Some Properties of English Adjectives
Ending in - *able*[*]

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In this article I will examine certain characteristics of -*able* adjectives and will show how the peculiar behavior of adjectives derived from the corresponding verbs is accounted for in connection with the properties of their verbs.   I will also show that we should fundamentally admit the hypothesis proposed by Chomsky [6][**] to be correct and can adopt the framework introduced by Hust [9], but that a substantial and formal modifications have to be made so as to explain the syntactic behavior of deverbal adjectives.

In the first section of this essay some phonological properties are described, chiefly from the point of view of word formation.   For the discussion in this section, I am deeply indebted to Aronoff [1].   Section 2 undertakes an analysis of the syntactic properties of -*adle* adjectives. The discussion of selectional restrictions and subcategorizational features will go on within the framework of the standard theory of generative grammar.   We will reject Lakoff's proposal and assert that -*able* adjectives should be derived by lexical rule.   I will assume that an abstract node should be incorporated into a branching lexical entry.   In the third section, I will note some interesting facts to be investigated.

1.0.   The phonological properties of the suffix -*able*

Before the discussion of the syntactic properties of the suffix -*able*,

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[**] Numbers in brackets refer to the references at the end of the paper.

we have to state the phonological properties of it.   They will pose some interesting problems concerning our investigation into its semantics and syntax.

The suffix - *able* may be appended to any transitive verb to make an adjective.   For this reason, it is called a deverbal suffix.   Mute *e* is spelled after soft *c* or *g* and dropped after other consonants·if the verb ends in mute -*e*.   The question is orthographical here.   The rule of spelling is illustrated in the examples (1a) and (1b).   When verbs end in -*y* preceded by a consonant, its *y* must be changed into *i*.   But the *y* is retained when verbs end in *y* preceded by a vowel. This fact is expressed in (1c) and (1d).

(1)   a. pronounceable   b. usable   c. justifiable   d. buyable
              manageable   likable   triable   payable

There is the case that the ending -*ate* is dropped before -*able*:

(2)   abóminate   abóminable
        démonstrate   démónstrable
        accúmulate   accúmulable
        adúlterate   adúlterable
        tólerate   tólerable
        negótiate   negótiable

Truncation of -*ate* is usually obligatory.   If the suffix -*ate* cannot be analyzed as a morpheme, it cannot be dropped.   So, -*ate* does not truncate in the following words:

(3)   debáte   debátable
            státe   státable
            transláte   translátable
            dictáte   dictátable
            locáte   locátable

If we posit that -*ate* is a morpheme in these forms, we must have

reasons for analyzing *st-* in *state* as the root of the word 'state,' which is not possible, since all roots must contain a vowel. Items in (3) are of two syllables, and the primary stress in these derivatives fall on the penult, though in some verbs, for example, *dictate, demonstrate, locate,* there are two variants in stress. The suffix *-able* is a final syllable with a [-long] vowel when not followed by any further suffix. According to the theory of generative phonology proposed by Chomsky and Halle [7], the Primary Stress Rule will ignore the suffix *-able* and place stress on the penult, unless the penult is weak. In the case that the penult is weak, stress falls on the antepenult. We expect to find that there are some stress patterns in (2) and (3). As we expected, it is clear that the adjectival forms in (2) and some in (3) are regulated by the stress rule: stress on the penult if it is strong, otherwise stress on the antepenult. Even if there is any identity in stress between the verb S + *ate* and its derivative V-*able*, it is accidental.

As to the items in (2), Fowler [8] says that "… the short form with *-at-* omitted would be disagreeably pedantic in many cases where either the verb itself is little used in literature, or the dropping of *-at-* amounts to disguising the word or the *-able* adjective is likely to be very seldom used, or confusion with another word might result."

The dropping of *-ate* can be said to be either obligatory or blocked. However there are many cases where the suffix *-ate* is dropped optionally before *-able,* as cited below:

(4)		
anticipate	anticipable	anticipatable
educate	educable	educatable
cultivate	cultivable	cultivatable
operate	operable	operatable
separate	separable	separatable

(From Aronoff [1])

We cannot tell whether there are any syntactic and semantic differences between the derivatives, that is, between the short form and the form with the suffix *-ate.* Here we must note that a verb has two derivatives

formed by choice between *-able* and *-ible.* As noted Fowler [8], the *-ible* form is the natural one for words derived from Latin verb ending, making adjectives in *-ibilis* (e.g. dirigible, audible). We can find the minimal pairs as follows:

(5)   perceivable   perceptible
             prescribable   prescriptible
             avertable   avertible
             solvable   soluble
             destroyable   destructible

The *-ible* forms in (5) are regarded as well-established adjectives. This fact suggests that there is some semantic difference between *-ible* form and *-able* form, which we will return to below.

Another question to be treated with in this section is of the stress of the adjectival form ending in *-able.* As previously stated, we can predict the stress placement in terms of the stress pattern we find: place stress on the penult unless it is weak, in which case stress falls on the antepenult. For example, 'hospitable' has the stress on the antepenult, while 'extendable' on the strong penult.

However, we can easily find a small number of contradictory cases that show alternate stress patterns. Consider the following examples[2]:

(6)   a.   b.
             fórmidable   formidable
             déspicable   despicable
             hóspitable   hospitable
             inéxplicable   inexplícable   (inexplícable)
             éxplicable   explicable

In the case of the stress in column (6b), we can derive the stress if we analyze the affix as disyllable. Here are some interesting pairs of words which show alternate stress patterns and semantic differences between the forms with its pattern.[3]

(7)

	a.	b.
	cómparable	compárable
	réparable	repaírable
	réfutable	refútable
	préferable	preférable
	dispútable	dispútable

Aronoff [1] shows there are two suffixes, $+ abl$ and $\# abl$, that they have the same meaning and syntactic properties, but that the consistency with which these properties appear is greater for words of the form $\# abl$ than it is for words of the form $+ abl$. We can account for the occurrence of the alternate stress types in (7), assuming that the words in column (7a) are of the form $V + abl$ and those in column (7b) of the form $V \# abl$. This hypothesis, is feasible.

We have described the phonological behavior of the suffix -*able* But this is not our central concern in this paper'. Now we must go into more complicated and obscure problems.

2.0. The syntactic properties of the suffix -*able*

2.1. In this section, we will research the syntactic properties of the suffix -*able*. As mentioned earlier, most of English verbs that have corresponding adjectival forms ending in -*able* are transitive verbs. From this fact, certain predictions are possible. It is clear that verbs that do not passivize should not have corresponding -*able* adjectives. Since verbs called 'middle verbs' (Lees [13]) have no -*able* forms, this appears to be a correct predication.

(8) a. This watch costs a lot.

b. *A lot is cost by this watch.

c. *A lot is costable.

(9) a. The smoke means fire.

b. *Fire is meant by the smoke.

c. *Fire is meanable.

(10) a. Susan resembles her mother.

b. *Her mother is resembled by Susan.

    c. *Her mother is resembleable.

(11) a. A misfortune befell Bill.

    b. *Bill was befallen by a misfortune.

    c. *Bill was befallable.

Here a question rises whether verbs that passivize could have corre-sponding *-able* adjectives. The investigation on this problem is undertaken by G. Lakoff [12] within the framework of generative semantics proposed by him. He suggests that English has a rule relating verbs to adjectives and its rule should be a transformation operating on the output of the Passive transformation.

His discussion is so brief that we can repeat it here for convenience:

> The rule which forms *readable* from *able to be read* is also a minor rule. (Call it ABLE-SUB.) Thus we get:

(5-5) a. His handwriting can be read = His handwriting is readable
     b. He can be depended upon = He is dependable
     c. The present can be returned = The present is returnable
     d. This function can be computed = This function is computable
     e. This condition can be satisfied = This condition is satisfiable
     f. John can be relied upon = John is reliable.

> Most verbs, however, cannot undergo this rule. Thus we do not get:

(5-6) a. John can be killed = *John is killable
     b. John can be shot = *John is shootable
     c. His fast ball can be hit = *His fast ball is hittable
     d. This bar can be bent = *This bar is bendable
     e. This match can be lit = *This match is lightable
     f. The bat can be swung = *This bat is swingable
     g. The lighthouse can be spotted = *The lighthouse is spottable

> and so on.

[12:32]

We must reexamine Lakoff's argument on the grammaticalness of the above sentences. Consider the sentences examplified in (12)-(17)[5].

(12) a. This precious picture can be stolen.

    b. This precious picture is stealable.

(13) a. This book can be published.

b. This book is publishable.

(14) a. A long letter can be written.

b. A long letter is writable.

(15) a. John's son can be scolded by Mary.

b. *John's son is scoldable.

(16) a. The president can be interviewed.

b. *The president is interviewable.

(17) a. ?John can be bitten.

b. ?John is bitable.

c. Diamond cannot be bitten.

d. Diamond is not bitable.

The *-able* rule relates items in different grammatical categories, and the syntactic and semantic properties of productively derived words are that they are apt to be more limited in their selectional restrictions, their strict subcategorizations and the acceptablity of sentences. It seems that the differences in the grammaticalness of the examples (12) - (17) should depend on selectional restrictions and accidental gap in lexicon, i.e. English language does not have such forms accidentally. This is also true in Lakoff's examples. We can say the following sentences:

(18) a. Lions that escape from the zoo are killable.

b. The gun is shootable.

c. The chief natures are bendable.

d. This fabric is easily spottable.

The reason that we cannot say the sentences (15b) and (16b) may be that whether one can be scolded or not is dependent upon the receiver of the act, not upon the agent. We cannot generate the sentences involving *-able* adjectives derived from such verbs.

Before proceeding to a discussion of other syntactic properties, we must note on selectional features briefly. There has been a good deal of debate as to whether selectional restrictions properly belong in the syntactic

part of the grammar, or whether they are semantic in nature. I will agree with the hypothesis that selectional restrictions are semantic features. The position that selectional restrictions are syntactic features is taken by Chomsky [5] Bach [2] points out that there are some serious problems in the arguments that selectional features must be regarded as syntactic. It is important to note that no claim is made that selectional restrictions *must* be regarded as semantic features, but merely that the position that selectional restrictions must be regarded as syntactic has to face inexplicable problems.

We will discuss the selectional restrictions that are more explicit.

(19) a. Bill broke the plates.

      b. *Bill broke jealousy.

(20) a. The windowpanes are breakable.

      b. *Jealousy is breakable.

(21) a. The windowpanes can be broken.

      b. Someone can break the windowpanes.

      c. *Someone can break jealousy.

Break selects an object noun phrase which denotes something which can be break, but not abstract nouns. Correspondingly, the predicate *be breakable* selects a subject nounphrase which denotes something which can be broken, but not abstract nouns. Now I will comment G. Lakoff's argument cited above.

Within the framework of Lakoff [12], such regularities would be accounted for deriving *breakable* from a sentence containing *break*. According to his framework, (20a) would be derived from (21a), which would be, in turn, derived from (21b). The correspondences could be accounted for if we state selectional restrictions for the verb *break*. Thus the grammaticalness of (20a) and (20b) follows from that of their underlying structures (21b) and (21c).

However, Chomsky [6] points out a number of problems with such an approach and proposes instead that sentences like (20a) are not derived from the structures underlying (21a), but rather are generated directly with

breakable inserted as an adjective at the level of deep structure. Wasow [15] also proposes that the *-able* forms should be derived from corresponding verbs and nouns by lexical rule, not transformation. He asserts that the property of the *-able* rule as "Minor Rule" in Lakoff's terminology would lead us to assign it to the lexicon, quite independently of the fact that it is a category changing rule. Since (20a) is not transformationally related to that in (21a), the selectional correspondences remain unexplained. Furthermore, he argues against Lakoff's proposal, citing another examples examplified in (22) and (23).

(22)   a. ??Your unfortunate remarks can be regretted.

    b. Your unfortunate remarks are regrettable.

    c. ??This car can be afforded.

    d. This car is affordable.

<div align="right">(Wasow [15])</div>

    e. ??Joan's mistake can be pitied.

    f. Joan's mistake is pitible.

(23)

    a. This book promises to $\left\{\begin{array}{l}\text{be readable}\\ \text{*be able to read.}\\ \text{*can be read.}\end{array}\right\}$

    b. I was expecting the evening to $\left\{\begin{array}{l}\text{be tolerable.}\\ \text{*be able to be tolerated.}\\ \text{*can be tolerated.}\end{array}\right\}$

    c. The bottles began $\left\{\begin{array}{l}\text{being returnable.}\\ \text{??being able to be returned.}\\ \text{*canning be returned.}\end{array}\right\}$

<div align="right">(Wasow [15])</div>

According to Wasow [15], "the facts in (22)- (23), which also created difficulties for Lakoff's analysis, present no problem to a lexical analysis, since it predicts no particular correlation between the environments allowing passives and allowing *-able* adjectives."

For further discussion, we must ask what devices have been proposed in the standard theory of transformational grammar. Chomsky [6] has

discussed this problem. We should like to outline two interesting proposals. Note again that adjectives in *-able* which are derived from mainly transitive verbs exhibit one characteristic feature of passives. When the verb of the adjective sequence selects a NP as object, the related adjective itself selects this NP as subject. Chomsky noted this redundancy and proposed a lexical approach,

> regularities involving only selectional features might in principle be stated as redundancy rules of the lexicon.[39] For example, insofar as a subregularity exists regarding selectional rules in the case of *-able*, it can be formulated as a lexical rule that assigns the feature X____ to a lexical item V-*able* where V has the intrinsic selectional feature____X.

<div align="right">[6: 213···footnote 39 omitted]</div>

Hust [9] attempted to explain the selectional correspondences, formulating the lexical redundancy rules relevant to a base and its derivative. Hust [9] has formulated Chomsky's rule and says,

> Chomsky's informal rule can now be formalized as (28), ···
>
> (28) $[+\_\_\_\_\text{-}able] \rightarrow [a[f]\quad]/ \left\{ \begin{array}{c} +\_\_\_\_\text{NP} \\ \_\_\_\_[f] \end{array} \right\}$
>
> Rule (28) is to be interpreted as assigning the feature $[+\_\_\_\_\text{-}able]$, that is, branching diagram of their lexical entry by a node containing the features $[+\_\_\_\_\text{NP}]$ and $[\_\_\_\_[f]]$.

<div align="right">[9:76]</div>

"In this formula, it is assumed by convention that all features present in the context of redundancy rules employing alpha notation are relevant, including +____NP itself. That is, although +____NP appears in the context of (28), it also is covered by the alpha feature of the context matrix and thus +NP____is associated with adjectives in *-able*, etc.," noted Brame [3].

Now we will return to investigate the syntactic properties of the deverbal adjectives ending in *-able*. We cite some examples from (12)-(17) again for convenience.

(24) a. ?John can be bitten.
   b. ?John is bitable.
   c. Diamond cannot be bitable.
   d. Diamond is not bitable.
   e. This precious picture can be stolen.
   f. This precious picture is stealable.

g. This book is publishable.

h. *Tom's proposal is bitable.

Examples (24c-h) are grammatical, since neither strict subcategorizational nor selectional restrictions are violated. On the other hand, sentences (24a, b) and (20b) are not allowed because the selectional restrictions to subjects are violated. As stated above, the subject of the verb *bite* is restricted to something which can be bitten. So abstract nouns can be selected as the subject of *bite* as illustrated in ungrammatical example (24h). However, the examples (24a, b) show that there is a problem with the assumption that the derivatives ending in *-able* retain the selectional restrictions of their corresponding verbs, and that a noun phrase can be selected as the subject of the derived form ending in *-able* if the corresponding verb to the derivative can select it as an object noun phrase. In the case of *bite*, the situation is slightly complex. Consider the following example.

(25) a. The snake bites Bill.

b. Bill is bitten by the snake.

c. A dog bites his stick.

d. His stick can be bitten by a dog.

e. ?Bill is bitable.

f. *His stick is bitable.

g. *Diamond is bitable.

These examples show that the restrictions between a subject noun phrase and the predicate *be V-able* are more strict than the restrictions between an object noun phrase and the corresponding verb. So we may say that a noun phrase verb cannot select as an object cannot be allowed as the subject of the predicate *be V-able* derived from it, but not vice versa. Furthermore we can find that the ungrammaticality of the sentences (25e-g) comes from the violation of the features peculiar to *bitable*, somewhat [+suitable to bite]. Such ungrammaticality will be accounted for by certain condition like well-formedness condition in the semantic component.

In above cases, the lexical rule relating verb to corresponding *-able* adjectives identifies the subject of the latter with the direct object of the

former. However, Chapin[4] points out that there are adjectives in -*able* which select as subjects the same class of nouns which the related verbal stem selects as subject, rather than object. Consider the following examples.

(26) a. The weather changes.

    b. The weather is changeable.

(27) a. John changes his shirt.

    b. *John's shirt is changeable.   (Hust [9])

(28) a. That ornament passes.

    b. That ornament is passable.

(29) a. They pass the time of day.

    b. *The time of day is passable.

Hust [9] proposes that lexical entries are Boolean functions of features representable as branching diagrams. Within his framework, adjectives with the morphological feature [+_____-*able*] are indirectly dominated by a node containing the feature [+_____NP]. Therefore, it appears that these examples may pose a problem for his approach. He recognizes the problem for his proposed framework and explains that in this case the feature [+_____-*able*] is dominated by the node specified with features that distinguish the class of nouns which can occur as subject of intransitive *change* or *pass*, not by the node in the branching diagram which is specified with the feature [+_____NP]. It seems that this framework can be accounted for the problems posed by these examples.

Here it must be noted that certain additional devices may be necessary if we are to predict the grammaticality of the sentences as follows:

(29) a. They change their places of meeting.

    b. Their places of meeting are changeable.

(30) a. Farmers pass Bill's field.

    b. Bill's field is passable.

These examples suggest that [+_____-*able*]in *change* or *pass*, etc. must

be dominated by the node specified with the feature $[+\underline{\hspace{1cm}}NP]$ as well as the feature $\left\{\begin{matrix}[+\underline{\hspace{1cm}}\#]\\[\alpha[f]\underline{\hspace{1cm}}]\end{matrix}\right\}$. There is no serious problem for two occurrences of the feature $[+\underline{\hspace{1cm}}\cdot able]$: One is closely related to transitive *change* and is subject to certain lexical redundancy rule, since it is dominated by a node that characterizes transitive verb. The other is closely related to intransitive *change* and is not subject to the lexical redundancy rule. Thus this fact reveals that the examples (29) and (30) are not problematic at all. The *-able* adjectives that require to be treated with in this way are: *answerable, honourable, insensible*, etc.. The deverbal adjectives such as *favourale, profitable, suitable*, etc., are dominated by a node containing the features $[+\underline{\hspace{1cm}}\#]$, $[+\underline{\hspace{1cm}}VP]$ and so on.
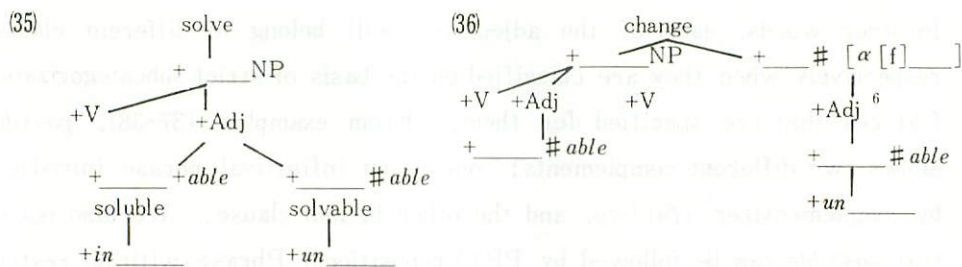
Again we have other examples to be accounted for within this framework. The problems posed by them are related to the morphological process of word formation and the differences in meaning of derivatives. Consider the following examples:

(31)   a.   This riddle is solvable by this hint.

         b.   *This riddle is soluble by this hint.

(32)   a.   *This material is solvable into water.

         b.   This material is soluble into water.

(33)   a.   This town is destroyable intentionally.

         b.   *This town is destructible intentionally.

         c.   Glass and china are destructible.

(34)   a.   There is a flaw in the grain, but it's imperceptible.

         b.   *There is a flaw in the grain, but it's unperceivable.

                                                      (Aronoff[1])

As previously discussed in 1.0, marked latinate roots show the allomorphs before *-able* and these allomorphs are optional in their occurrences. In addition, we have another allomorphs that result from optional truncation of *-ate* before *-able* These allomorphs can occur optionally. We have cited the examples for the former in (5) and for the latter in (4). The analysis must account for the cases that involve allomorphy. For accommodating nicely these examples, we should incorporate the two different boundaries that Aronoff [1] posits before the suffix *-able* into this frame-

work. Thus we may posit the two different features [+_____ # *able*] and
[+_____ +*able*] in place of a feature [+_____ -*able*] and both of these
features are dominated by same node in the branching diagram which is
specified with the feature [+____NP]. These are morphological features
and can account for the other morphological derivation by appending affixes.
But Aronoff asserts that # *able* has a base of the category Verb, while +*able*
has often has no base from morphological viewpoint. If we agree his anal-
ysis, we should analyze the items listed in central column of (4) and right
column of (5) as the derivatives with the feature [+_____ + *able*]. This
suggests that these derived forms have no base, but this is not the case.
Aronoff [1] points out that the base is a transitive verb when a word of
the form X +*able* has base. He analyzed words like *possible*, *probable* and
refrangible, which has no base, as the form X +*able*. But we consider
that words like *possible* and *probable* do not contain the deverbal suffix
-able; they must therefore be analyzed as independent lexical items.
Similar to *possible* and *probable* is *eligible*, which should not be analyzed as
containing the suffix *-able*. We cannot posit it in the branching diagram
of the lexical entry for *elect* and its derivatives, though *elect* and *eligible*
are descended from Latin verb *eligere*. In addition, the analysis should be
divorced from any semantic considerations. Semantically, *elect* and *eligible*
have some common properties, but they must be treated with in the area
of historical linguistics of English language.

If we analyze *possible* class adjectives, *soluble* class adjectives and *-ate*
truncated class adjectives .ending in *-able* as specified with the feature
[∓_____ +*able*], we cannot find significant generalizations: the latter two
kinds of adjective have allomorphs as a sister in the lexical entries for
corresponding verbs, but *possible* class adjectives do not have allomorphs
and have lexical entries for them which contain phonological features, se-
mantic features and syntactic features. For convenience, we will illustrate
the lexical entry for *solve* partially in (35) and for *change* incompletely in (36)
according to Hunt [9].

(35)
```
              solve
                |
          +_____NP
          +V    +Adj
         /        \
   +_____+able  +_____#able
    soluble        solvable
       |             |
     +in_____     +un_____
```

(36)
```
              change
          +_____NP       +_____#  [α [f]____]
        +V +Adj  +V        +Adj
         +_____#able       +_____#able
                              +un_____
```

Possible class adjectives share some properties with *soluble* class adjectives. One of the properties shared between them is that negative affix *in-* in English attaches to adjectives of their class. We will discuss this interesting morphological condition in my forthcoming paper. For the moment, we will describe subcategorizational restrictions for some adjectives of *-able* forms in the following section.

2.2. Aronoff [1] reported that there are some features of the base which are lost in the derived form, and that the loss is systematic, though it is idiosyncratic in many cases. We can easily find that the adjectives ending in *-able* (*-ible*) which are not regularly derived from verbs behave in different way. We will begin our investigation by considering what kind of complements they allow. Consider, first, the following sentences:

(37) a. It is possible to grow vegetables in this soil.

b. Such an action would be possible with a pretty girl.

(38) a. No career is possible in this small village.

b. It is possible that he went.

(39) a. It is hardly probable that he will succeed.

b. *It is probable to prevent desease.

c. Rain is probable before evening.

(40) a. It is very feasible that the strike may be brought to an end this week.

(41) a. He is capable of great things.

b. He is capable of making a fortune in any legitimate business.

In the face of these sentences we are lead to consider that the subcategorizational restrictions that these adjectives enjoy are indiosyncratic.

In other words, each of the adjectives will belong to different classes respectively when they are classified on the basis of strict subcategorization features that are specified for them. From examples (37-38), *possible* allows two different complements; one is an infinitival phrase introduced by complementizer *(for)-to*, and the other is *that*-clause. We also notice that *possible* can be followed by PP (Prepositional Phrase) with no restrictions. Of course, this PP does not play a role in the subcategorization of the adjective *possible*, which is different from the PP of *capable*. *Possible* has two distinct meanings that are relevant to its subcategorization. *Possible* is subcategorized with respect to *that*-clause complement when it means approximately "capable of happening or existing" and is subcategorized with respect to *for*-phrase complement when it means "capable of being done." Since we adopted the system with slight modification that was proposed by Chomsky [6] and discussed by Hust [9], this observation indicates that one node for *possible* dominates subcategorization features, [+ *(for)-to*____#], [α [f]_____], in right branch and the other node dominates the features, [+ *that*____#], [α [f]____], in left branch. This system naturally accounts for semantic differences in *possible*. From examples (40), *feasible* cannot select any structures but *that*-clause as its complement. It, therefore, is subcategorized with respect to *that*-clause complement. Example (41) shows that *capable* is subcategorized with respect to PP and that we cannot consider the PP to behave like place, time and manner adverbials that are associated with full predicate phrase.

Now we should like to deal with the differences in the range of subcategorization between a base and a deverbal adjective, and between a deverbal adjective and an established adjective ending in *-able*. In this paper, we limit our discussion to the subcategorizational restrictions with respect to PP and Complement.

Our first concern will be devoted to discussing strict subcategorization feature for adjectives ending in *-able*. Aronoff [1] has done work on the subcategorization possibilities of two class X + *able* that has no lexical base and X # *able* which has a base. He argues that X + *able* allows a prepositional phrase more frequently than X#*able*. He cited the following examples for discussion.

(42)　　a.　I am amenable to a change in plans.

　　　　b.　It's visible to the naked eye.

　　　　c.　He's eligible for reappointment.

　　　　d.　That's compatible with our findings.

We can add some other sentences to (42).　By positing the ＋ boundary, we can correctly predict that PP participates in strict subcategorization of adjectives ening in -*able* which have no base.　However, examples (42) do not show which of　deverbal adjectives of the form V-*able* we can place the ＋boundary.　By looking at the behavior of the suffix -able in derived forms, we find that only a ＋boundary should be postulated in some forms and the other forms should be analyzed as having both ＋and ♯boundary. In the following sentences, it seems that we cannot place a ＋boundary to them,　though they are dominated by a node specified by the feature [＋____ PP].

(43)　　a.　An adult should be answerable for his conduct.

　　　　b.　Electricity is convertible into other forms of energy.

　　　　c.　Democracy is applicable only to the West.

　　　　d.　This line is separable from that.

　　　　e.　Our language is fully comprehensible to one another.

　　　　f.　The thumb is opposable to the forefinger.

　　　　g.　Your explanation is reconcilable with the facts.

　　　　h.　College texts are profitable for book publishers.

At first glance, predicative adjectives in sentences cited above may be considered as derivatives from corresponding verbs by appending the suffix -*able*.　We can easily find that some derivatives and their bases, i.e. transitive verb, may meet the same subcategorization restrictions, but some derived form in -*able* allow the PPs that their corresponding verbs cannot take.　In some cases, their corresponding verbs do not only take the same PP as the derivatives formed by -*able*, but also allow some other PPs. In addition to (43), we cite some interesting examples as follows:

(44) a. You will have to answer for this waste.

b. *An argument supposedly is answerable for (to) her behavior.

c. An interrogation confined to questions $\left\{\begin{array}{l}\text{can be answered} \\ \text{is answerable}\end{array}\right\}$ in one word.

(45) a. Water can be converted into steam.

b. A man is not easily convertible to strange system.

c. He can be easily converted to a new theory.

(46) a. This style is acceptable to tribal custom.

b. This style can be accepted $\left\{\begin{array}{l}\text{*to} \\ \text{by}\end{array}\right\}$ each generation.

(47) a. The toad is mistakable for a stone.

b. That scene is effaceable from my memory.

c. The toad can be mistaken for a stone.

d. That scene can be effaced from my memory.

(48) a. The rest of us may profit by your experience.

b. Your experience is profitable for the rest of us.

c. The darkness favored the attempt.

d. The wind is favorable to a start.

From examples (43a) and (44), we find that there are some derivatives in *-able* which take PPs corresponding their intransitive verbs and have a passive sense derived from their transitive verbs. Examples (45) and (43b) suggest that some deverbal adjectives in *-able* are subcategorized with respect to the same PPs as well as their bases, but certain forms in *-able*, e.g. (43c), do not allow some PPs which the related verbs take. Sentences in (47) exemplify the same fact as (45) and (43b) suggest, but there is a difference in frequency of use between them. (47a,b) are rarely used, but acceptable. Sentences in (46) may share subcategorizational properties with sentences cited in (48), though we can find a slight difference between them.

In most of derived adjectives in *-able*, we can assume that they may allow the specific corresponding PPs to follow them.

However, as Aronoff [1] noted, some (e.g. Chapin [4]) has argued

that the adjectives *breakable* and *showable* may not followed by the corresponding PPs, though the verbs *break* and *show* can take the PPs. The examples that they supplied are cited again as (49) for convenience.

(49) a. They broke the glass into six pieces.
b. We showed the film to the children.
c. The glass is breakable.
d. The film is showable.
e. This glass can be broken into six pieces.
f. This film can be shown to children.
g. *The glass is breakable into six pieces.
h. *The film is showable to the children.

They claimed to be involved in the derivation of V-*able* adjectives, since the passive construction (49e, f) also allow these PPs. Aronoff [1] argued against it: "it would thus appear that an externally unmotivated feature of the WFR (Word Formation Rule) X-able forbids PPs which are subcategorized by the verb X to appear after the adjective X♯*able*." I think that his observation is correct, but the reason why these adjectives in -*able* cannot take the PPs to follow them, though we can explain this fact by assigning an ideosyncratic feature [-_____PP] to these forms in -*able*.

The adjectives in (47) may be followed by the corresponding PPs. Note, first, that some important factors may be revealed when a comparison between examples (43b), (45), (47) and (49) is made. In these cases, the PPs preceded by the adjectives specify the target of the modification by the adjectives. We may assume that a PP used after an adjectives semantically might perform a function in shifting a passive sense of a deverbal adjective in -*able* to an active sense. Also we may consider that most of adjectives in -*able* that take PPs except for 'by' have an active sense, mainly derived from transitive verbs, and their corresponding verbs also allow the same PPs. We can easily find strong evidence for this prediction. In English, there are some adjectives like *agreeable, available, ascribable, opposable, referable, traceable,* and so on, which do not only have an active sense, but also do allow PPs. The reason why the adjectives in (49) may

not followed by the PPs would be lies in that we can say "something is liable to be broken," but "something that is liable to be broken into three pieces or something that is easily broken into three pieces" is strange. In the case of *showable*, that it does not allow the PP depends upon the predominancy of a passive sense, mainly derived from transitive verbs. However, we find that both cases should be regarded as unacceptable sentences, though not ungrammatical sentences. This unacceptability might mainly stem from the degree of establishment of a derived form in *-able*.

Before proceeding another problem, it must be noted that *answerable* can be analyzed in the same way as *changeable* because it allows a PP and the feature [+____NP] plays a role in strict subcategorization of it. The derived adjectives in *-able* in the other sentences exemplified in (43)- (47) can be accounted for without assigning a + boundary to them by lexical redundancy rule because most of them have the same, though much more limited in some cases, subcategorizational features as their corresponding verbs.

Now I will present a discussion of the problem which is posed by examample (48c, d) and show that it would be accounted for nicely if additional devices can be corporated into our system. Although *favorable* like *sensible* is apparently like as adjective derived from a verb, it seems that the syntactic properties lead us to classify it to the same class as *possible*, which is a true adjective and has no base. However, example (48) indicates that *favorable* selects as its subject the same class of nouns which its verbal base *favor-* selects as its subject in certain cases. We can find the same situation in the case of *changeable*, but its base can behave as both intransitive and transitive verb. This is not the case in *favorable*. Thus *favorable* must be dominated indirectly by a node specified with the features [+____#] and [α [f]____], which is an abstract node that could dominate intransitive verb *favor*. There is other evidence for assuming an abstract node of this kind. Now consider the following example.

(50) a. John regrets his words.
      b. John's words are regrettable.
      c. ??John's words can be regretted.

(51)　a.　Joan pities her own mistake.

　　　b.　Joan's mistake is pitible.

　　　c.　??Joan's mistake can be pitied.

The adjectives in these examples should be accounted for by incorporating an abstract node into our system, because the bases from which they are derived do function as intransitive verbs. *Regret* like *afford* and *deplore* has only a transitive sense, and it is different from middle verb in that it has a derivative formed by *-able*. The analysis proposed here will be proved to be valid by further examination.

　　Finally we should like to comment briefly on the argument of Aronoff [1] that +*able*, but not #*able*, sometimes allows the PP where we get both forms, and the base is a verb that allows a PP. We cite Aronoff's example as (52)

(52)　a.　divisible by three

　　　b.　?dividable by three

　　　c.　divisible into three parts

　　　d.　?dividable into three parts

(53)　a.　A rope is { *extensible / extendible } across the street.

　　　b.　Beasts are { separable / *separatable } from man by a great gulf.

　　　c.　John is { persuadable / ??presuasible } to do (into doing) it.

The grammaticalness of these examples may partly depend on the productivity of the suffix *-able*, and I think that the frequency of use and the impression of items, which depends on the active vocabulary of speakers, play an important role in judging the grammaticalness of sentences. This condition sometimes produces syntactic differences between allomorphs.

3.0. In this section, we will add some other facts about adjective in *-able*. First of all, the adjectives in *-able* may be classified with respect to complements that they allow. Consider the following example.

(54)　a.　*John's conjecture is provable to be wrong.

b. *John's arguments are believable to be plagiarized.

From example (54), we can find that 'persuadable' class can be distinguished from 'believable' class with respect to a complement.

It is also noted that there is an interesting relationship between -able and other suffix or prefix. Aronoff already noted that the affix -able is triggering the attachment of +ity which attaches only to latinate forms. This is the case in the attachment of the prefix un-. We can say unpaintable, unreadable and unwritable, but not *unpaint, *unread (in present tense) and *unwrite.

Note that there are two common negative prefixes in English. They are in- and un-. Aronoff [1] points out that among adjectives in -able, some can take in- as prefix and the other can be prefixed by un-.

(55)   in-   un-

        impossible   *umpossible
        inviolable   *unviolable
       *imperceivable   unperceivable
        irrevocable   *unrevocable

He concluded that the facts of (55) correlate perfectly with his analysis that in + attaches to X + able and un # attaches to X # able. Zimmer [18] also noted: "there are a few examples of in-V-able: inconceivable, indescribable. Cases of un-V-able are easier to find. The reason for the imbalance in the numbers of exceptions is the difference in the productivity of in- and un-." However, we can find that there are many forms to which both un- and in- attach. Some of them show that there are interesting problems to be dealt with. Consider the following distribution of affixes:

(56)

	un-			in-		
	-ity	-ness	-ly	-ity	-ness	-ly
tangible	−	−	−	+	+	+
adaptable	−	−	−	+	+	−
communicable	−	−	−	+	+	−
susceptible	+	−	−	+	−	+
stable	+	+	−	+	−	−
distinguishable	−	+	+	+	+	+
advisable	−	+	+	+	−	−
applicable	−	+	+	−	−	−
alterable	+	+	+	+	−	+
sociable	+	+	+	+	−	+
controllable	+	+	+	−	−	−

In this table +indicates that the form *un-* (*in-*) *V-able*
-ness (*-ity* or *-ly*) can be found, and − indicates that
it does not occur in English.

From the table (56), it is possible to predict that the suffix *-ness* would
play an important role in determining which form of two has the high fre-
quency of use and is produced by analogical process. But further investi-
gation into the characteristics of each derivatives will reveal interesting
facts. There is clearly much more work to be done here. We cannot
claim to have discovered all that there is to know about the syntactic and
semantic properties of adjectives in *-able*. But I believe that our discus-
sion points in the right direction.

NOTES

1) The mark I placed on the words listed in (2) indicates the primary stress that they
   have. The mark (¹) indicates that there they have alternate stress and can be
   pronounced in either way.
2) According to Kenyon and Knott [11], *formidable* and *inexplicable* are pronounced in
   British English, and the pronunciations, *despicable, explicable,* are less frequent and
   the pronunciation as *hospitable* is much less frequent. They note that *inexplicable* is
   gaining ground here. However, Jones [10] explains that the pronunciations as illus -
   trated in column (6b) with stress on the penult is less frequent and *explicable*
   with stress on the second syllable is becoming common, and seem likely to supersede
   the other before long.
3) Jones [10] also states that *preferable* is rarely pronounced. The pronunciations with
   with stress on the penult examplified in (7b) sound pedantic (personal communication
   with D.M. Flint, a foreign instructor in Asahikawa Medical College)
4) Among the recent works in this area I can recommend Siegel [14] and Aronoff [1].
5) In general, the adjectives of form *-able* have strained usage and have more limited
   sense than their corresponding verbs. For the discussion of the semantic differences

between allomorphs like appreciable-appreciatable, see Aronoff([1]: chapter 6)
6) In Hust's framework, the feature [+Adj] is assigned by a redundancy rule like the following: $[+\underline{\hspace{1cm}}\text{-}able] \rightarrow [+\text{Adj}]$
He asserts that this rule should be generalized to include other adjectives forming affixes such as *un-*_____*-ed*, *-atory*, *-ous*, etc.

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