The purpose of this chapter is to explore further the general relationship between morphemes and words. In what sense do words consist of morphemes? Is there some constant relation between the two, as in syntax, where practically all sentences can be said to be synthetic entities, constructed out of words in a single way? We will see that words are very different from sentences, that their structures are much more varied, and that though there is a single principle governing the structure of most complex words, this principle must be applied in different ways to different classes of words. I will discuss these various classes.

Before going on to words, however, I must say a few things about morphemes, for though these units are basic to several aspects of the theory of language, their properties have been more asserted than studied, and since they are so central to our investigation we must be particularly careful that we know whereof we speak.

2.1. Trouble with Morphemes
The units into which words are analyzed, out of which they are composed, are termed morphemes. We will be concerned in this section with some problems concerning the defining characteristics of the morpheme, concentrating on a central premise of the approach which has been most pervasive in American linguistics. This premise is the definition of the morpheme as "the smallest individually meaningful element in the utterances of a language" (Hockett (1958, 123)). Accepting this premise entails that every polymorphemic word is a compositional entity. It is compositional in two senses, both semantically and structurally, the semantics being a function of the morphemes and the structure, just as a sentence is semantically compositional. Recent work has revived the truism that every word has its own idiosyncratic traits, some of which can be very erratic and elusive. (We are speaking here of derivational words; this waywardness does not extend to inflection.) If it is true of words that they are minimally meaningful, then what about the morpheme? Does it have no status at all, or can we define it other than semantically? The point of this section is to show that the latter question can be answered in the affirmative. Specifically, we will isolate a class of morphemes, show that there is no way in which the members of this class can be said to have any meaning at all, and then demonstrate that there are phonological criteria which allow us to isolate occurrences of these meaningless morphemes. The importance of this demonstration is two-fold. First, it shows us that any theory of "minimally meaningful element" is misguided. Second, it shows that despite this fact, it is still possible to construct a theory in which the morpheme plays a central role.
2.1.1. Minimal Signs

In order to understand what is at stake here, we must first have a better understanding of what is meant by minimal meaningful element. This entails a short review of de Saussure’s concept of the minimal sign. The sign is one of the most basic concepts of linguistics, and the literature on the subject is vast. Nor is the definition of the sign a closed matter. I will adopt in this discussion what I think is an orthodox view, where orthodox does not, of course, mean totally uncontroversial.¹

The minimal meaningful unit of a language is the basic, minimal, Saussurean sign (cf. de Saussure (1949)). The sign is an arbitrary union of the semantic and the phonetic. So the sign dog has a meaning and a sound; one cannot exist without the other; they are arbitrarily united. Arbitrarily, because there is nothing in the sound which dictates its meaning, and vice versa, except social convention. The sound may change and the meaning remain, or the meaning may change and the sound remain.

Out of the minimal signs we can construct composite signs. These signs are not arbitrary. Their meanings may be predicted from their structure and the minimal signs out of which they are constructed. Sentences are composite signs.

It is sometimes argued that there are different degrees of arbitrariness. A sign like dog is completely arbitrary. However, there are other signs whose sounds, we feel, have some intrinsic connections with their meanings. Onomatopoetic words, and those which involve phonetic symbolism (cf. Marchand (1969, 398 ff.)), like slurp and quack, are said to be partially motivated (nonarbitrary) because of this intrinsic connection. The class of partially motivated signs also includes composite items whose meanings can be partially, but not completely, derived from the meanings of their parts. Thus a sign which formally consists of the signs a + b, but whose meaning must be represented as A + B + C, that is, the meanings of a and b plus something else specific in addition, is sometimes said to be partially motivated. I will hold with de Saussure, and against Bally (1940) and Marchand (1969), that only fully motivated signs are to be counted as nonminimal, that partial motivation is not significant. Thus, any sign which is at all arbitrary is considered to be part of the basic inventory of signs.² Most of what follows is devoted to deciding what sorts of elements form this basic inventory.

2.1.2. Words

That there are minimal signs which are polymorphemic was first stressed as an important fact, at least within the framework of generative grammar, by Chomsky (1970). Chomsky noted that

¹ Readers may be interested in these controversies. Two good starting points are Spang-Hanssen (1954) and Koerner (1972).

² “Fully motivated” must not be confused with “fully meaningful”. As Culicover (1972) has shown, some signs are inherently unspecified in such a way as to cause any utterance containing them to be highly, perhaps infinitely, ambiguous. The sentence One more can of beer, and I’m leaving (Culicover (1972)) is an instance of such an ambiguous entity. “What about that can of beer?” we ask. “Anything,” is the reply. The point is that the meaning of the entire sentence is somehow partially unspecified. It is probable that all linguistic entities are not fully meaningful in this sense: all sentences are ambiguous, hence the poetic function. Instances such as these, however, differ fundamentally from those where two items a and b are concatenated and the concatenation does not mean ‘a + b + infinite ambiguity’ but rather ‘a + b + c’, i.e. instances where some specific isolable constant part of the meaning of a concatenation cannot be derived from that of its parts. It is in these latter cases that motivation or arbitrariness is relevant.
much of derivational morphology is semantically irregular and should not be handled in the syntax. Out of this remark there developed two hypotheses. The strong lexicalist hypothesis of Jackendoff (1972) excludes all morphological phenomena from the syntax. This means that the syntax cannot relate some and any, or ever and never, and that inflection, if it is referred to in the syntax, must be handled by some sort of filter. The version of the lexicalist hypothesis which is more widely accepted than this one, but which to my knowledge has never been explicitly formulated in print, is that derivational morphology is never dealt with in the syntax, although inflection is, along with other such "morphological" matters as Do Support, Affix Hopping, Clitic Rules, i.e. all of "grammatical morphology". This seems to be the position of, for example, Chomsky (1973). This latter hypothesis, which I will assume, does not say that derivational processes are always irregular and that their semantics is always noncompositional. Nor does it exclude from the domain of the syntax only irregular derivational phenomena as Chomsky (1970) says one might do. It says rather that derivational phenomena are always separate from the syntax, regardless of their regularity. Postal (1969) presents very convincing evidence for this hypothesis. Translated into a Saussurean framework, the hypothesis says that for the purposes of syntax, the word (sans infection) is the minimal sign. This hypothesis says nothing about intraword phenomena and relations; they may or may not be regular. Of course the main reason for the adoption of the hypothesis in the first place was semantic irregularity, and we must develop a theory of derivational morphology which allows for, and hopefully even predicts and accounts for, this observed irregularity.

I will now present evidence that the word is a minimal sign, not merely for the purposes of the syntax. To do this, I will show that below the level of the word we encounter morphemes which, while they must be assumed to be real linguistic elements, have no meaning...
which can be assigned independently of each of the individual words in which they occur. This demonstration is not a novelty. The most extended and formalized argument that I know of in favor of the point I am making is in Hervey and Mulder (1973).

2.1.3. Morphemes

2.1.3.1. Cranberry Morphs. There is in English a class of *hapax legomena*, morphemes which only occur in one English word. They are often called *cranberry morphs*. Consider the following list:

(1) cranberry  boysenberry  huckleberry

Since the words in our list are all names of berries, we may isolate this last unit as a meaningful morpheme. We are left with the items in (2):

(2) #Cran#  #boysen#  #huckle#

None of these items occurs either independently or in any other words than those in (1). There is thus no noncircular way of assigning meanings to the morphemes in (2). Their meanings are intimately connected with those of the individual words in which they occur. As Hervey and Mulder note (1973, 45), "... a sign is only analyzable into two or more constituents in a grammar, if each of these constituents can be identified as a sign." Of course, one can ignore problems of circularity and assign a meaning to the item in question. It is then merely an accident that this fully meaningful item occurs only in one word. However, there are cases in which such a simple solution is not possible.

2.1.3.2. Other Berries. As noted above, it is possible to assign a meaning to items such as #cran#, simply because they do occur only in one word. With other names of berries, however, this simple device will not work. Consider the following list:

(3) strawberry  blueberry
   blackberry  gooseberry

By removing berry again, we can isolate the morphemes in (4):

(4) #straw#  #blue#
    #black#  #goose#

As opposed to the items in (2), these occur elsewhere than as parts of the names of berries; in fact, they occur as independent words. However, when they do appear as independent words, they have meanings which bear no relation to the meanings they might be assigned in (4). For example, one might think that a blackberry is black. However, not all black berries are blackberries, and furthermore, many blackberries are green or red (a fact also noted by Hervey and Mulder). There is therefore no way to assign a meaning to the item black which will be valid both when it occurs as an independent word and when it occurs in the word blackberry. The same holds for blueberry. The connection between geese and gooseberries or between straw and strawberries is not very apparent. The problem here is that we cannot resort to the simple ruse
of assigning the items in (4) constant meanings, for they do occur elsewhere than in the words in (3), but with meanings which are totally incompatible with those we would like to assign to them on the basis of the meaning of the corresponding word in (3).

It is possible to get around this problem of a morpheme having different meanings in different words without entirely giving up the claim that morphemes are meaningful. The basic tack is to give morphemes underdetermined meanings, with contextually determined allo-meanings. This is essentially the solution which Chomsky (1970) adopts. In order to handle idiosyncratic semantic differences in verb-noun pairs like refuse-refusal, he says that “the lexical entry may specify that semantic features are in part dependent on the choice of one or another of these categorial features” (noun or verb) (1970, 190). To the extent that these dependencies are regular and syntactically motivated, there is virtue in such a device, or a similar redundancy convention, but to the extent that they are idiosyncratic, which many of them are, the device merely serves to obscure the truth, that it is the words which are idiosyncratic. Though this system may allow us to preserve the idea that morphemes are meaningful, it is only at the level of the individual word that these meanings can be fully specified.

In the particular case with which we are dealing, the device of underspecification and contextual filling leads to a particularly unsatisfying result. Since, as noted, some blackberries are red, and since something cannot be both black and red at the same time, the two allo-meanings of #black# will be contradictory and will share almost no semantic features (color?). Allowing a device which permits such a situation is very dangerous; it essentially gives homophony as the only criterion for deciding whether two things are instances of the same meaningful entity.7

One might also go entirely the opposite route. Thus one could claim that the various instances of #black# are completely unrelated, each a different morpheme. This rids us of the problem of morphemes with underspecified meanings, though we are still left with the circularity problem: is it the word or the morpheme which specifies the meaning? The next set of data bears on this theory.

2.1.3.3. Prefix=Stem (latinate). The last two sets of data consisted of what are traditionally called “partially motivated” forms. There was one element, berry, whose meaning was relatively constant, and another, which in a sense told us what sort of berry we were dealing with, but which never occurred, or never occurred with the same sense, outside of the particular word with which we were dealing. This next set of data differs from these in having no fixed element.

The data set consists of the latinate verbs with bound stems and prefixes which are always stressed on the stem. In the system of SPE this class is marked phonologically by the presence of a special boundary, =, between the prefix and the stem. Examples of such verbs are refuse, convene, and inject. I will not discuss verbs such as suffer, proffer, or differ, which diverge in their stress patterns from other prefixed verbs with bound stems, and for which no = boundary is posited. Nor will I discuss verbs such as re#fuse (‘fuse again’), in which there is a # boundary

7There is a basic dissimilarity between this device and the one I alluded to in footnote (1). There underspecification resulted in infinite ambiguity (infiniguity?), which is not the case here.
in the system of SPE. For this class \( x = y \) it is possible to demonstrate that neither the prefix nor the stem has any fixed meaning.

First the stem. Consider the verbs in (5):

<table>
<thead>
<tr>
<th></th>
<th>( X = \text{fer} )</th>
<th>( X = \text{mit} )</th>
<th>( X = \text{sume} )</th>
<th>( X = \text{ceive} )</th>
<th>( X = \text{duce} )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>refer</td>
<td>remit</td>
<td>resume</td>
<td>receive</td>
<td>reduce</td>
</tr>
<tr>
<td></td>
<td>defer</td>
<td>demit</td>
<td>presume</td>
<td>deceive</td>
<td>deduce</td>
</tr>
<tr>
<td></td>
<td>prefer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>infer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>confer</td>
<td>commit</td>
<td>consume</td>
<td>conceive</td>
<td>induce</td>
</tr>
<tr>
<td></td>
<td>transfer</td>
<td>transmit</td>
<td>submit</td>
<td>assume</td>
<td>transduce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>submit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>admit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>permit</td>
<td></td>
<td></td>
<td></td>
<td>perceive</td>
</tr>
</tbody>
</table>

Let us presume for the moment that the prefixes in (5) have constant meanings, much as the berry of (1) and (3). Is it possible to extract any common meanings, however minimal, from the different occurrences of each stem? At first glance, if we merely compare pairs of verbs, one might be tempted to think so. Confer and transfer might appear to share something, similarly remit and submit, conceive and perceive, assume and presume, induce and deduce. However, if we attempt to extend our hypotheses beyond these select pairs by extracting the common sense from each and assigning it to the other verbs in the particular stem, the result is nonsense. What even vague sense does prefer share with confer and transfer? or commit with remit and submit? or receive with conceive and perceive? or consume with presume and assume? or reduce with induce and deduce? None. There is no meaning which can be assigned to any of these stems and combined with the presumably constant meanings of the prefixes in a consistent way to produce the meanings of all the verbs in that stem. Each stem occurs in different verbs, but never with the same sense. Rather, the sense is determined by the individual verb.

As suggested above, one might attempt to reduce the whole problem to cranberries (with, of course, the accompanying problems of that class) by calling each occurrence of a given stem a different morpheme. This system denies any linguistic reality to the stems and replaces each of them by a list of homophones, each having its own meaning and each occurring with only one, perhaps even two, prefixes. In such a system one would not have, for instance, a stem mit which occurred in all the relevant words in (9); rather, one would have many homophonous stems, \( \text{mit}_1, \text{mit}_2, \ldots \text{mit}_n \). This system would be fine if these stems had nothing at all in common. The problem is that all occurrences of the stem mit do share a common feature which is not predictable from any general phonological properties of the sequence [mit]. As will be carefully documented in chapter 5, all instances of the latinate stem mit exhibit the same phonologically arbitrary variant (allomorph) before the suffixes +ion, +ory, +or, +ive, +able. The details of the relevant argument are given in chapter 5. For the moment we can look at the following paradigm:
<table>
<thead>
<tr>
<th>permit</th>
<th>permission</th>
<th>permissive</th>
</tr>
</thead>
<tbody>
<tr>
<td>remit</td>
<td>remission</td>
<td>remissory</td>
</tr>
<tr>
<td>excrete</td>
<td>excretion</td>
<td>excretive</td>
</tr>
<tr>
<td>assert</td>
<td>assertion</td>
<td>assertive</td>
</tr>
<tr>
<td>digest</td>
<td>digestion</td>
<td>digestive</td>
</tr>
<tr>
<td>prohibit</td>
<td>prohibition</td>
<td>prohibitive</td>
</tr>
</tbody>
</table>

The last column reveals the difference between verbs of the form $X=mit$ and other verbs with final $t$ before the suffixes in question. $Mit$ always takes the form $mis$ here, and the change of $t$ to $s$ in this environment is confined to this one stem. There are no exceptions to this rule either way.

This regularity, or the factors which condition it, cannot be phonological, but must be stated on another linguistic level, the level of the stem or morpheme. Proof of this assertion is the fact that other instances of the phonological sequence $[mit]$, which are not instances of the latinate stem $mit$, do not show up as $[mis]$ in the relevant environment. So we find $vomit/vomitory$. In the word $vomit$, there is no reason to presume that we are dealing with a prefix $vo$ and a stem $mit$; in fact, there is good reason to believe that we are not: $vo$ never shows up as a prefix elsewhere, and the stress pattern gives us no evidence of a boundary, or at least of the sort of boundary for which there could be evidence. The alternation in question is therefore restricted to the latinate stem $mit$. This means that all the items which in the theory in question were mere homophones, $mit_1, \ldots mit_n$, must be at some level instances of the same thing. Otherwise there is no way to express the fact that all occurrences of $mit$ exhibit the same allomorphy. There is good evidence that the level at which the rule embodying the facts in question must be stated is that of the morpheme. First of all it can be shown that a feature such as $[+latinate]$, which governs among other things what sorts of affixes can be attached to a word, is a property of morphemes. Second, the sort of rule that changes $t$ to $s$ in the relevant environment here is a rule which applies to a morpheme and not to any other linguistic level, lower or higher. $Mit$ is therefore a morpheme, though it has no meaning. Nor is $mit$ the only case. As we shall see in chapter 5, there are many stems which undergo rules of allomorphy.

It appears, then, that there is something fundamentally wrong with the theory of many homophonous $mits$, for there is good evidence that we are indeed dealing with one morpheme. This turns us back to the allo-meaning theory, with its problems of underspecified meanings and circularity, or to the theory that morphemes are not minimal signs. The allo-meaning theory had some plausibility with reference to the preceding sets of data (cranberry, blackberry, etc.), mainly because, as noted, we always had one constant element with a relatively perspicuous meaning, and we could as a result attribute the residue of the meaning of each word to the problematic morpheme. However, when we look at the prefixes, we find that (just as with the stems) there is no constant meaning which can be attributed to any of them. How, then, are we to segment the meaning of the individual words in a principled manner?

Consider the following list:
Though it is more likely that one could attribute more commonality of meaning to occurrences of some of these prefixes than one could to any of the stems, there is no general meaning which can be assigned to any of them. Thus one might try to assign to re a meaning 'back', and a large number of the verbs of the form re=X have something to do with 'back' (cf. Williams (1973)). What about receive, though? Or consider reduce in the following sentence:

(8) The government reduced the size of the quart from 32 to 31 ounces, in an effort to stop inflation.

Since the quart never was less than 32 ounces, there is no way in which 'back' can be involved in the meaning of reduce here.

Now, since we know from (7) that re= has no fixed meaning, and we know from (5) thatduce has no fixed meaning, how are we to segment the meaning of reduce into two parts, one associated with re= and the other with duce, in a principled manner? We can't. The word principled is important here. A priori, any word can be split in two and each part given a meaning. I can divide apple into a and pl, and give each of them part of the meaning of the whole word. However, we prefer to reject this solution, for by allowing such an analysis we would reduce the predictive power of a theory to zero, as noted above. It is unfalsifiable. Thus the fact that the allo-meaning theory must be made so strong in these cases that its empirical validity is reduced to zero forces us to fall back on the only position left to us: there are morphemes which have no meaning. The hypothesis that morphemes are the "minimal meaningful elements of language" cannot be maintained even in any of its most contorted variants. In many cases this role of the minimal sign must be moved one level up, to the level of the word. The sign gravitates to the word.

Note that we have not abandoned the concept of the morpheme. It still remains, but not always as a sign.

2.1.3.4. A Similar Class. The same argument as was made in 2.1.3.3 can be made for the following set of data, which comprises a much smaller though more striking set of prefixed verbs:

(9) understand/stood undertake/took withstand/stood partake/took

There is no way to relate the putative meanings of stand in its two occurrences, nor those of take. Nor can the meaning of stand, in understand at least, be related to any of the multifarious meanings of the free verb stand. Similarly for the prefixes under, with, and par. How-
ever, in the case of the stems, we must be able to encode the fact that they always show the same variant in the past tense form. Nor is there any way in which this variant can be viewed as phonologically conditioned. It must be conditioned by some abstract property which is common to all occurrences of the meaningless entity *stand* or *take*.

2.1.3.5. Defining the Morpheme. The morpheme is traditionally defined as the minimal sign: an arbitrary constant union of sound and meaning. This definition must be adjusted to include such morphemes as *mit*, which have no constant meaning. Now, *mit* is clearly a constant phonetic string (at the level of the input to the phonology). It is also arbitrarily linked to something. However, it is linked not to a meaning but to a phonological rule, the rule which changes *t* to *s* before *ion*, *ive*, *ory*, and *or*, only in the morpheme *mit* (cf. *vomitory*, *vomissory*). The original definition of the morpheme has three aspects: constant form, arbitrary link, constant meaning. In order to include *mit* in the class of morphemes, we need only broaden the third, that of constant meaning, to include a phonological operation as well. This broadened definition will allow us to include *stand* and *take* also. The rule to which they are arbitrarily linked spells out the past tense.

That I include a meaning and a phonological rule in the same class of entities, and speak of mere broadening in doing so, may strike some as odd. But I only wish to point, perhaps a little dramatically, to what is essential about a morpheme: not that it mean, but rather merely that we be able to recognize it. A morpheme is a phonetic string which can be connected to a linguistic entity outside that string. What is important is not its meaning, but its arbitrariness. This is close to the position of Harris (1951).

2.1.4. Trouble with Words?

2.1.4.1. Cranberry Words. There are words which, like cranberry morphs, concatenate only with specific words and not with syntactic classes. For example, the noun *headway* occurs only as the direct object of the verb *make*, just as *cran* occurs only in *cranberry*. However, there is a difference in the manner of concatenation. On the phonological and syntactic surface, *cran* can only appear in one specific place, directly before *berry*. However, *headway* does not necessarily appear directly after *make* on the surface. Rather, it is the head of its underlying object NP, and as such it may be modified and even moved about:

(10) We haven't made much headway lately.
(11) Are we making any sort of headway here?
(12) There isn't much headway being made.
(13) The only headway we were making was illusory.

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9 Not all instances of the phonological string *stand* are instances of the morpheme *stand*. This can be seen from such examples as *grandstanded*.

10 According to Harris (1951) the ablaut rule itself is a morpheme, an allomorph of the past tense morpheme usually spelled out as *ed*.

10 Within an orthodox analysis of relative clauses *headway* is never, strictly speaking, the object of *make* in this sentence (cf. Vergnaud (1974)).
Because it occurs in these different environments, we can isolate other properties of headway than the fact that it is an arbitrary phonological string. It is a noun. It is not a count noun (*headways). It is not animate (... headway ... it). Thus we can say things about headway which are not dependent on make, and which have something to do with its meaning. This is not true of cran, and it is the complete interdependence of cran and berry which forces us to conclude that in the strictest sense the former cannot be meaningful.\(^{11}\) The point is that because cran is completely isolated from the syntax by its occurrence inside only the one word, there is no way in which it can have syntactic (and hence semantic) properties of its own. Because it is a noun and the head of a syntactic phrase, headway is not so insulated. As the head of a phrase it must, perforce, have syntactic properties, some of which may be related to meaning properties.

2.1.4.2. The Numerous Verbs Stand. I have argued that the various instances of stand in (9) could not be related to one another semantically, though they must be regarded as instances of the same entity because of their shared irregularity (stand/stood). It seems possible to argue exactly the same point from the various occurrences of stand as an independent verb. Many of the uses of the verb stand cannot be related semantically, and yet the same irregular past form always appears. Consider the following sentences:

(14) We stood there for a while.

(15) We stood the chairs in a corner.

(16) I stood it as long as I could, and then left.

Though one might conceivably attempt to relate the verbs of (14) and (15) in some manner, perhaps even systematically, I cannot see how either of these two could be related to the verb in (16). However, though the meaning of this verb cannot be systematically related to the others, its form is. Therefore, extending the argument of 2.1.3.4 to this class, one might wish to say that the word stand is a unit, but it has no meaning. There is no difference between morphemes and words.

With regard to meaning, the same sorts of arguments hold here as we observed in 2.1.4.1. The various verbs in the above sentences have different subcategorizations, and from subcategorization we can go to meaning. Therefore the individual verbs are not meaningless or indeterminable as to their meaning. They each comprise a separate entry in the lexicon.

The problem is accounting for a property which they share and which has nothing to do with their meanings. This is the common irregularity of their past tense forms. It is here that our expanded definition of the morpheme comes into play. By this new definition, all occurrences of the string stand which alternate systematically with stood in the past tense are instances of the same morpheme. This means that the various verbs stand of (14)-(16) are all instances of a single morpheme, the same morpheme which occurs in understand and withstand. However, they are not instances of the same sign, for, as we have seen, a morpheme need not be a sign at all.

\(^{11}\) The problem of idioms intersects with this one.
This distinction allows us to represent both the sameness and the difference of the items in question. The notions *morpheme* and *sign*, as defined, are not really notions of the same sort. Two words can be instances of the same morpheme. In addition, freeing the morpheme from the requirement that it be meaningful, which we have found to be necessary, allows us to use it to account for phenomena which, in other theories, could not be related (no prevalent theory which I am aware of is capable of encoding formal similarities of this arbitrary sort among words unless they are accompanied by semantic similarities). The numerous verbs *stand* thus present no problem for our revised view of the morpheme; rather, they can be much more satisfactorily accommodated than they had been previously.

2.1.5. A Historical Note on Inflection
It should not be terribly surprising that morphemes are not the "minimal meaningful elements" they have been purported to be. This conception of a morpheme is very intimately tied in with certain structuralist assumptions. It is, in part at least, a consequence of a simple view of the relationship between sound and meaning and the mappings which express this relation.

When dealing with inflection, this type of system is especially difficult to justify. Even very early, attempts by Hockett (1947) and Bloch (1947) to apply to real data the definition of a morpheme as a one-to-one mapping between meaning and sound led to very bizarre and counterintuitive results (cf. Nida (1948) for criticism of the two works cited above). Harris (1948) discusses the problems that a paradigmatic set of data presents for a theory in which the morpheme is the basic meaningful element. Chomsky (1965) made essentially the same point as Harris twenty years later, when he introduced the complex symbol and syntactic feature as a way of treating paradigmatic and crossclassified phenomena. In a system like Chomsky's, the traditional concept of a morpheme as a one-to-one mapping between form and meaning is nullified. Chomsky makes this point explicitly and argues for the virtue of his system over the old one with regard to the treatment of inflection (1965, 170-174).

Thus, rejecting the morpheme as a basis for a theory of derivational morphology, at least in its definition as a minimally meaningful unit, is not the radical step one might think it to be. As a basis for accounting for inflectional phenomena, it has long been under attack. We must now develop a theory of morphology which does not crucially depend on the morpheme as a basic meaning-bearing element.

2.2. Word Formation
The goal of this section is to sketch out the underpinnings of a theory of morphology. In view of the preceding section, we will assume that such a theory must not include the premise that morphemes are necessarily meaningful.

2.2.1. Possible and Actual Words
Just as the simplest goal of a syntax is the enumeration of the class of possible sentences of a language, so the simplest task of a morphology, the least we demand of it, is the enumeration