UNIT 2: WORD-FORMATION IN ENGLISH – 1

Structure

2.0 OBJECTIVES

The objectives of this unit are to enable you to

- distinguish between the inflectional and the derivational morphology of English,

- to operate with concepts relevant to the morphology of English, e.g., stems, roots, affixes, etc.,

- see how the application of the principles of inflectional morphology to English words yields the paradigms of nouns, pronouns, adjectives, adverbs and verbs, and

- make a distinction between regular and irregular forms in the paradigms.

2.1 INTRODUCTION

In the previous unit we established certain basic principles of the formal study of words. The principles were:

1.   Words are not the smallest units of language either in terms of meaning or form.

2. The smallest unit of language in the morpheme. It is the smallest unit of meaning as well as grammatical function.

3. Word and morpheme are the two lowest levels of structure in the grammar of a language. The relationship between the levels in one of realization. Morpheme and morpheme combinations are realized as words.

In this unit, we will look mainly at one class of morphemes, the bound grammatical morphemes, and see why it is desirable to analyse the grammatical word into constituent elements which include bound grammatical morphemes. We will then go on to describe the main types of bound grammatical morphemes in English and shall see the role they play in the formation of words belonging to the different parts of speech in English.

Among the various distinctions we made in the previous unit, three will be particularly relevant to the present and the following units. We shall therefore list and describe them again:

1. **Free vs bound morphemes:** Certain morphemes in English are such that they are realized at the word level into independently occurring forms, while others are realized only in combination with other morphemes into merged forms where their separate identity may not always be represented by phonological or orthographic means. Thus, boy, **book, read**, etc. occur at the word level as free, (ie independently occurring) forms, so do **boyish, bookish** and **reading**. The last three are however morpheme combinations and they contain two morphemes each. The first two words contain the morpheme -**ISH** while the last word contains-**ING**. The morphemes occur only in combination with other morphemes (like boy and book) and are not realized as independent word forms. -ING is actually the morpheme **CONTINUOUS ASPECT**. Its convenient representation as -**ING** here is based on the fact that it is orthographically realized as the suffix -**ing**, but this convenience is not available to us in all cases. For example, the morpheme **PAST**, when combined with the morpheme **READ**, gives us the homographic form **read** and the phonological form /red/, neither of which presents us with a covenient handle on the morpheme. Hence morphemes like -**ISH** and **CONTINUOUS ASPECT** can only be treated as abstract entities. Since we cannot regard some morphemes as abstract and others as concrete, all morphemes are treated as abstract. This, however, does not affect the division of morphemes into **free** and **bound**. Morphemes like -**ISH** and **CONTINUOUS ASPECT**, which are not realized as independently occurring words, are bound morphemes.

2. **Meaning vs. grammatical function:** Lexemes were defined in the previous units as abstract entities which represent meanings. Meanings are based on references to external objects or concepts associated with external objects. However, not all language units we identify as words have meanings in this sense. For example, function words (auxiliaries, prepositions, conjunctions, etc.) do not refer to anything outside the language: they only help to relate words, or units made up of words to each other. In other words, they only have grammatical functions. Grammar is a collective name for the set of rules that describe how words in a language are combined together to produce well-formed sentences. Since function words only play a role in producing grammatical combinations without contributing any meaning of their own, they are said to belong only to the category of grammatical words and have no lexical counterparts

3. **Grammatical vs lexical morphemes:** The class of grammatical words thus include (1) forms of lexical words derived by the application of grammatical rules
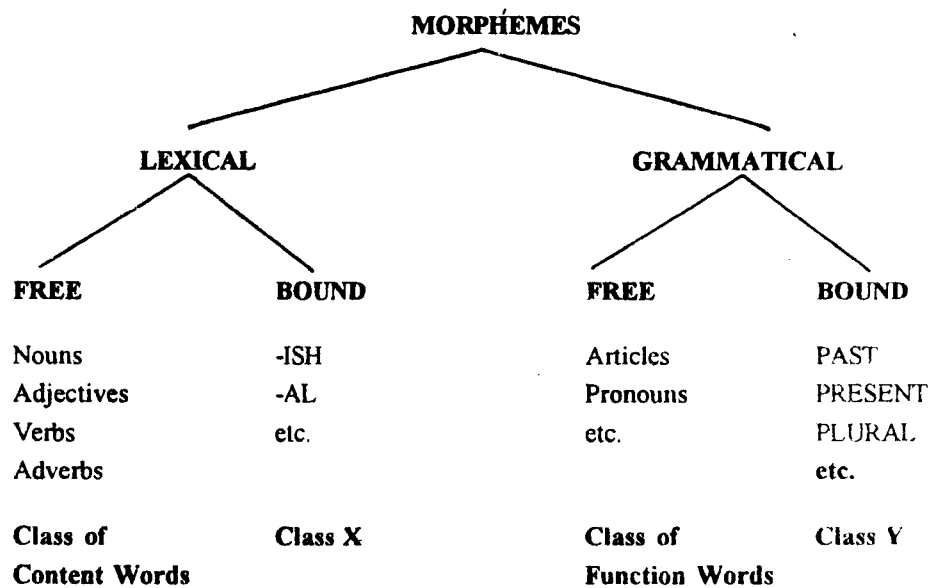
and (2) function words, or words that have no lexical forms, ie have no meanings, only grammatical functions. Since all words are morphemes before they become words, function words too can be seen as asbtract grammatical morphemes before they are realized as words. Thus, the orthographic word 'the' can be seen as corresponding to the abstract grammatical morpheme **DEFINITE ARTICLE**. As opposed to grammatical morphemes, lexical morphemes are those morphemes which (individually or in combination with other lexical morphemes) are realized by lexical words at the word level. These include words belonging to the classes of nouns, adjectives, verbs and adverbs.

Both grammatical and lexical morphemes can be free or bound. Articles, pronouns, etc. (i.e. function words) are examples of free grammatical morphemes, since they are realized as freely occurring forms. But morphemes like **PLURAL,PRESENT, PAST, CONTINUOUS, PAST PERFECT, PRESENT PERFECT**, etc. are not realized as free-occurring forms but as modifications on other free-occurring forms; hence they are bound morphemes in English. It is quite possible for some of these morphemes, if they occur in another language, to occur as free morphemes. Similarly, nouns, adjectives, verbs and adverbs, which are all realized as free-occurring lexical words, are free morphemes, while morphemes like -ISH,-AL -ABLE, -NESS, etc., which are not independently realized into words but must be combined with free lexical morphemes to be so realized, are bound morphemes.

Though grammatical morphemes have no meaning content in the sense in which lexical morphemes do, it would be wrong to conclude that they make no contribution to the meaning of the sentence. However, their contribution to meaning is made not by adding their own independent meaning to the aggregate but by modifying the meanings of the lexical words in the sentence in certain fixed ways. For example, the definite article morpheme modifies the meaning of the noun it occurs with by making its reference definite; the plural morpheme added to a countable lexical noun makes its reference plural; the past tense morpheme added to a verb changes its time reference to past; the addition of a continuous aspect morpheme to a verb adds the meaning 'action taking place at the point of time being spoken of', and so on. In other words, grammatical function, though distinguishable from lexical meaning, makes its own contribution to the total meaning of the sentence by carrying out certain standard modifications to the meanings of the lexical words occurring in it.

Bound lexical morphemes (-ISH, AL, -ABLE, -NESS, etc.) also make their contribution to meaning by modifying the meanings of the lexical morphemes with which they are combined, but there is an important difference there from the way in which bound grammatical morphemes make their contribution to meaning. Bound grammatical morphemes, usually realized as affixes in the phonological forms, modify the meanings of the lexical morphemes to which they are joined in fixed and regular ways, e.g., the addition of the bound morpheme PLURAL always adds the meaning 'more than one' Bound lexical morphemes, on the other hand, may modify the meanings of different lexical morphemes in different ways. For example, the addition of the morpheme-suffix –ize to the noun symbol= adds the meaning 'to act as a ... of; its addition to the noun 'hospital' contributes the meaning 'to put in a ....for treatment'; added to the noun 'diesel', it contributes the meaning 'to convert to ... engine power'and so on. In other words, while the effects on meaning of the bound grammatical morphemes are predictable, those of bound lexical morphemes are not.

We can diagram the picture that emerges from the description so far as follows:

MORPHEMES

LEXICAL		**GRAMMATICAL**	
FREE	**BOUND**	**FREE**	**BOUND**
Nouns	-ISH	Articles	PAST
Adjectives	-AL	Pronouns	PRESENT
Verbs	etc.	etc.	PLURAL
Adverbs			etc.
Class of	Class X	Class of	Class Y
Content Words		Function Words	

Much of what we have to say in this and the following unit has to do with the two classes of bound morphemes we have labelled as Class **X** and Class **Y** respectively in the diagram. As you can see, Class **X** is the class of bound lexical morphemes and Class **Y** is the class of bound grammatical morphemes. The question we will be dealing with is: What role do these two classes of morphemes play in word-formation in English? In the last unit, we shall be concerned with certain other processes of word-formation, i.e., processes which do not involve bound morphemes.

2.2   THE PROCESS OF WORD-FORMATION

One of the major characteristics of any human language is that one can always produce and understand new words. In fact, one of the reasons English vocabulary has got richer and richer is that English allows the manufacture of new words almost as a routine matter. Even a cursory look at a newspaper reveals many words which would not be found in a dictionary published only fifty years ago. Words like **politicize, criminalize, marginalize,** etc. were coined in the recent past, and one can now read words like **Ambedkarize, McDonaldize, Mandalize,** etc. Such words are produced according to certain fixed patterns and not at will. For example, while one can produce and understand words like the ones just mentioned, one cannot produce new words like ***redize, *bluize *purpleize, *scarletize,** etc. Similarly, one can use a very recently coined noun, email, as a verb and say I emailed a reminder to him, but one cannot do that with the quite old noun **message** to say ***I messaged him a reminder.** (the *mark indicates that the form is ungrammatical.) In other words, though word-formation is a productive process, like all productive processes, it is governed by certain rules. It is our aim in this and the following units, to give you a brief account of the rules that account for the productive processes of word-formation in English.

2.2.2   Simple, Complex and Compound Words

Words can be divided into simple, complex, compound and compound-complex depending on whether they realize a single free morpheme, a free morpheme plus one or more bound morphemes, two or more free morphemes, or two or more free morphemes plus one or more bound morphemes respectively. For example

Simple:	boy, sing, kind, write, etc.
Complex:	boys, singing, kindness, writers, etc
Compound:	playboy, birdsong,
Compound-complex:	hot-bloodedness, writer-producer

This neat picture is disturbed by a relatively small set of complex words which seem to realize a combination of bound morphemes only. Consider, for example, the set of words **local, locality, dislocate, locus, localize**. Because of the constancy of the element loc in all these forms, accompanied by a constancy of meaning (=place), some linguists argue that **loc** be recognized as a morpheme. However, since **loc** does not appear independently as a word, it must be recognized as the realization of a bound morpheme. This further leads us to conclude that complex words could also be realizations of combinatious of bound morphemes only, since all other morphemes in these words are bound too. Other candidates for complex words of this type could be words containing elements like- **ceive** (as in **receive, deceive, conceive**); **-duce** (as in **reduce, deduce, produce**); **sanct-** (as in **sanctify, sanctum, sanctuary, sanctity**); **tox-** (as in **toxic, toxicology, intoxicate, detoxify**), etc.

The most productive processes of word-formation are seen to be in operation in the making of complex and compound words. The store of simple words, though it is by no means fixed for ever, enlarges by processes which are not always linguistic. Whenever a new object, or process, or concept is discovered a word has to be found for it. The word can come from anywhere: from an ancient language, from a foreign language, from the discoverer's imagination, and so on (Examples of invented words are **splooshing**, in Jack Kerouac's 'I come **splooshing** to a no-good end' and **googol**, adapted from an infant's cooing noise by a mathematician at a loss for a word to describe the number ten raised to the power hundred.) Sometimes the new word may be recycled from morphemes already existing in the language. If the new word is a simple one, i.e., if it is not a complex or compound word created from already existing morphemes, the store of simple words of the language is increased. Such words are always content words, as the store of function words is fixed for ever. The new word will of course have a corresponding morpheme and this morpheme will then be subject to the same rules of combination and realization that apply to other morphemes of its class.

2.2.2   Affixes, Stems, Roots

As we stated earlier, in the majority of cases of complex and compound words, the (free and bound) morphemes in combination that are realized as words can be identified as separate elements (called **morphs**) in the phonological and orthographic representations. This makes it easier to refer to the morphemes when talking about the rules which govern their occurrence. Morphology, or the branch of linguistics that deals with the internal ('morphic') structure of words, has a set of terms to describe the various categories into which these morpheme elements (or **morphs**) can be separated. The there basic category-terms are **affixes** (divided into **prefixes** and **suffixes**), **stems** and **roots**.

A complex word, as stated above, realizes the combination of (1) one free morpheme and one or more than one bound morphemes, or (2) two or more bound morphemes. Here are some examples of such combinations:

'impenetrable'	=	IM + PENETR + ABLE
'declassify'	=	DE + CLASS + FY
'recharge'	:=	RE + CHARGE
'hopeless'	=	HOPE + LESS
'hopelessly'	=	HOPE +LESS +LY
'deindustrializing'	=	DE + INDUSTRY + IAL + IZ (E) + ING

Most of these complex words have one free morpheme (e.g., CLASS- CHARGE, HOPE, INDUSTRY) and one or more than one bound morphemes (e.g., IM-, DE-, -ABLE, -FY, etc.). We can call the element that represents the free morpheme in these words the **'base'** of the complex word. The elements representing the bound morphemes are attached to this base, either at the front or at the end. This base is of course not always a free morpheme: in the case of a complex word which is made up of two or more bound morphemes, ie in words containing elements like **loc-, -ceive-, duce-,** etc. cited above, the base is a bound morpheme. In the first word in the above list, the base is 'PENETR-' a bound morpheme. Such bases are called **bound bases**. The bound morphemes that attach themselves to the beginning or to the end of the base are called **affixes.**

Affixes are of two sorts in English: elements that are attached in front of the base are called **prefixes**, while elements that are attached to the end of the base are called **suffixes**. Thus, **im-** and **de-** are prefixes while **-able** and **-fy** are suffixes. When the affixes are thus factored out, in words containing elements like **-loc-, -ceive-, -duce-,** etc. these elements will turn out to be the bound bases.

Affixes do not always attach themselves to bases realizing a single free or bound morpheme: often they attach themselves to bases which are combinations of free and bound morphemes. For example, in the word 'hopelessly', '-ly' is not attached to the free morpheme base 'hope' but to the combination 'hopeless' in which the bound morpheme element '-less' is already attached to 'hope'. Similarly, in the word 'impenetrable', the prefix 'im-' is attached not to the bound base 'PENETR-' but to the adjective word 'penetrable' which realizes the combination, PENETR +ABLE of a free and a bound morpheme respectively. How do we know this? We know this because prefixing 'im-' to the bound base PENETR- would give us a nonexistent from *'impenetr'. On the other hand, attaching the element '-able' to the base 'penetr-' gives us the form 'penetrable' which is a wellformed adjective to which the prefix 'im-' can now be attached to get the word 'impenetrable'. The steps in the formation of this word are therefore as detailed in I and not as in II:

I   PENETR + ABLE   II-   *IM + PENETR
     IM + (PENETR + ABLE)   (*IM + PENETR) + ABLE

The bound morpheme element IM- is here attached not to the single morpheme base PENETR but to the combination of a bound base with a bound morpheme which is realized as a suffix-. IM- is thus prefixed to a 'complex base'.

The term **stem** is used in morphology to describe any element, or combination of elements, to which an affix is attached. It is thus synonymous with the term ' base'. In our first example above, 'hope' is the stem to which the suffix '-less' is attached, and 'hopeless. is the stem to which the suffix,-ly' is attached. In the second example, the suffix '-able' is attached to the stem 'penetr' and not to the stem 'impenetr'; the prefix 'im-' is attached to the stem 'penetrable' and not to the stem 'penetr'.

A stem can therefore consist of

- only a free morpheme base, as in 'hopeless'

- a bound morpheme base, as in 'penetrable'

- a base consisting of a free morpheme and one or more than one bound morphemes, as in 'deindustrialize' or 'anti- humanitarianism'

- a 'compound base' consisting of two or more free morphemes, as in 'flower-pots'.

A stem consisting of only one free morpheme is called the root (**e.g 'human'** in 'anti-humanitarianism'); one consisting of two free morphemes is said to have a **compound root** (e.g. 'flower + pot' in 'flowerpots').

2.2.3   Inflectional vs. Derivational Morphology

John Lyons (1968: 5.4.2) tells us that grammars written in the classical tradition of Greek and Latin were generally divided into three section: these section were respectively **Accidence, Word-formation** and **Syntax**. 'Accidence' was also called 'inflection' and 'word-formation'. Lyons also tells us that while these grammars devoted hundreds of pages to inflection and syntax, they devoted only half a dozen or so pages to derivation. The reason for this was that the classical grammarians did not really consider derivation to be a part of grammar. For them grammar was mainly inflection and syntax. Inflection refers to the changes made in the sentence. In classical grammar, this section included topics like the 'declensions' of nouns, adjectives and pronouns and the 'conjugation' of verbs. The section on derivation listed various processes whereby new words were formed from existing words, or 'roots', for example, adjectives from nouns, nouns from verbs, etc. The fact that these grammars never completely excluded this section from their grammars shows that they were aware of the regularities involved in derivation, yet they did not give the topic full treatment because they thought derivational forms belonged to dictionary and not to grammar. So the derivational forms were listed as distinct forms in the dictionary, but the inflectional forms (words with bound grammatical morphemes in them) were not. They had to be derived by applying the rules given in the grammar.

We can restate the inflection- derivation distinction in terms of the three distinctions we have made in **1.0.** **Inflection** refers to the ways in which bound grammatial morphemes (=morphemes of Class **Y**) combine with stems to be realizrd as grammatical words. **Derivation,** on the other hand, describes the ways in which bound lexical morphemes (= morphemes of the Class **X**) combine with stems to be realized   as lexical words. As we know, both lexical and grammatical words eventually surface as phonological and orthographic words, where these bound morphemes can be identified in most (though not all) cases as affixes. Accordingly, affixes which realize bound grammatical morphemes, and therefore perform only grammatical functions are called inflectional affixes. Correspondingly, affixes which realize bound lexical morphemes and help to create new lexical words with distinct meanings are called **derivational affixes.**

Examples of inflectional affixes in English are the suffix **-s/-es** on plural nouns, the suffix **-s/-es** on third person, singular number verbs, the suffix **'s** on possessive nouns, the suffix **-d/-ed** on past participle forms of verbs, and so on. In describing the **inflectional morphology of English**, we will need to describe the various bound grammatical morphemes these and other inflectional affixes of English realize, and various kinds of grammatical functions they perform. We will also need to describe the forms these affixes take in the corresponding phonological and orthograpic words and any regularities that we notice in this correspondence.

Examples of derivational affixes in English include all those prefixes and suffixes we have called bound lexical morphemes, e.g. **de-, re-, -ize -ation**, etc. Since these bound morphemes combine with other free lexical morphemes, or stems containing them, the

derivational morphology of English will need to describe the grammatical category of the morphemes (or morpheme combinations) to which each derivational affix morpheme can be attached; the grammatical category of the resulting word; the meaning change brought about by the affix, any noticeable regularities in the meaning-change; and the regularities or irregularities in the corresponding phonological and orthographic representations.

Before proceeding further, it would be useful to summarize the characteristics that distinguish the inflectional morphology of English from its derivational morphology. As you will notice, some of these points are restatements of the points already made above:

1. Inflectional affixes never change the grammatical category (part of speech) of the stem: a noun remains a noun, a verb a verb, an adjective an adjective even after an affix has been added to it. Derivational affixes may or may not change the grammatical category of the stem: **modern modernize, read readable, nude nudity** all show changes in the grammatical category; **obey disobey, charge recharge, fortune misfortune** do not show a change. Derivational prefixes in particular do not seem to affect the category of the stem.

2. Inflectional affixes in English are all suffixes; derivational affixes may be prefixes or suffixes.

3. Both derivational and inflectional morphemes may occur in the same word, but when that happens derivational morphemes are attached first and inflectional morphemes last, ie derivation creates the input to inflection but not vice versa. Once an inflectional affix has been attached to a form, no other affixes can be added to it. As a result, in a complex word the inflectional affixes mark the outer layer and the derivational affixes the inner layer. Note how the formation of the word **deindustrialzing** illustrates this point:

Root	**industry**
Deriv.	**industr (i) + al**
Deriv.	**(industr (i) + al) +ize**
Deriv.	**de + {(industr (i) +al) + ize}**
Infl.	**{de+ ((industr (i) + al) + ize)) +ing**

    The addition of a bound lexical morpheme (ie. a derivational affix) creates a new lexeme (ie. a lexical word) which can independently convert to a grammatical word through the application of appropriate grammatical rules.

4. If both compounding and inflection take place, inflection follows compounding. If compounding, derivation and inflection all three occur, they follow the stated order. E.g., **kickstarted** =(kick +start) +ed; **channel hopping** = (channel+hop) + ing; **footballers** = ((foot + ball) +er) + s.

5. Inflectional affixes modify the meanings of the stem in a regular way, e.g. the plural affix, the past affix, etc. The meaning change affected by derivational affixes is unpredictable.

2.3 THE INFLECTIONAL MORPHOLOGY OF ENGLISH

The inflectional morphology of a language is usually discussed in terms of paradigms. As we stated in the previous unit (Sections 2.2, 2.3), a paradigm refers to a set of

forms derived by the application of certain grammatical rules to a lexical, or, in the case of pronouns and auxiliaries, to a function word. Thus the English verb has a paradigm ('The verb paradigm') which consists of the grammatical words derived by the application of those grammar rules which are pertinent to the English verb. For example, the paradigm of the verb **break** contains the forms **break, breaks, breaking, broke, broken.** Each of these forms in derived by the application of separate grammar rules like present tense formation, past tense formation, past tense formation, past participle formation, etc.

In this and the following sections, we will describe the inflectional morphology of English by describing the paradigms of all the major grammatical categories (parts of speech) of words, viz. nouns (including pronouns), adjectives, verbs including auxiliaries) and adverbs. Only words belonging to these categories take inflectional affixes, or are affected otherwise by the rules of grammar. Prepositions, conjunctions, articles, etc. do not change their forms at all, and therefore have no paradigms. For describing the paradigms we will also need to d scribe the sets of 'grammatical rules' that apply to words of a given category. Finally, we will describe the effects that the application of these rules has on the phonological and orthographic shapes of words. These effects will fall into two types: regular and irregular.

2.3.1   Inflectional Morphology of the English Noun

English nouns fall into two major subcategories: proper and common. The basis of this subcategorization is supposed to be semantic (ie. meaning based): Proper nouns denote unique identities whereas common nouns denote persons, objects, etc. which are members of a class. Thus, despite the fact that hundreds of males may share the name 'Sachin', each occurrence of this noun refers to one and only one person; on the contrary, no occurrence of the noun 'cat' can refer to only one animal; it must always refer to any member of the class of cats. But proper and common nouns could also be differentiated solely on the basis of their paradigms. How?

To answer this question we must first describe the grammatical rules that apply to nouns. As stated earlier, grammatical rules are rules which state how words can combine with each other to form clauses and sentences. They describe which categories of words can combine with which other categories of words, in what order, with what changes of form, with what signification, and so on. Considered in this way, the rules that apply to nouns can be said to be the following:

I.   **The Number Rule:** This rule allows you to choose singular or plural reference. If we want the reference to be singular we choose the bound morpheme SINGULAR; if we want it to be plural – we choose the bound morpheme PLURAL.

II.   **The Case-formation Rule:** This rule states that one noun (N1) can combine with another noun (N2) to signify possession. This rule applies if we wish to express the meaning 'N2 belongs to N1'. If we want the rule to apply, we choose the bound morpheme POSSESSIVE with N1.

These are the only two rules that apply to the English noun so far as paradigm formation is concerned. Infact only the second rule applies to the class of proper nouns. This is because there is no choice of number with proper nouns. Being a uniqueness identifier, a proper noun always has singular reference even when it happens to be plural in form. For example. **The Helions** refers to a group of singers. **The West Indies** refers to a country and so on. The only time proper nouns show plural reference is when they are used as common nouns. Hence the **paradigm of the Proper nouns** contain only two forms, as follows:

Paradigm of the Proper Noun

Common Case	Possessive Case
Proper noun + COMMON	Proper noun + POSSESSIVE
RAm /raːm/	Ram's /raːmz/
pat /pæt/	pat's /pæts/
George /dʒɔːdʒ/	George's /dʒɔːdʒiz/

The variation to be seen in the phonological representations is discussed below.

Paradigm of the Common Noun

The paradigm of the common noun is a little more complicated. Common nouns are further subcategorized into **Count** and **Mass** nouns. The formal basis of this subcategorization is that their paradigms are different, but the subcategorization also has a basis in meaning. Count nouns denote objects which can be counted (e.g., cat boy, house, speaker, etc.); Mass nouns denote objects which cannot be counted (e.g., water, milk, silver, advice, peace, etc.)

The paradigm of the Count Noun is formed by the application of both number and case rules. The following forms result:

Rule I

SINGULAR	PLURAL
COUNT NOUN + SINGULAR	COUNT NOUN + PLURAL
CAT + SINGULAR = 'cat' /kɔt/	CAT + PLURAL = 'cats' /kæts/
DOG + SINGULAR = 'dog' /dɔg/	DOG + SING+POSS = 'dogs' /dogz/
HOUSE+SINGULAR = 'horse' /hɔːs/	HORSE + PLURAL = 'horse' /hɔːsiz/

Rule II

Common Case	Possessive Case
COUNT NOUN + COMMON	COUNT NOUN + POSSESSIVE
CAT + COMMON = 'cat' /kæt/	CAT + POSSESSIVE = 'cat's' /kæts/
DOG + COMMON = 'dog' /dɔg/	DOG + POSSESSIVE = 'dog's' /dɔgz/
HORSE+COMMON = 'horse' /hɔːrs/	HORSE + POSSESSIVE = 'horses' /hɔːsiz/

Rule I & II (Apply in that order)

Singular number + Common Case	Singluar Number + Possessive Case
CAT+SING+COMMON = 'cat' /kæt/	CAT+SING+POSS = 'cat's' /kæts/
DOG+SING+COMMON = 'dog'/'dɔg'/	DOG+SING+POSS = 'dog's /dɔgz/
HORSE+SING+COMMON = 'horse'/hɔːs/	HORSE=SING+POSS = 'horse's /hɔːs/

Plural Number + Common Case	Plural Number + Possessive Case
CAT+PLU+COMMON = 'cats' /kæts/	CAT+PLU+POS = 'cats' /kæts/
DOG+SING+COMMON = 'dogs' /dɔgz/	DOGPLU+POSS = 'dogs' /dɔgz/
DOG+PLU+COMMON = 'horse' /hɔːs/	HORSE+PLU+POSS = 'horses' /hɔːsiz/

This detailed presentation of the paradigm of the regular count nouns is intended to make the following points:

1. Paradigmatic contrast is shown by means of a regular change in the form (phonological\orthographic) of the majority of words belonging to the class.

2. The number of contrasts in paradigm is determined by the number of such regular

formal changes. It is however not necessary for every word of that class to show all the changes. For example, most count nouns in English show the number contrast shown above, but some count nouns don't e.g. **sheep** and **deer** which retain the same form in both singluar and plural. This does not affect the existence of the paradigm, but creates syncretic forms.

Some forms are syncretic with respect to both orthographic and phonological realizations but some others are syncretic with respect to only one of them. e.g., the PLURAL NUMBER, COMMON CASE, the SINGULAR NUMBER, POSSESSIVE CASE and the PLURAL NUMBER, POSSESSIVE CASE are syncretic with respect to the corresponding phonological word since they all have the phonological shape \kæts\, but they are not syncretic with respect to the orthographic shape which is different in each case, viz. 'cats', 'cats's' and 'cats' respectively. This means that if we were to go by the phonological shape only, we would not be justified in setting up a case paradigm in the plural for the count noun. However, the existence of the differences in the orthographic representation, and a variety of other factors justify setting up the case paradigm.

4. While orthography preserves the differences in this regard, in another regard it eclipses the diffferences while phonology preserves them. Note that the plural suffix is written as – in the case of all the three words 'cats', 'dogs', and 'horses', the suffix is pronounced /s/; in 'dogs', it is pronounced /z/; in 'horses' it is pronounced /iz/.) We discuss why this is so below.) But this has nothing to do with syncretism, since these differences (and the parallel similarity in the orthographic shapes) occur within each grammatical category and not across categories. Despite the phonological difference, each shape still realizes the same bound grammatical morpheme, the PLURAL NUMBER bound morpheme.

To deal with this situation, where the same grammatical morpheme may be realized by two or more different phonological shapes, morphology has set up the concept of the **allomorph**. As mentioned above, any physical shape that realizes a morpheme (grammatical or lexical) is called a **morph**. If two or more morphs realize the same morpheme they are said to be **allomorphs** of that morpheme. Thus, /s/ /z/ **and** /iz/ are all allomorphs of the plural morpheme in the number paradigm of the English count noun.

The allomorphs of a morpheme are mostly phonetically conditioned, ie the reason for the existence of the different phonological realizations of the same morpheme lies in the phonetic context of the given word. In our example, the reason why the plural morpheme is realized as the voiceless suffix /s/ with **cat** is the voicelessness of /t/, the immediately preceding sound. In **dog**, the immediately preceding sound /g/ is voiced, so the suffix too becomes the voiced counterpart of /s/ viz. /z/. With '**horse**', the story is different. The word ends in a sibilant ('hissing') sound. The plural suffixes /s/ and /z/ are also sibilants and two sibilant sounds cannot be pronounced together in succession. Hence a vowel sound /i/ is inserted between them to make the suffix pronounceable. Sicne /i/ is a voiced sound, the voiced suffix /z/ is the natural choice. Hence the suffix /iz/ .

/s/, /z/ and /iz/ are **allomorphs** not only of the plural morpheme but also of the POSSESSIVE morpheme: see, e.g., the case paradigms of the proper noun and the common noun given above. In fact, as we will see below, they are also the allomorphs of the THIRD PERSON SINGULAR morpheme which combines with a verb when its subject is a third person singular subject.

Another good example of allomorphs can be give by referring to the indefinite article morpheme in English. This has two allomorphs: 'a' /ə/ and 'an', /ən/. Their phonetic conditioning is known to every English student: 'a' occurs before words beginning with a consonant, 'an' before words beginning with a vowel.

It should be noted that, being phonetically conditioned, the allomorphs of a morpheme are always in **complementary distribution (CD)**. This means that no two allomorphs can occur in the same context: where one allomorph occurs, the other cannot, obviously because they are conditioned to occur in mutually exclusive contexts.

5. Though belonging to a given category, some words do not form their paradigms in the regular way. For example, some nouns form their plurals not by taking on a suffix but by changing the vowel sound in the word, e.g., 'man' /mæn/ >'men' /men/;'mouse' /maus/ >'mice' /mais/; 'foot' /fut/> 'feet'/fi:t/, and so on. Some take the regular suffix but change the final consonant before adding the suffix. e.g., 'knife' /naif/ >'knives' /naivz/; some take the irregular suffixes, e.g., child> **children, ox> oxen.** However, since these nouns show the formal change in one way or another, they still fall in the paradigm.

Note that when both number and case rules apply to forms like man, child, etc., we get forms like men's /menz/ and children's /tʃildrənz/. These unsyncretized forms clearly show the phonological shape of the case suffix in the plural which is not seen in the paradigm of the regular count nouns.

These irreggular forms are somewhat more difficult to account for in terms of allomorphic variation. However, an attempt has been made to set up a special kind of allomorph called 'the replacive allomorph' to accomodate irregular forms of this kind. A replacive allomorph is shown as a process of change, e.g., /æ>e/ is a replacive allomorph of the plural morpheme in the case of man> men. Replacive allomorphs are said to be morphologically conditioned as they occur with certain fixed morphs only. The account is obviously not satisfactory, and does not cover cases like child> children.

Common nouns which do not show any changes of form for the plural *(deer, sheep)* are said to have **ZERO ALLOMORPHS** of the plural morpheme in this account.

Paradigm of the Mass Noun

Since mass nouns denote objects which cannot be counted, the number contrast is irrelevant to them. Hence they have no plural inflection: we cannot normally speak of *advices, *informations, *milks, etc. For purposes of verb-agreement, mass nouns are treated as singular (ie they take singular verbs), but this is not reflected in any way in the morphology of the mass noun.

Mass nouns should not be confused with count nouns with zero plurals. Count nouns, even if they do not show the plural number by change of form, can still be counted: we can say **ten sheep and a dozen deer,** but we cannot say *three advice or *ten **mutton.** We must add a countable noun to be able to slice up the mass nouns into countable bits. E.g., **ten pieces of advice or a leg of mutton.**

Mass nouns do not inflect for case either; instead they occur in the of-construction after the noun they modify. We do not say **power's love** or **courage's man** but the **love of power** and **a man of courage** respectively.

In short, mass nouns do not have number and case paradigms.

2.3.2 Inflectional Morphology of the English Pronoun

Now that we have the necessary framework for the description of the inflectional morphology of English, we can state the paradigms of the other parts of speech in a

summary, tabulated style. You can expand the statement using the framework outlined above.

A pronoun, as you must know, is a word that is used in place of a noun when we do not want to repeat the noun again and again. These are words like *I, me, us, you, he, she, her, it, them, his, your, yours*, etc. These are called **Personal Pronouns.**

The category of pronouns also covers words like *someone, somebody, everyone, everybody, etc.* They are called **Indefinite Pronouns.**

The grammatical rules applicable to personal pronouns are:

I.   **The Case Rule:** Puts the pronoun in nominative, objective or possessive case forms depending on whether the noun is to function as the subject of the verb, the object of the verb or is to be combined with a noun to show 'N2 belongs to 'N1 relationship where N1 = the pronoun and N2 = the noun. With personal pronouns the possessive case produces two different forms which we call here the First Possessive and the Second Possessive form respectively. The difference is between the ways they combine with other words in a sentence: the First Possessive form occurs before a noun (as in *my* **bicycle,)** the Second Possessive form occurs after the verb (as in **The bicycle is mine.)**

II. **The Person Rule:** Puts the pronoun in three different forms depending on whether the reference is to the speaker (FIRST PERSON), to the addressee (SECOND PERSON), or to a 'third party' (THIRD PERSON).

III. **The Gender Rule:** Puts some of the pronouns in three different forms depending on whether the reference is to the male of the species (MASCULINE), the female of the species (FEMININE), or to nonliving objects (NEUTER).

IV. **The Number Rule:** Puts some of the pronouns into different forms dependings on whether the reference is to one (SINGULAR) or to more than one (PLURAL) person, object, etc.

Two points are to be noted about the application of these rules:

1.   The rules apply in an integrated fashion to produce a form, ie a particular form is the result of the application of all the rules together. Thus the form he shows the nominative case, the third person, the masculine gender, and the singular number.

2.   The application of the rules produces different forms which cannot be analysed into stem and affix, as in the case of nouns. This does not matter much as the purpose of signalling contrast is achieved anyway.

The paradigm of the personal pronouns can therefore be presented as follows in an integrated presentation:

Person	Number	Gender	Case			
			Nom.	**Obj.**	**Ist Poss**	**IInd Poss**
First	**Sing.**		I	me	my	mine
	Plu.		we	us	our	ours
Second			you	you	your	yours
Third	**Sing.**	**Masc.**	he	him	his	
		Fem	she		her	hers
		Neut	it		its	
	Plu.		they	them	their	theirs

The indefinite pronouns (*someone, somebody etc.*) form their paradigms like proper nouns: they show only case contrast (**someone > someone's**) but no number contrast. Unlike personal pronouns, but like proper nouns, they show contrast by taking on the suffix -'s with parallel phonological shapes.

2.3.3 Inflectional Morphology of the English Adjective

The only grammatical rule with morphological consequences that applies to English adjectives is the **Degree Rule.** This rule states that most base adjective morphemes can combine with the bound degree morphemes, COMPARATIVE & SUPERLATIVE, to yield inflected forms, while a smaller class of base adjectives yield irregular degree forms. There is another set of adjectives which do not express the degrees morphologically at all but do it through the use of the degree words more and most for comparative and superlative degree respectively. A few adjectives cannot be combined with these bound morphemes at all.

For the regular cases, the inflection for the comparative degree is the orthographic form '-er' and the phonological form /ə/; for the superlative, they are '-est' and /ist/ respectively. Thus, the rule yields the forms 'sweeter'/swi:tə/ and 'sweetest' /swi:tist/ respectively, from the base 'sweet' /swi:t/. Most one-syllable adjectives and a large number of two-syllable ones fall in this category.

Nearly all adjective of three or more syllables fall outside this category: instead of taking on affixes, they use more and most. e.g., **beautiful, interesting,** etc. Also outside this category are adjectives like **dead, male, criminal,** etc. which cannot be compared at all.

Those adjectives whose comparative forms are quite unrelated to their base forms are also outside this category. The number of such adjectives is small but they are used very frequently. e.g.,

Base	Comparative	Superlative
good		
well	better	best
bad	worse	worst
far	farther	farthest
	further	furthest
little	less	
	lesser	least

The inflectional paradigm of the English adjective is thus easily presented:

Base	+POSITIVE	+COMPARATIVE	+SUPERLATIVE
sweet	sweet	sweeter	sweetest
/swi:t/	/swi:t/	/swi:tə/	/swi:tist/

2.3.4 Inflectional Morphology of the English Adverb

Adverbs are words that qualify verbs just as adjectives are words that qualify nouns. Adverbs qualify verbs by describing the place where, the time when, and the manner in which the action denoted by the verb takes place.

As with adjectives, the only rule that has any morphological consequences with adverbs is the **Degree Rule.** The inflectional paradigm is also the same. In fact, a large number of adjectives also function as adverbs and also inflect for degree in the same way. E.g.,

Adjective:	Did you have to wait a **long** time?
Adverb:	Did you have to wait **long**?
Adjective:	You can expect a **longer** wait this time.
Adjective:	This was my **longest** wait ever.
Adverb:	I had to wait **longest** this time.

Some other adjectives of this kind are **fast, short, hard, early, late,** etc. They also function as adverbs without any change of form and inflect in the same way for degree.

Soon and **often** are two adverbs that inflect for degree but have no corresponding adjective forms. **Sooner, soonest, oftener, oftenest** occur only as adverbs.

Irregular adverbs are also identical with irregular adjectives, the only difference being sometimes in the positive form. Note the equivalence:

Adjective:	Sita is a **good** painter.
Adverb:	Sita paints **well.**
Adjective:	Sita is a **better** painter.
Adverb:	Sita paints **better.**
Adjective:	Sita is the **best** painter.
Adverb:	Sita paints **best.**

We thus conclude that the inflectional paradigm of the adverb is identical to that of the adjective. Manner adverbs, which take the suffix -ly (e.g., **happily, rudely,** etc.) are not cases of inflectional morphology and will be discussed in the next unit with cases of derivational morphology.

2.3.5 Inflectional Morphology of the English Verb

The distinction between lexical vs. function words made above (1.0) is reflected in the class of verbs in the division between the large subclass of lexical verbs and a small subclass of auxiliary verbs. Lexical verbs are verbs with meaning content that occur in sentences as main verbs (e.g., 'dismiss' in the sentence 'He *dismissed* the class'); auxiliaries are helping verbs that help the main verb of the sentence to form its tense, voice, etc. (e.g., 'was' in 'The class was dismissed').

Verbs in Englsh are actually of three types:

I. **Full Verbs** are those verbs which function only as main verbs in a sentence, e.g., *dismiss, jump, hit, eat,* etc. They form a large and open class into which new members are regularly making entry.

II. **Modal Verbs** are those verbs which function only as auxiliaries. They are a small and closed class with no entry for new members. *Can, could, shall, should, will would, may, might are* some examples.

III. **Primary Verbs** are verbs which function both as full verbs and as auxiliaries. There are only three verbs in this class. They are *be, have* and *do.*

In describing the inflectional morphology of the English verb, each of the above types must be dealt with separately.

The grammatical rules that apply to the English verb are as follows:

1. **The Person and Number Rule:** Full and primary verbs show a change of form depending on the number (singular or plural) and person (first, second or third) of the subject. Full verb take regular inflection for the third person singular number subject in the simple present tense, primary verbs change form completely in both present and past tenses, but modals are not affected at all.

2. **The Tense Rule:** English verbs undergo change of form to show the contrast between the present and past tenses only; they do not change form for future reference. The tense rule expresses this by postulating just two bound morphemes, PRESENT and PAST. When the verb combines with PAST, a change of form results in most cases. A combination with PRESENT leads to a change of form only if THIRD PERSON and SINGULAR NUMBER are also present. Compare:

    I\we\you(Sing.), you(Plu.) he, she, they **looked** very interesting.

    I\we\you (Sing.), you(Plu.), they **look** very interesting.

    He\she **looks** very interesting.

3. **The Aspect Rule:** When we speak of the CONTINUOUS tense (or bound morpheme), or of the PERFECT tense, we refer to an aspect of the action we are talking about which is not correctly captured by the term 'tense'. 'Tense' refers to the time of action, present or past, but 'continuous' and 'perfect' refer to whether the action is in progress, or has been completed, at the time of which the speaker is speaking. Thus, an action may be in progress in the present ('present continuous') or may have been in progress in the past ('past continuous'); it may have been completed in the present ('present perfect') or in the past ('past perfect'). This continuity, or completion, of the action is what is referred to by the term ASPECT. ASPECT always occurs in combination with a tense morpheme: PRESENT or PAST. Since ASPECT has two modes, CONTINUOUS, and PERFECT, altogether we get four possible combinations which we have just enumerated. These four combinations are realized as combinations of an auxiliary and an inflected form of the main verb, as follows:

    | PRESENT CONTINUOUS | : is\am\are + verb + ing (e.g., He is\I am\We. You, They are eating.) |
    | PAST CONTINUOUS | : was\were + verb + ing (e.g., I, He was eating\We, You, They were eating.) |
    | PRESENT PERFECT | : have\has + (verb + en) (e.g., I, You, They have\ He has changed.) |
    | PAST PERFECT | : had + (verb + en) (e.g., I, We, You, He, They had changed.) |

    (verb + en) refers to the past participle form of the verb e.g., **broken, taken, gone, played** (syncretic with the past tense form), and so on.

4. **The Voice Rule:** Active and passive voices of the verb have important implications for the sentence as a whole. In the active voice the 'subject' of the verb is the noun which denotes the agent, or doer, of the action described by the verb; in the passive voice, the subject is the noun which denotes the 'affected' person and corresponds to the object of the verb in the active voice. (*Cf. The police arrested the thief* vs. *The thief was arrested by the police*). The same action can thus be viewed from the viewpoint of the agent or the affected. Since the presence of both agent and the affected is necessary for the active-passive

contrast to obtain, the voice rule applies only to verbs with objects, ie to transitive verbs only.

When ACTIVE is chosen there is no change in the verb form for voice, but when PASSIVE is chosen the main verb is put in the -en form and is preceded by an appropriate form of the verb BE.

Paradigm of the Full Verb

Full verbs can be divided into two classes with respect to the morphological changes they undergo: Regular and Irregular.

Regular verbs appear in all the four forms: the base form (work), the -s form (*works*), the -ing form (*working*) and the past form (*worked*). They have no past participle form distinct from the past form. However, not all verbs which show four forms are regular: some of them form their past and past participle forms in irregular ways, e.g., *bend*, *send*, etc. The regular verbs have the following features: (i) if we know the base form and the grammatical rules we can predict all the other forms; (ii) new and coined words follow their pattern; and (iii) the vast majority of English verbs pattern in this way.

Irregular verbs fall into two types: those which have five different forms and those which show only three forms. The verbs *speak, write, break,* etc. belong to the former type. They have five forms because the past and the past participle (-en) forms in their case do not show syncretism ie they show separate forms for these rules (e.g., *spoke, spoken*). Verb belonging to the second type show only three forms, e.g., *cut, hit, put,* etc. In their case, three different rules yield the same, syncretized, form: PRESENT (NON-THIRD PERSON SINGULAR), PAST and PAST PARTICIPLE.

The following table shows the forms of both regular and irregular verbs:

R/Ir	Base	-s form	-ing form	Past form	-en form
R	work	works	working	**worked**	worked
R	jump	jumps	jumping	**jumped**	jumped
Ir	break	breaks	breaking	broke	broken
Ir	cut	cuts	cutting	**cut**	**cut**

(Note: Syncretized forms are in bold face.)

The Phonological Forms: We have shown the paradigm in orthographic representation above but the distinctions are retained in the phonological representation too. The only differences that are noticed are allomorphic (see Sec. 3.1.2 above). As in the case of the plural morpheme of nouns, the orthographic suffix -s is realized as three phonetically conditioned allomorphs /s/, /z/ and /iz/: works /wɔːks/, hugs /hʌgz/, and teaches /tiːtʃiz/. In the case of the regular verbs, the past and the past participle morphemes, orthographically realized as -ed, also have three phonetically conditioned allomorphs: /t/ after a voiceless sound (as in worked /wɔːkt/), /d/ after a voiced sounds (as in hugged / hʌgd/), and /id/ after /t/ and /d/ (as in quitted /kwitid/ and traded /treidid/. The phonetic reason for the occurrence of the \id\ allomorph is similar to the reason for the occurrence of the /iz/ allomorph: like two sibilants, two successive alveolar stops also make an unpronounceable sequence.

In the case of irregular verbs, there is considerable variability and unpredictability in the way the past and the past participle forms are phonologically realized. Some verbs (e.g., *burn, smell*) have two past (participle) forms (*burnt, burned*), some verbs end in

\d\ but change it to \t\ in the past (participle) form (e.g., *bend > bent*). Some show no change from the base, and so on. However, they all form their -s and -ing forms in the regular way.

Paradigm of the Modal Verb

The modals do not change their forms for any of the four rules which cause morphological changes in the full verbs. This means that by just looking at the form of a modal verb you cannot predict the person and number of the subject, nor the tense, aspect. The only exception to this generalization that may be cited is the use of modals like *would, should, could, might* in sentences where they might be seen as past tense forms of *will, shall, can and may* respectively, e.g., in the sentence *He said he would be late* or in the sentence *She thought she could get away with it.* But in these instances *would* and *could* are best seen as sequence-of-tenses partners of *said* and *thought* respectively rather than as past forms of *will* and *can.* This is because if we took forms like *could, would,* etc. as indicators of past tense we would either fail to give any interpretations or produce erroneous interpretations for sentences like *Could you come again next week? I'd be grateful if someone would hold the door open* in which the time reference, if it is relevant at all, is to the future.

Paradigm of the Primary Verb

Primary verbs, as we stated above. are those verbs which occur both as main and auxiliary verbs. There are three of them in English : **BE, HAVE, AND DO.** Here are some examples of how they are used as main and auxiliary verbs:

BE: Arundhati **is** a significant writer. (main verb)
              Arundhati **is** leaving for London tomorrow. (Aux.)

HAVE: I **have** no money. (Main verb)
              I **have** written a book. (aux.)

DO: What **did** (aux.) he **do** (Main)?

The morphology of these verbs, both as main and auxiliary verbs, is, however, the same. All the four rules given above apply to them to produce a variety of forms. For example, in the FIRST PERSON, SINGULAR NUMBER, BE has the form am in the PRESENT TENSE, was in the PAST TENSE; in the FIRST PERSON PLURAL. SECOND PERSON SINGULAR and PLURAL and the THIRD PERSON PLURAL, it has the form are in the PRESENT TENSE and were in the PAST TENSE; in the THIRD PERSON SINGULAR, it has the form is in the PRESENT TENSE and was in the PAST TENSE. The CONTINUOUS ASPECT and the PERFECTIVE ASPECT forms are being and been respectively. The other primary verbs also show similar forms.

The morphology of the English verb is too complicated to allow us to present all its paradigms in a single chart. The chart given below makes an attempt, but leaves out many details. An additional dimension of finite and nonfinite forms is however introduced. The inflected verb forms can be divided into two classes according to whether they can complete a sentence alone. providing all the necessary information about person, number, tense, etc., or whether they require the assistance of another verb which will do this for it. Thus, in the sentence, *He yelled,* the form in *yelled* is enough to complete the sentence, but in the sentence *He is yelling, yelling* cannot complete the

sentence by itself. It needs the assistance of the verb is, which shows the person and number of the subject and the tense, while *yelling* only shows aspect. So we say that *yelled* is a finite form of the verb, while yelling is a non-finite one. Among the inflected forms, the CONTINUOUS and the PERFECTIVE forms are nonfinite, others finite. The modals are finite too.

Type of Verb	Finite			Non-finite	
	Base	-s form	Past Form	-ing form	-en form
Full Regular	work	works	worked	working	worked
Full Irre_.	break sit quit	breaks sits quits	broke sat quit	breaking sitting quitting	broken sat quit
Primary	have do be	has does am, is are,	had did was, were	having doing being	had done been
Modal		will, would, shall should, can, could, may, might, must, ought, dare, need used			

2.4 LET US SUM UP

1. Morphemes are subject to a two-way classification into free\bound and grammatical\lexical morphemes.

2. Grammatical morphemes peform grammatical functions, i.e. they play a role in the rules which set out how words are to combine to form structures.

3. Free grammatical morphemes are eventually realized as FUNCTION WORDS, bound ones as modifications (including zero, or no modification) on words.

4. Lexical morphemes have meaning content. These meanings are generally based on references to external objects.

5. Free lexical morphemes are realized as lexical words, bound ones as modifications on these words.

6. Grammatical morphemes also contribute to meaning but in a different way: they modify the meanings of lexical morphemes in certain standard ways, e.g., changing reference to plural, making it definite, changing time reference to past, etc.

7. Bound lexical morphemes contribute to meaning by modifying the meanings of the lexical morphemes to which they are attached, but these modifications are neither fixed nor regular (as is the case with the modifications made by bound grammatical morphemes).

8. Morphemes and combinations of morphemes are realized as word. This process is called word-formation. All languages reveal certain patterns of word-formation., new words are being regularly created on these patterns.

9. Words are called simple, complex, compound or compound complex depending on whether they realize a single free morpheme, a free morpheme plus one or

more than one bound morpheme, two or more free morphemes, or two or more free morphemes plus one or more bound morphemes respectively. In some cases, two bound morphemes, of which one is a bound base, may also be realized as a complex word.

10. When a combination of morphemes is realized as a word it often possible to separate the phonological\orthographic elements which correspond to different morphemes. We call these elements which correspond to different morphemes. We call these elements morpheme elements, or morphs. Morphs can be classified into stems, roots and affixes.

11. The study of the internal structure of words in terms of its constituent morphs is called morphology.

12. Affixes are morphs which represent bound morphemes. They can be subdivided into prefixes and suffixes.

13. Prefixes are affixes attached to the beginning of the stem; suffixes are affixes attached to the end of the stem.

14. A stem can consist of a free morpheme base, a bound morpheme base, a base consisting of one free plus one or mor bound morphemes, or of two or more free morphemes.

15. The inflectional morphology of a language is the study of the way in which bnound grammatical morphemes combine with stems to be realized as grammatical words.

16. The derivational morphology of a language is a study of the ways in which bound lexical morphemes combine with stems to be realized as lexical wods.

17. Affixes which realize bound grammatical morphemes are called inflectional affixes; affixes which realize bound lexical morphemes are called derivational affixes.

18. The inflectional morphology of English describes the bound grammatical morphemes of English, the grammatical rules in which they figure, the paradigms they form, and the various phonological and orthographic forms into which they are realized.

19. The derivational morphology of English describes the bound lexical morphemes of English, the categories of the stems with which they can be combined, the categories of the resulting forms, the meaning changes brought about in this process, and the phonological\orthographic shapes these morphemes acquire.

20. Inflectional affixes differ from derivtional affixes in these ways: they never change the grammatical category of the stem, they are all suffixes, they form the outer layer of a complex word, and they modify the meaning of the stem in regular ways.

21. The inflectional morphology of a language can be studied in terms of the paradigms formed by the application of the relevant grammatical rules to the words of a given grammatical category (part of speech).

22. The inflectional morphology of the English noun can be described by setting up the paradigms of the proper and the common noun. Common nouns are subdivided into count and mass nouns with separate paradigms.

23. The grammatical rules relevant to the noun category are the Number Rule (producing two forms: singular and plural) and the Case-formation Rule (producing two forms: Common and Possessive).

24. Only the Case-formation rule applies to proper nouns. Hence its paradigm consists of only two forms: The Common Case form and the Possessive Case form.

25. Both rules apply to the count noun. This should produce four forms, but phonologically only two forms are produced: two categories are syncretized.

26. In counting phonological forms, phonetically conditioned variation is discounted. Sometimes several different morphs represent the same morpheme and the occurrence of these morphs is phonetically conditioned. Such phonetically conditioned morphs are called allomorphs of the same morpheme. The allomorphs of a morpheme are always in Complementary Distribution.

27. A number of count nouns form their paradigms in irregular ways. The notions of 'a replacive morph' and 'a zero morph' have been suggested to deal with them.

28. Mass nouns have no number and case paradigms.

29. Case, Person, Gender and Number Rules apply to English personal pronouns. An integrated application of these rules yields a complex paradigm with a variety of phonological forms not analysable into stem, affix, etc. The indefinite pronouns inflect like proper nouns.

30. English adjectives have a paradigm for the Degree Rule, which produces three forms: positive, comparative and superlative. This rule however applies only to a subset of English adjectives.

31. The English adverb forms its paradigm like the English adjective. The only rule that applies is the Degree rule.

32. The English verbs are subcategorized into Full, Modal and Primary Verbs for puposes of morphological description. The rules relevant to the construction of their paradigms are the Person and Number Rule, the Tense Rule, the Aspect Rule, and the Voice Rule.

33. The rules produce a maximum of five forms, but the regular Full Verb shows only four: the Base form, the Person-Number form (the -s form), the Continuous Aspect form (the -ing form) and the Past Tense (the -ed) form. the Perfective Aspect form is syncretic with the Past Tense the Perfective Aspect form is syncretic with the Past Tense from. (the-ed) The passive Voice form is restricted to transitive verbs only and is syncretic with the Perfective Aspect form.

34. Irregular verbs show five or three forms.

35. The phonological realizations of the Person -Number form (-s) and the Past Tense\Perfective Aspect form (-ed) show phonetically conditioned allomorphs of the suffix.

36. The Modal Verb does not show any paradigm changes.

37. The Primary Verbs are BE, HAVE and DO. They show considerable variation in form for the four rules and present an irregular paradigm.

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Allomorph : One of the morphs that represent a particular morpheme.

Aspect: A grammatical marking in the verb that indicates whether the action denoted by the verb is in progress or has been completed

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added. Same as Stem.

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Compound Word: A word that realizes two or more free morphemes.

Compound-complex word: A word that realizes two or more free morphemes plus one or more bound morphemes.

Compound root: A root that consists of two or more free morphemes.

Count Noun: A common noun that denotes objects which can be counted.

Derivational Affix: An affix that realizes a bound lexical morpheme.

Derivational Morphology: The derivational morphology of a language is a study of the ways in which bound lexical morphemes combine with stems to be realized as lexical words.

Finite verb: A form of the verb which expresses tense, number, person, etc. A sentence needs a finite verb to be complete.

Free Lexical Morpheme: A lexical morpheme that is realized as an independent lexical word.

Free Grammatical Morpheme: A grammatical morpheme that is realized as an independent grammatical word.

Full Verb: A full verb is a verb which functions only as a main verb in a sentence.

Grammatical Morpheme: Grammatical morphemes are morphemes which perform grammatical functions, i.e. they play a role in the rules which set out how words are to combine to form structures.

Inflectional Morphology: The inflectional morphology of a language is the study of the ways in which bound grammatical morphemes combine with stems to be realized as grammatical words.

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Mass Noun: A common noun that denotes objects which cannont be counted but must be treated as forming a mass.

Modal Verb: A modal verb is a verb which functions only as an auxiliary.

contrast to obtain, the voice rule applies only to verbs with objects, ie to transitive verbs only.

When ACTIVE is chosen there is no change in the verb form for voice, but when PASSIVE is chosen the main verb is put in the -en form and is preceded by an appropriate form of the verb BE.

Paradigm of the Full Verb

Full verbs can be divided into two classes with respect to the morphological changes they undergo: Regular and Irregular.

Regular verbs appear in all the four forms: the base form (work), the -s form (*works*), the -ing form (*working*) and the past form (*worked*). They have no past participle form distinct from the past form. However, not all verbs which show four forms are regular: some of them form their past and past participle forms in irregular ways, e.g., *bend*, *send*, etc. The regular verbs have the following features: (i) if we know the base form and the grammatical rules we can predict all the other forms; (ii) new and coined words follow their pattern; and (iii) the vast majority of English verbs pattern in this way.

Irregular verbs fall into two types: those which have five different forms and those which show only three forms. The verbs *speak, write, break*, etc. belong to the former type. They have five forms because the past and the past participle (-en) forms in their case do not show syncretism ie they show separate forms for these rules (e.g., *spoke, spoken*). Verb belonging to the second type show only three forms, e.g., *cut, hit, put*, etc. In their case, three different rules yield the same, syncretized, form: PRESENT (NON-THIRD PERSON SINGULAR), PAST and PAST PARTICIPLE.

The following table shows the forms of both regular and irregular verbs:

R/Ir	Base	-s form	-ing form	Past form	-en form
R	work	works	working	**worked**	worked
R	jump	jumps	jumping	**jumped**	**jumped**
Ir	break	breaks	breaking	broke	broken
Ir	cut	cuts	cutting	**cut**	**cut**

(Note: Syncretized forms are in bold face.)

The Phonological Forms: We have shown the paradigm in orthographic representation above but the distinctions are retained in the phonological representation too. The only differences that are noticed are allomorphic (see Sec. 3.1.2 above). As in the case of the plural morpheme of nouns, the orthographic suffix -s is realized as three phonetically conditioned allomorphs /s/, /z/ and /iz/: **works** /wɔ:ks/, **hugs** /hʌgz/, and **teaches** /ti:tʃiz/. In the case of the regular verbs, the past and the past participle morphemes, orthographically realized as -ed, also have three phonetically conditioned allomorphs: /t/ after a voiceless sound (as in **worked** /wɔ:kt/), /d/ after a voiced sounds (as in **hugged** /hʌgd), and /id/ after /t/ and /d/ (as in **quitted** /kwitid/ and **traded** /treidid/. The phonetic reason for the occurrence of the \id\ allomorph is similar to the reason for the occurrence of the /iz/ allomorph: like two sibilants, two successive alveolar stops also make an unpronounceable sequence.

In the case of irregular verbs, there is considerable variability and unpredictability in the way the past and the past participle forms are phonologically realized. Some verbs (e.g., *burn, smell*) have two past (participle) forms (*burnt, burned*), some verbs end in

\d\ but change it to \t\ in the past (participle) form (e.g., *bend > bent*). Some show no change from the base, and so on. However, they all form their -s and -ing forms in the regular way.

Paradigm of the Modal Verb

The modals do not change their forms for any of the four rules which cause morphological changes in the full verbs. This means that by just looking at the form of a modal verb you cannot predict the person and number of the subject, nor the tense, aspect. The only exception to this generalization that may be cited is the use of modals like *would, should, could, might* in sentences where they might be seen as past tense forms of *will, shall, can* and *may* respectively, e.g. in the sentence *He said he would be late* or in the sentence *She thought she could get away with it*. But in these instances *would* and *could* are best seen as sequence-of-tenses partners of *said* and *thought* respectively rather than as past forms of *will* and *can*. This is because if we took forms like *could, would*, etc. as indicators of past tense we would either fail to give any interpretations or produce erroneous interpretations for sentences like *Could you come again next week? I'd be grateful if someone would hold the door open* in which the time reference, if it is relevant at all, is to the future.

Paradigm of the Primary Verb

Primary verbs, as we stated above, are those verbs which occur both as main and auxiliary verbs. There are three of them in English : **BE, HAVE, AND DO.** Here are some examples of how they are used as main and auxiliary verbs:

BE: Arundhati **is** a significant writer. (main verb)
               Arundhati **is** leaving for London tomorrow. (Aux.)

HAVE: I **have** no money. (Main verb)
               I **have** written a book. (aux.)

DO: What **did** (aux.) he **do** (Main)?

The morphology of these verbs, both as main and auxiliary verbs, is, however, the same. All the four rules given above apply to them to produce a variety of forms. For example, in the FIRST PERSON, SINGULAR NUMBER, BE has the form am in the PRESENT TENSE, was in the PAST TENSE; in the FIRST PERSON PLURAL, SECOND PERSON SINGULAR and PLURAL and the THIRD PERSON PLURAL, it has the form are in the PRESENT TENSE and were in the PAST TENSE; in the THIRD PERSON SINGULAR, it has the form is in the PRESENT TENSE and was in the PAST TENSE. The CONTINUOUS ASPECT and the PERFECTIVE ASPECT forms are being and been respectively. The other primary verbs also show similar forms.

The morphology of the English verb is too complicated to allow us to present all its paradigms in a single chart. The chart given below makes an attempt, but leaves out many details. An additional dimension of finite and nonfinite forms is however introduced. The inflected verb forms can be divided into two classes according to whether they can complete a sentence alone, providing all the necessary information about person, number, tense, etc., or whether they require the assistance of another verb which will do this for it. Thus, in the sentence, *He yelled,* the form in *yelled* is enough to complete the sentence, but in the sentence *He is yelling, yelling* cannot complete the

sentence by itself. It needs the assistance of the verb is, which shows the person and number of the subject and the tense, while *yelling* only shows aspect. So we say that *yelled* is a finite form of the verb, while yelling is a non-finite one. Among the inflected forms, the CONTINUOUS and the PERFECTIVE forms are nonfinite, others finite. The modals are finite too.

Type of Verb	Finite			Non-finite	
	Base	-s form	Past Form	-ing form	-en form
Full Regular	work	works	worked	working	worked
Full Irre_.	break sit quit	breaks sits quits	broke sat quit	breaking sitting quitting	broken sat quit
Primary	have do be	has does am, is are,	had did was, were	having doing being	had done been
Modal		will, would, shall should, can, could, may. might, must, ought, dare, need used			

2.4 LET US SUM UP

1. Morphemes are subject to a two-way classification into free\bound and grammatical\lexical morphemes.

2. Grammatical morphemes peform grammatical functions, i.e. they play a role in the rules which set out how words are to combine to form structures.

3. Free grammatical morphemes are eventually realized as FUNCTION WORDS, bound ones as modifications (including zero, or no modification) on words.

4. Lexical morphemes have meaning content. These meanings are generally based on references to external objects.

5. Free lexical morphemes are realized as lexical words, bound ones as modifications on these words.

6. Grammatical morphemes also contribute to meaning but in a different way: they modify the meanings of lexical morphemes in certain standard ways, e.g., changing reference to plural, making it definite, changing time reference to past, etc.

7. Bound lexical morphemes contribute to meaning by modifying the meanings of the lexical morphemes to which they are attached, but these modifications are neither fixed nor regular (as is the case with the modifications made by bound grammatical morphemes).

8. Morphemes and combinations of morphemes are realized as word. This process is called word-formation. All languages reveal certain patterns of word-formation., new words are being regularly created on these patterns.

9. Words are called simple, complex, compound or compound complex depending on whether they realize a single free morpheme, a free morpheme plus one or

more than one bound morpheme, two or more free morphemes, or two or more free morphemes plus one or more bound morphemes respectively. In some cases, two bound morphemes, of which one is a bound base, may also be realized as a complex word.

10. When a combination of morphemes is realized as a word it often possible to separate the phonological\orthographic elements which correspond to different morphemes. We call these elements which correspond to different morphemes. We call these elements morpheme elements, or morphs. Morphs can be classified into stems, roots and affixes.

11. The study of the internal structure of words in terms of its constituent morphs is called morphology.

12. Affixes are morphs which represent bound morphemes. They can be subdivided into prefixes and suffixes.

13. Prefixes are affixes attached to the beginning of the stem; suffixes are affixes attached to the end of the stem

14. A stem can consist of a free morpheme base, a bound morpheme base, a base consisting of one free plus one or mor bound morphemes, or of two or more free morphemes.

15. The inflectional morphology of a language is the study of the way in which bnound grammatical morphemes combine with stems to be realized as grammatical words.

16. The derivational morphology of a language is a study of the ways in which bound lexical morphemes combine with stems to be realized as lexical words.

17. Affixes which realize bound grammatical morphemes are called inflectional affixes; affixes which realize bound lexical morphemes are called derivational affixes.

18. The inflectional morphology of English describes the bound grammatical morphemes of English, the grammatical rules in which they figure, the paradigms they form, and the various phonological and orthographic forms into which they are realized.

19. The derivational morphology of English describes the bound lexical morphemes of English, the categories of the stems with which they can be combined, the categories of the resulting forms, the meaning changes brought about in this process, and the phonological\orthographic shapes these morphemes acquire.

20. Inflectional affixes differ from derivtional affixes in these ways: they never change the grammatical category of the stem, they are all suffixes, they form the outer layer of a complex word, and they modify the meaning of the stem in regular ways.

21. The inflectional morphology of a language can be studied in terms of the paradigms formed by the application of the relevant grammatical rules to the words of a given grammatical category (part of speech).

22. The inflectional morphology of the English noun can be described by setting up the paradigms of the proper and the common noun. Common nouns are subdivided into count and mass nouns with separate paradigms.

23. The grammatical rules relevant to the noun category are the Number Rule (producing two forms: singular and plural) and the Case-formation Rule (producing two forms: Common and Possessive).

24. Only the Case-formation rule applies to proper nouns. Hence its paradigm consists of only two forms: The Common Case form and the Possessive Case form.

25. Both rules apply to the count noun. This should produce four forms, but phonologically only two forms are produced: two categories are syncretized.

26. In counting phonological forms, phonetically conditioned variation is discounted. Sometimes several different morphs represent the same morpheme and the occurrence of these morphs is phonetically conditioned. Such phonetically conditioned morphs are called allomorphs of the same morpheme. The allomorphs of a morpheme are always in Complementary Distribution.

27. A number of count nouns form their paradigms in irregular ways. The notions of 'a replacive morph' and 'a zero morph' have been suggested to deal with them.

28. Mass nouns have no number and case paradigms.

29. Case, Person, Gender and Number Rules apply to English personal pronouns. An integrated application of these rules yields a complex paradigm with a variety of phonological forms not analysable into stem, affix, etc. The indefinite pronouns inflect like proper nouns.

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Mass Noun: A common noun that denotes objects which cannont be counted but must be treated as forming a mass.

Modal Verb: A modal verb is a verb which functions only as an auxiliary.

Morph: A physical form that represents some morpheme.

Non-finite Verb: A verb form that does not express tense, number, person, etc. and therefore cannot complete a sentence by itself. It needs the assistance of an auxiliary which takes over this function.

Paradigm: The set of grammatical words resulting from the application of the appropriate grammatical rules to a word belonging to a particular grammatical category.

Prefix: An affix that is attached to the beginning of the stem.

Primary Verb: A verb that occurs both as an auxiliary and a main verb (BE, HAVE and DO).

Regualr Verb: A verb that forms its paradigm in the way the majority of verbs do. Its forms are therefore predictable.

Root: The (free or bound) morpheme at the core of a word to which affixes are added.

Simple Word: A word that realizes a single free morpheme.

Stem: See **Base**

Suffix: An affix that is attached to the end of the stem.

Word-formation: The process by which morphemes and morphemd combinations are realized as words.

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2.7 QUESTIONS & EXERCISES

1. What is the basis for the classification of morphemes into (a) Free and Bound, and (b) Grammatical and Lexical?

2. What kinds of morphemes are realized as (a) function words (b) content words, and (c) affixes?

3. Identify the elements that represent (a) free and (b) bound morphemes in the following words (ignore other elements):

    Pesticide, postmodernist, prepacked, expedition, manhood, servicing, manager, unenthusiastically, predate, embedded

4. Identify (1) the root and (2) the stem to which the prefixes de-, dis-, and mis- are respectively attached in the following words:

    a. deregulation   b. disinformation   c. misinformation

5. Make a list of ten elements in English which occur as bound bases and try to work out the likely meaning of each. Give at least five words as examples for each bound base.

6. Distinguish inflectional and derivational affixes in the following words:

    a. tributaries   b. unclassified   c. beginnings

    d. friendlier   e. writer's

7. Would you say that the suffix -ly in words like *happily, beautifully, rapidly,* etc. was a derivational suffix or an inflectional one? List the reasons for your answer.

8. Is the suffix *-ly* in the words cited in the previous question the same or different from the *-ly* in words like *cowardly, friendly, shapely,* etc? Cite evidence for your answer.

9. The count noun *child* has an irregular paradigm. How many different phonological forms does the paradigm show? How many different phonological form does a regular noun show?

10. Nouns like *sheep* and *deer* do not change their form for the PLURAL morpheme, but they are countable. Are nouns like *cattle* and *police* also like them? If not, in what ways are they different?

11. Write the pronoun forms for the following morpheme combination:

    a. FIRST PERSON + PLURAL NUMBER + IInd POSSESSIVE

    b. THIRD PERSON + SINGULAR NUMBER + FEMININE GENDER + OBJEC-TIVE CASE

    c. THIRD PERSON + PLURAL NUMBER + FIRST POSSESSIVE

12. Sort out following adjectives into three categories, as follows:

    a. · Those which can only be compared in the inflected form.

    b. Those which can only be compared with **more** and **most**.

c. Those which can be compared in both ways.

right, clever, great, low, wrong, polite, wealthy, brave, likely, ambitious

13. Find these positive form of the italicized adjective/adverb to fill the blank:

   a. His condition went from .... to *worse*.

   b. I am quite .... today. I should be *better* tomorrow.

   c. She paints .... but her sister paints even *better*.

   d. Shakespeare knew .... Latin and *less* Greek.

   e. I have caused you ....trouble already. Do you mind if I cause a little *more*?

14. Which of the morphemes, TENSE, ASPECT, NUMBER, and PERSON are present in the verbs underlined in the following sentences:

   a. The train *leaves* in an hour.

   b. The train *has left*.

   c. All trains *are running* late.

   d. I *am* busy now.

   e. I *have written* a book.

15. Give the full paradigms of the following verbs and say whether they are regular or not:

   thrust, dye, spoil, bet, bend, show, quit, see, dive, wear

16. Construct a chart showing the full paradigm of the verb DO showing

   a. how its forms realize TENSE, NUMBER and PERSON. Include both positive and negative forms.

   b. which forms are finite and which non-finite.

NOTES ON 'QUESTIONS & EXERCISES'

1. (a) Morphemes which are realized as independently occurring words are free; those which are realized as modifications on other words are bond.

   (b) Morphemes which, alone or in combination with other lexical morphemes, are realized as lexical words, with meaning content, are lexical morphemes.

   Morphemes which ar realized as words, or as modifications on other words, with grammatical function are grammatical morphemes.

2. (a) free grammatical morphemes (b) free lexical morphemes (c) Bound grammatical and lexical morphemes

3.

WORD	FREE MORPHEME	BOUND MORPHEME(S)
pesticide	PEST	CIDE
postmodernist	MODERN	POST-/-IST
prepacked	PACK	PRE-/-ED
expedition	EXPEDITE	-ION
manhood	MAN	-HOOD
servicing	SERVICE	-ING
manager	MANAGE	-ER
unenthusiastically	ENTHUSIASM	UN-\-TIC \-AL\-LY
predate	DATE	PRE-
embedded	BED	EM-\-ED

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4.	WORD		ROOT	STEM
	a.	deregulation	regulate	regulate
	b.	disinformation	inform	information
	c.	misinformation	inform	inform

6. a. tributaries: tribute + ary (deriv.) (tribute + ary) + s (Infl.)

    b. unclassified: class(i) + fy (Deriv.)

                           (un+ (Class(i) + fy) + ed (Infl.)

    c. beginnings: begin + ing (Deriv.)

                           (begin + ing) + s (Infl.)

    d. friendlier: friend + ly (Deriv.)

                           (friend + ly) + er (Infl.)

    e. writer's: write + er (Derive.)

                           (writer + er) + 's (Infl.)

7. In 2.3 above, we discussed some criteria for distinguishing inflectional from derivational affixes:

    a. Inflectional affixes never change the grammatical category (part of speech) of the the stem.

    b. Inflectional affixes in English are all suffixes; derivational affixes may be prefixes or suffixes.

    c. Both derivational and inflectional morphemes may occur in the same word, but when that happens derivational morphemes are attached first and inflectional morphemes last. When an inflectional suffix has been attached to a stem, no derivationa affix can be attached to it.

    d. Inflectional affixes modify the meanings of the stem in a regular way.

Applying these criteria to -ly in the given word produces contradictory results. (a)shows it to be a derivational affix, (c) and (d) mark it as closer to an inflectional affix, and (b) is unhelpful. In terms of its general character, however, -ly is certainly not like other inflectional affixes, which produce contrasting forms in a grammatical paradigm (SINGULAR VS. PLURAL; PRESENT VS. PAST etc.). If MANNER (the meaning which this suffix expresses) is a grammatical morpheme it has no contrasting category. English adjectives therefore have no 'Manner' paradigm, though they do have a 'Degree' paradigm with contrasting categories of positive comparative and superlative degrees of comparison. The general opinion is therefore in favour of treating -ly as a derivational suffix.

8. It is not the same. The -ly in happily, etc. is an adverb forming suffix expressing manner. The -ly in cowardly, etc. is an adjective-forming suffix. hence we have comparative forms for the adjectives like 'cowardliest, friendlier, etc., but none for the adverbs (*happilier, *happiliest are not acceptable forms).

9. It shows four different phonological forms:

SINGULAR NUMBER, COMMON CASE: /tʃaild/ 'child'

SINGULAR NUMBER, SSESSIVE CASE; /tʃaildz/ 'child's'

PLURAL NUMBER, COMMON CASE: /tʃildr n/

PLURAL NUMBER, POSSESSIVE CASE: /tʃildrnz/ 'children's'

A regular noun shows two forms only: the last three forms are syncretized.

10. No. **Cattle** and police are not like **sheep** and **deer**: there is no number contrast in the former. We cannot say *one police or *one cattle (whereas we can say one sheep and one deer). They can only be used in the plural, but being unccuntable,

cannot be used with number words, to use number words, we have to use a countable noun with them e.g., **ten policemen, ten heads of cattle.**

11. a. ours b. her. c. their

12. **right, clever, great, low, wrong, polite, wealthy, brave, likely, ambitious**

   a.   great, low,

   b.   right, wrong, ambitious

   c.   clever, polite, wealthy, brave, likely

13. a.   bad b. well c. well d. little e. much

14. a.   'leaves': TENSE, NUMBER, PERSON

   b.   'has left': TENSE, ASPECT, NUMBER, PERSON

   c.   'are running': TENSE, ASPECT, NUMBER

   d.   'am': TENSE, NUMBER, PERSON

   e.   'have written': TENSE, ASPECT, NUMBER, PERSON

15.

BASE	thrust	dye	spoil	bet	bend
-S	thrusts	dyes	spoils	bets	bends
-ING	thrusting	dyeing	spoiling	betting	bending
-ED	thrust	dyed	spoiled spoilt	bet	bent
-EN	thrust	dyed	spoiled spoilt	bet	bent
R/Ir	Ir	R	R/Ir	Ir	Ir
BASE	show	quit	see	dive	wear
-S	shows	quits	sees	dives	wears
-ING	showing	quitting	seeing	diving	weaing
-ED	showed	quit quitted	saw	dived	wore
-EN	showed shown	quit quitted	seen	dived	worn
R\Ir	R\Ir	R\Ir	I	R	I

16.

	Finite				Non-finite	
	Present		Past		-in gform	-en form
	pos.	neg.	pos.	neg.		
1st Person Sig. Plu. 2nd Person Sing.\plu. 3rd Person Plural	do du:	don't /dəunt/				
			did /did/	didn't /didnt/	doing /du:iŋ/	done /dʌn/
3rd Person Singular	does /dʌz/	doesn't /dʌznt/				