it provides some insights to the issue under investigation.

According to MacWhinney (1989), the Competition Model views language as a series of competitions between lexical

items, phonological forms, and syntactic patterns. The type of competition which is relevant to the issue at hand is lexical competition, which provides a way of understanding the semantic ranges of words by showing how words force each other to take on various polysemy and extended meanings. MacWhinney classifies lexical ambiguity into three types as follows, namely, syntactic polysemy, major polysemy and minor polysemy. Syntactic polysemy is the use of a single word for two or more different parts of speech. Major polysemy is the use of a single word for two entirely different senses within a given part of speech. Minor polysemy is the case where there are minor readings within each major entry. There may be further polysemy even within a minor polysemy. Therefore, semantic differences between senses within a minor polysemy may not be so sharp. The semantic variations of the verb *hàk* and *oru* being investigated in this paper would fall into the category of minor polysemy in MacWhinney's terms.

MacWhinney also discusses the mechanism which gives rise to polysemy. In sentences, some words are in constructions with some others and these constructions force words to be polysemous. He emphasizes that not every word in a sentence can impinge on every other word. In order for one word to push another word around, the two words have to be involved in a meaningful relation. This type of polysemy, which stems from some words impinging on some others in a sentence is called "pushy polysemy". Polysemic pushing occurs only across what MacWhinney calls "valence bridges". We will use the Thai data in this paper as an illustration. In the sentence *thəə hàk khâacháyçàay ruŋtɔ̀yay* 'Have you deducted expenses?', a valence bridge

exists between *hàk* 'break' and *khâacháyçàay* 'expenses'. The word *khâacháyçàay* pushes or impinges on the verb *hàk* so that the latter will take on the meaning of deducting. A valence bridge will not be formed unless the verb *hàk* assumes this reading. In this example, we can say that the noun *khâacháyçàay* pushes the verb *hàk* into a particular polysemic pathway.

It is common for nouns which function as the direct object to push the verbs around as seen in the examples so far. This explains why verbs tend to be polysemous than nouns that they are in construction with. It may be possible for the verbs to push their noun arguments around. For example, the phrase *hàk kràdàat* 'break paper' is unacceptable to native speakers of Thai in normal contexts. However, this seemingly unacceptable phrase *hàk kràdàat* 'break paper' can make sense only in the context in which the noun *kràdàat* is interpreted as having the properties of a prototypically breakable object. Namely, it must be a hard entity, which lends itself to being broken. If the noun did not assume this semantic property, the valence bridge between the verb and the noun would not be formed and this construction would be semantically odd. Notice that the case of a verb pushing a noun around does not occur frequently.

6. Conclusion

In carrying out a contrastive study of the so-called "corresponding" verbs in Thai and Japanese, this paper has demonstrated that word equivalents provided in bilingual dictionaries do not give an accurate picture of what is going on in the language being examined. The word equivalents are often used as glosses in linguistic analysis. We have shown that a

range of meanings of a word especially a verb is culturally bound. It has also been demonstrated how the basic meaning of the verb of breaking in Thai and Japanese is extended. We have presented how a cognitive linguist, a computational semanticist and a psychologist account for the phenomena of semantic extension and polysemy. The three accounts are made in terms of the notions of accommodation (Langacker 1987), co-composition (Pustejovsky 1995) and valence bridges (MacWhinney 1989), respectively. All of these accounts draw on the highly flexible nature of the human mind in trying to make sense of co-occurring words in sentences.

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