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"Ungrammaticality"の文法性

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Grammaticality of "Ungrammaticality"

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0. Introduction

Grammaticality of some complex words like *ungrammaticality* has been in controversy since introduction of a phonological theory known as Lexical Phonology by Kiparsky (1982a, b) – see also Borowsky (1986), Kiparsky (1985), Mohanan (1982), and Pullayblank (1986). One of the major claims of the theory is the Level Ordered Hypothesis (henceforth LOH) which says that the lexicon is level-ordered in such a way that a Level-n morphological operation should not follow any Level-$n+1$ morphological operation. Under this view, *ungrammaticality* should be ill-formed since the *-ity* suffixation, a Level-1 affixation, should not take place after the *un-* prefixation, a Level-2 affixation. However, the word is genuinely a grammatical word and its morphological structure demonstrates the unacceptable ordering. This kind of problem in morphological ordering is referred to as braketing paradoxes.

Several accounts of the problem of bracketing paradoxes have been introduced. In other words, several attempts have been made to clarify the grammaticality of the complex words with bracketing paradoxes. As I summarize in Section 2, however, these accounts have flaws. In this paper, I present another account of the problem based on a phonological theory known as Prosodic Lexical Phonology (hereafter PLP) introduced by Inkelas (1989). The account assumes, following Inkelas, that morphological and prosodic (phonological) structures are represented separately. The major point of the account, which I call a Prosodic Account, is that affixes are subcategorized both morphologically and prosodically. I demonstrate that this account is preferable to the preveous analyses of bracketing pradoxes.

This paper is organized in the following way. First, I present the outline of PLP. Then, I will discuss the shortcomings of the previous account of the problem of bracketing paradoxes. In Section 3, I will lay out the Prosodic Account of the problem. Finally, I conclude that the account presented in the paper is better than the previous ones.

1. Prosodic Lexical Phonology

In this section, I will present an overall picture of PLP. This theory has developed from (Standard) Lexical Phonology (henceforce SLP). Thus, Inkelas assumes a level-ordered lexicon. The main difference between PLP and SLP is that in the former theory, phonological rule domains and morphological structures are represented separately. In other words, a structure created by a morphological operation is not the place where phonology takes place as assumed in SLP and other theories of Phonology. A domain in which phonological rules apply is formed by an algorithm. Such a domain is called a prosodic constituent (hereafter p-constituent). The P-Constituent Formation Algorithm (PCF) depicted in (1) creates a p-constituent which corresponds to a morphological constituent (henceforth m-constituent). The subscribed letters m and p stand for morphological and prosodic constituents, respectively.

(1) P-Constituent Formation Algorithm (Inkelas. 1993, 82)

$$[x]_m \rightarrow [x]_m \ [x]_p$$

Inkelas assumes that there is a parallel m-constituent formation, referred to as the M-Constituent Formation Algorithm (MCF), which has functions comparable to Selkirk's (1982) rewrite rules for morphology. The MCF has the following schema:

(2) M-Constituent Formation Algorithm (*ibid.*)

$$x \rightarrow [x]_m$$

Thus, when a phonological rule applies to a stem, the form has the following representation.

(3) [stem]$_m$

[stem]$_p$

The rule applies within the p-constituent only after the PCF creates a domain and the rule never refers to the m-constituent.

PLP follows SLP in assuming a level-ordered lexicon. Thus, PLP needs to provide distinct types of lexical p-constituents. That is, it will need a mechanism to generate such constituents in the appropriate order. To create such a mechanism, Inkelas revises both the PCF and the MCF in the following way:

(4) PCF (revised) (*ibid.*)

[x]$_{mi}$ [x]$_{pi-1}$ → [x]$_{mi}$ [x]$_{pi}$

(5) MCF (revised) (*ibid.*)

[x]$_{mi}$ → [x]$_{mi+1}$

The index i in (4) and (5) indicates a level in the lexicon. Following Inkelas, I use variables such as α and β, with α being the lowest, to mark the lexical levels.

To clarify the revised algorithms, I have quoted the following sample derivation from Inkelas, which shows the assignment of Level 1 (α), Level 2 (β), and Word Level (ω) structure of a simple stem.

(6) Underlying representation: stem

Level 1	MCF	[stem]$_{m\alpha}$	
	PCF		[stem]$_{p\alpha}$
	phonological rules		[stem]$_{p\alpha}$
Level 2	MCF	[stem]$_{m\beta}$	[stem]$_{p\alpha}$
	PCF		[stem]$_{p\beta}$
	phonological rules		[stem]$_{p\beta}$
Word Level	MCF	[stem]$_{m\omega}$	[stem]$_{p\beta}$
	PCF		[stem]$_{p\omega}$
	phonological rules		[stem]$_{p\omega}$

The sample derivation demonstrates that the Level-2 p-constituent is formed only after the Level-2 m-constituent is created out of the Level-1 m-constituent. Within

a single level, both the MCF and the PCF may apply cyclically. That is, an affixed form undergoes formation of a m-constituent and a p-constituent in the stem cycle and formation of both constituents after affixation.

2. The Bracketing Paradoxes and the Problems of Previous Accounts

In the Lexical Phonology of English (Kiparsky (1982a, b, 1983, 1985), Mohanan (1982, 1986), and Borowsky (1986): *cf.* Halle and Mohanan (1985)), affixation is as-signed at a particular level. At the core of this theory are the claims that Level-n affixes cannot appear after Level-$n+1$ affixation and that phonological rules take effect only in a particular level. For instance, *un-* is a Level-2 prefix, while *in-* is a Level-1 prefix. The former does not undergo phonological rules that the latter does. However, words like *un-grammatical-ity*, where *-ity* is a Level-1 suffix, do exist. Since the prefix *un-* is attached only to adjectives, *-ity* suffixation must follow *un-*prefixation. In other words, Level-1 suffixation of *-ity* applies after Level-2 prefixation of *un-*, which clearly violates LOH.

Several accounts of the bracketing paradox have been proposed (Mohanan (1982, 1986), Selkirk (1982), Kiparsky (1983), and Halle and Vergnaud (1987a, b)), but they all have shortcomings. Mohanan (1982) introduces a notion of loops: an outcome of a morphological process at Level-n can go back to Level-$n-1$. How-ever, this concept weakens the theory itself as discussed in Kiparsky (1983) and Kaisse and Shaw (1985) since it allows LOH to be violated by some kinds of affixa-tion. If such violation is permitted, positing the hypothesis is itself questionable. Notice that the bracketing paradox occurs as a result of the hypothesis. In other words, if English does not have a level-ordered morphology, there would not be any paradox, nor LOH violation.

Selkirk (1982) proposes that *un-* belongs both to Level 1 and Level 2.[1] Under this view, there is no LOH violation in *ungrammaticality* sice the prefix *un-*, which is a Level-2 affix, also belongs to Level 1. This dual-membership is supported by the existence of words like *reundercut* and *redefinition*. In the former, the prefix *re-* is

attached to a compound verb *undercut* produced at Level 2, which suggests that the prefix is a Level-2 affix. In the latter, a Level-1 suffix *-ition* is attached to the stem verb *redefine*. As a consequence, prefixation of *re-*, supposed to be a Level-2 affix, takes place prior to Level-1 suffixation of *-ition*. That is, the prefix takes part in affixation at both Level 1 and Level 2. However, this approach cannot account for nonapplication of Level-1 phonological rules to words like *unpopularity* (*cf.* **umpopularity*) and *unreceptivity* (*cf.* **urreceptivity*). Moreover, as pointed out by Kiparsky (1983), this approach predicts incorrect forms like **in-anti-religious*, where a Level-1 prefix *in-* is outside of a dual-membership prefix *anti-*. In addition, Selkirk's account cannot explain a generalization of dual membership that all the affixes which belong to both levels are members of Level-2 affixes in Kiparsky's model. Level-2 affixes in his model do not have dual membership.

Kiparsky (1983) posits that the problem of bracketing paradoxes can be dealt with by means of reanalysis. This approach offers the following account of the derivation of *ungrammaticality*. First, the suffix *-ity* is attached to the adjectival stem *grammatical* at Level 1. The outcome of this affixation is *grammaticality*, which is a noun. At Level 2, then, the affix *un-* is prefixed to the noun derived by the Level-1 suffixation, and the output of this affixation is *ungrammaticality*. After the last prefixation, the structure is reanalyzed as having such a structure in which *un-* is prefixed to *grammatical* (*i.e. un-grammatical*) and *-ity* is suffixed to *ungrammatical* (*i.e. ungrammaticality*). However, this reanalysis approach is undesirable because affixing *un-* to the nominal stem violates the subcategorization frame of the Level-1 prefix: *un-* can only be attached to adjectives.

Halle and Vergnaud (1987a, b) propose to eliminate Level Ordering Hypothesis itself. Instead, they posit that affixes in English are classified in terms of cyclicity: cyclic and noncyclic affixes, which correspond to Level-1 and Level-2 affixes, respectively.[2] At the core of their theory are the claims that these two types of affixations are not ordered and that noncyclic phonological rules apply at once after all morphological processes are completed. In their view, words like

ungrammaticality do not create any bracketing paradox. Since afffixation is not ordered, *-ity* suffixation can follow *un-* prefixation. Moreover, since *un-* is a noncyclic prefix, its affixation does not trigger the phonological rules that *in-*, a cyclic prefix, initiates. However, their theory predicts ungrammatical words like **in-anti-religous* and **ir-respect-ful.* (Notice that in the words which are predicted by their theory but do not exist, the leftmost prefixes are always cyclic.) That is, although their theory predics attested forms, it also predicts ungrammatical ones.

I have discussed four proposed accounts of bracketing paradoxes. Every one of them has a problme since it either weakens the theory of Lexical Phonology itself, is unable to explain attested cases, or predicts ungrammatical forms.

3. A Prosodic Solution

In this section, I present a Prosodic Lexical account of the puzzle of bracketing paradoxes. This analysis crucially refers to double subcategorization of affixes and dual domains where morphological and phonological representations are separated. In the following presentation of a prosodic account of bracketing paradoxes, I first present the oultine of the prosodic description. Then, I demonstrate the prosodic account by showing sample derivations of some words with affixes.

3.1. Outline of the Analysis

In order to provide a solution to the problems of previous accounts of the problem of bracketing paradoxes, I make the following three proposals. First, I posit that affixation in English is level-ordered with respect to prosodic subcategorization (henceforth p-subcat), not to morphological subcategorization (henceforth m-subcat), contrary to the claims made implicitly in Kiparsky (1982a, b), and Inkelas (1989), and other previous works assuming LOH. That affixation is prosodically level-ordered means that prosodic domains are constructed at the levels

to which the affixes belong. I refer to the level ordering of affixation with respect to p-subcat as Prosodic Level Ordering. Second, I propose that m-subcat only designates the morphological class of the host of affixation. This means that the morphological component of affixation is not concerned with Level Ordering. Third, I propose that m-subcat is not obeyed in prosodic affixation (henceforth p-affixation) at the last level, *i.e.* Level 2. This proposal predicts that p-affixation at Level 1 observes m-subcat. As I will show later, this prediction is correct. The derivation of some hypothetical words with cirtain suffixes are rejected because p-affixation in these words does not meet the m-subcat of the affixes. These three proposals are summarized in (7) as *Restriction on Double Subcategorization.*

(7) Restriction on Double Subcategorization

    a. Levels of affixation are designated only by p-subcat.

    b. M-subcat designates only the morphological category of the hosts of affixation.

    c. M-subcat is not obeyed in p-affixation at Level 2.

I will motivate the restriction on double subcategorization in discussions below.

    I propose that English affixes are classified as in (8).

(8) Levels of afffixes

    Level 1: -ity, in-, ist, -ation, -al, -ous, -ive, *etc.*

    Level 2: un-, -hood, -ness, -ful, -ish, -less, non-, *etc.*

Notice that the levels to which affixes belong are identical to ones assumed in SLP. What is predicted from Prosodic Level Ordering and double subcategorization is that a Level-2 affix may appear inside a Level-1 affix within the morphological domain since m-subcat does not concern with Level Ordering (*cf.* [*ungrammaticality*]$_M$). Such a morphological structure is possible as long as m-subcategorization frames of the two affixes are satisfied. However, the morphological structure is subject to scrutiny by p-subcat. That is, well-formedness of a word is decided by both m-subcat and p-subcat.

    Moreover, following Inkelas' (1989) idea, I assume that Level-1 p-constituents

become Level-2 p-constituents when they enter Level 2. I formulate this process in (9).[3]

(9) *Level-2 Prosodic Constituent Fomation Algorythm*

$$[\qquad]_{p1} \rightarrow [\qquad]_{p2}$$

After a new P2 constituent is created, Level-2 prosodic affixation is allowed. I demonstrate the significance of this algorythm by describing the derivation of *ungrammatical*. The prefix *un-*, which is subcategorized to take a Level-2 host, cannot be directly attached to *grammatical*, which is a Level-1 constituent. This is because of the mismatch between the subcategorization frame of the prefix, requiring its host to be a Level-2 constituent, and the prosodic level of the host. The stem must become a Level-2 constituent so that the affix will be attached to it. Then, the prefix can be affixed to the host, which is now a Level-2 constituent.

3.2. Sample Derivation: *ungrammaticality*

Since I have laid out the crux of Prosodic Lexical Phonology and the outline of my proposals, I now demonstrate the prosodic account of the bracketing paradoxes by presenting derivations of some cases. With double subcategorization and Prosodic Level Ordering, *ungrammaticality* has the following derivation. At the third cycle, the prefix is affixed to the stem to form *ungrammatical*. Since the affix is to take an adjective as its host and the stem is an adjective, the affixation creates a m-constituent as seen in (10). However, since the p-subcat of the prefix requires that it be attached to a Level-2 constituent and the host is a Level-1 constituent (the adjective forming suffix *-al* is a Level-1 affix), no prosodic domain is constructed as seen in the figure. (I use the following abbreviations of morphological classes in figures: n = noun, v = verb, and *adj* = adjective. *Pn* represents the Level-n prosodic constituent.)

(10) M: [un[grammatical]$_{adj}$]$_{adj}$

P: [grammatical]$_{p1}$

The mismatch between the morphological and prosodic representations is

expected due to the prosodic subcategorization frame of the prefix.[4] It should be noted here that Level-1 phonological rules should not apply in the prosodic domain after the morphological affixation (henceforth m-affixation) since no new prosodic contituent is created. This is why the place of the morpheme-final nasal does not assimilate to the stem-initial stop.

To this form, the nominal suffix *-ity* is affixed. Because the prosodic constituency of the stem matches with the p-subcat of the suffix, a new Level-1 p-constituent is created as shown in (11) and phonological rules apply. Nevertheless, p-affixation of *un-* does not take place because the constituent is still of Level 1.

(11) M: [[ungrammatical]$_{adj}$ ity]$_n$

P: [[grammatical]$_{p1}$ ity]$_{p1}$

No more m-affixation takes place. Then, the formative goes into the Level-2 component, where the prosodic constituency is redefined as in (12) by means of the rule in (9).

(12) M: [ungrammaticality]$_n$

P: [grammaticality]$_{p2}$

At this stage, the p-affixation of the prefix *un-* results in a new Level-2 prosodic domain.

(13) M: [ungrammaticality]$_n$

P: [ungrammaticality]$_{p2}$

Moreover, Level-1 phonological rules do not apply since the outcome of the p-affixation is a creation of a Level-2 constituent. Thus, no Place Assimilation occurs between the prefix final-nasal and the stem-initial stop even if they are adjacent.

Notice that the prefix is attached to the host which has been created after the nominal suffixation. Morphologically, the prefix should be affixed to an adjective. However, it appears that morphological requirement does not intervene the p-affixation. Otherwise, the prosodic stem has no chance to

undergo p-affixation of the prefix. What this means is that the well-formed word *ungrammaticality* would not be derived if p-affixation of *un-* at Level 2 had to be subject to the m-subcat frame of the prefix. As shown in (14), the affix cannot be prosodically attached to its host: the stem is morphologically a noun, while the prefix is subcategorized to take an adjective as its host.

(14) M: [un[grammaticality]$_n$]$_n$

P: *[ungrammaticality]$_{p2}$

Therefore, the output of the lexical component would be rejected as ill-formed since p-subcat of the prefix is not satisfied.

(15) An ill-formed structure

M: [ungrammaticality]

P: [grammaticality]

The discussion above leads us to posit that m-subcat of affixes is not observed in p-affixation. (As I will show later, p-affixation at Level 1 is interceded by m-subcat of the affix.)

3.3. More on the Prosodic Account

In Section 2, I laid out the problems of previous accounts of the bracketing paradoxes seen in complex words like *ungrammaticality*. First, Mohanan's account assumes the notion of loops, which weakens the theory of Lexical Phonology itself since it allows Level Ordering to be violated. Second, Selkirk's proposal of dual membership can describe why the prefix *un-* is inside the stem of the Level-1 suffix -*ity* without referring to the notion of loops. However, her analysis cannot account for the fact that Root Level phonological rules – Level-1 phonological rules – do not apply to *ungrammatical*. Third, Kiparsky's reanalysis approach assumes that the Level-2 prefix is attached to a nominal stem *grammaticality*. This account requires violation of the subcategorization frame of the affix. By contrast, the present account of the bracketing paradox

in the complex word does not refer to a loop nor does it invoke reanalysis. It also offers an explanation for the fact that Level-1 phonological rules do·not apply affter m-affixation of the prefix *un-* despite its taking place at Level 1. Thus, the conclusion is that the Prosodic Account is preferable to the three previous account.

We have solutions to some problems of previous analyses of bracketing paradoxes. However, we still have some problems unsolved. One of them is that ungrammatical forms like *inantireligeous* are expected to occur in models proposed in Selkirk (1982) and Halle and Vergnaud (1987a,b). PLP provides the following account of the nonexistence of the hypothetical word. First, m-affixation of *anti-* applies to create a new m-constituent as seen in (16). However, since the prefix is subcategorized to take a Level-2 p-constituent as its host and the p-constituency of the host is of Level 2, p-affixation of the prefix does not take place.

(16) M: [anti[religeous]adj]adj

P: [religeous]pl

Then, the outermost prefix in the word, *i.e. in-*, is attached to the output of the second cycle morphological operation. First, m-affixation of the prefix applies to make a m-constituent as seen below in (17).

(17) M: [in[antireligeous]adj]adj

P: [religeous]pl

Notice here that the Level-1 p-constituent can be the host of p-affixation of the Level-1 prefix *in-*; the affix is m-subcategorized to take an adjective as its host and the potential host of the p-affixation is morphologically an adjective. Nontheless, this affixation does not take place in the p-constituent even if the prefix is p-subcategorized to take a Level-1 p-constituent and the potential host does satisfy the p-subcat frame of the affix. This, I posit, is due to the following constrained referred to as *Constraint on Prosodic Constituency*.

(18) Constraint on Prosodic Constituency

Ordering in a m-constituent must be oberved in the corresponding p-constituent.

That is, p-affixation of the prefix in- cannot precede p-affixation of the prefix *anti-* because m-affixation of the former follows m-affixation of the latter in morphology.

Without the constraint, a mismatch between the morphological and prosodic structures as illustrated in (19) is expected.

(19) M: [in-anti-religeous]
P: [anti-ir-religeous]

P-affixation of the Level-1 prefix *in-* would be possible since the potential host is a Level-1 constituent and the output of the p-prefixation would be [*ir-religeous*]$_{p1}$. It is also possible that after the constituent becomes a Level-2 p-constituent, p-affixation of the Level-2 prefix *anti-* would apply to [*ir-religeous*]$_{p2}$ and the outcome would be [*anti-irreligeous*]$_{p2}$. Nevertheless, no mismatch like the one shown in (19) would happen. In other words, ordering of affixation in a p-constituent must be the same as the ordering of affixation in the corresponding m-constituent.

Level-2 p-affixation has the following process. Since no m-affixation applies to [*in-anti-religeous*], the formative in (17) goes into the Level 2, where a new Level-2 p-constituen is formed as seen in (20).

(20) M: [in-anti-religeous]$_{adj}$
P: [religeous]$_{p2}$

Then, p-affixation of the Level-2 prefix *anti-* takes effect as shown in (21) because the Level-2 p-constituent is a legitimate host of the prefix.

(21) M: [in-anti-religeous]$_{adj}$
P: [anti-religeous]$_{p2}$

By contrast, the new p-constituent does not undergo the p-affixation of the Level-1 prefix *in-* since the prefix is p-subcategorized to take a Level-1

constituent and the postential host is a Level-2 constituent. Thus, the final stage of this derivation has the following structure.

(22) M: [inantireligeous]adj

P: [antireligeous]p2

As a consequence, the outcome of these prefixation will be rejected as ill-formed since the p-subcat frame of the Level-1 prefix has not been satisfied.

As mentioned above, derivation of some hypothetical words would be rejected because p-affixation at Level 1 is subject to m-subcat of the affixes. The illegitimate derivation of unattested words like *irrespectful* as presented below demonstrates the intervention of p-affixation by m-subcat of Level-1 affixes. The derivation would have the following process. First, the suffix *-ful*, which is m-subcategorized to take a noun as its host, is morphologically affixed to the stem [*respect*]n and a new m-constituent is constructed as shown in (23). After this m-affixation, p-affixation of the suffix applies in the p-constituent. However, it is rejected since the suffix is p-subcategorized to take a Level-2 constituent as its stem and the stem is a Level-1 p-constituent. Therefore, no new p-constituent is created corresponding to the m-constituent [*respectful*]adj as seen in (23).

(23) M: [[respect]n ful]adj

P: [respect]p1

To this form, the Level-1 prefix *in-* will be affixed both morphologically and prosodically. M-affixation of the prefix takes effect, as shown in (24), since the affix is m-subcategorized to take an adjective as its base and the base is an adjective. Furthermore, the p-affixation of the prefix, which is p-subcategorized to take a Level-1 constituent as its base, would not be rejected since the potential base is a Level-1 p-constituent. So far, no mechanism to hinder such p-affixation has been introduced. Thus, a new p-constituent would be constructed as shown in (24) and Level-1 phonological rules apply in the newly formed p-constituent.

(24) M: [in[respectful]adj]adj

  P: [ir [respect]p1]p1

Nevertheless, this p-affixation should be made illegitimate since if it is allowed, the final output *irrespectful*, which should be unacceptable as a grammatical word, would be derived as a correct form. Thus, we need to have some kind of condition that prevents this kind of p-affixation. Here, I posit that p-affixation at Level 1, unlike Level-2 p-affixation, is subject to m-subcat of the affixes. In other words, if a Level-1 prefix is m-subcategorized to take an adjective as its host, then its p-affixation is allowend only if the morphological base is an adjective. Under this proposal, the p-affixation of the Level-1 prefix should not take effect since it is m-subcategorized to take an adjective as its base and the potential base is morphologically a noun.

(25) M: [in[[respect]n ful]adj]adj

  P: *[ir [respect]p1]p1

Thus, the outcome of the Level-1 affixation to the original base [*respect*]n contains only [*respect*]p1 in its prosodic domain as shown in (26).

(26) M: [in-respect-ful]adj

  P: [respect]p1

When the formative goes into Level 2, the prosodic domain becomes a Level-2 p-constituent as shown in (27).

(27) M: [in-respect-ful]adj

  P: [respect]p2

At this stage, the p-affixation of the Level-2 suffix *-ful* applies and takes effect as depicted in (28) since the suffix is p-subcategorized to take a Level-2 p-constituent as its base and the potential base is now a Level-2 constituent.

(28) M: [in-respect-ful]adj

  P: [[respect]p2 ful]p2

However, p-affixation of the Level-1 prefix *in-* would no longer take place since the stem is now a Level-2 p-constituent and the prefix is p-subcategorized to take

a Level-1 p-constituent as its host. In other words, p-affixation as seen in (29) would be refused as ill-formed.

(29) M: [in-respect-ful]adj

      P: [in [respectful]p2]p1

As a result, the potential output of the Lexicon would be rejected as ill-formed since p-subcat of the Level-1 prefix *in-* has not been satisfied.

3.4. Summary

As I have shown above, Prosodic Lexical Phonology provides a solution to the problem of bracketing paradoxes. It predicts "dual-membership" of Level-2 affixes: as far as m-affixation of prefixes and suffixes at Level 1 obeys m-subcat of the affixes, m-affixation of some affixes may take effect both in Level 1 and Level 2. However, such affixation triggers Level-2 phonological rules only since the p-constituents are created only at Level 2 due to the p-subcat of the affixes. Moreover, ungrammatical words such as *inantireligious* and *irrespectful* would not be produced. The former would not be derived due to a constraint that the ordering of units in the prosodic domain should correspond to that in the morphological domain. The latter is rejected because p-affixation of the prefix does not satisfy the m-subcat of the affix.

4. Conclusion

The Prosodic Approach, which crucially depends on double subcategorization and representation where morphological and phonological structures are represented separately, offers account of the problem of bracketing paradoxes. This account provide solutions to the difficulties of the previous accounts of the problem. Thus, we can conclude that Prosodic Lexical Phonology is preferable to other models discussed in this article. In other words, double subcategorization and dual representation, both of which are assumed in PLP, are needed in the theory of Phonology.

1 Selkirk does not use the term levels. Instead, she uses Root Affixes and Word Affixes, which roughly correspond to Level-1 and Level-2 affixes, respectively.

2 Extending the Morphemic Plane Hypothesis (McCarthy (1979, 1981, and 1986)), they make the following proposal. Cyclic affixes have their own planes, while noncyclic affixes do not. The latter is inserted into the plane of the stem.

3 This is not exactly the way Inkelas formulates constituent formation. According to her model, Level-2 m-constituents are created first. Then, Level-2 p-constituents are constructed corresponding to them. However, as I posit in this article, morphological domains do not concern with Level Ordering of affixation. In other words, a constituent with an affix does not belong to a particular level with respect to morphological domain. Thus, Level-2 Prosodic Constituent Formation Algorythm applies independently of morphological constituent formation.

4 This should not be confused with invisibility (extrametricality／ extraprosodicity) as represented in Inkelas (1989, 1990, 1993) and Ishihara (1991).

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論文要旨

"Ungrammaticality" の文法性

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Kiparsky（1982）による「語彙音韻論」の提唱以来、"ungrammaticality"のような複雑な構造をした語の文法性は1980年代の音韻論の中心テーマの一つとして多くの研究がなされた。その理由は、語彙音韻論の観点から、この例のように実際に存在する語が非文法的とされるので、いわゆる、ブラケティング・パラドクスの問題を解決し、このような語の文法性を明確にする必要が生じたからである。しかしながら、本稿に示されるように、先行研究の多くが何らかの問題を含んでいる。本稿では、先行研究にみられる問題を克服し、ブラケティング・パラドクスの問題の解決を試みる。

Inkelas（1989）が「語彙音韻論」から発展させて確立した「韻律語彙音韻論」によると形態表示と音韻表示はそれぞれ独立した構成素を持つ。言い換えると、形態規則が適用される領域と音韻規則が適用される領域はそれぞれ独立していて、重なり合うものではない。この形態表示と音韻表示の分離は、接辞の形態的下位範疇指定と音韻的下位範疇指定を可能にする。本稿では接辞の二重範疇指定を利用してブラケティング・パラドクスの問題の解決を提唱する。この解決法に基づくと、"ungrammaticality"のような語はブラケティング・パラドクスを含まない文法的な語として分析される。また、韻律音韻論にもとづいた解決法では、先行研究の解決法で生成することができた非文法的な語（例えば"inantireligious"）も確実に排除できる。

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