A Step toward the Improvement of English Teaching: A Semantic Approach to *-Ment* and *–Tion*

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要旨

現在の英語教育では、単語の意味を覚えることの重要性は強調されている一方、より小さな単位である接辞についてはあまり触れられない。しかも、多義語においても、それらを意味の羅列として教える。しかしながら、接辞の意味そしてそれらの意味の体系を教えることは、学習者の語彙習得に大きく貢献できることは間違いない。実際、今回行った実験でも接尾辞についての言語学的説明を与えるほど単語テストの点数が上がった。

本論文では、実験の概要から始まり、次にどのような言語学的説明を与えることで、学習者の接尾辞学習が進んだかを説明する。具体的には、まず接尾辞付与の条件が意味にあることを証明した後、認知言語学的手法を用いて接尾辞-ment と-tion の中心義、棲み分けを明らかにする。さらに心理動詞と形容詞を取り上げ、なぜそれらの多くは-tion ではなく-ment が付くのかを説明し、そこにも動詞で見たような-ment と-tion の意味的な違いが関連していることを示す。

キーワード

  TESL, suffix, derived nominal, cognitive linguistics, central meaning

1. Introduction

This paper aims to contribute to English education, especially teaching vocabulary. Students are usually forced to "memorize" the meanings of words. This implies the following two points. Firstly, it is no exaggeration to say that English classes do not give students enough information about the word formation and the "meanings" of morphemes, which should be a great help for students in building up their vocabulary. Secondly, it is supposed that memorizing the "lists" of the meanings of a word is the very way to memorize the meanings of words. However, for building up their vocabulary, it should be useful to teach that the "lists" of meanings have an organic relationship.

In this paper, we adopt the view that not only words but also affixes have meanings; "grammatical morphemes are meaningful." (Langacker 1991:102) Following this cognitive discipline, we also assume that the polysemous meanings of words form "radial networks" and center around the central meaning of the word. (Langacker 1987)

Generally speaking, the more basic a term is, the more ambiguous the central meaning is, and this makes it hard to explain the synonymity of basic terms. No doubt may the same be said of affixes. In this study, we will take up suffixes, *-ment and -tion. -Ment* and *-tion* are confusing to

students because they both have the function of making verbs into nominals, i.e., they both are deverbal suffixes.

Morita(2005) has demonstrated that although *-ment and -tion* has the same deverbal function, they differ semantically: *-Ment* refers to the end and *-tion* the whole event the verbs represent respectively. What is more, *-ment* can be added to certain psych verbs and adjectives. The next question is how helpful this information is to students learning English as the second language.

In the first part of this paper, we will show the outline and the results of our experiment to prove that what Morita (2005) has revealed contributes to English education. (Section 2) The second part, explains what kind of linguistic information is useful in English classrooms: it opens with a consideration of previous studies (3.1); next, we will clarify the difference between *-ment* and *-tion* in 3.2; Section 3.3 describes other linguistic phenomena that will strengthen the students' learning, namely the relationship of *-ment* and *-tion,* and psych verbs and adjectives.

2. An Application to English Education

Morita (2005) has revealed that the suffixation rule is concerned with the semantic condition: *-ment* and *-tion* have the semantic difference in that they focus on the end and the whole event respectively. The next step is to apply this finding to English teaching.

In short, Morita (2005) has revealed the following three points.

(1) The findings of Morita (2005)
    (a) suffixation rule is concerned with the semantic condition.
    (b) *-ment* and *-tion* have the semantic difference in that they focus on the end and the whole event the verbs denote respectively.
    (c) the fact that when psych verbs and adjectives are nominalized, they only take *-ment* not *-tion* can also be explained in the same line.

To prove that these conclusions are useful to English education, we have conducted an experiment. The experiment consists of three steps to match the three findings of Morita (2005) summarized in (1): The first step is to measure how much knowledge English learners have about suffixation rules; the second step aims to assess how beneficial semantic information of suffixes is to language teaching, i.e., the application of (1a) and (1b); the third step evaluate the advantage of teaching a related phenomenon to establish the knowledge of suffixation rule, i.e., the practice of (1c).

The procedures of the experiment are the followings: First, the subjects, 41 college students, took an exam with no information. It consisted of ten questions asking whether they think the derivation with *-ment* or *-tion* is correct; Test A. Second, we taught them the semantic differences of *-ment* and *-tion,* and then they took the same quiz; Test B. Next, they tried the exam again, i.e., Test C, after we explained that the semantic differences of *-ment* and *-tion* can account for the suffixation rules of psych verbs and adjectives when nominalized.

TABLE 1 shows the results of the experiment. The upper column shows the average scores for exam A, B, C. The lower one shows the time the subjects needed to answer all the questions.

	A	B	C
Exam results	5.5	6.9	7.8
Time needed to answer (min.)	10	5	3.5

A: without any semantic explanation
B: with the semantic explanation of -*ment* and -*tion*
C: with the explanation of suffixation rules to the psych verbs and adjectives

TABLE 1: The Results of the Experiment

Comparing the results of the three exams, we can clearly see the findings of Morita (2005) are beneficial to English teaching.

The average of Test A was 5.5. This result shows that although the subjects have had 7 years of English leaning, they do have almost no knowledge of suffixation rules. The score is almost 50%, which shows that the students answered based on their intuition, since the exam was a choice between two alternatives. Moreover, some students left most space blank, which reinforces the reading of the experiment that the students did not have the apprehension of suffixation rules.

The result of Test B shows that teaching the semantic differences of morphemes enhances the English learning.

The score of 7.8 at Test C demonstrates that teaching related phenomena is also helpful in acquiring language knowledge. Through leaning a correlated incident, students can understand the rule better and reinforce the knowledge.

Noticeable is the fact that, besides the gradual improvement in the test score, although some students left most space blank at the stage A, no one did in B and C. Teaching semantic differences of -*ment* and -*tion* fosters confidence in students' mind.

What is also striking in the results of this experiment is that the amount of time the subjects needed to answer the exams considerably decreased from Test A to C. We should not overlook the fact that the subjects needed only as half as time in answering B as A. This fact cannot be explained only by a possible explanation that students got used to the test. The students looked up brightly when they finished Test B and C, while they looked puzzled after Test A. Rather, the main reason for the decline of the time needed to answer the exams is attributable to the fact that the information about the meanings of the suffixes reduced the students' bewilderment.

The following sections illustrate the linguistic information that has been proved useful to language leaning.

3. Useful Linguistic Information in TESL from the Results of the Experiment

In this section, we will examine some previous studies and as a consequence, we will see that cognitive linguistics is useful in describing suffixes in English classrooms, and none of the previous studies on *-ment* and *-tion* are worthy enough to be taught at English teaching.

3.1 Previous Studies

In this section, we will examine some previous studies. The first is the investigation of verbs of utterances (3.1.1). This study takes up basic terms in verbs of utterances (e.g. speak, say, tell, talk), and through looking over this study, we will reaffirm the needs for a cognitive linguistic analysis to basic terms. Next, we will investigate various studies concerning morphology, especially affixes (3.1.2) and suffixation in *-ment* and *-tion* (3.1.3).

3.1.1 A Study of Verbs of Utterance

Dokkyo University and Soka city inspected the actual condition in English acquisition of language learners' from 1988 to 1990 in order to grope for a new direction of foreign language education. This study is among the numerous attempts have been made by scholars to show how English learners acquire vocabulary. They conclude that a cognitive linguistics approach to foreign language education is useful.

> This research starts with the fundamental idea that words exist not independently, but relatively to each other in a certain vocabulary domain of a language. There is a tension between the words that exist in one domain and it is the force of conceptual development which we human possess that makes this tension. This study picks up four verbs of utterance. They exist not independently, but relationally in their semantic domains. English also has many other verbs of utterance besides these four verbs. It seems that these verbs are semantically related to each other but have their own distinctive meanings, which keep the tension and the coordination. Therefore, it must be important for learning languages to know how to learn the semantic relationship among words.
>
> (Dokkyo University and Soka City 1992:2)

They take up verbs of utterance, basic words in communication, as the object of their study. The main reason for this is that the more basic a word is, the more unclear its accurate meaning is. In class room, too, it is more difficult to teach basic terms than complex words: it is hard to teach systematically the meaning extension of fundamental words such as *take* and *make*. According to the result of their survey, college students who have learned English for eight or nine years still have difficulty with ambiguities of basic terms and their diverse usages.

This study also notes that to learn vocabulary, we need to learn a correlation between words.

They go on from the above observation to the summary that:

(2) a. *speak*: to make linguistic sounds (making sounds is important)

    b. *talk*: to interchange words (mutual interchange is important)

    c. *say*: to say something (an utterance of content [information] is important)

    d. *tell*: to inform something (communication is important)

<div align="right">(ibid.:56)</div>

To summarize, their study suggested the following two points: (1) The meanings of these verbs are not exactly distinguished, but overlap with each other. (2) They suggested that cognitive linguistics is useful to analyze this kind of study as to study how to understand the structure among verbs in our head, hence the usefulness of cognitive linguistic study in TESL, teaching English as a second language.

3.1.2 Studies of Affixes

In this section, we will focus on the previous studies in affixes and nominalization. A large number of studies have been made on the meanings of affixes. We will review studies on suffixes *-ity* and *-ness* in 3.1.2.1, Russian prefixes *za-, pere-, do-,* and *ot-* in 3.1.2.2 and these on suffixes in general in 3.1.3. Section 3.1.2.3 discusses studies on derived nominals, which leave the meanings of affixes untouched, but they are important since they compare a verb base with its derived nominal, and this study involves a nominalizer, i.e., a suffix.

3.1.2.1 *-Ity* and *-Ness*

Riddle(1985) and Shimamura(1990) have analyzed the differences between *-ity* and *-ness.* Both of them function as suffixes that make an adjective an abstract noun which denotes "state and quality." (Quirk *et al.* 1972:1000) However their meanings are different. Both of the studies conclude that *-ity* tends to denote concrete things or its attributes, in contrast, *-ness* means the state of things. (3) is an example in point.

(3) a. curiosity

    a desire to know about something   (Cobuild)

    b. curiousness

    the state or quality of being curious   (Webster's)

Additionally, Shimamura says "*Xity* sometimes has unpredictable meanings." (Shimamura 1990:22) "*Variety* does not only mean 'the state of being varied or diversified,' but also 'a type of something'." (ibid.:21)

Summarizing, they say *-ity* and *-ness* are the suffixes which mean states and quality, strictly speaking, there are differences between them. Viewed in this light, we can say suffixes are "meaningful" units.

3.1.2.2 Russian Prefixes; *Za-*, *Pere-*, *Do-*, and *Ot-*

There is another study on affixes that we must not ignore. Laura Janda (1984) analyzes Russian verbal prefixes, *za-*, *pere-*, *do-*, *and ot-*. All of those prefixes have ⟨excess⟩ submeaning, and she accounts for each sense with image schemata (FIGURE 1).

ZA-

PERE-

TR

LM

TR

LM

DO-
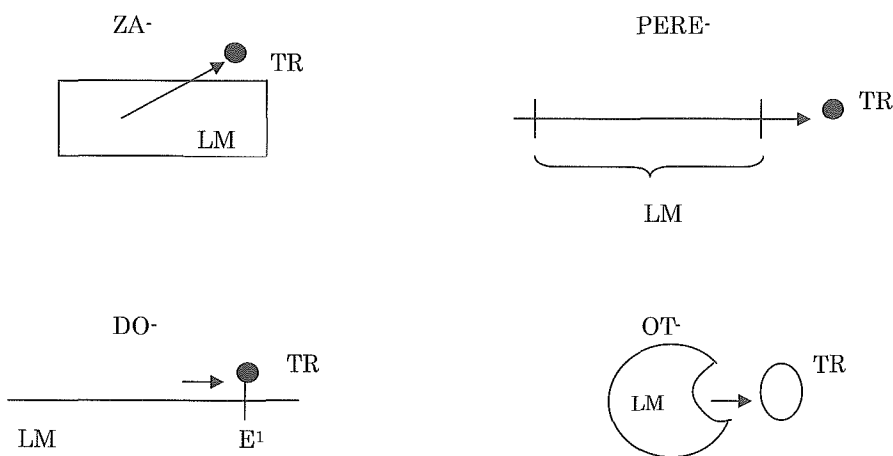
TR

LM   E[1]

OT-

LM   TR

FIGURE 1: Configuration of ⟨excess⟩ (Janda 1984:224)

The ⟨excess⟩ meaning is expressed with *over* in English and this word has attracted many studies such as Lakoff (1987) and Brugman (1981). Her study takes a similar view.

These various configurations of ⟨excess⟩ in FIGURE 1 illustrate the images of each prefix. "Patients of *za-* suffer ruined health, disposition, or death; those of *pere-* are spoiled by overexposure to actions which are normally limited; those of *do-* have through carelessness wound up in trouble; and with *ot-*, limbs are made unresponsive to the bodies that they are members of." (ibid.:225)

Her study explains the subtle differences of *za-*, *pere-*, *do-*, *and ot-*, and we, too, need to explain the subtle differences of *-ment* and *-tion* following her beautiful analysis.

3.1.2.3 Derived Nominals from Causative Verbs

Next let us review previous studies about derived nominals, which will lead us to the

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[1] End point

consideration of suffixes.

Mizuno (2003) is concerned with the derivation from causative verbs. She claims that nominals derived from causative verbs do not convey the causative meanings. The derived nominal, *annoyance,* for example, means a state of being annoyed. *Annoyance* does not have a causative meaning like its verb stem, *annoy.* Hence, "the derived nominal lacks causative force." (Mizuno 2003:50)

What we must note here is that there is semantic difference between a verb and its derived nominal in profiling, and this nominalization is influenced by suffixes. Therefore, it is the suffixes that take a part in deciding where to profile.

3.1.3 Approaches to Suffixation

Intuitively, we can say that there are rules for suffixation. Many studies have struggled to elucidate this insight and various researchers have proposed diverse approaches. We can classify these investigations into four main groups: phonemic, etymological, morphological, and semantic. Before turning to the main subject, let us pause here to look briefly at each approach.

3.1.3.1 Phonemic Approaches

First, let us review the studies which deal with the subject from the phonemic point of view. Apparently, the suffixation seems to follow some phonemic rules. This is usually the explanation that is taken in Japanese English-classes. Kilby (1984) revealed that this line of thought does not suffice in explaining the suffixation rule.

> (4) a. destroy→destruction
> b. enjoy→*enjuction/enjoyment
> c.*constroy/construct→construction   (Kilby 1984:114-115)

Given a verb with phonological similarities to *destroy,* it does not follow that it will have a similar nominal form - cf. *enjoy, enjoyment, *enjuction.* Conversely, given a nominal form similar to *destruction,* it does not follow that we will be able to reconstruct a verb on the same pattern as *destroy* — cf. *construction, construct, *constroy.* (ibid.:114-115)

It will be clear from these examples that phoneme has no reference to the suffixation rule.

3.1.3.2 Etymological Approaches

Secondly, we shall concentrate on etymological approach to the issue.
OED describes *-ment* as follow:

. . . the suffix came to be treated as an English formative. Early examples of its use as appended to native English verb-stems are *onement . . .* and *hangment . . .* In the 16th c. the suffix was very freely added to English verb stems, not only to those of Romanic etymology . . . , but also to those of native origin; . . . Since the 16th c. many new derivatives in *-ment* have been formed from verbs of obvious French origin. (OED)

Aronoff (1976) can also be categorized in this school of thought: He indicates that "-ment and -ion[2] both form nouns from verbs (*detachment, inversion*), but the latter is restricted to latinate verbs."(Aronoff 1976:36)

However, we can raise objection against Aronoff's idea:

(5) a. consign
   b. consignment
   c. consignation

(5a) is a verb base, and (5b) and (5c) are nominalized nouns. *Consign* is surely a latinate verb and *consignation* follows the rule which Aronoff shows. But this view is quite unsatisfactory, since *consign* takes both *-ment* and *-tion*.

What we wish to show in this paper is a difference between *-ment* and *-tion*. (5) shows that it is impossible for an etymological approach to reveal the difference; both suffixes can be added to the same base.

3.1.3.3 Morphological Approaches

Thirdly, let us look closely at morphological proposals to the matter. There are some studies which argue that morphemes are relevant to suffixation.

To begin with, we will examine *-ment*. At first sight, a morphological rule may be applicable to this suffixation phenomenon, but the rules are not appropriate.

Oishi (1988) says "*-ment* productively combines with verbs including *en-* or *be-*." (Oishi 1988:62) Many scholars take the similar view. (c.f. Aronoff 1976:53, Marchand 1969:332, Williams 1981:249-250) OED is also in accordance with this view. It says, "Among verbs of native English etymology, those with the Romanic prefix *en-* *(em-)*, and those with the native prefix *be-*, seem to have given rise to derivatives of this form with especial frequency. . ." (*"-ment"* in OED), and gives the following examples;

(6) a. embankment, embodiment, enlightenment, entanglement
   b. bedazzlement, bedevilment, bedragglement, bereavement,
      beseechment, besetment, bewilderment   (*"-ment"* in OED)

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[2] Some researcher use *-ion* or *-ation* instead of *-tion.*

This assumption goes down well with our general belief and most of us would accept the fact. However, as Kilby (1984) says, "it is certainly not true that the mere existence of one of these prefixes guarantees the possibility of a nominalization in *-ment.*" (Kilby 1984:121) He continues to give the following examples which contain these prefixes but cannot be suffixed with *-ment*:

    (7) a. encode, encounter, engrave, enumerate
        b. betroth, betray, belong, beatify   (ibid.:121)

Turning now to *-tion,* the same observation as *-ment* applies to *-tion.* Regulations which some researchers propose are inadequate just like the case of *-ment.* Many studies argue that *-ation* is automatically added to verb bases whose ending is *-ize.* (Oishi 1988:62, Kageyama 1999:5) See examples (8). In addition, "this suffix freely combines with verb bases in *-ize, -ify, -ate.*" (Quirk et al. 1985:1550) In this connection, Namiki also mentions that verbs whose ending is *-ify* or *-ize is* regularly suffixed in *-tion* .(Namiki 1985:43) Moreover "*-ize* is so productive that nouns including *-ation* can be used correspondently when *-ize* is added to nouns or adjectives to make new verbs. Hence *-(at)ion* is more or less productive." (Shimamura 1990:219) This statement presumes that *-tion* automatically combines with verb bases including *-ize.*

    (8) a. civilization
        b. organization   (Oishi 1988:63)

However, it would be untrue to say that a morphological condition decides which suffix should be added to bases. The next two examples will suffice to show that the foregoing regulations are unsatisfactory. See (9) and (10) below.

    (9) a. aggrandize
        b. aggrandizement

    (10) a. abate
         b. abatement

What the examples in 3.3.3 make clear is that a morphological condition is irrelevant to suffixation.

3.1.3.4 Semantic Approaches

Finally, we shall focus on semantic approaches. Both *-ment* and *-tion* are deverbal suffixes and make nominals. The first point to notice is a distinction between verbs and nominalizations.

A semantic contrast between a verb and its nominalization is schematized in FIGURE 2. "The verb stem designates a process, comprising a series of component states scanned sequentially

through conceived time," (Langacker 1991:23) which is indicated by a heavy arrow. "Within the verb itself this region is only latent, so it is depicted in (a) with a broken-line" (ibid.:24-25) circle. The line indicates that we can see the transition through "sequential scanning." (Langacker 1987a) Nominalization, by contrast, profiles a region, as shown in (b). This heavy line circle means "each set of events contributing something to a single configuration," (ibid.:145) that is "summary scanning"(ibid.) To take an example, a verb *explode* and its nominalization *explosion*, they "describe the same event," (Langacker 1987b:92) however, "employ different images." (ibid.:92)
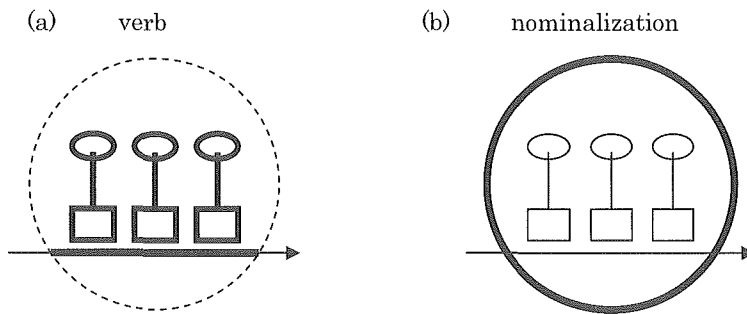

(a)　　verb　　　　　　(b)　　nominalization

FIGURE 2　　　(ibid.:93)

Langacker uses the term "nominalizations" to refer to event nominals. Kilby (1984) also regards the semantic factor of fact interpretation as the core meaning of nominalization. Yet the real explanation lies a little deeper. They fail to account for differences of meanings among nominalizers, that is to say suffixes.

On the other hand, OED says the following quotation.

> -ment
> The Latin *-mentum* . . . sometimes expressed the result or product of action of the verb, . . . and sometimes the means or instrument of the action, . . . In late popular Latin, and hence in French , the suffix, while retaining its original functions, came . . . to be also a formative of nouns of action. (OED)

> -tion
> The etymological meaning was primarily 'the state or condition of being . . . But already in L.[3] *-tio* was used for the action or process . . . In Eng.[4] the most usual sense is that of a noun of action, equivalent to the native ending -ING . . . (ibid.)

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[3] Latin
[4] English

OED surely reports that the two suffixes have each meaning, and yet it leaves the problem how the meanings are related to each other untouched. Any regulations have not been cleared. This question is taken up in the next section.

3.2 *-Ment* and *-Tion*

We were concerned with the four main approaches which scholars had proposed to reveal the suffixation rule in the previous section. Through this analysis, we can presume that the semantic approach is the strongest proposal. Therefore, we limit the discussion to semantic aspects from this section downward.

3.2.1 Data

We consulted *Progressive Eigo Gyakubiki Jiten,* and then took up entry words; entries in *X-ment* are 332 words. *X-ation, X-ion,* and *X-tion are 767* words. We picked out words which are not loans, so that the data come to be *X-ment;* 91 words, *X-tion*[5]; 26 words. Needless to say, many of the English words are loans. So far as studies of English word-formation are concerned, to take these loan words objects of such studies makes no sense. It is for this reason that we limit words for our data.

    -Ment is "originally occurring in adopted Fr.[6] words in *-ment,* either representing Latin ns.[7] in *-mentum,* or formed in Fr. on the analogy of these by the edition of the suffix to verb-stems." (OED) *-Tion* is "a compound suffix, representing, often through Fr. *-tion,* OF. *-cion,* ME. *-cio(u)n,* L. *-tio, -tiòn-em. . ."* (ibid.) We exclude words whose verb bases are Latin or French words from the data with religious care since both *-ment* and *-tion* are from Latin. The reason for the exclusion is that we can depend on only OED to check words' etymologies. Consequently, there is a possibility that some loans had formed before they were adopted from Latin or France, even if OED dose not say so. This is a precaution to mingle loans including *-ment* or *-tion* with others.

3.2.2 Semantic Condition

We have examined some conditions of suffixation from view points of phonology, etymology, morphology and semantics in the previous section. These results lead to the conclusion that the semantic approach is the most effective of the four.

    Let us recall the examples (5) and compare (11) with (12) again.

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[5] The reason why *X-tion* includes entries in *X-ation, X-ion,* and *X-tion* is that they are all Latin in origin. We believe that the difference of the forms is due to an issue of bases' forms or phonemes, so that we integrate these representations into *-tion* in this paper.

[6] French

[7] nouns

(11) *consignment*

    a. delivering over, delivery, committal, allotment   (OED)

    b. the consigning of goods or a cargo   (ibid.)

    c. a quantity of goods consigned to an agent or factor   (ibid.)

    d. a load that is being delivered to a place or person (Cobuild)

(12) *consignation*

    a. the action of consigning goods for sale or custody   (OED)

Consign is transformed into nominals with *-ment* or *-tion*. What the examples make clear is that the meanings of them are different to one another. Thus we see that suffixes are morphemes which not only change parts of speech but also have their original meanings. Precisely, to have a variant form does mean to be the evidence that it has an independent meaning from the standpoint of iconicity: to borrow Bolinger (1977)'s phrase, "one form, one meaning." Judging from the above, we come to the conclusion that suffixes have their own senses.

3.2.3 The Central Meanings of *-Ment* and *-Tion*

It was observed in the preceding section that the factor in deciding which suffix to take is their meanings. We will consider what the central meanings of *-ment* and *-tion* are in this section.

Let us start with the analysis of the data on *-ment* and *-tion*. Briefly speaking, *-ment* tends to profile a part of the event the verb indicates, to put more precisely, around the end of the event. In contrast, *-tion* usually profiles the whole event in the verb, that is to say, "summary scanning" (Langacker 1987a). Let us turn now to consideration to the examples. We give three examples to each of the suffixes, as all the data cannot be discussed here for lack of space. We shall compare verb bases with the suffixes which add to them. We will begin by discussing *-ment* and *X-ment*.

    (13) ravel

        a. to entangle, confuse, perplex (OED)

    (13') ravelment

        a. entanglement, confusion (ibid.)

    (14) ship

        a. to put or take (persons or things) on board ship; to cause (a person) to embark; to place (goods) in a ship for transformation (ibid.)

    (14') shipment

        a. the act of shipping (goods or commodities) for transformation (ibid.)

        b. the which is shipped; a consignment of goods for transformation (ibid.)

(15) weld
    a. to soften by heat and join together (pieces of metal, esp. iron, or iron and steel) in a
       solid mass, by hammering or by pressure; to forge (an article) by this method (ibid.)
(15') weldment
    a. a unit consisting of pieces welded together (ibid.)

What these examples make clear is that *X-ment* expresses the result or product, i.e., around the end of the event. *Ravelment* (13') is born of the act of raveling. *Shipment* (14'b) is something that is shipped. *Weldment* (15') is a unit as a result of welding.

For the moment, let us look at *-tion* and *X-tion.*

(16) starve
    a. to die or lose vitality for lack of proper nutriment (OED)
    b. to cause to perish of hunger; to deprive or keep scantly supplied with food (ibid.)
(16') starvation
    a. the action of starving or subjecting to famine (ibid.)
    b. the condition of being starved or having too little food to sustain life or health (ibid.)
(17) scatter
    a. to distribute to various positions; to place here and there at irregular interval (ibid.)
(17') scatteration
    a. the action of scattering. also, the fact or condition of being scattered (ibid.)
(18) ideate
    a. to form the idea of; to flame, devise, or construct in idea or imagination; to imagine,
      conceive (ibid.)
(18') ideation
    a. the process of forming ideas or images (Random House)
    b. the information of ideas or mental images of things not present to the senses (OED)

We have insisted that *X-tion* stands for the overall event. *Starvation* (16'a) is the action, (16'b) is the condition. *Scatteration* (17'a) means the event of scattering and *ideation* (18'a) is the process. What we have mentioned can be schematized as FIGURE 3. The arrows indicate the march of time a verb base expresses, and the circles show the range of being profiled.

        a. X-ment   b. X-tion

FIGURE 3

We have explained the difference of profiling rules between *-ment* and *-tion*. However, it seems that there are a few exceptions to the rules. Although *X-ment* must indicate the result in my definition, *shipment* (14'a) is the act of shipping. Equally, *ideation* (18'b) refers not to the action but to the production. But it would be fallacious to say that they are exceptions. To the objection that they break the rules, we reply that they merely vary from the prototypes. "Grammatical categories have a prototype structure." (Taylor 2003:220) What we have claimed means each central meaning, i.e. prototype. Accordingly, "this is not to say that all the members of a grammatical category necessarily share a common semantic content." (ibid.:220) Precisely, is a meaning be distinguished like FIGURE 4? There must be considerable doubt as to this idea. So we cannot say where the end is in a meaning. Take *starve* (16) for example. *Starve* has two uses; transitive (16b) and intransitive (16a). *Starvation* (16'b) means the state. If one starts by thinking of *starve* as transitive use, *starvation* (16'b) is interpreted as the result. On the other hand, if one thinks of *starve* as intransitive uses, it may be possible to interpret *starvation* (16'b) as the whole event. Thus, the meaning of *starvation* (16'b) is ambiguous, so it admits of two interpretations. Instead, we believe that a meaning consist of a series of the properties as FIGURE 5. Hence, just because the two examples are peripheral members in each category, it does not follow that they are exceptions.
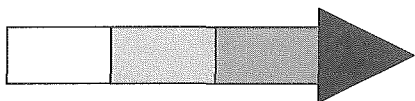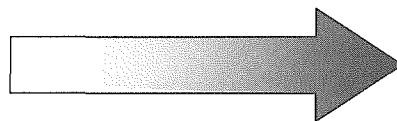

FIGURE 4: clear-cut properties   FIGURE 5: a continuous property

3.3 Teaching Related Phenomena

As the result of Test C in our experiment shows, teaching related phenomena is helpful in acquiring language knowledge. It was observed in the preceding section that *-ment* emphasizes the last of the event a verb base contains, while *-tion* embraces the whole event and understands it through sequential scanning. There are two other things that should be added to for characterization of one another. *-Ment* can be added to psych verbs and adjunctions but *-tion* cannot. The two characters can be explained by our opinion. Let us devote a little more space to discussing it and concentrate on the cases of psych verbs (3.3.1) and of adjectives (3.3.2).

3.3.1 Derivation from Psych Verbs

Derivatives of psych verbs contain *-ment* instead of *-tion*[8], as can be seen in the following examples.

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[8] except loan words (e.g. *satisfaction*).

(19) bewilder

    a. to confuse in mental perception, to perplex, to confound; to cause mental aberration
      (OED)

(19') bewilderment

    a. the state or condition of bewildering or being bewildered (ibid.)

(20) puzzle

    a. to perplex or bewilder (the brain, mind, understanding, will, wit) (ibid.)

(20') puzzlement

    a. the fact or condition of being puzzled; perplexity, bewilderment, confusion (ibid.)

If we think of *-ment* as the suffix which means the result or product of a series of property, it helps to explain the phenomenon. The reason is that feeling is a kind of products in psych verbs. Although we cannot see feeling itself, it should remain in human's body, namely mental space. This idea is concerned with PHYSICAL AND EMOTIONAL STATES ARE ENTITIES WITHIN A PERSON metaphor Lakoff and Johnson (1980) suggest.

    We should also note why *-tion* does not combine with psych verbs. Several observations in section 3.2.3 have shown that the central meaning of it does not imply things like products. Result and products belong to rather *-ment* than *-tion.*

3.3.2 Derivation from Adjectives

    We have examined *-ment* as a suffix which combines with verbs to form nouns. "It is rarely that the suffix has been appended to any other part of speech than a verb, as in *dreariment, funniment, oddment.*" (OED) What the passage makes clear is that *-ment* is sometimes added to adjectives. The points made so far apply in principle to any cases, so the same should be said of derivation from adjectives. Let us observe the following instances.

(21) funny

    a. affording fun, mirth-producing, comical, facetious (OED)

    b. curious, queer, odd, strange (ibid.)

(21') funniment

    a. drollery, humor; also, a joke, a comicality (ibid.)

(22) odd

    a. not forming part of any particular group, set, or class (Random House)

(22') oddment

    a. unimportant objects of any kind, usually ones that old or left over from a larger group
      of things (Cobuild)

(23) merry

    a. pleasing, agreeable (OED)

(23') merriment

        a. cheerful, or joyful gaiety; mirth; hilarity; laughter (Random House)

An adjective is a word that describes a person or thing, or gives extra information about them. The point is that an adjective modifies a noun. From this view point, one may say that adjectives have a closer relation to nouns than any other parts of speech. Recall our earlier discussion about *-ment*. *-Ment* usually profiles the result of an action. If the action a verb base indicates contains a product as a thing, *-ment* covers the meaning of the thing. Therefore, *-ment* is to a product what an adjective is to a noun.

    -Tion, on the other hand, is inapplicable to this kind of derivation. The reason why *-tion* is not added to adjective is that it is not irrelevant to 'thing'. The major function of the suffix is summarizing events.

4. Conclusion

    This paper has tried to apply the findings of Morita (2005) to English education. In sum, this paper together with Morita (2005) has shown that the following three points are useful in English teaching, namely (a) suffixation rules are concerned with the semantic condition. (b) *-ment* and *-tion* have the semantic difference in that they focus on the end and the whole event the verbs denote respectively. (c) the fact that when psych verbs and adjectives are nominalized, they only take *-ment* not *-tion* can also be explained in the same line.

    "If only I had learned English this way!" "Had I learned English like this, I would have enjoyed learning English." These are the remarks the students made after they did the experiment test. Learning English through understanding, not memorizing the semantic differences is very appealing to students and the information students get through this kind of teaching are apt to stay in learners' mind. To teach the semantic differences, we must teach through comparing more than two terms that are similar in function, in other words, we must approach the language onomasiologically. Hence the results of the experiment show that teaching onomasiologically with linguistic analysis is the key to language teaching. The next step is to take a further onomasiological perspective and compare other suffixes that are involved in deverbalizing, that is *-al* and *-ing*.

Data Sources

Cobuild. London: Harper Collins.
OED.
Progressive Eigo Gyakubiki Jiten. [*Progressive English Reverse Dictionary*] Tokyo: Shogakukan.
The Random House Dictionary of the English Language 2nd edition. New York: Random House.
Webster's Twentieth Century Dictionary. New York: Simon and Schuster.

References

Aronoff, M. (1976). *Word Formation in Generative Grammar.* (Linguistic Inquiry Monograph 1.) Cambridge, Mass.: MIT Press.

Bolinger, D. (1977). *Meaning and Form.* London: Longman.

Brugman, Claudia. (1981). "Story of *Over*". M. A. thesis, University of California, Berkeley. Available from the Indiana University Linguistics Club.

Dokkyo University and Soka City. (1992). *Eigokyouiku ni Okeru Goi Rikai no Jittai to Mondaiten -Hatsuwadoushi no Bunseki-. [The Actual Condition and the Issues of Vocabulary Understanding in English Education -The Analysis of Verbs of Utterance-]* Saitama Prefecture: Dokkyo University English Education Workshop.

Janda, Laura (1984). "A Semantic Analysis of the Russian Verbal Prefixes ZA-, PERE-, DO-, and OT-". ph.D. diss., University of California, Los Angeles.

Kageyama, T. (1999). *Keitairon to Imi. [Morphology and Meaning]* Tokyo: Kuroshio-Shuppan.

Kilby, D. (1984). *Descriptive Syntax and the English Verb.* London: Croon Helm.

Lakoff, G. (1987). *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind.* Chicago: University of Chicago Press.

Lakoff, G, and Mark Johnson. (1980). *Metaphors We Live By.* Chicago University of Chicago Press.

Langacker, R. W. (1987a). *Foundations of Cognitive Grammar. Vol. I : Theoretical Prerequisites.* Stanford: Stanford University Press.

---- (1987b). "Nouns and Verbs" in Langacker(2001), pp.59-100. 1st publ. in *Language* 63, pp.53-94.

---- (1991). *Foundations of Cognitive Grammar. Vol. II : Descriptive Application.* Stanford: Stanford University Press.

---- (2001). *Concept, Image, and Symbol : The Cognitive Basis of Grammar,* 2nd edn. Berlin: Mouton de Gruyter. 1st edn 1990.

Marchand, H. (1969). *The Categories and Types of Present-Day English Word-Formation.* München: C. H. Beck.

Mizuno, E. (2003). "On the Licensing of VP Adverbs". *Studies in English Literature, English.* Number 44, pp.41-68.

Morita, M. (2005). "Yoriyoi Eigo Kyouiku no Tameni − -*Ment* to -*Tion* no Imironteki Bunseki [For Better English Education −A Semantic Approach to -*Ment* and -*Tion*]," Paper read at the 57th annual meeting of the English Literary Society of Japan, Aich University, October 2005.

Namiki, T. (1985). *Gokeisei. [Word Formation].* Tokyo: Taishukan.

Oishi, T. (1988). *Keitairon. [Morphology].* Tokyo: Kaitaku-sha.

Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J.(1972). *A Grammar of Contemporary English.* London: Longman.

---- (1985). *A Comprehensive Grammar of the English Language.* London: Longman.

Riddle, E. M. (1985). "A Historical Perspective on the Productivity of the Suffixes -*ness* and -*ity*". in J. Fisiak (ed.) (1985), *Historical Semantics. Historical Word-Formation* (Trends in Linguistics.

Studies and Monographs, 29), pp.435-461. Berlin: Mounton.

Shimamura, R. (1990). *Eigo no Gokeisei to Sono Seisansei.* [*English Word Formation and its Productivity*] Tokyo: Liber Press.

Taylor, John R. (2003). *Linguistic Categorization.* Oxford: Oxford University Press.

Williams, E. (1981). "On the Notions 'Lexically Related' and 'Head of a Word' ". *LI* 12, pp.245-274.