2.1 The Definition of Morphology

The term morphology comes from the Ancient Greek word *morphe* which means ‘form’ and *logos* which means ‘science’. Since the dominant term of form in linguistics referred to the form of word, morphology is therefore the science of form of words.

Morphology is the branch of linguistics studying how words are structured and how they are put together from smaller parts. For example, the English word *unfriendly* is formed from *friend*, the adjective-forming suffix *-ly* and the negative prefix *un-* (Sibarani, 2006:1).

Morphology is the study of morphemes and their arrangements in forming words (Nida, 1967:1). It would be quite wrong to assume, however, that morphology and syntax constitute air-tight compartments in the structure of any language. This is by no means true. In some languages there is constant overlapping of structure, and in a few instances it seems almost impossible to draw a line between word structure and phrase structure.
Morphology refers is the words of language (Fronklim, Rodman, Hyams, 2011:36). Words are an important part of linguistic knowledge and constitute a component of our mental grammars, but one can learn thousands words in a language and still not know the language. Anyone who tried to communicate in a foreign country by merely using a dictionary knows this is true. On the other hand, without words we would be unable to convey our thoughts through language or understand the thoughts of others.

Morphology is the study of how words are structured and how they are put together from smaller parts (Language Files, 1988:117). Despite the popular notion that the word is the smallest meaningful unit, the smallest unit with meaning is actually the morpheme. A word may be made up of several morphemes.

Morphology is the study of formal relationships between words (Singh, Starosta 2003:18). Morphology is at the conceptual centre of linguistics. This is not because it is the dominant subdiscipline, but because morphology is the study of word structure, and words are at the interface between phonology, syntax and semantics. Words have phonological properties, they articulate together to form phrases and sentences, their form often reflects their syntactic function, and their parts are often composed of meaningful smaller pieces.

It is true that there are some words whose sound seems to reflect their meaning fairly directly. These include so-called onomatopoeic words, such as words for animal cries: bow-wow, miaow, cheep, cock-a-doodle-doo (Carstairs 2002:6-7).
But even here convention plays a large part. Onomatopoeic words are not the same in all languages, for example, a cock-crow in German is *kikeriki*, and dog’s bark in French is *ouah ouah* (pronounced roughly ‘wah wah’).

Someone who doesn’t know English would not know where one word begins or ends in an utterance like *Thecatsatonthemat*. We separate written words by spaces, but in the spoken language there are no pauses between most words. Without the knowledge of the language, one can’t tell how many words are there in an utterance. Knowing a word means knowing that a particular sequence of sounds is associated with a particular meaning. A speaker of English has no difficulty in segmenting the stream of sounds into six individual words—*the, cat, sat, on, the, mat*—because each of these words is listed in his or her mental dictionary, lexicon (the Greek word for dictionary), that is part of a speaker’s linguistic knowledge. Similarly, a speaker knows that uncharacteristically, which has more letters than *Thecatsatonthemat*, is nevertheless a single word.

Although some of these may sound strange concept, they are perfectly acceptable forms. The *idea-ideas* case is the most straightforward. The distinction between these two words is that while the first refers to a single thing, the second refers to more than one of them (Newson et.al, 2006: 7).

In general the word is the smallest unit that one thinks of as being basic to saying anything. It is the smallest unit of sentence composition and the smallest unit
that we are aware of when we consciously try to create sentences (Stockwell, 2001:56).

2.2 Types of Morphemes

The term *morpheme* is used to refer to the smallest unit that has meaning or serves a grammatical function in a language. Morphemes are the atoms with which words are built (Katamba, 1994:20). A morpheme can be made up of one phoneme, e.g. the plural /z/, or more than one phoneme as in /dɒg/. We can equate morphemes with what we call ‘words’, since *cats* is one word but two morphemes. Nor can we equate morphemes with syllables, since *elephant* has three syllables but is one morpheme.

Morphemes are the minimal meaningful units which may constitute words or parts of words, e.g. *re-, de-, un-, -ish, -ly, -ceive, -mand, tie, boy*, and *like* in the combinations *receive, demand, untie, boyish, likely* (Nida, 1967:1). The morpheme arrangements which are treated under the morphology of a language include all combinations that form words or parts of words. Combinations of words into phrases and sentences are treated under the syntax.

A morpheme is the minimal linguistic unit which has a meaning or grammatical function. Although many people think of words as the basic meaningful
elements of a language, many words can be broken down into still smaller units, called *morphemes* (Language Files, 1988:119).

There are two classes of morphemes (Lim, 1980:38). A *free morpheme* (sometimes called a ‘stem’ or ‘base’) is one which can meaningfully occur alone, e.g. *book, pencil, elephant, love, give, happy, very*. There are also morphemes that must always occur with a base, e.g. the ‘plural’ morpheme in *books* cannot occur alone as *s*, except in a sentence like *The ‘s’ in ‘books’ expresses plurality*. Such morphemes are called *bound morphemes*. Other examples of bound morphemes are the ‘present tense’ morpheme in *walk(s), run(s)*, the ‘negative’ morpheme in *(un) happy, (in) attentive* and the ‘quality’ morpheme in *happi(ness), sinceri(ty)*.

Bound morphemes may be classified as affixes, which are subdivided into prefixes, suffixes and infixes, according to the way they combine with the base or stem. Prefixes occur before the base, e.g. *(un)tidy, (pre)school, (dis)like*. Suffixes occur after the base, e.g. *kind(ness), angri(ly), judge(ment), teach(er)*. Infixes occur in the middle of the base. English has no infixes.

Bound morphemes or affixes may also be classified as derivational or inflectional according to the effect they produce on the base. Dericational affixes are bound morphemes which generally combine with the base to change its ‘parts of speech’ class. For example, *teach, build* and *sweep* are verbs, but if we add the derivational affix *er* they become the nouns *teacher, builder, sweeper*. If we add the
affix *ly* to the adjectives *happy, loud, smooth*, we get the adverbs *happily, loudly, smoothly*. Another example of derivational affix *en* which can change nouns into verbs, e.g. *danger, slave, throne* become *endanger, enslave, enthrone*. However, the part of speech is sometimes not changed by a derivational affix, e.g. *like* and *dislike* are both verbs; *true* and *untrue* are both adjectives.

Inflectional affixes are bound morphemes which carry grammatical meanings like ‘plural’, ‘past tense’ or ‘possessive’. In English the number of inflectional morphemes is small but they combine with many bases. They do not change the part of speech of the base to which they are added. For example, if we add the ‘plural’ morpheme to the nouns *bag, tin, church* they remain nouns: *bags, tins, churches*; if we add the ‘past tense’ morpheme to the verbs *walk, drown, risen*, they are still verbs: *walked, drowned, rinsed*.

Both derivational and inflectional affixes may be used to define word classes (or parts of speech). For example, bases that can combine with *er* and *est* (to express comparison) or with *ness* are adjectives, e.g. *tall, kind, happy* and *smooth*; and bases that can dance. English derivational affixes may be either prefixes (*dislike, behead, unknown*) or suffixes (*judgement, sweetly, creator*). English inflectional affixes, on the other hand, tend to be suffixes, e.g. Tom’s, *walked, glasses, talking*.

Thus, the language user is able to coin new **polymorphemic** words (words consisting of more than one morpheme) through the concatenation of morphemes,
and of morphemes, and of morphemes with words that are themselves polymorphemic. An example of the latter is the formation of the verb *tranquillize*, itself derived from *tranquil* through the addition of –*ize*. The formation of *tranquillizer* is not a matter of concatenating three morphemes; instead, it is a two-steps operation. First, the bound morpheme –*ize* has been added to the simplex adjective *tranquil*, resulting in the verb *tranquillize*. Subsequently, the bound morpheme –*er* has been added to this verb. The morphological structure of this word is therefore a layered one, and can be represented in the form of a string with labelled bracketing, or a tree (Figure 2.1). In short, morphology might be seen as morpheme syntax, as the set of principles that tell you how to combine free and bound morphemes into well-formed words.

![Figure 2.1 The morphological structure of tranquillizer](image)

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2.3 Word-Classes: A Structuralist Approach

Language make an important distinction between two kinds of words—content words and functions words. Nouns, verbs, adjectives, and adverbs are the content words (Fronklim, Rodman, Hyams, 2011:39). These words denote concepts such as objects, actions, attributes, and ideas that we can think about like children, anarchism, soar, and purple. Content words are sometimes called the open class words because we can and regularly do add new words to these classes, such as Bollywood, blog, dis, and 24/7, pronounced “twenty-four seven.”

Other classes of words do not have clear lexical meanings or obvious concepts associated with them, including conjunction, such as and, or, and but; prepositions such as in and of; the articles the and a/an, and pronouns such as it. These kinds of words are called function words because they specify grammatical relations and have little or no semantic content. For example, the articles indicate whether a noun is definite or indefinite—the boy or a boy. The preposition of indicates possession, as in ‘the book of yours,’ but this word indicates many other kinds of relations too.

Function words are sometimes called closed class words. It is difficult to think of any conjunctions prepositions, or pronouns that have recently entered the language. The small set of personal pronouns such as I, me, mine, he, she, and so on are part of this class. With the growth of the feminist movement, some proposals
have been made for adding a genderless singular pronoun. If such a pronoun existed, it might have prevented the department head in a large university from making the incongruous statement: “We will hire the best person for the job regardless of his sex.” Various proposals such as ‘e’ have been put forward, but none are likely to gain acceptance because the closed classes are unreceptive to new membership. Rather, speakers prefer to recruit existing pronouns such as they and their for this job, as in “We will hire the best person for the job regardless of their sex.”

The difference between content and function words is illustrated by the following test that has circulated over the Internet:

Count the number of F’s in the following text without reading further:

FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS.

Most people come up with three, which is wrong. If you came up with fewer that six, count again, and this time, pay attention to the function word of.

This little test illustrates that the brain treats content and function words (like of) differently. A great deal of psychological and neurological evidence supports this claim. Some brain-damaged patients and people with specific language impairments
have greater difficulty in using, understanding, or reading function words like *in* or *which*, but can read the lexical content words *inn* and *witch*.

In the early stages for development, children often omit function words from their speech, as in for example, ‘doggie barking’.

The linguistic evidence suggests that content words and function words play different roles in language. Content words bear the brunt of the meaning, whereas function words connect the content words to the larger grammatical context. So, modern linguistics classify five word-classes: Nouns, verbs, adjectives, adverbs, and function words. The classification of English morphemes in modern linguistics can be seen as follows:
FIGURE 2.2 Classification of English morphemes
2.4 The Constituent of Word-Formation

To the native speaker, many words have an obvious internal structure. With *blackbird* and *monkey-like*, we can see that each word comprises parts that occur elsewhere in the language with the same meaning (*blackboard* and *ladylike*, for example) (Quirk et al., 1992: 1518). We shall refer to such items as COMPLEX words, in contrast to those words-long or short-which to the native speaker have to be learnt as arbitrarily contrived units, with no recognizable parts: *cat* or *rhinoceros*.

Superficially, a complex word like *depolarization* looks like a simple linear string of items:

\[ \text{de} + \text{pol(e)} + \text{ar} + \text{iz(e)} + \text{aion} \]

consisting of the WORD *pole* with AFFIXES which may precede (PREFIXES) or follow (SUFFIXES). But some complex words are not analysable into words plus affixes:

jealous = jeal- + -ous

pious = pi- + -ous

(contrast desirous = desire + -ous)

To capture what is common to *pole, desire, jeal-* and *pi-*, therefore, we obviously cannot use ‘word’ and we shall speak instead of STEM. We can then say that the
stems *desire* and *jeal-* combine with the affix –*ous* to yield the adjectives. But a further distinction is necessary, as this is inadequate when we want to describe depolarization, since if we said that the affixes *de-*, *-ar-*, *-ie*, and –*ation* are combined with the stem, this might imply that fact, it is with the verb *polarize* or the deverbal noun *polarization* that *de-*can combine. We need to distinguish a unit that may be neither STEM nor WORD but of which we can say that it is with this unit that a particular affix is combined. We shall call this unit the base.

We can now make analogous statements like the following:

*Jealous* = base *jeal-* + affix –*ous*

[the base here is identical with the stem, but neither is a word in English]

*polarize* = base *polar* + affix –*ize*

*depolarize* = affix *de-* + base *polarize*

[the base here is not identical with the stem is either case, the stem being *pole*; but both the bases and the stem are English words]

*(be) spectacled* [‘wearing spectacles’] = base *spectacle-* + affix-*ed* [here the base is identical with the stem, but although the word *spectacle* exists in English it is only the stem of the plural *spectacles* that constitutes the base in *spectacled*.]

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The stem is thus the form of a word stripped of all affixe that are recognizable as such in English; eg; man, person, apply, abattoir, rhinoceros. If abattoir is a stem, despite the existence in English of reservoir (with an identical ending, both words referring to physical constructions), how should we regard reservoir itself? Should we regard it as having a stem identical with the word reserve? Again, should we relate reserve, preserve, deserve as having a common stem, perhaps seeing this as identical with the verb serve?

Various arguments come into play: etymological, semantic, even phonological. We note, for instance, that the s in reserve is pronounced /z/, where that in serve is pronounced /s/. The more indications there are of the remoteness of connection between one word and another, as perceived by the native speaker, the more we must be influenced to regard polysyllabic words like reservoir and reserve, deceive and conceive as individual stems. The observe is actual productivity. Where, beside depolarize, we find new words being currently created such as decompress and deregulate, the de- element having a similar relation in each, we know that we are not dealing with isolated polysyllabic stems but with complex words.
2.5 Word-Formation Processes

Word-formation is traditionally divided into two kinds: **derivation** and **compounding** (Booij 2005: 5). Whereas in compounding the constituents of a word are themselves lexemes, this is not the case in derivation. For instance, *-ity* is not a lexeme, and hence TAXABILITY is a case of derivation. The word INCOME TAX, on the other hand, is a compound since both INCOME and TAX are lexemes.

The word-formation processes or the morphological processes are the processes of forming new words with the rules of morphology.

2.5.1 Suffixation

Suffixation is putting a suffix after the base, sometimes without, but more usually with, a change of word class; eg: *friend + less* (Quirk et.al., 1992: 1520).

As with prefixes, we shall concentrate on those suffixes that are in commonest productive use, but where our treatment of prefixes was on a generally **semantic** basis, our treatment of suffixes is on a generally grammatical basis. This is because, while prefixes primarily effect a semantic modification of the base, suffixes have by contrast only a small semantic role, their primary function being to change the grammatical function (for example the word class) of the base.
2.5.2 Conversion

Conversion assigning the base to a different word class with no change of form; eg: *(we shall) carpet (the room)* – verb from noun.

Conversion is the change in form class without any corresponding change of form (Bauer 1983: 32). Thus the change whereby the form *napalm*, which had been used exclusively as a noun, came to be used as a verb (They decided to *napalm* the village) is a case of conversion.

Conversion is frequently called *zero-derivation*, a term which many scholars prefer. Most writers who use both terms appear to use them as synonyms.

Conversion is the derivational process whereby an item is adapted or converted to a new word class without addition of an affix (Quirk et.al., 1992: 1558). In this way, conversion is closely analogous to suffixation (as distinct from prefixation). For example, the verb *release* (as in *They released him*) corresponds to a noun *release* (as in *They ordered his release*), and this relationship may be seen as parallel to that between the verb *acquit* (as in *They acquitted him*) and the noun *acquittal* (as in *They ordered his acquittal*):

<table>
<thead>
<tr>
<th>VERB</th>
<th>DEVERBAL NOUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUFFIXATION</td>
<td>acquit</td>
</tr>
<tr>
<td>CONVERSION</td>
<td>release</td>
</tr>
</tbody>
</table>
Conversion is unusually prominent as a word-formation process, through both the variety of conversion rules and their productivity.

2.5.3 Back-formation

The great majority of back-formations in English are verbs (Bauer 1983: 230). A back-formation is a subspecies of a folk etymology that results in a totally new listeme entering the language. This occurs when a learner encounters a word that contains a sound sequence that sounds like a particular suffix. The word doesn’t in fact contain that suffix, in the minds of the other people using it, but the learner doesn’t know that. Consequently, the learner’s word-analysis machinery strips off the apparent suffix, and invents a meaning for the leftover part by subtracting the apparent suffix’s meaning. Some words that entered English this way are *juggle*, *burgle*, *televise* and *fluoresce*. The word *burglar*, referring to someone who enters a house to commit *burglary*, was in common use in English in the 1500s. Sometime around 1870, the word *burgle* first appeared. Where did it come from? Evidently, seduced by pairs like *write–writer*, *fiddle–fiddler*, *meddle–meddler*, and *wrangle–wrangler*, some enterprising person assumed that *burglar* was made up of a verb *burgle* plus the *-er* suffix present in those words. Just as a writer is someone who writes, and a meddler is someone who meddles, this learner thought, a burglar must be someone who “burgles.” That is, the new verb *burgle*, by the logic of wordformation, must mean whatever it is a burglar does; burglars steal, so *burgling* must mean something like “stealing.” The hypothetical learner would have started
using *burgle* as a verb meaning “steal” – “Joe, I heard your house was burgled last night!” Because the *burgle* + -*er* derivation seems so plausible as analysis for *burglar*, the newly back-formed word caught on, and now is used widely in British English, though not so widely in American English. The same thing happened to *juggler*. *Televise* is back-formed from *television* (originally tele+vision); *fluoresce* from *fluorescent*. The same logic underlies the recent introduction of the verb *to lase*, from *laser*. *Laser* was originally an acronym for *Light Amplification by the Stimulated Emission of Radiation* – no -*er* suffix involved.

Pairs of words like *advise ~ advisor, burgle ~ burglar, inspect ~ inspector, edit ~ editor*, suggest an identical relationship between the member which from the synchronic viewpoint of the ordinary language user is perfectly correct. But as a matter of historical fact, while advisor and inspector were indeed formed from advise and inspect by suffixation, we have derived burgle and edit from burglar and editor, analysing these on the analogy of other agential nouns. This is the process known as ‘back-formation’, and in addition to well-established items, whether from long ago (like laze from lazy) or more recently (like televize from television), new formations of this kind continue to be made. The process is particularly fruitful in creating denominal verbs. It should be noted that new formations tend to be with some hesitation, especially in respect of the full range of verbal inflexions. For example, the textual instances was significantly in the base form, *self-destruct*, but although clearly used as a verb, there is less obvious clash with the well-established verb
destroy than when (as occasionally) ordinary verb inflections are added: ?’ The 
organization self-destructed in 1985’. So also we had the agential baby-sitter before 
the verb baby-sit, and the base form (‘Will you baby-sit for me?’) before inflected 
forms (‘He baby-sat for them’). Other back-formations continue to display their lack 
of established acceptability: *(They) sight-saw, *(She) housekept.

A particularly productive type of back-formation relates to the noun 
compounds in –ing and –er. For examples, the verbs:

bottle-feed brain-wash chain-smoke day-dream dry-clean
fire-watch house-hunt house-keep lip-read sight-see
sleep-walk spring-clean window-shop

Less commonly, we have nouns from adjectives by back-formation: eg polymer from 
polymeric.

2.5.4 Abbreviations

Abbreviations are similar in nature to blends, because both blends and 
abbreviations are amalgamations of parts of different words (Plag, 200:160). 
Abbreviation has in common with truncation and blending that it involves loss of 
material (not addition of material, as with affixation), but differs from truncation and 
blending in that prosodic categories do not play a prominent role.
It is of the essence in lexicalization that, however lengthy and complex the formation of an item, it comes to be regarded as a single unit in relation to the meaning so lexicalized. In consequence, it is not the constituents of the word in combination that are seen as conveying this meaning but its individuality as a whole. Provided any part of the item is itself sufficiently individual to call up the whole, it can be shortened to a form which is linguistically convenient but need not reflect the morphological make-up of the full form. For example, *bus* (from *omnibus*), *ad* (from *advertisement*), *bit* (in information processing, from *binary digit*); *TV* (from *television*) (Quirk et.al., 1992: 1520). We distinguish three highly productive ways in which abbreviation is involved in English word-formation, giving us CLIPPING, ACRONYMS, and BLENDS.

### 2.5.5 Clippings

Clipping refers to the process whereby a lexeme (simplex or complex) is shortened, while still retaining the same meaning and still being a member of the same form class (Bauer 1983: 233). Frequently clipping results in a change of stylistic level. The unpredictability concerns the way in which the base lexeme is shortened. Especially in informal usage, we tend to show our familiarity with polysyllabic words (especially nouns), by shortening them, often to a single syllable. The ‘clipping’ seems often to start from the graphic form, since the surviving fragment is usually initial and need not constitute either prosodically or semantically the salient part of the original:
ad or 'advert <BrE> from ad'vertisement (also ad'vertisement in AmE)

'cosec /kəʊseɪk/ from cosecant /kəʊ'seɪkθ/ (trigonometry)

demo from demon'stration (but not the verb e'xamine or exami'nation in the medical sense)

French fries <esp AmE> from French fried potatoes <esp AmE>

gents from gentlemen’s (especially = gentlemen’s lavatory)

lab from la'boratory <BrE>, 'laboratory <AmE>

lib from li'beration (but only in lexicalizations like Women’s Liberation Movement)

'memo from memo'randum

mike from 'micro phone

'photo from 'photograph (but not pho'tography)

prof from pro'fessor

pseud <BrE> from pseudo- (intel'lectual)

pub from , public'house

'stereo from , stereo'phonic
Less commonly, the clipped form has resulted from discarding the initial part of a word, as in:

- **phone** from 'telephone (but not, eg, microphone)
- **plane** from 'airplane, 'aeroplane

Occasionally, syllables have been discarded at both ends of a word, as in:

- **flu** from , influ'enza
- **fridge** from re'frigerator

### 2.5.6 Acronyms

Acronyms are words formed from the initial letters of words that make up a name (Quirk et.al., 1992: 1581). New acronyms are freely produced, especially by scientists and administrators, and particularly for names of organizations. There are two main types:

[A] Acronyms which are pronounced as sequences of letters (also called ‘alphabetism’), eg C.O.D /siədi:/, are most like ordinary abbreviations and hence most peripheral to word-formation. In writing, the more institutionalized formations have no periods between the letters. The use of
capitals in not determined solely by whether the items abbreviated are proper nouns.

[i] The letters represent full words:

c/o (in) care of [used on envelopes]

C.O.D. cash on delivery

DIY <informal BrE> do-it-yourself [used of self-help repairs, etc]

EEC European Economic Community

eg exempli gratia [Latin, ‘for example’]

ESP extra-sensory perception

FBI Federal Bureau of Investigation

ie id est [ Latin, ‘that is’]

KL Kuala Lumpur

LA Los Angeles

MIT Massachusetts Institute of Technology

p.c <BrE. Postcard

UFO unidentified flying object
UN the United Nations

VIP very important person

[ii] The letters represent constituents in a compound or just parts of a word:

GHQ General Headquarters

ID identification (card)

TB tuberculosis

TV television

Acronyms of Type [A] are sometimes given a quasi-phonetic written form. For example, M.C. ['Master of Ceremonies'] may be informally written as Emcee; DJ ['Disc Jockey'] as Deejay, Ok as Okay. In AmE, Jaycee is used for Junior Chamber of Commerce (member).

[B] Acronyms which are pronounced as a word, eg NATO /ˈneɪtoʊ/, are often used without our knowing what the letters stand for:

laser lightwave amplification by stimulated emission of radiation

NATO the North Atlantic Treaty Organisation

radar radio detecting and ranging
UNESCO the United Nations Educational, Scientific and Cultural Organization

WASP White Anglo-Saxon Protestant <AmE, informal>

Acronyms of this second type frequently derive from phrasal names specially devised for their acronymic convenience. For the same reason, initial syllables are well as initial letters may be involved, as in binac ('binary automatic computer').

2.5.7 Blends

As the term suggests, blends are formations in which a compound is made by ‘blending’ one word with another (Quirk et.al., 1992: 1583). Enough of each is normally retained so that the complex whole remains fairly readily analysable. To this end also, and preserving the normal attributes of the compound such that end-part is the thematic base to which the new initial part is related, the blend tends to have as a whole the prosodic shape of the untruncated end-part. Thus on the basis of hotel we preface enough of motor both to achieve the new contrast with hotel (a hotel specially equipped for the needs of motoring guests), and to achieve the dominance of the base pattern: motel.

So too with a special kind of lunch which has some of the features of breakfast, we have coined brunch; if the meal had been primarily conceived as a kind of breakfast, we might have had instead (*) lunkfast. Thus we may conclude that a spork (first recorded in 1976) is a fork like a spoon, rather than a spoon that
looks like a fork (which might have given us (*) foon). Note the distinction between tigon (wheree the sire is a tiger) and liger (where the sire is a lion). In such formations, an attempt seems to be made at matching the pragmatic position with a linguistic form.

Blending is very productive process, especially in commercial coinages, which suggests that its rather daring playfulness is popular. Where many types of neologism are criticized adversely (eg as 'unnecessary jargon'), blend seem rather to be enjoyed. Perhaps in consequence, many of them are short-lived or never achieved currency beyond the advertising copy in which they may originate. Eg: swin'sation of a swimsuit that will cause as sensation; lubri'tection of a new lubricant that will provide engine protection.

Others not merely becoe well-established but act as a highly productive model for new formations: 'cheese burger, shrimp burger; washe'teria, candy'teria, luncha'teria, etc (and we note again that a matching in prosodic shape is a determining factor in establishing the blended form). Others again achieve a brief surge of productivity in response to an outstanding event. In the years following the Washington Watergate scandals, the name 'Watergate, 'Billigate, 'cattlegate. All of these denoted specific cases of political crisis resulting from scandalous deception connoted by the underlying Watergate, the whole of which (with the associations) had to be understood in each alternative formation.
Some further and more general examples:

'b'reathal yser [breath + 'anal yser]

e'lectro čute [electro + 'exe čute]

'heli port [helicopter + 'air port]

'n'ews čast [news + 'broad čast]

'para tropes ['para čhute + troops]

smog [smoke + fog]

štag'flation [stag'nation + in'flation]

'tele čast [television + 'broad čast]

'trave jlogue [travel + 'cata jlogue]

there is rather more radical abbreviation in bi'onic (biological + electronic). Items like bit (‘binary digit’), interpol (‘international police’), mop ed (‘motor pedal-cycle’), telex (‘teleprinter exchange’), are outside the general pattern outlined above, both in the way in which the word-fractions are made up and in the disregard for the prosody of a thematic starting-point.
2.6 Compounds

Compounding is adding one base to another, such that usually the one placed in front in some sense subcategorises the one that follows; *eg*: *blackbird*, *armchair*, *bottle-feed*; but contrast, for example, ‘bahuvrihi’ compounds such as *heavyweight*. English speakers have long shown a strong preference for putting existing words together to create new words. This process is called *compounding*. (Finegan and Besnier, 1989: 107). A compound is a lexical unit consisting of more than one base and functioning both grammatically and semantically as single word. In principle, any number of bases may be involved, but in English, except for a relatively minor class of items (normally abbreviated), compounds usually comprise two bases only, however, internally complex each may be.

The corresponding morphological process is called compounding or affixation (Mel’cuk 2006: 296). Compounding can take place within any of the word classes, but – within the present framework – we shall in effect be dealing only with the productivity of compounds resulting above all in new nouns and, to a lesser extent, adjectives. These may involve the combination of the unchanged base (as in *taxfree*); or the first element may be in its special ‘combining form’ (as in the noun *trouserleg* or the adjective *socioeconomic*); or the second element may have a suffix required by the compound type (as in the noun *theatre-goer* or the adjective *blue-eyed*); or both elements may have a form that is compound-specific (as in the *laundromat*).
Before we consider the individual types, we shall give some attention to two issues: first, the conditions for lexicalization in respect of a particular collocation of bases; second, the formal characteristics of the composition thus made into an institutionalized whole.

2.6.1 Noun Compounds

2.6.1.1 Type ‘Subject and Verb’

[A] 'SUN.RISE: subject + deverbal noun (‘The sun rises’). This is a very productive type. For example:

bee-sting  catcall  daybreak  earthquake
frostbite  headache  heartbeat  landslide
nightfall  rainfall  sound change  toothache

[B] 'RATTLE.SNAKE: verb + subject (‘The snake rattles’). This type is only weakly productive. For example:

crybaby  driftwood  drip coffee  flashlight
glowworm  hangman  playboy  popcorn
stinkweed  tugboat  turntable  watchdog
[C] ‘DANCING GIRL: verbal noun in –ing + subject (‘The girl dances’); very productive. For example:

- cleaning woman
- firing squad
- flying machine
- investigating committee
- wading bird
- washing machine
- working party

Sequences with converse stress pattern (flying'saucer, working'man) show a lesser degree of institutionalization as compounds; contrast 'workman.

### 2.6.1.2 Type ‘Verb and Object’

[A] ‘BLOOD TEST: object + deverbal noun (‘X tests blood’). This is a moderately productive type. Self is a common first constituent. Some compounds denote an activity (eg: handshake), some the result of an activity (eg: bookreview), and some could be either (meat delivery). For example:

- birth-control
- book review
- crime report
- dress-design
- haircut
- handshake
- meat delivery
- office management
- suicide attempt
- self-control
- self-destruction
- tax cut
- word-formation
[B] 'FAULT FINDING: object + verbal noun in –ing ('X finds fault(s'); man-eating). This type is very productive. For example:

- air-conditioning
- book-keeping
- book-reviewing
- brainwashing
- dressmaking
- housekeeping
- letter-writing
- oath-taking
- sightseeing
- story-telling
- town-planning

[C] 'TAX-PAYER: object + agential noun in –er ('X pays tax(es)'). This is a very productive type, and designates concrete (usually human) agents; note however dishwasher, lawn-mower, penholder, record-player. For example:

- cigar smoker
- computer-designer
- crime reporter
- gamekeeper
- hair-splitter
- language teacher
- matchmaker
- radio-operator
- songwriter
- stockholder
- window-cleaner

[D] 'PUNCH CARD: verb + object ('X punches the card'). For example:

- call-girl
- drawbridge
- pin-up girl
- punchball
- push-button
- scarecrow
- treadmill
[E] ‘CHEWING GUM: verbal noun in –ing + object (‘X chews gum’); very productive. For example:

- cooking apple
- drinking-water
- eating apple
- boiling fowl <BrE>
- reading material
- spending money
- roasting joint
- braising steak

2.6.1.3 Type ‘Verb and Adverbial’

[A] ‘SWIMMING POOL: verb noun in –ing + adverbial (consisting of a prepositional phrase; ‘X swims in the pool’). This is a very productive type. Several adverbial relations are involved. For example:

PLACE:
- diving board ['dive from a board']
- drinking cup ['drink out of a cup']
- freezing point ['freeze at a point']
- frying pan <BrE> ['fry in a pan']
- hiding-place ['hide in a place']
- living-room ['live in room']
- typing paper ['type on paper']
waiting room ['wait in a room’]
writing desk ['write at a desk’]

INSTRUMENTAL: adding machine ['add with a machine’]
baking powder ['bake with powder’]
carving knife ['carve with a knife’]
sewing machine ['sew with a machine’]
walking stick ['walk with a stick’]
washing machine ['wash with a machine’]

[B] 'DAY,DREAMING:  adverbial + verbal noun in –ing (‘X dreams during the day’). This is a moderately productive type ( ocean going). For example:

PLACE: churchgoing ['going to church’]
horse riding ['ride on a horse’]
tight-rope walking ['walk on a tight rope’]
sun-bathing ['bathe in the sun’]

TIME: sleepwalking ['walk in one’s sleep’]

INSTRUMENTAL: fly-fishing ['fish with a fly’]
handwriting  ['write by hand']

OTHER:  shadow-boxing  ['box against a shadow']

[C] ‘BABY SITTER:  adverbial + agential noun in –er (‘X’ sits with the baby’). This is a moderately productive type. For example:

PLACE :  backswimmer  ['swim on the back']

city-dweller  ['dwell in the city']

factory-worker  ['work in a factory']

gate-crasher  ['crashes through a gate', *i.e* ‘uninvited guest’]

housebreaker  ['break into a house']

playgoer  ['go to a play']

tight-rope walker  ['walk on a tight rope']

sun-bather  ['bathe in the sun']

theatre-goer  ['go to the theatre']

TIME :  daydreamer  ['dream during the day']
[D] ‘HOME, WORK: adverbial + deverbal noun (‘X works at home’). This is a moderately productive type. For example:

PLACE :  
  boat-ride  ['ride in a boat']
  field-work  ['work in the field']
  table talk  ['talk at a table']
  moon walk  ['walk on the moon']

TIME :    
  daydream  ['dream during the day']
  night flight  ['fly during the night']

INSTRUMENTAL:  
  gunfight  ['fight with a gun']

OTHER :  
  smallpox vaccination  ['vaccinate against smallpox']
  tax-exemption  ['exempt from tax']
  telephone call  ['message by the telephone']

So also self-determination.

[E] 'SEARCH LIGHT: verb + adverbial (‘X searches with a light’). Several adverbial relations are involved. For example:

PLACE :    
  dance hall  ['dance in a hall']
Some further examples: cookbook <esp AmE>, fry-pan <AmE>, restroom <esp AmE>, swimsuit <esp AmE>, washroom <esp AmE>. The labels indicate the popularity of this pattern in AmE; BrE there is a corresponding preference for the pattern.

2.6.1.4 Verbless Compounds: Type ‘Subject and Object’

[A] 'WIND MILL: noun1 + noun2 (noun1 [powers/operates] noun2’, ‘the wind powers the mill’). For example:

- air-brake
- air rifle
- cable car
- coar fire (‘. in BrE)
- motorcycle
- steam engine
- gas cooker (‘. in BrE)
- hydrogen bomb (‘ in AmE)

[B] 'TOY FACTORY: noun1 + noun2 (‘noun2 [produces/yields] noun1’, ‘the factory produces toys’). For example:

- honey-fee
- oil well
- power plant
- silkworm
tear gas textile mill water pistol gold mine

[C] 'BLOOD STAIN: noun1 + noun2 (‘noun1 [produces/yields] nouns2’, ‘the blood produces stains’). For example:

bloodstain canesugar eiderdown foodpoisoning gaslight

hay fever sawdust tortoise-shell whalebone

[D] 'DOOR KNOB: noun1 + noun2 (‘noun1 [has] noun2’, ‘the door has a knob’). This is a very productive type. Noun1 is inanimate. With animate nouns, we use a noncompound genitive phrase: compare the 'table leg with the boy's 'leg. For example:

arrowhead bedpost bottleneck <metaphorical>

cartwheel piano keys shirt-sleeves

table leg telephone receiver television screen

[E] SE'CURITY OFFICER: noun1 _ noun2 (‘noun2 [controls/works in connection with] noun1’, ‘The officer looks after security’). For example:

chairperson deckhand fireman gasman

motorman <AmE> polive-officer postman
This is a very productive type, with the second constituent always a human agent. Indeed, so commonly has man been thus used (in its unmarked gender role, ‘human adult’) that in some compounds it has a reduced vowel /ɪn/ in postman, draughtsman, fireman, workman, businessman. This item and its gender-free alternative person might in fact be viewed as a suffix. Contrast the unreduced form of man in 'handy man', perhaps because in this case the compound does not refer to a regular occupational role.

### 2.6.1.5 Type ‘Subject and Complement’

[A] 'GIRL FRIEND: noun1 + noun2 (‘noun2 [is] noun1’, ‘the frien is a girl’). Noun1 often refers to a subset of the class denoted by noun2. For example:

- blinker
- drummer boy
- feeder
- bus
- killer shark

- manservant
- oak tree
- pine tree
- tape-measure

Numerous sequences of this oppositional type occur with phrasal prosody: woman 'writer, toy factory ['the factory is a toy’. And the question of ‘partial’ compound.

[B] 'DARK ROOM: adjective + noun (‘noun [is] adjective’, ‘the room is dark’. For example:

- blackboard
- blackbird
- blueprint
- double-talk

- dry dock (or ‘.)
- greyhound
- grey matter (=brain)
- handyman
The initial constituents in *knitwear* and *mincemeat* were originally –ed participle adjectives.

Along with this type should be considered many sequences with phrasal prosody:

- fancy 'dress
- hot 'dog ('., in AmE), ill'omen, ill re'pute
- ill 'wind, risen 'costs

Despite the apparent parallelism of: bad health.

He suffers from \( \left\{ \begin{array}{l}
\text{poor health.} \\
\text{ill health.}
\end{array} \right. \)

compounding is nonetheless suggested in the last by the fact that *ill* is not normally a premodifier in noun-phrase structures, nor are past participles of intransitive verbs (*risen*). Semantically, moreover, some of these examples have a high degree of lexicalization; on *hot dog*.

[C] 'FROG MAN: noun1 + noun2 (‘noun2 [is like] noun1’, ‘the man is like a frog’).

This is a very productive type. For example:

- Butter-bean
- catfish
- dragonfly
- goldfish
Kettledrum  sandwich man  tissue paper

[D] 'SNOW FLAKE: noun1 + noun2 (‘noun2 [is of, consists of] noun1,’ ‘a flake of snow’). For example:

Breadcrumb  breakfast time  coffee time  cough drops

Cowshed  doghouse  facecloth  fire engine

Fish-pond  flowerbed  flypapeer  safety belt

tearoom

2.6.1.6 Combining-Form Compounds

PSYCHO-A'NALYSIS: noun1 (in its ‘combining form’) + noun2 (= ‘noun2 [in respect of] noun1’), ‘the analysis of the psyche’. This is a highly productive type and various relations can be involved. Typically, the first constituent is neo-classical and does not occur as a separate noun base in English, but the model has been widely imitated with common bases, with a vowel (usually -o- but often -i-) as a link between the two parts: cryptography, insecticide, etc. Also the use of combining-form. Among common second constituents are -meter, -graph(y), -gram, -logy, and the formations are especially in the fields of science and learning. In consequence, many are in international currency, adopted or adapted in numerous languages. Some miscellaneous examples:
Also ‘dramaurgy, ‘metalurgy. On pseudo-. With ‘stereo-typed and ‘stereo-phonic, we have adjectives that are more commonly used than the corresponding nouns.

Compounding may involve more than one combining-form; eg nephrolithotomy, neurolymphomatosis.

On the model of neo-classical combining-forms, we have compounds to whose initial base a connecting-‘o- is added; eg: spee’dometer.

There is vacillation between 'kilometre and ki’lometre.

2.6.1.7 ‘Bahuvrihi’ Compounds

All the compounds to be listed in this section are formed on one or other of the patterns already described. Most of them are like ‘dark room, others are like, for example, ‘frog man or 'snow flake ([B], [C], [D]) respectively). The term ‘bahuvrihi’ refers not to their pattern of formation but to the relation they have with their referents. Neither constituent of such a compound refers to the entity named but, with a semantic movement that may be thought of as ‘lateral’, the whole refers
to a separate entity (usually a person) that is claimed to be characterized by the compound, in its literal or figurative meaning. Thus a 'highbrow' means ‘an intellectual’, on the basis of the facetious claim that people of intellectual interest and cultivated tastes are likely to have a lofty expanse of forehead. Similarly 'heartthrob' [A] for its non-bahuvrihi use) is someone who causes the heart to throb in a person of the opposite sex; ie ‘a sexually attractive person’. Many bahuvrihi compounds are (like highbrow) somewhat disparaging in tone and are used chiefly in informal style. Some further examples:

- birdbrain
- blockhead
- bluebell
- butterfingers

- egghead
- fathead
- featherbrain
- featherweight

- hardback
- hardtop
- heavyweight
- hunchback

- loudmouth
- paleface
- paperback
- pot-belly

- redcap
- scarecrow
- shellback

also hardcap ‘construction worker’ <esp AmE>.

2.6.2 Adjective Compounds

2.6.2.1 Type ‘Verb and Object’
'MAN-EATING: object + -ing participle (‘X eats men’; also faultfinding). This is a very productive type. Self is a frequent first constituent but takes secondary stress. For example:

breathtaking fact-finding heart-breaking life-giving
record-breaking self-defeating self-justifying

in mouth-watering, there is causative relatio: ‘X makes the mouth water’. In informal AmE we have such a compound used to premodify an adjective in finger-licking good.

2.6.2.2 Type ‘Verb and Adverbial’

[A] 'OCEAN-GOING: adverbial + -ing participle (‘X goes across oceans’, daydreaming). For example:

fist-fighting law-abiding lip-sucking

[B] 'HEART FELT: adverbial + -ed participle (‘X feels it in the heart’). The type is particularly productive when the noun has agential meaning and consists of self-styled, self-appointed, self-employed, self-taught (but a self-addressed envelope is one that is addressed to oneself.) examples are:

airborne cost-led custom-built handmade
home-brewed home-made language-retarded suntanned
typewritten  hunder-struck  town-bred  weather-beaten

also speech (-) and language (-) impaired.

[C] HARD'-WORKING: adverb/adjective + -ed participle (‘X works hard’, ‘X looks good’). For example:

easy-going  everlasting  far-reaching  fresh-baked

high-sounding  sweet-smelling  well-meaning

[D] QUICK'FROZEN: adjective/adverb + -ed participle (‘X was frozen quickly’). For example:

dry-cleaned  far-fetched  fresh-baked

long-awaited  'new-laid  true-born  well-meant  'wide spread

2.6.2.3 Type ‘Verbless’

[A] ‘FOOT SORE: noun-based adverbial of respect + adjective (‘sore in respect to (one’s) feet. This is a very productive type, especially with certain adjectives that have prepositional complementation, such as free, (from), proof (against), weary (of). For example:

airsick  airtight  camera-ready  carsick

dustproof  duty-free  fireproof  foolproof
Homesick oven-ready tax-free war-weary watertight

With some there is phrasal stress, as in class-conscious, cost-effective, labour-intensive and (involving a combining form), stereophonic.

[B] GRASS-GREEN: noun (denoting basis of comparison) + adjective (‘as green as grass’). This is a fairly productive type and the items formed can usually be used also as nouns: stress is variable, but phrasal stress is usual. Some examples:

age-old ash-blonde bottle-green brick red
jet black midnight blue rock-hard sea-green

[C] GREY-GREEN: adjective + adjective in a coordinating relation but where the phrasal stress pattern implies that the first is relatively thematic, the second focal and hence semantically dominant. ‘The colour is basically green but with a greyish tint’. Informally, this can be reflected in the first adjective having the suffix –y or –ish, as in reddish-brown, greeny-grey. Coordinate compounds are, however, widely used with reference to international relations where (despite the phrasal stress) parity is theoretically fundamental: ‘A Japanese-American trade pact is about to be signed’. In many coordinate compounds the first element assumes a combining form. Some examples of various types:

Anglo-polish auditory-visual aural-oral
2.7 Reduplicatives

In word-formation, reduplication is repetition of morphemes indicates a strengthening of the expression (Bussmann, 1998:989). Some compounds have two or more constituents which are either identical or only slightly different, eg: goody-goody (chiefly noun, ‘a self-consciously virtuous person’, informal). The difference between the two constituents may be in initial consonants, as in walkie-talkie, or in the medial vowels, eg: criss-cross. Most of the reduplicatives are highly informal or familiar, and many belong to the sphere of child-parent talk, eg: din-din [‘dinner’]. The most common uses of reduplicatives (sometimes called ‘jingles’) are:

[i] to imitate sounds, eg: rat-a-tat [knocking on door], tick-tock [of clock], ha ha [of laughter], bow-wow [of dog];

[ii] to suggest alternating movement, eg: seesaw, flip-flop, ping-pong;

[iii] to disparage by suggesting instability, nonsense, insincerity, vacillation, etc:

higgledy-piggledy, hocus-pocus, wishy-washy, dilly-dally, shilly-shally;
2.8 The Identification of Morphemes (Structuralist Approach)

There are six principles which we may apply in isolating and identifying morphemes (Nida 1967: 7). None of the principles is complete in itself; each is supplementary to the basic definition and must be considered so. If each were interpreted as being exclusive of all situations noted in the principle, the statements would be contradictory.

2.8.1 Principle 1

Forms which have a common semantic distinctiveness and an identical phonemic form in all their occurrences constitute a single morpheme.

2.8.2 Principle 2

Forms which have a common semantic distinctiveness but which differ in phonemic form (i.e. the phonemes or order of the phonemes) may constitute a morpheme provided the distribution of formal differences is phonologically definable.

2.8.3 Principle 3

Forms which have a semantic distinctiveness but which differ in phonemic form in such a way that their distribution cannot phonologically

defined constitute a single morpheme if the forms are in complementary
distribution in accordance with the following restrictions:

1. Occurrence in the same structural series has precedence over
occurrence in structural series in the determination of morphemic
status.

2. Complementary distribution in different structural series constitutes a
basis for combining possible allomorphs into one morpheme only if
there also occurs in these different structural series a morpheme which
belongs to the same distribution class as the allomorphic series in
question and which itself has only one allomorph or phonologically
defined allomorphs.

3. Immediate tactical environments have precedence over nonimmediate
tactical environments in determining morphemic status.

4. Contrast in identical distributional environments may be treated as
submorphemic if the difference in meaning of the allomorphs reflects
the distribution of these forms.

2.8.4 Principle 4

An overt formal differences in a structural series constitutes a
morpheme if in any member of such a series, the overt formal differences
and a zero structural difference are the only significance features for distinguishing a minimal unit of phonetic-semantic distinctiveness.

2.8.5 Principle 5

Homophonic forms are identifiable as the same or different morphemes on the basis of the following conditions:

1. Homophonic forms with distinctly different meanings constitute different morphemes.

2. Homophonic forms with related meanings constitute a single morpheme if the meaning classes are paralleled by distributional differences, but they constitute multiple morphemes if the meaning classes are not paralleled by distributional differences.

2.8.6 Principle 6

A morpheme is isolatable if it occurs under the following conditions:

1. In isolation.

2. In multiple combinations in at least one of which the unit with which it is combined occurs in isolation or in other combinations.
3. In a single combination provided the element with which it is combined occurs in isolation or in other combinations with nonunique constitutes.

In identification of the morphemes in Mandarin in Medan, in this thesis, the writer picks out the structuralist approach, i.e., Eugene A. Nida as his basic theory. In addition to this approach, the writer will apply the all above-mentioned principles in his research study in chapter IV that include the types of suffixation, compounding, and reduplication in Mandarin in Medan.

2.9 Previous Related Research

Nurjafa, a graduate from the faculty of letters, from Methodist University of Indonesia in 1998 wrote his Skripsi entitled ‘Consonant Sounds in Hokkien Dialect in Medan’. In his Skripsi, he looked into both the consonants in details and the tones in Hokkien dialect in Medan.

This S1Skripsi aims at finding out further about the phonological aspects of consonantal sounds and the tones in Medan Hokkien dialect related to the tones in Medan Mandarin Chinese as both of them have the same numbers of tones, i.e., four tones. The tones are: high level ( - ), rising ( ’ ), low fall-rise ( ˇ ), and falling ( ` ).

Nini, a graduate from the faculty of letters, from Methodist University of Indonesia in 1994 wrote her Skripsi entitled ‘Parts of Speech in Tiou Ciu Dialect’. In
her Skripsi, she found out how parts of speech play an important role, specifically in Tiou Ciu dialect.

Parts of speech in Tiou Ciu dialect are divided into eight classes: Noun, Pronoun, Verb, Adjective, Adverb, Preposition, Conjunction, and Interjection.

After describing the parts of speech mentioned above in the Tio Ciu dialect, it is very obvious that there are some differences and similarities compared to another language, specially Medan Mandarin Chinese as in the structuralist approach, word classes are divided into two kinds of words—content words (open class or lexical words) and function words (closed class or grammatical words). Nouns, Verbs, Adjectives, and Adverbs are the content words, yet Conjunctions, Prepositions, Articles, Pronouns, and Auxiliary verbs are function words. All of the parts of speech or modern linguistics classified five word-classes: Nouns, Verbs, Adjectives, and Function Words are needed to form morphological processes in Medan Mandarin Chinese. It is stated that every human language is made up of these basic classifications.