Ministry of Higher Education and Scientific Research

Mouloud MAMMERI University of Tizi-Ouzou

Faculty of Letters and Languages

Department of English

Second-year Undergraduate Students

Subject

A Course in Linguistics for Second-year Undergraduate Students of English

Semesters 3 and 4

Designed by:

Dr. Katia BERBAR

Academic Year: 2022-2023

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Introduction

Linguistics is a scientific discipline that studies human language's properties, functioning, structure, and evolution. It is an area of study that encompasses various sub-fields. This course introduces second-year students to some of the sub-branches of linguistics.

General Course Information

Institution: Mouloud MAMMERI University of Tizi-Ouzou

Faculty: Letters and Languages

Department: English Language and Literature

Course name: Linguistics

Target audience: Second-year undergraduate students of English

Teaching unit: Fundamental

Coefficient: 1

Credits: 2

Semesters: 3 and 4

Number of sessions per week: One session of one hour and a half

Course delivery modality: Lecture

Pre-requisites (if any): Students should have already taken introductory courses in linguistics and phonetics during their first year at the university.

Information about the Instructor

Instructor's name and position: Dr. Katia BERBAR, Senior lecturer

Contact: katia.berbar@ummto.dz

Reply via email: any questions related to the course should be sent via the group email so that all students can benefit from the answer. I typically respond to emails within a 24-48-hour time period.

Course Contents

The course is made up of five chapters to be covered in semesters three and four. Each chapter provides an overview of the key concepts related to each branch of linguistics. The assimilation of these key concepts is reinforced by examples and learning activities. These chapters are as follows:

Phonology: The Sound Systems of Language

The first chapter introduces Phonology, a branch of linguistics that studies the organization of sounds in a language. This chapter presents the differences between phonology and phonetics which is another branch of linguistics interested in the articulatory, acoustic and perceptive aspects of sounds. In addition, it discusses the differences between phonemes, phones and allophones, and shows how sounds (phonemes) function contrastively by introducing the concepts of *minimal pair* and *minimal set*. Furthermore, it introduces a subdomain of phonology, known as phonotactics, and defines the structure of a syllable and onset consonant cluster.

Word Formation: The Processes of Lexical Expansion

The second chapter deals with word formation. Word formation refers to how new words are brought into existence. The chapter presents students with different word-building methods. There are different processes/methods used to create new words and expand the English lexicon such as compounding, borrowing, conversion, and derivation.

Morphology: The Internal Structure of Words

The third chapter introduces students to another branch of linguistics, known as Morphology. Morphology is the study of the forms and structure of words. This chapter explains the notion of morphology and distinguishes between three key concepts, namely morpheme, morph and allomorph. In addition, it classifies morphemes into different categories and introduces students to morphological analysis.

Syntax: The Analysis of Sentence Structure

Syntax is a branch of linguistics that studies sentence structure. It deals with the way words combine to form phrases and sentences. It is also interested in the rules governing the construction of phrases and sentences. This chapter is an introduction to English syntax. It presents students with the basic concepts in syntactic analysis (such as constituents and tree diagrams) and the different approaches to sentence structure analysis. It mainly introduces students to Bloomfield's syntactic theory of Immediate Constituent Analysis and Chomsky's theory of Transformational Generative Grammar.

Semantics: The Study of Meaning

Semantics is a branch of linguistics that is interested in the study of meaning. It examines the meaning of words, phrases and sentences. It investigates the meaning and connection between linguistic expressions. This fifth and last chapter introduces students to the basic concepts of semantic analysis. Topics of focal interest include types of meaning, semantic features and lexical relations.

Expected Learning Outcomes

By the end of this course, students are expected to be able to:

- understand the purpose of phonology, word formation, morphology, syntax, and semantics;
- demonstrate their mastery of the main concepts and terminologies related to each branch of linguistics;
- identify the levels of language analysis: the level of sound, the level of word, the level of sentence, and the level of meaning;
- explain and identify the different types of morphological processes; and
- perform phonemic, morphological, syntactic, and semantic analysis.

Recommended Reading

To deepen their understanding and knowledge, students are advised to consult the following sources:

Carstairs-McCarthy, A. (2002). *An introduction to English morphology: Words and their structure*. Edinburgh University Press Ltd.

Chomsky, N. (1957). *Syntactic structures*. The Hague: Mouton.

Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, Massachusetts: The MIT Press.

Djeribiai, A. (2016). Chomsky's generative transformational grammar and its implications on language teaching. *Ex Professo, 1*(1), 99-110. Retrieved from https://www.asjp.cerist.dz/en/downArticle/484/1/1/79899.

Fasold, R., & Connor-Linton, J. (2006). *An introduction to language and linguistics*. Cambridge University Press. Available at https://repository.bbg.ac.id/bitstream/531/1/An_Introduction_to_Language_and_Linguistics.pdf

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Hayes, B. (2009). *Introductory phonology*. United Kingdom: Blackwell Publishing.

Jackson, H., & Zé Amvela, E. (2007). *Words, meanings and vocabulary: An introduction to modern English lexicology* (2nd ed.). London, England and New York: Continuum International Publishing Group.

Kreidler, C. W. (1998). *Introducing English semantics*. London and New York: Routledge.

Nagy, I. K. (2017). *An introduction to lexical semantics for students of translation studies*. Cluj-Napoca: Scientia.

Odden, D. (2005). *Introducing phonology*. Cambridge: Cambridge University Press.

Roach, P. (2009). *English phonetics and phonology: A practical course* (4th ed). Cambridge: Cambridge University Press.

Varga, L. (2010). *Introduction to English linguistics*. Eötvös Loránd University: Budapest. Retrieved from http://seas3.elte.hu/coursematerial/VargaLaszlo/ICEL-2010.pdf

Yule, G. (2010). *The study of language* (4th ed). Cambridge: Cambridge University Press.

Yule, G. (2017). *The study of language* (6th ed). Cambridge: Cambridge University Press.

Zapata, A. (2007). *Unit 1: Types of words and word- formation processes in English*. University of De Los Andes. Retrieved from http://webdelprofesor.ula.ve/humanidades/azapata/materias/english_4/unit_1_types_of_words_and_word_formation_processes.pdf

Course Policies

Attendance Policies

- Students' presence is not compulsory or controlled but it is recommended to understand the key concepts related to the course and receive handouts.
- Students are expected to arrive on time. They should not walk in and out of the amphitheater without permission. Walking in and out is rude and disruptive.
- Students should turn off their cell phones and put them away when class begins. Talking and texting not only distract students themselves but also disrupt the flow of the course.

Evaluation and Grading Policies

- Summative evaluation will be used. That is to say, at the end of each term/semester, students' learning outcomes and academic achievement will be evaluated through a

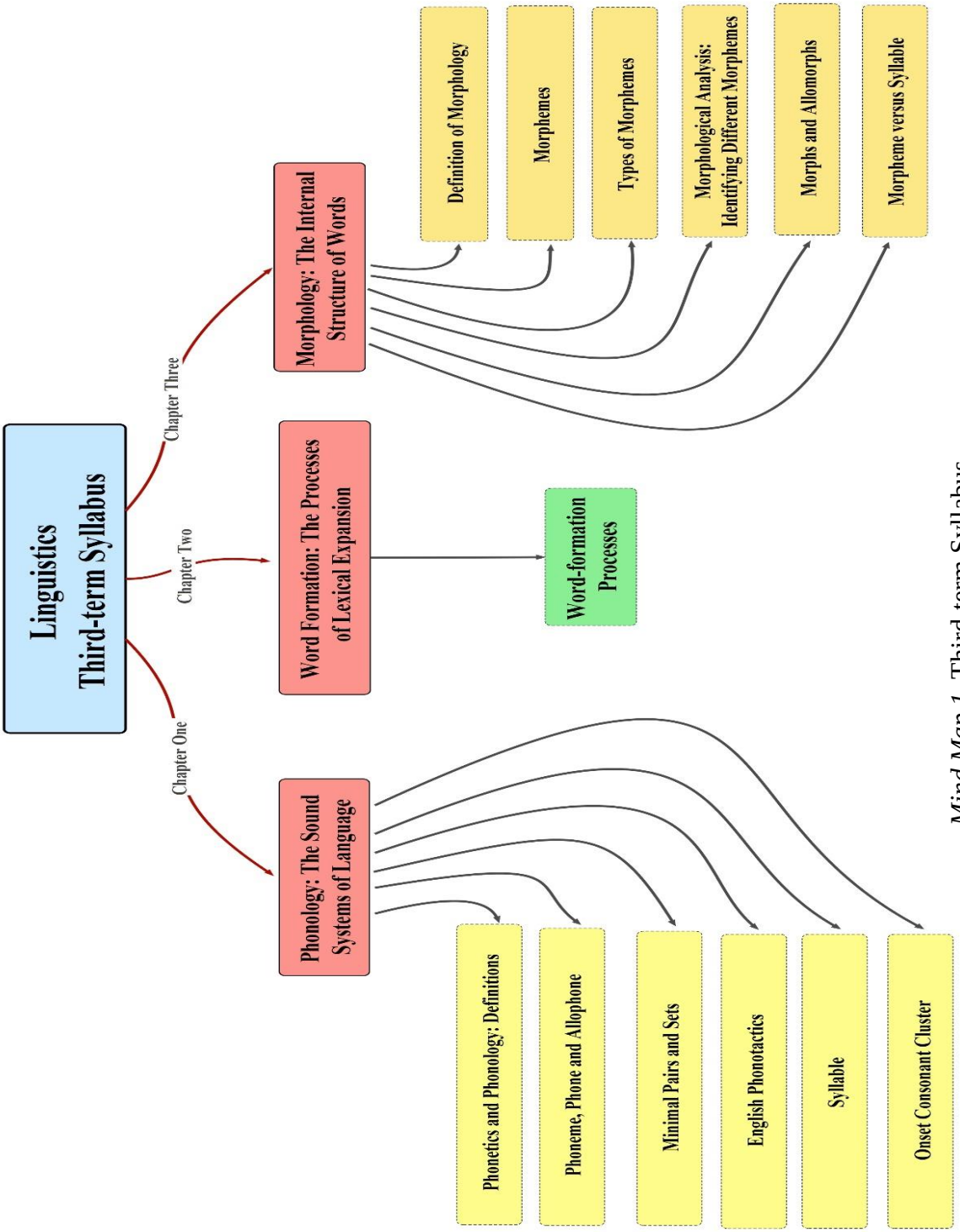
written-based examination scored out of 20 points (See appendices for examination models). The score obtained in the exam will constitute the final grade of the course.

- The exam will consist of closed and open questions about the items discussed in class and will assess students' knowledge and skills.
- Cheating, plagiarism, and misconduct during exams will result in a zero grade and further disciplinary actions may be taken.

Absences from Exams

- If a student is absent from the exam without any excuse, his/her grade will be zero.
- Students who provide accepted excuses within 72 hours after the exam will take a make-up exam.

Third-term Syllabus



Mind Map 1. Third-term Syllabus

Chapter One

Phonology: The Sound Systems of Language

Objectives

This chapter introduces phonology, the study of the sound system of language. After completing this chapter, students will be able to:

- distinguish between phonetics and phonology;
- distinguish between phoneme, phone and allophone and illustrate with personal examples;
- show how phonemes function contrastively by applying the rules for creating minimal pairs/sets;
- define phonotactics;
- divide words into syllables and describe the structure of each syllable; and
- identify the possible combinations of consonants in the onset part of the syllable.

Introduction

Linguistics is the scientific study of human language. The field of linguistics comprises several sub-fields. The first chapter introduces the part of linguistics that deals with the sound patterns of language, namely *phonology*. It comprises several sub-headings and learning activities. It first defines phonology and differentiates it from another linguistic field, which is *phonetics*. Then, it specifies the difference between the core concepts of phonology, which are *phoneme, phone* and *allophone*. Afterwards, it shows how phonemes function contrastively by introducing the terms *minimal pair* and *minimal set*. Finally, it presents one of the sub-fields of phonology, namely *phonotactics*, states the syllable structure, components and types, and specifies the initial consonant sequences.

I.1. Phonetics and Phonology: Definitions

Phonetics and phonology are sub-disciplines of linguistics. They are similar in the sense that both fields deal with sounds in human language. However, phonetics is the part of linguistics that deals with actual physical sounds, whereas phonology is the branch of linguistics that focuses on the abstract or mental aspect of sounds. To be more specific, phonetics studies how speech sounds are produced, transmitted and perceived as physical entities (Hayes, 2009). For example, the labiodental consonant [f] is produced with the lower lip and the upper teeth and by forcing air out of the mouth. Phonetics also differentiates between the sound [l] in the words *dull* and *leaf*. More precisely, the sound [l] in the word *dull* is called dark [ɫ], whereas in the word *leaf*, it is clear [l]. Phonology, on the other hand, is concerned with the study of the properties of speech sounds and how they are organized and combined in a language. According to Hayes (2009), phonology deals "with the largely unconscious rules for sound patterning that are found in the mind/brain of a person who speaks a particular language" (p. 19). In phonology, three categories of sounds are distinguished: phoneme, phone and allophone.

I.2. Phoneme, Phone and Allophone

Phoneme, phone and allophone are terms used to refer to speech sounds. The sounds of a language are meaningless, but when combined they form meaningful words. Let us define each term separately and give examples.

I.2.1. Phoneme

A phoneme is the smallest phonological unit located in the mind that performs a distinctive function (Betti, 2002). In other words, a phoneme is the mental/abstract representation of a sound that distinguishes one word from another. A phoneme is said to be the smallest contrastive/distinctive unit in the sense that substituting one phoneme for another phoneme results in a difference in meaning. Indeed, according to Betti (2002), if the replacement of a sound with another leads to a change in meaning, then this sound is a phoneme.

Examples

- The sounds /b/ and /v/ are two separate phonemes because they distinguish words such as *bane* /**b**eɪn/ and *vein* /**v**eɪn/, *beer* /**b**ɪə/ and *veer* /**v**ɪə/, *boat* /**b**əʊt/ and *vote* /**v**əʊt/.
- The sounds /p/, /b/, /l/ and /s/ function contrastively because they make the words peak /**p**iːk/, beak /**b**iːk/, leak /**l**iːk/, and seek /**s**iːk/ meaningfully different.

I.2.2. Phone

When someone actually produces a sound, he/she produces a phone. A phone is a physical segment. It is the concrete realization of a sound in a language. Put simply, a phone is a sound that is physically produced by the mouth and that we hear with our ears.

Examples

Here are some examples of phones: [p], [t], [k], [b], [d], [e], [iː]

I.2.3. Allophone

A set of phones that are all variants of the same phoneme are known as allophones (Yule, 2017). An allophone (from the Greek *allos* meaning *other* and *phone* meaning *sound*) is another way to pronounce a phoneme. That is to say, allophones are different realizations/pronunciations of the same phoneme. Unlike phonemes, allophones do not change the meaning of words. To be more specific, substituting one allophone for another allophone results in the same meaning but different pronunciations (Betti, 2002).

Example

- Peak [p^h iːk]
- Speak [spiːk]

[p^h] and [p] are allophones of the phoneme /p/. The two sounds are phonetically different because in the word *peak* the phoneme /p/ is pronounced with a burst of air known as *aspiration*. If you put your hand in front of your mouth when you pronounce the word *peak*, you should be able to feel this puff of air accompanying the [p] sound. However, in the word *speak*, the sound

[p] is unaspirated meaning that it is not produced with this puff of air. In English, [p^h] and [p] are not separate phonemes but allophones of the phoneme /p/ because they do not produce a contrast in meaning. Similarly, the phonemes /t/ and /k/ have an aspirated allophone [t^h] and [k^h] and an unaspirated allophone [t] and [k]. The unaspirated allophones [p], [t] and [k] only occur after /s/ as in *spy*, *star* and *sky*.

Notes

1. Slashes //are used to enclose abstract units (phonemes).

2. Square brackets [] are used to enclose phonetically or physically produced segments (phones and allophones).

Table 1.1 compares between phoneme, phone and allophone.

Table 1.1

Differences between Phoneme, Phone and Allophone

Phoneme	**Phone**	**Allophone**
Abstract/mental unit	Physical/concrete unit	Concrete sound unit
In the mind (not pronounced)	In the mouth (actual speech)	Phonetic variant of a phoneme
enclosed in slashes //	enclosed in square brackets [ ]	Enclosed in square brackets [ ]
Contrastive unit	Non-contrastive unit	Brings no change in meaning

I.3. Minimal Pairs and Sets

Minimal pairs show that two sounds in a language are contrastive/distinctive (Hayes, 2009). For example, the sounds [s] and [b] contrast in the pair of words *seen* /**s**i:n/ and *been* /**b**i:n/. Since the pair of words differ only in one sound in the same location (initial position), we can say that the sounds [s] and [b] are two distinct phonemes. The two sounds are distinctive because they produce the meaning difference between the words *seen* and *been*. When we have a pair of words like *seen* and *been* that vary in one single sound in the same position (initial,

medial or final), it is called a minimal pair. Indeed, Fasold and Connor-Linton (2006) state that "Pairs of words that differ in only a single sound in the same position within the word are called minimal pairs" (p. 38). Table 1.2 provides some examples of minimal pairs.

Table 1.2

Examples of Minimal Pairs

Initial Position	**Medial Position**	**Final Position**
Bill /**b**ɪl/ ≠ Dill /**d**ɪl/	Book /b**ʊ**k/ ≠ Beak /b**i**:k/	Kiss /kɪ**s**/ ≠ Kill /kɪ**l**/
Zeal /**z**i:l/ ≠ Seal /**s**i:l/	Seen /s**i**:n/ ≠ Soon /s**u**:n/	Leaf /li:**f**/ ≠ Leave /li:**v**/
Call /**k**ɔ:l/ ≠ Tall /**t**ɔ:l/	Beat /b**i**:t/ ≠ Boot /b**u**:t/	Meat /mi:**t**/ ≠ Mean /mi:**n**/

According to Hayes (2009), "The concept of minimal pair can be extended to cover larger sets." (p. 20). This is known as *minimal sets*. When replacing one phoneme with another in the same position within a group of words results in a change in meaning, then these words are said to form a minimal set. In other words, a minimal set refers to a group of words that are identical except for one phoneme located in the same position in every word. Below are some examples of minimal sets:

- Bet /**b**et/, set /**s**et/, pet, /**p**et/, get /**g**et/, net /**n**et/ (Initial position)
- Beat /b**i**:t/, Boot /b**u**:t/, boat /b**əʊ**t/, but /b**ʌ**t/, bet /b**e**t/, bat /b**æ**t/ (Medial position)
- Safe /se**ɪf**/, sake /se**ɪk**/, sale /se**ɪl**/, sage /se**ɪdʒ**/, same /se**ɪm**/, sane /se**ɪn**/ (Final position)

Note

For words to be considered as minimal pairs or sets, they should have the following characteristics:

1. They should possess the same number of sounds.

2. They must be completely identical except for one sound.

3. The sound that is different must be in the same position in every word.

4. The pair or set of words must have different meanings.

I.4. English Phonotactics

In English, certain combinations of sounds are allowed while other combinations are not. Indeed, Fasold and Connor-Linton (2006) point out that "In English, for example, no word begins with the sequence [tl]. There are words like train and plane, but no tlane." (p. 41). English, like any other language, imposes strict restrictions on what sounds can appear, in what order, and in what position. For example, in English, the combination [bl] is allowed as we have words like *blue*, *blow* and *bling*. However, no word in English begins with the sequence [bw]. The part of phonology that studies the way in which sounds are allowed to combine is called Phonotactics. Phonotactics is a branch of phonology that studies the possible combinations of phonemes in a language (Roach, 2009). In other words, phonotactics is about the rules and restrictions for what combinations of phonemes are permissible in a given language. These rules/restrictions, which vary from one language to another, are known as *phonotactic constraints*. Fasold and Connor-Linton (2006) state that "Languages have phonotactic constraints – restrictions on the types of sounds that are allowed to occur next to each other or in particular positions in the word" (p. 41). This includes the rules that limit the number of segments in a syllable and the permissible arrangement of sounds in initial and final consonant clusters.

I.5. Syllable

I.5.1. Definition of Syllable

According to Yule (2017), "A syllable must contain a vowel or vowel-like sound, including diphthongs." (p. 145). That is to say, a syllable is a unit of speech that contains a single vowel sound plus consonant combination(s). From the definition, it can be deduced that the number of vowels defines the number of syllables in a word.

I.5.2. Syllable Structure

A syllable can be divided into two main parts: the *onset* and the *rhyme*. The onset comprises one or more consonants at the beginning of a syllable (Hayes, 2009). The rhyme is further divided into the *nucleus* and the *coda*. The nucleus, also called the *peak*, is the core of a syllable and consists of a vowel sound whereas the coda is a consonant or a group of consonants that occur at the end of the syllable after the nucleus (Hayes, 2009). Consistent with Hayes (2009), "It is obligatory for a syllable to have a nucleus, very common for a syllable to lack a coda, and less common for it to lack an onset." (p. 251). That is to say, the only compulsory part of a syllable is the nucleus whereas the onset and the coda are optional constituents. When present, the onset and the coda contain one or more consonant sounds. Figure 1.1 illustrates the way a syllable is structured in English.

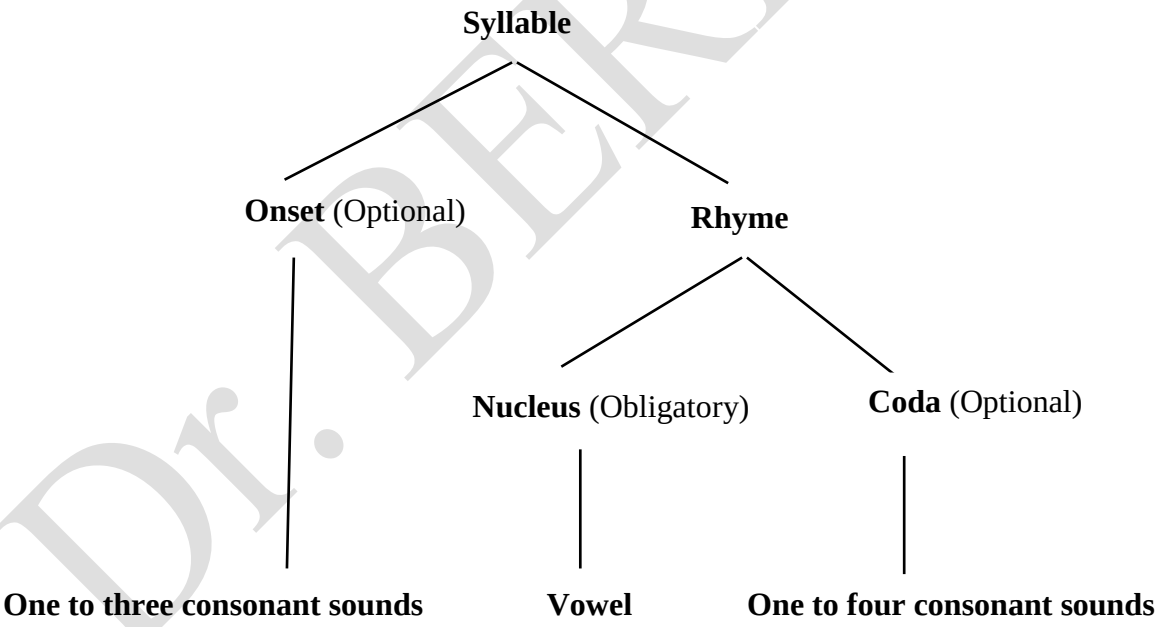


Figure 1.1. Structure of an English Syllable

For example, the word *napkin* /næpkɪn/ contains two syllables /næp/ and /kɪn/. The first syllable consists of the onset /n/, the nucleus /æ/ and the coda /p/. /æ/ and /p/ represent the rhyme part of the syllable. The syllable structure is (CVC). The structure of each syllable is shown in Figure 1.2.

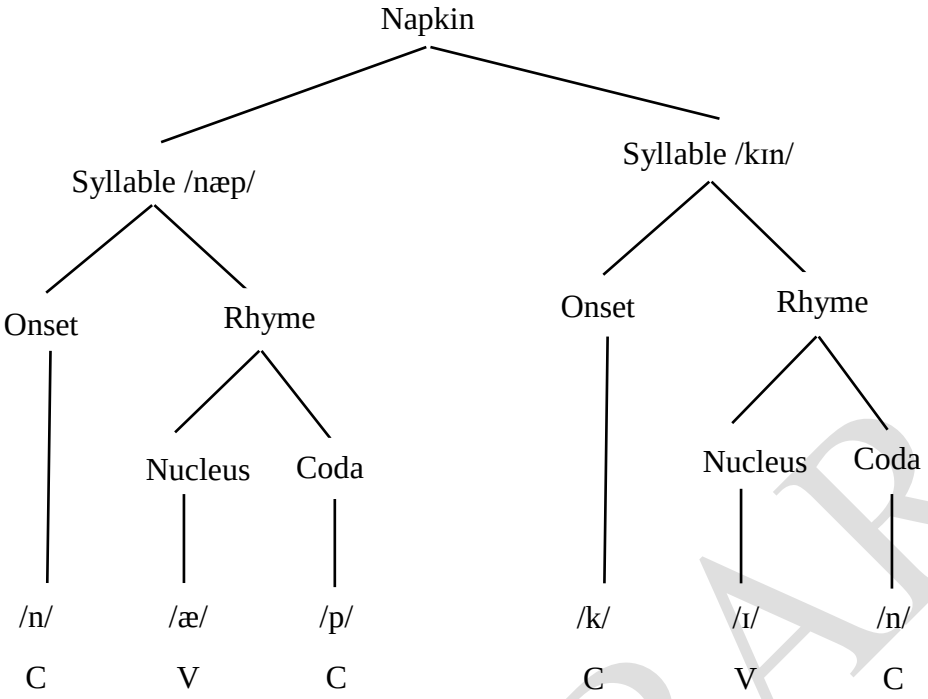


Figure 1.2. The Syllable Structure of the Word "Napkin"

It has to be noted that only sounds are coded with C or V and not letters.

I.5.3. Types of Syllables

Depending on their ending, syllables can be open or closed. Open syllables end with the nucleus meaning that they do not have a coda. For example, the words *go* /gə**ʊ**/, *flu* /fl**u**ː/ and *she* /ʃ**i**ː/ have an onset and a nucleus but no coda. Closed syllables, on the other hand, are syllables that end with a consonant sound known as the coda, for example, *wish* /wɪ**ʃ**/ and *eat* /iː**t**/. Table 1.3 highlights the structures of open syllables and offers some examples.

Table 1.3

Structures and Examples of Open Syllables

Word	**Transcription**	**Syllable Structure**
I / eye	/aɪ/	V
Hi	/haɪ/	CV
Sky	/skaɪ/	CCV
Spray	/spreɪ/	CCCV

Table 1.4 highlights the structures of closed syllables and offers some examples.

Table 1.4

Structures and Examples of Closed Syllables

Word	**Transcription**	**Syllable Structure**
At	/æt/	VC
East	/iːst/	VCC
Ants	/ænts/	VCCC
Note	/nəʊt/	CVC
Dust	/dʌst/	CVCC
Sinks	/sɪŋks/	CVCCC
Sixths	/sɪksθs/	CVCCCC
Fraud	/frɔːd/	CCVC
Frost	/frɒst/	CCVCC
Crafts	/krɑːfts/	CCVCCC
Prompts	/prɒmpts/	CCVCCCC
Spread	/spred/	CCCVC
Sprint	/sprɪnt/	CCCVCC
Sprints	/sprɪnts/	CCCVCCC

Note. C = Consonant, V = Vowel

I.6. Onset Consonant Cluster

As you can see in the examples presented above, both the onset and the coda can comprise more than one consonant. When two or more consonants are combined together with no vowel sound between them, they form a *consonant cluster* (Roach, 2009; Yule, 2017). As expected, there are restrictions on which consonants are allowed to combine to form the onset and the coda. Yule (2017) indicates that "There are many CC onset combinations permitted in English

phonotactics, as in black, bread, trick, twin, flat and throw." (p. 146). The first consonant is called the initial consonant and the second the post-initial consonant. Table 1.5 presents some of the allowed initial CC clusters in English.

Table 1.5

Initial CC Cluster

Cluster	**Word**	**Transcription**	**Cluster**	**Word**	**Transcription**
/bl/	Blend	/blend/	/kr/	Cry	/kraɪ/
/br/	Bread	/bred/	/sk/	Sky	/skaɪ/
/dr/	Dry	/draɪ/	/sl/	Sleep	/sliːp/
/dw/	Dwell	/dwel/	/sm/	Smile	/smaɪl/
/fl/	Flu	/fluː/	/sn/	Sniff	/snɪf/
/fr/	Fry	/fraɪ/	/sp/	Spy	/spaɪ/
/gl/	Glue	/gluː/	/st/	Steal	/stiːl/
/gr/	Gray	/greɪ/	/sw/	Sway	/sweɪ/
/pl/	Ply	/plaɪ/	/tr/	Try	/traɪ/
/pr/	Proud	/praʊd/	/tw/	Twin	/twɪn/
/kl/	Claim	/kleɪm/	/θr/	Throw	/θrəʊ/

The maximum number of consonants in the onset is three. According to Yule (2017), "When we study the phonotactics of these larger onset consonant clusters, we can find a fairly regular pattern" (p. 146). Yule further explains that an initial CCC cluster must always start with /s/ as the first consonant followed by /p, t, k/ as the second consonant and /l, r, w/ as the third consonant sounds. The first consonant is called the pre-initial consonant, the second is the initial consonant and the third is the post-initial consonant. Table 1.6 provides some examples of initial CCC clusters.

Table 1.6

Initial CCC Cluster

Cluster	Word	Transcription
/spl/	Splash	/splæʃ/
/spr/	Spray	/spreɪ/
/spj/	Spume	/spjuːm/
/str/	Strain	/streɪn/
/stj/	Stew	/stjuː/
/skr/	Screen	/skriːn/
/skw/	Squeeze	/skwiːz/
/skj/	Skew	/skjuː/

Conclusion

Phonology is one of the main fields of linguistics that differs from the closely related discipline of phonetics. Its basic unit is the phoneme which is a contrastive unit that creates differences in meaning. A contrast in one phoneme in the same position results in the creation of minimal pairs and sets. It has a sub-field, known as phonotactics, that is interested in the rules governing the syllable structure and consonant clusters in a language.

References

Betti, M. J. (2002). *An introduction to English phonetics and phonology*. University of Thi-Qar : Al-Hadir.

Fasold, R., & Connor-Linton, J. (Eds.) (2006). *An introduction to language and linguistics*. Cambridge: Cambridge University Press.

Hayes, B. (2009). *Introductory phonology*. United Kingdom: Blackwell Publishing.

Roach, P. (2009). *English phonetics and phonology: A practical course* (4th ed). Cambridge: Cambridge University Press.

Yule, G. (2017). *The study of language* (6th ed). Cambridge: Cambridge University Press.

Further Reading

Odden, D. (2005). *Introducing phonology*. Cambridge: Cambridge University Press.

Glossary of Terms

Aspiration: a puff of air that accompanies the release of some consonants like [p], [t], and [k].

Clear [l]: The phoneme /l/ is said to be clear when it occurs as an initial consonant before a vowel sound as in the words *lip* and *learn*.

Dark [ɫ]: The phoneme /l/ is said to be dark when it comes after a vowel sound as in the words *pull* and *milk*.

Labiodental consonant: a consonant sound produced with a constriction between the bottom lip and upper teeth.

Exercises

Exercise 1.1

Tick the right answer(s).

1. There are two branches of linguistics that are concerned with the study of speech sounds: phonetics and phonology. What is the difference between them?

- Phonetics studies orthographic spelling whereas phonology deals with pronunciation.
- Phonetics is about the physical production of sounds whereas phonology deals with symbolic sounds.
- Phonetics is about sounds of language whereas phonology is about the sound systems of language.

2. Phonotactics is a branch of phonology that deals with

- the restrictions on the types of sounds that are allowed to occur next to each other or in particular positions in the word.
- the study of the rules governing the possible phoneme sequences in a language.
- the rules concerning the ways in which syllables can be created in a language.

Exercise 1.2

Find pairs of words that would contrast the following English phonemes.

/t/ ≠ /d/	…….	(Contrast in the final position)
/i:/ ≠ /i/	…….	(Contrast in the middle position)
/s/ ≠ /z/	…….	(Contrast in the final position)
/m/ ≠ /n/	…….	(Contrast in the initial position)
/æ/ ≠/e/	…….	(Contrast in the middle position)
/v/ ≠ /w/	…….	(Contrast in the initial position)

Exercise 1.3

Complete the table below so as to form minimal sets.

Look	…….	…….	…….	Contrast in the initial position
Night	…….	…….	…….	Contrast in the medial position
Fly	…….	…….	…….	Contrast in the final position

Exercise 1.4

Underline the minimal pair in each of the following sentences, and then provide another pair of words in order to form a minimal set.

1. He came to the game with his brother.

……...

2. My friends and I went to the movies to watch the film “The Cat in the Hat”.

……...

3. Lack of physical activity and improper eating behaviors are among the main causes of weight gain.

……...

4. I did not hear the storm last night.

……...

5. The wine is very fruity with red berry notes.

……...

6. The baby's arms are caught in a cot.

……...

Exercise 1.5

Break the following words into syllables and describe the structure of each syllable by drawing a syllable tree.

1. Ground

2. Beauty

3. Indicate

Chapter Two

Word Formation: The Processes of Lexical Expansion

Objectives

This chapter is about word formation, which is the process by which new words are brought into existence. This part of linguistics plays a significant role in expanding the lexicon. After completing this chapter, students will be able to:

- understand the subject matter of word formation;
- know the different processes used to form new words in English; and
- identify the different processes used to create different words

Introduction

According to Yule (2017), "The creation of new words in a language never stops and English is one language that is particularly fond of adding to its large vocabulary" (p. 167). In other words, the vocabulary (lexis or lexicon) of a given language is not fixed but it always enlarges with the creation of new words. In any language, new words can be added to express different concepts and ideas and to denote new objects and products. There are many methods by which new words can enter the lexicon. These mechanisms used to expand the word-stock of a given language are known as word-formation processes. In English, the following word-formation processes are usually used to form new words.

II.1. Coinage/Neologism

Coinage, also known as neologism, is one of the least common word formation processes (Yule, 2017). It refers to the process of creating new, previously non-existent words to represent new inventions or innovations. Newly coined words can appear in domains like technology, health, science, economy, and advertising. Yule (2017) claims that common sources of coinages are "trade names for commercial products that become general terms (usually without capital

letters) for any version of that product" (p.179). Here are some examples of coinages: *google, internet, skype, blog, escalator, heroin, aspirin* and *nylon*.

New words can also be derived from the name of a real or fictional person or place. This process is known as eponymy. An eponym is a new word based on the name of a person or place (Yule, 2017). For example, in the sentence *She ordered a Caesar salad*, the word *Caesar* is an eponym because it makes reference to the Italian-Mexican chef *Caesar Cardini* who created the salad that now bears his name. Table 2.1 offers other examples of eponyms.

Table 2.1

Examples of Eponyms

Eponym	**Meaning**
Fahrenheit	A temperature scale named after the scientist Daniel Gabriel Fahrenheit.
Ferrari	A sports automobile named after the brand's founder Enzo Ferrari.
Jeans	Pants named after the city of Genoa (Italy), where the jeans fabric was originally made.
Newton	A unit of force named after the English scientist Isaac Newton.
Parkinson's disease	A neurodegenerative disease named after English surgeon James Parkinson.
Virginia	A U.S. state named after Queen Elizabeth I of England, known as the Virgin Queen.

II.2. Borrowing

Borrowing is the process of obtaining words from other languages (Yule, 2017). According to Crystal (2003), "English has borrowed words from over 350 other languages, and over three-quarters of the English lexicon is actually Classical or Romance in origin" (p. 23).

The borrowed words are called loan words. Major loan words in English come from French, German, Italian, Russian, Chinese, Japanese, Greek, Spanish and Arabic (Zhou, 2016). Table 2.2 presents some examples of foreign words used in English.

Table 2.2

Examples of Borrowed Words in English

Source Language	**Examples of Borrowed Words**
French	Entrepreneur, ballet, restaurant, table, face, cuisine, justice
Spanish	Guerrilla, fiesta, tornado, avocado, rodeo, tomato, tobacco
Italian	Graffiti, patio, casino, pizza, solo, opera
Turkish	Yoghurt, baklava, borek
Arabic	Algebra, alcohol, giraffe, sofa
German	Nickel, kindergarten**,** Volkswagen
Russian	Czar/Tsar, Vodka, Ruble
Japanese	Tsunami, sushi, samurai

The words presented in Table 2.2 are examples of direct borrowing. Direct borrowing is a type of borrowing that occurs when words are directly taken from other languages with little or no phonological or morphological modifications. Direct borrowing occurs as a result of cultural contact between two language communities.

Yule (2017) mentions a special type of borrowing known as *loan-translation* or *calque*. Hoffer (2005) states that "Loan-translation or Calque occurs when the native language uses an item-for-item native version of the original. 'Loanword' itself is a loan-translation of the German lehnwort" (p. 53). This means that loan-translation involves the process of taking a foreign expression or phrase then translate it using the native words of the receiving language. For example, when you take an expression from Spanish and use word-for-word or literal

translation using English terms, this process is known as loan-translation/calque. Table 2.3 provides some examples of loan-translation/calque.

Table 2.3

Examples of Loan-translation/Calque

Loan-translation / Calque	**Original Language**	**Original Expression**
Adam's Apple	French	*Pomme d'Adam*
Deaf-mute	French	*Sourd-muet*
Beer Garden	German	*Biergarten*
Earworm	German	*Ohrwurm*
Moment of truth	Spanish	*El momento de verdad*
Blue blood	Spanish	*Sangre azul*
Masterpiece	Dutch	*Meesterstuk*
Devil's advocate	Latin	*Advocatus diaboli*

II.3. Compounding

Another way of forming new words in English is through *compounding*. Compounding is a highly productive word-building method in English. In English, new words can be created from already existing words through the process of compounding. According to Yule (2017), compounding is the "joining of two separate words to produce a single form" (p. 172). That is to say, compounding is the process of combining two or more existing individual words to create one single word, known as a *compound word* or simply a *compound*. Compounding is not limited to the union of two words, for example, the nouns *father* and *law* can be joined with the preposition *in* to form the compound word *father-in-law*. Compound words can be nouns, verbs, adjectives, adverbs and even prepositions like *inside* and *outside*. They can be written in three different ways: open (written with a space between the parts of the compound), hyphenated (with a hyphen separating the parts of the compound) and closed/solid (written as

one word with no space or hyphen between the parts of the compound word) (Zapata, 2007). Table 2.4 presents some examples of compound words in English.

Table 2.4

Examples of Compound Words in English

Words	**Compound / Compound word**
Head (Noun) + ache (Noun)	Headache (Noun)
Black (Adjective) + board (Noun)	Blackboard (Noun)
Run (Verb) + time (Noun)	Runtime (Noun)
Down (Preposition) + town (Noun)	Downtown (Noun)
Over (preposition) + take (Verb)	Overtake (Verb)
Air (Noun) + Sick (Adjective)	Airsick (Adjective)
Over (Preposition) + night (Noun)	Overnight (Adverb)

What is worth mentioning is that the part of speech of the compound word is usually determined by its second element (Zapata, 2007), that is why *blackboard* is considered as a noun and *airsick* as an adjective. It should also be noted that the meaning of the compound word can often be guessed from the meaning of its individual parts (Zapata, 2007). For example, a *headache* is a pain/ache in the head.

II.4. Blending

In English, new words can also be formed by combining parts of two words. This process is known as *blending*. Blending is the process by which new words are created by joining parts of two words, usually the beginning of one word and the end of another word. In some cases, the beginning parts of both words are joined as in the word *modem*, which combines the beginnings of the words modulator and demodulator (Yule, 2017). Sometimes, a whole word is joined with a part of another word. The newly formed word is called a *blend* or *portmanteau word*. There are two types of blend words: *total blends* and *partial blends*. Total blends are

formed by combining the beginning of the first word and the end of the second word, or by joining the beginnings of two words. Some examples of total blends are presented in Table 2.5.

Table 2.5

Examples of Total Blends

Blend Word	**Structure**	**Definition**
Chunnel	**Ch**annel + T**unnel**	A railroad between France and England under the English Channel
Brunch	**Br**eakfast + L**unch**	A meal served late in the morning before lunch
Spanglish	**Span**ish + En**glish**	A language that combines words from Spanish and English
Moped	**Mo**tor **+** **Ped**al	A small motorbike that can be pedaled by a low-powered gasoline engine.
Globish	**Glob**al + Engl**ish**	A simplified version of English used by non-native speakers

Besides total blends, we can also create partial blends. The process involves taking a whole word and combining it with a part of another word to form a new word. That is to say, in partial blending, one word is reduced and combined with a full word. Table 2.6 reports some examples of partial blends.

Table 2.6

Examples of Partial Blends

Blend Word	**Structure**	**Definition**
Amerindian	**Ameri**can + I**ndian**	An American Indian / A Native American, any member of the people living in the Americas before the arrival of the Europeans
Brexit	**Br**itish **+ Exit**	The departure of the United Kingdom from the European Union
Docudrama	**Docu**mentary **+ Drama**	A film or a television program presenting actual facts about an event or person
Staycation	**Stay +** Va**cation**	A holiday spent at home or nearby

To sum up, blend words are formed by one of the following methods:

1. The most common method of blending involves taking the beginning of the first word and combining it with the end of the second word.
2. The beginnings of two words are joined.
3. A complete word is joined with a part of another word.

II.5. Clipping

Clipping is the process of forming new words by reducing other words, by eliminating the initial part, the final part, or both parts without changing the meaning and the part of speech of the word. From this definition, we can identify three types of clipping: *fore/front clipping*, *back clipping* and *middle clipping*. In fore/front clipping, the back/last part of the word is retained while the front/initial part is removed. The opposite process is known as back clipping. To be more specific, back clipping involves removing the last part of the word and keeping the front part. In the third type of clipping, called middle clipping, the middle part of the word is

retained while the initial and final parts are removed. The shortened words are called *clipped words*. Table 2.7 provides some examples of clipped or shortened words.

Table 2.7

Examples of Clipped Words in English

Original Word	Clipped Word	Type of Clipping
~~Cara~~**van**	Van	Fore clipping
~~Alli~~**gator**	Gator	Fore clipping
~~Air~~**plane**	Plane	Fore clipping
~~Violon~~**cello**	Cello	Fore clipping
Gas~~oline~~	Gas	Back clipping
Ad~~vertisement~~	Ad	Back clipping
Gym~~nasium~~ / **Gym**~~nastics~~	Gym	Back clipping
Photo~~graph~~	Photo	Back clipping
~~In~~**flu**~~enza~~	Flu	Middle clipping
~~Re~~**frige**~~rator~~	Fridge	Middle clipping
~~De~~**tec**~~tive~~	Tec	Middle clipping

Note: Clipped words are different from abbreviations. Even though abbreviations are shortened forms of words, they often end with a full stop such as *Jan.* for January. In clipping, the shortened forms do not end with a full stop.

Yule (2017) identifies a special type of reduction that produces shortened forms called *hypocorism*. Hypocorism involves reducing a word to a single syllable and adding –y or –ie at the end. This word-formation process is mainly used in British and Australian English. Examples of hypocorism include *telly* (television), *Aussie* (Australian), *Barbie* (barbecue), *bickie* (biscuit), *bookie* (bookmaker), *brekky* (breakfast), *hankie* (handkerchief) and *toastie*

(toasted sandwich) (Yule, 2017). Other examples of hypocorism are *granny* (grandmother), *Willy* (William) and *comfy* (comfortable).

II.6. Backformation

Backformation is another process of word formation in English. It is the process of shortening words by detecting affixes. According to Yule (2017), this process occurs when "a word of one type (usually a noun) is reduced to form a word of another type (usually a verb)" (p. 176). Yule (2017) gave the example of the word "*television*" (noun) which was reduced to form the word "*televise*" (Verb). Unlike clipping, in backformation, the part of speech of the word changes as its form is reduced (From noun to verb). In Table 2.8, you can find some examples of backformation.

Table 2.8

Examples of Backformation in English

Base Form	**Backformation**
Burglar (Noun)	To burgle (Verb)
Diagnosis (Noun)	To diagnose (Verb)
Sculptor (Noun)	To sculpt (Verb)
Escalator (Noun)	To escalate (Verb)
Peddler (Noun)	To peddle (Verb)
Inspector (Noun)	To inspect (Verb)
Execution (Noun)	To execute (Verb)

The verbs *burgle*, *diagnose*, *sculpt*, *escalate*, *peddle*, *inspect* and *execute* have been formed from the pre-existing nouns *burglar*, *diagnosis*, *sculptor*, *escalator*, *peddler*, *inspector* and *execution* respectively.

II.7. Conversion

Conversion is a widely productive process of creating new words in English. This process occurs when an already existing word is used in a new grammatical function without any reduction and without the addition of affixes. Yule (2017) specifies that "A change in the function of a word, as for example when a noun comes to be used as a verb (without any reduction), is generally known as conversion" (p. 177). Yule (2017) points out that conversion is also known as *category change* or *functional shift*. It can be for the obvious reason that the word changes its word class or part of speech. Another term for conversion is *zero derivation* because the new word is formed with the addition of zero affixes. In a nutshell, conversion produces new words by changing their part of speech and not their form. Table 2.9 presents examples of conversion.

Table 2.9

Examples of Conversion in English

Conversion	**Example**
From verb to noun: to swim / a swim	I cannot *swim*. (Verb)
	They went for a *swim* before lunch. (Noun)
From noun to verb: oil / to oil	She added *oil* to the pizza recipe. (Noun)
	She *oiled* the pan. (Verb)
From adjective to verb: dry / to dry	The clothes are finally *dry*. (Adjective)
	She washed and *dried* the dishes. (Verb)

II.8. Acronyms and Initialisms

According to Yule (2017), "Acronyms are new words formed from the initial letters of a set of other words" (p. 180). That is to say, acronyms are produced by combining the initial letters of several words in a phrase to form a new word. Yule (2017) states that acronyms should

be pronounced as words and not one letter at a time. Examples of acronyms are provided in Table 2.10.

Table 2.10

Examples of Acronyms in English

Acronym	**Phrase**
Moodle /muːdəl/	**M**odular **O**bject-**O**riented **D**ynamic **L**earning **E**nvironment
NASA /næsə/	**N**ational **A**eronautics and **S**pace **A**gency
NATO /neɪtəʊ/	**N**orth **A**tlantic **T**reaty **O**rganization
UNICEF /juːnɪsef/	**U**nited **N**ations **I**nternational **C**hildren's **E**mergency **F**und
PIN /pɪn/ code	**P**ersonal **I**dentification **N**umber

Another way of creating new words that is similar to acronyms produces forms known are *initialisms*. Both acronyms and initialisms involve taking the initial letter of each word in a phrase to form a new word. The main difference is that acronyms are pronounced as words while initialisms are pronounced as individual letters (Štěrbová, 2018). Table 2.11 offers some examples of initialisms.

Table 2.11

Examples of Initialisms

Initialism	**Phrase**
BBC /biː biː siː/	**B**ritish **B**roadcasting **C**orporation
FBI /ef biː aɪ/	**F**ederal **B**ureau of **I**nvestigation
ICT /aɪ siː tiː/	**I**nformation and **C**ommunication **T**echnology
MIT /em aɪ tiː/	**M**assachusetts **I**nstitute of **T**echnology
VIP /viː aɪ piː/	**V**ery **i**mportant **p**erson

II.9. Derivation/Affixation

According to Zapata (2007), "Affixation is a very common and productive morphological process in synthetic languages" (p. 4). Affixation, also called derivation, is a process whereby new words are formed by adding affixes. When affixes are placed at the beginning of words, they are called *prefixes*. For example, when the prefix *dis-* is added to the word *honest*, this results in the creation of the word *dishonest*. Prefixes change the meaning of the words they are attached to but maintain their part of speech (Štěrbová, 2018). As you can see both *honest* and *dishonest* are adjectives but the meaning is different. When affixes are placed at the end of words, they are called *suffixes*. For example, when the suffix *-ly* is added to the word *friend*, this results in the creation of the word *friendly*. Unlike prefixes, suffixes change the part of speech of the words they are attached to (Štěrbová, 2018). In the aforementioned example, the addition of the suffix *-ly* changed the part of speech of the word from the noun *friend* to the adjective *friendly*. The words created through derivation are called *complex words*. More information about derivation is provided in the next chapter entitled *Morphology: The Internal Structure of Words*.

II.10. Multiple Processes

In English, new words can be formed through more than one word-formation process. This is known as multiple processes of word formation. This involves the combination of multiple word-formation processes to create a new word (Yule, 2017). For example, the word *phone* has been created through clipping (from the noun telephone) and conversion (from noun to verb). Another example is the word *backformation* which has been formed through compounding (back + form) and derivation (backformation + -tion). The word *google* has also been created using two word-formation methods: coinage and conversion (from noun to verb as in *please **google** the answer*.)

Conclusion

Word-formation processes are methods used to form new words. We can create new words by using one of the aforementioned word-building methods. However, it is possible to use more than one process to form new words.

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Further Reading

Jackson, H., & Zé Amvela, E. (2007). Words, meanings and vocabulary: An introduction to modern English lexicology (2nd ed.). London, England and New York: Continuum International Publishing Group.

It is recommended to read the fourth chapter entitled “Word Formation”.

Exercises

Exercise 2.1

Identify cases of conversion in the following sentences and determine the part of speech.

1. If you go to Paris, visiting the Eiffel Tower is a must.

……

2. I will ship your stuff very soon.

……

3. The wine was bottled in France.

……

4. Stop running around like a crazy.

……

5. Have you ever summered in the country?

……

Exercise 2.2

Determine the word formation processes involved in the production of the words in bold in the sentences below.

1. **Sawdust** is always a problem in a woodworker's workshop. (…….)
2. The **doc** prescribed me some medications. (…….)
3. I ate a **pretzel** this morning. (…….)
4. He is **papering** the bedroom walls. (…….)
5. Could you persuade the readers of your newsletter to **donate** to my charity? (…….)
6. Could you give me a quick **recap** of the meeting? (…….)
7. We will **carpet** the living room. (…….)

8. He is going to **Philly** to visit his family. (…….)
9. **A marriage of convenience** is a marriage contracted for practical reasons rather than for love. (…….)
10. Maria **temped** as a secretary. (…….)

Exercise 2.3

Complete the table below.

Blend word	**Structure**	**Clipped word**	**Original word**
Japlish	……	……	Hippopotamus
Netiquette	……	Dorm	……
……	Picture + dictionary	……	Brother
Malware	……	Limo	……
……	Friend + enemy	Sec	……
Email	……	……	Brassiere
Keytar	……	Rhino	……
……	Alphabetic + numeric	……	Professional

Chapter Three

Morphology: The Internal Structure of Words

Objectives

At the end of this chapter, students will be able to:

- understand the subject matter of morphology;
- identify the meaningful parts of words, which are morphemes;
- know what free and bound morphemes are and how they can be identified;
- identify lexical and grammatical morphemes;
- identify derivational and inflectional morphemes and determine their role in morphology;
- understand and explain the difference between morpheme, morph and allomorph; and
- differentiate between morpheme and syllable.

Introduction

In linguistics, the study of the form and structure of words is the subject matter of *Morphology*. This chapter introduces this field of linguistics. It first defines morphology and its basic unit, which is the morpheme. Then, it lists the different types of morphemes. Finally, it specifies the difference between morpheme, morph and allomorph and between morpheme and syllable.

III.1. Definition of Morphology

The term *Morphology* is of Greek etymology. It is composed of the Greek morphemes *morphe* +-*ology*. The word *morphe* means "form, shape" (Carstairs-McCarthy, 2002, p. 16) and the Greek suffix -*ology* means *science of* or *branch of knowledge*. Therefore, morphology is the science that studies word forms. It studies the internal structure of words and the processes used to form them (Fromkin et al., 2011, p. 41). In other terms, morphology is a branch of linguistics that examines the internal construction of words and the rules by which they are formed. Words

have an internal structure and can be broken down into small meaningful components called morphemes. Therefore, the central term in morphology is the *morpheme*. Morphology studies morphemes and the way they are combined to form words.

III.2. Morphemes

Words consist of morphemes. The term *morpheme* comes from the Greek *morphe* which means form or shape and the suffix *-eme* which denotes the smallest significant or distinctive unit. In morphology, a morpheme represents the smallest unit in linguistics that can carry meaning and have a grammatical function (Yule, 2017) and can form words or parts of words. It is smallest in the sense that it cannot be divided into smaller meaningful units (It is the smallest one). For example, the word *but* contains one morpheme and if we remove any part, it will become meaningless. A morpheme can be a word or a word element.

Consider the following examples. *Bird*, *ocean*, *bat*, *textbooks*, *playing* and *teacher* are all words. However, *bird*, *ocean* and *bat* cannot be divided into further meaningful units whereas *textbooks*, *playing* and *teacher* can be analyzed as *text* + *book* + *-s*, *play* + *-ing* and *teach* + *-er*. The items *bird*, *ocean*, *bat*, *text*, *book*, -s, *play*, *-ing*, *teach* and *-er* are all morphemes. Some are simple words such as *bird* and *ocean* while others are only word elements (or parts of words) such as *-ing* and *-er*. As mentioned previously, a morpheme is the smallest indivisible unit of meaning or grammatical function. For example, the word *textbooks* contains three morphemes: a minimal unit of meaning is *text*, another minimal unit of meaning is *book* and a minimal unit of grammatical function is *-s* indicating the plural.

III.3. Types of Morphemes

Morphemes can be can be divided into two large groups: free morphemes and bound morphemes.

III.3.1. Free/Independent Morphemes

Free or independent morphemes are those morphemes that can occur alone and stand independently as words (Yule, 2017) and have a meaning or fulfill a grammatical function such as *moon*, *girl*, *house*, *but*, *in* and *this*. These morphemes are said to be free or independent because they can stand by themselves as single words and have a specific meaning. There are two categories of free morphemes: lexical morphemes and grammatical morphemes.

III.3.1.1. Lexical/Content Morphemes

Lexical morphemes, also known as content morphemes, are free morphemes that have concrete meanings and take the form of nouns, verbs, adjectives and adverbs (Yule, 2017), for example, *dog*, *Peter*, *house*, *build*, *stay*, *smart*, *happy* and *fast*. Lexical morphemes constitute the larger class of morphemes and form the open-class words in a language. Yule (2017) states that "We can add new lexical morphemes to the language rather easily, so they are treated as an 'open' class of words" (p. 215). For example, the class of nouns can always be expanded by the addition of new words as new technological innovations and scientific discoveries are made.

III.3.1.2. Grammatical/Functional Morphemes

Grammatical morphemes, also referred to as functional morphemes, are free morphemes that have little or no meaning on their own but used to show grammatical relationships between sentences. These morphemes are represented by articles, conjunctions, prepositions, pronouns (Yule, 2017) and auxiliary verbs, for examples, *the*, *this*, *or*, *but*, *in*, *he*, and *can*. Grammatical morphemes belong to the closed-class words because their number is limited and rarely expanded. Yule (2017) claims that "Because we almost never add new functional morphemes to the language, they are described as a 'closed' class of words" (p. 215). For example, in English, there are only three articles (a, an, the). Similarly, we almost never invent new prepositions, conjunctions, pronouns and auxiliary verbs.

III.3.2. Bound/Dependent Morphemes

Bound or dependent morphemes are those morphemes that cannot occur alone as words but as parts of words and must be attached to another morpheme (Yule, 2017). For example, *en-* in **en**danger, *dis-* in **dis**place, *-er* in work**er**, *-er* in small**er**, *-s* in boy**s** and *-ed* in play**ed**. The bound morphemes *en-*, *dis-*, *-er*, *-s* and *-ed* cannot stand on their own. They need the free morphemes *danger*, *place*, *work*, *small*, *boy* and *play* to convey meaning.

Bound morphemes consist of affixes. Affixes are bound morphemes that are marginally attached to words and consist of prefixes and suffixes. Prefixes are bound morphemes that are added at the beginning of words such as *un-* in **un**do and *mis-* in **mis**use. Note that prefixes are represented by the morpheme followed by a hyphen (-). Suffixes are bound morphemes that are attached to the end of words such as *-en* in short**en** and *-ful* in help**ful**. Note that suffixes are represented by the morpheme preceded by a hyphen (-). There are two categories of bound morphemes/affixes. According to the function they fulfill in a language, affixes can be classified into derivational morphemes and inflectional morphemes.

III.3.2.1. Derivational Morphemes/Derivations

Derivational morphemes or derivations are bound morphemes that have the ability to create new words in a language by changing the grammatical category (part of speech) (Yule, 2017), the meaning, or both the grammatical category and the meaning of the word they are attached to. That is to say, the role or function of derivational morphemes is to make new words. For example, by adding the derivational morpheme *-less* to the noun *care*, we create a new word *careless*, which belongs to a new grammatical category (adjective) and has a different meaning (opposite of care). In English, derivations can be prefixes or suffixes. As seen in the previous chapter, the process of creating new words by the addition of derivational morphemes is known as affixation or derivation.

III.3.2.2. Inflectional Morphemes/Inflections

Inflectional morphemes or inflections are bound morphemes that give extra-linguistic information about the already existing meaning of a word. According to Yule (2017), inflectional morphemes "are not used to produce new words in the language, but rather to indicate the grammatical function of a word" (p. 217). For example, all the forms of the verb *to drive*, namely *drives*, *driven* and *driving*, are all verbs. Similarly, the comparative and superlative forms of the adjective *big*, namely *bigger* and *biggest*, are also adjectives. The addition of the inflectional morphemes (-s, -en, -ing, -er, -est) did not result in the creation of new words but only indicated some aspects of the grammatical function of these words such as tense and comparison. Yule (2017) says that the function of inflections is to specify whether a noun is in the singular or plural form, whether a verb is in the present or past tense and whether an adjective is in the comparative or superlative form. In English, inflectional morphemes are all suffixes. English has eight inflectional morphemes that are summarized in Table 3.1.

Table 3.1

English Inflectional Morphemes

Inflection	**Type**	**Example**
-s	Plural (attached to nouns)	Lucy visited her grandparent**s**.
-s	Possessive (attached to nouns)	Lucy**'s** hair is long.
-s	Present tense/Third person singular (attached to verbs)	Lucy get**s** up at 6:30.
-ed	Past simple (attached to verbs)	Lucy open**ed** the window.
-en	Past participle (attached to verbs)	Lucy has eat**en** dinner at her house.
-ing	Present participle (attached to verbs)	Lucy is listen**ing** to music on her iPad.
-er	Comparative (attached to adjectives)	Lucy's hair is long**er** than mine.
-est	Superlative (attached to adjectives)	Lucy has the long**est** hair in her family.

III.4. Morphological Analysis: Identifying Different Morphemes

Derivational morphemes serve to create new words by changing their grammatical category. For example, when the derivational morpheme *-er* is added to the verb *to work*, this results in the creation of the noun *work**er***. Inflectional morphemes, on the other hand, do not produce new words in a language and do not change the grammatical category. For example, when we add the inflectional morpheme *-er* to the adjective *large*, this results in the creation of the comparative adjective *larg**er***. As you can notice, both *large* and *larger* are adjectives. The addition of an inflectional morpheme did not change the grammatical category of the adjective *large*. It is worth noting that the suffix *-er* can function as a derivational and an inflectional morpheme. Yule (2017) indicates that "Just because they look the same (-er) doesn't mean they do the same kind of work" (p. 218). In the same vein, the suffixes *-ing* and *-ed* can be derivational and inflectional morphemes.

According to Yule (2017), inflectional suffixes always occur at the end of words after derivational suffixes. For example, the derivational suffix *–ment* is first added to the verb *to develop* to create the noun *development*, then the inflectional suffix *-s* is added at the end to produce the plural noun *developments*.

Using our knowledge of the different types of morphemes, we can analyze the sentence *The teacher makes sure the learners comprehend the activity*, list the morphemes it contains and determine their type and category.

The is a free functional morpheme

teach is a free lexical morpheme

-er is a bound derivational morpheme

make is a free lexical morpheme

-s is a bound inflectional morpheme

sure is a free lexical morpheme

the is a free functional morpheme

learn is a free lexical morpheme

-*er* is a bound derivational morpheme

-*s* is a bound inflectional morpheme

comprehend is a free lexical morpheme

the is a free functional morpheme

act is a free lexical morpheme

-*ivity* is a bound derivational morpheme

The types and categories of morphemes are summarized in Figure 3.1.

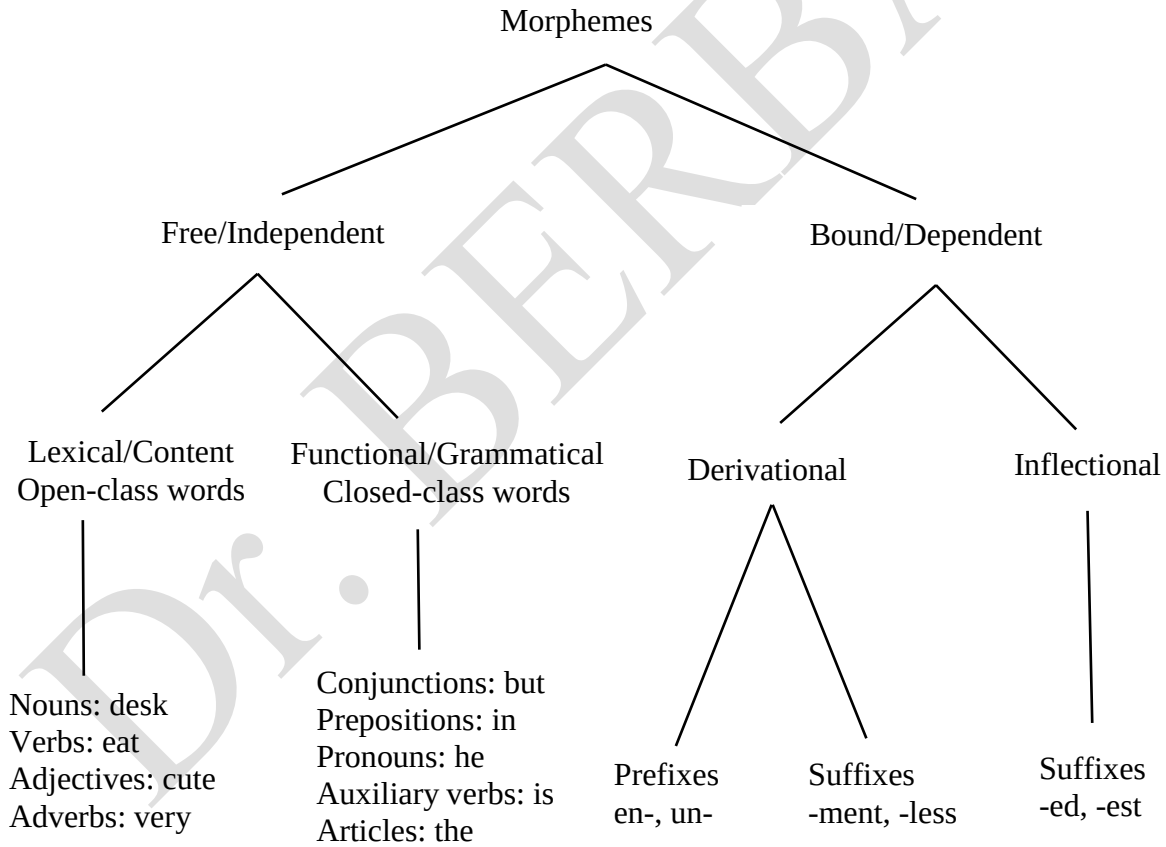

Figure 3.1. Classification of Morphemes

III.5. Morphs and Allomorphs

In the first chapter entitled *Phonology: The Sound Systems of Language*, we have seen that a phoneme is an abstract unit of sound and when it is physically produced, it becomes a

phone. The same phoneme can be pronounced in different ways depending on the phonetic environment. The different realizations of the same phoneme are called *allophones*. The relationship between a phoneme and its phones and allophones is similar to the relationship between a morpheme and its morphs and allomorphs.

Both phonemes and morphemes are abstract mental units. In morphology, a morpheme is an abstract, mental representation of a minimal unit of meaning in a language. Just as a phone is the physical realization of a phoneme, a morph is the concrete realization of a morpheme. Yule (2017) describes morphs as "the actual forms used to realize morphemes" (p. 219). Morphemes are abstract units that are phonetically and phonologically represented by morphs. The same morpheme can take different forms that are called *allomorphs*. The term allomorph is derived from the Greek *allos* meaning *other* and *morphe* which means *form* or *shape*. Therefore, an allomorph is one of the variant forms of the same morpheme. Xhina (2021) defines allomorph as "a variant phonetic form of a morpheme, or, a unit of meaning that varies in sound and spelling without changing the meaning" (p. 7029). Here are some examples of allomorphs.

a) A good example of allomorphy is the plural morpheme *-s*, which has three allomorphs: *[s]*, *[z]* and *[ɪz]*.

- She likes reading audiobook**s**. [s]
- The boy**s** went camping. [z]
- They worked as nurse**s** in a psychiatric hospital for twenty years. [ɪz]

In the examples provided above, the inflectional suffix *-s* is pronounced differently in the words *books*, *boys* and *nurses*. It is pronounced *[s]* in the word *books*, *[z] in the word boys* and *[ɪz]* in the word *nurses*. The different pronunciations of the suffix *-s*, namely [s], [z] and [ɪz], are called allomorphs.

b) Another example of allomorphy is the past tense morpheme *-ed* which has also three allomorphs: *[t]*, *[d]* and *[ɪd]*.

- Mary wash**ed** her hands before dinner. [t]
- The children play**ed** in the garden. [d]
- Tom visit**ed** his grandparents last week. [ɪd]

The pronunciation of the plural morpheme *-s* and the past tense morpheme *-ed* varies even though they are spelt the same.

c) Prefixes used to make negative versions of words have different allomorphs like *im-* as in **im**perfect and **im**moral, *in-* as in **in**capable and **in**tolerant, *il-* as in **il**literate and **il**logical, *ir-* as in **ir**regular and **ir**responsible and *un-* as in **un**comfortable and **un**true.

d) The indefinite articles *a* and *an* are also examples of allomorphs because they have different forms (spellings) and pronunciations.

e) Zero/null allomorph is a special kind of allomorph because it has no visual phonetic form. An example of zero allomorph is the plural form of words like *sheep, fish* and *deer*. In these words, the plural morpheme is invisible because no changes in spelling and pronunciation are observed. Yule (2017) indicates that "the plural of *sheep* can be analyzed as /ʃip/ + /∅/, adding another form (/∅/) to the set of allomorphs of 'plural'" (p. 219). Another example of zero allomorph is the past tense form of verbs like *bet, cut, hit* and *put*.

III.6. Morpheme versus Syllable

The terms *morpheme* and *syllable* are used to refer to the smallest units in words. However, they are different. A morpheme is a morphological unit (the morphological building block of words), whereas a syllable is a phonological unit (the phonological building block of words). While a morpheme relates to the meaning of words, a syllable is related to the pronunciation of words. To be more specific, a morpheme is the smallest unit of meaning (lexical or grammatical), whereas a syllable is a single unit of speech that contains one vowel

sound. For example, the word *unhappy* contains two morphemes (un- + happy) but three syllables (/ʌn/, /hæ/ and /pɪ/).

Conclusion

This chapter has introduced morphology which is a sub-discipline of linguistics that studies the internal structure of words. Words are made up of small meaningful segments called morphemes. Morphemes can be classified as free morphemes, which can function independently as words, and bound morphemes, which cannot stand alone as words but only as parts of words. Morphemes can be phonetically realized by morphs and can have different variants known as allomorphs.

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Xhina, O. (2021). A linguistic study of the English allomorphs il, ir, im, in and their Albanian equivalence. *South Florida Journal of Development*, *2*(5), 7028-7039.

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Further Reading

Fasold, R. & Connor-Linton, J. (2006). *An Introduction to Language and Linguistics*. Cambridge University Press. Available at https://repository.bbg.ac.id/bitstream/531/1/An_Introduction_to_Language_and_Linguistics.pdf

It is recommended to read the second chapter by Donna Lardiere entitled *Words and their Parts*.

Glossary of Terms

Closed class words: In this class of words, new words are seldom added. It rarely accepts new members and includes pronouns, determiners, conjunctions, and prepositions.

Open class words: In this class of words, new members are constantly being added. This includes nouns, verbs, adjectives and adverbs.

Exercises

Exercise 3.1

Say whether the following statements are true or false. Correct the false ones.

1. Morphology is the study of the rules governing the sounds that form words.

……...

2. Derivational morphemes are affixes that produce changes in number and tense.

……...

3. Words are the smallest meaningful language units.

……..

4. A morph is a different phonological version of a morpheme.

……...

Exercise 3.2

Determine the function of the affixes in bold.

1. The explor**ation** of **un**known area**s** often was precursor to colonization.

……...

2. We were at John**'s** house last weekend.

……...

3. She occupies the larg**est** suite in the hotel.

……...

4. At present, the main quota with the addition**al** three-tenths amounts to 16.25% of tax**able** income.

……...

Exercise 3.3

Examine the following passage carefully then list five free morphemes and five bound morphemes that occur in the first sentence and indicate their category. When you list the bound morphemes, indicate the words they are attached to.

Huntington's disease is a rare, inherited illness that causes the progressive breakdown of nerve cells in the brain. It impacts a person's functional abilities and usually results in movement, thinking and psychiatric disorders.

Free Morpheme	**Category**	**Bound Morpheme**	**Category**
……	……	……	……
……	……	……	……
……	……	……	……
……	……	……	……
……	……	……	……

Exercise 3.4

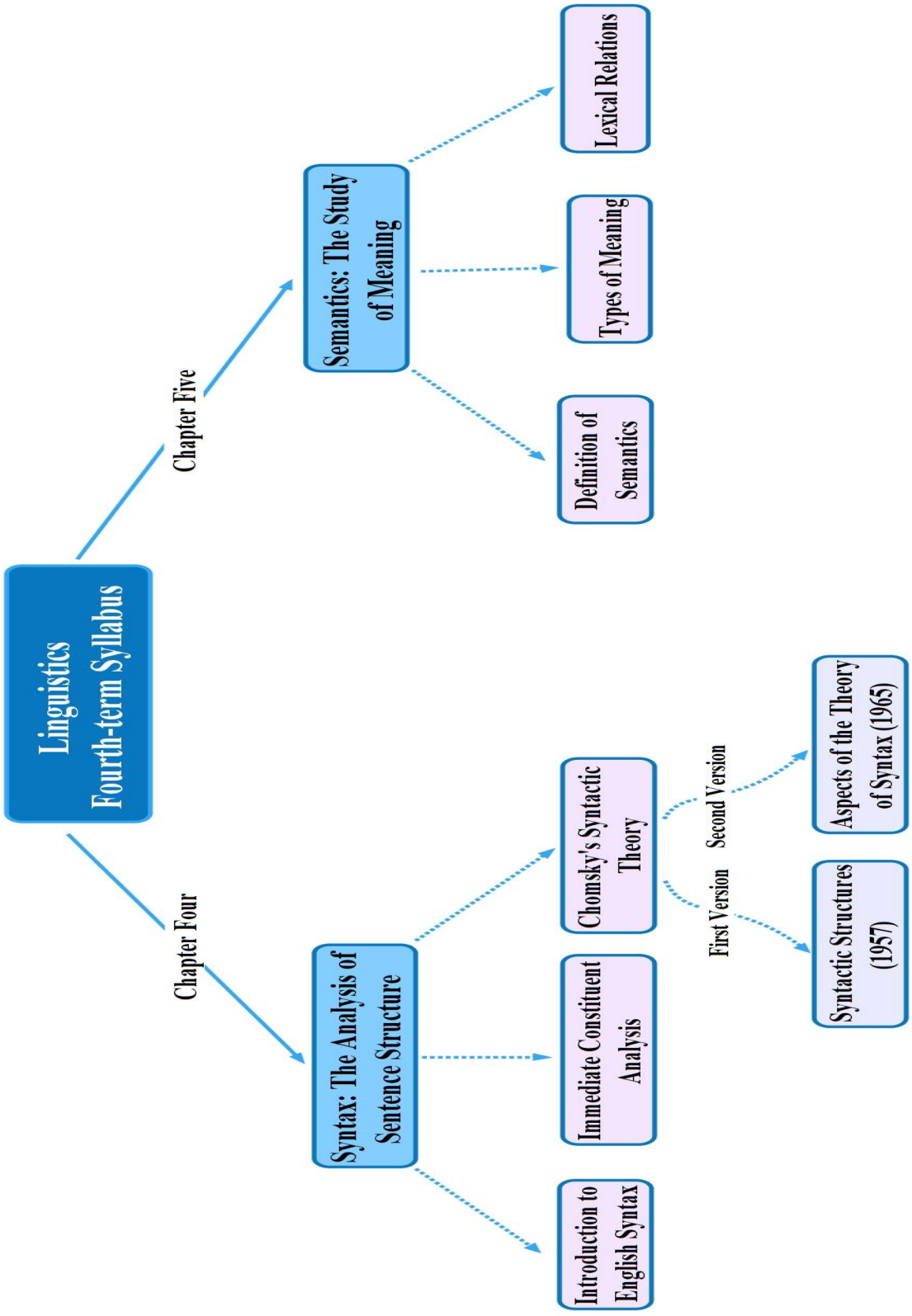
The sentence *The oldest oak trees in the woods swayed in the wind* contains different types of morphemes. Identify all the morphemes and determine the type and category of each morpheme.

……...

……...

……...

Fourth-term Syllabus



Mind Map 2. Fourth-term Syllabus

Chapter Four

Syntax: The Analysis of Sentence Structure

IV.1. Introduction to English Syntax

Objectives

After completing this unit, students will be able to:

- understand what is syntax;
- distinguish between syntax and grammar;
- distinguish between syntax and semantics;
- classify the constituents of a sentence and identify their syntactic category; and
- understand the structure of phrases and sentences.

Introduction

We have seen in the previous chapter entitled *Morphology: The Internal Structure of Words* that morphemes are the smallest meaningful units of words. However, words in a language do not exist in a vacuum. They are put together to form phrases and sentences. The way in which words are grouped together to create phrases and sentences is called *syntax*. Syntax differs from morphology in the sense that morphology deals with how morphemes are combined to form words, whereas syntax is concerned with the way words are combined to form phrases and sentences.

IV.1.1. Definition of Syntax

Syntax is a branch of linguistics concerned with the structure and construction of sentences. According to Yule (2017), the term syntax is of Greek etymology which literally means "putting together" or "arrangement" (p. 288). That is to say, the term syntax comes from the Greek word *Syntaxis*, where *Syn* means together and *taxis* signifies *to put* or *to arrange*. Therefore, syntax means to put together or arrange words in order to form phrases and sentences. Chomsky (1957) defines syntax as "the study of the principles and processes by

which sentences are constructed in particular languages" (p. 1). Put simply, syntax is the part of linguistics that explains how small linguistic elements (words) are put together to form large units (phrases and sentences). All languages have specific rules about which words go where and in what order in a sentence. Syntax refers to the set of rules that state how words are ordered in phrases and sentences. Consider the following phrases:

- The small house
- ***** House the small
- ***** Small house the

The first phrase is grammatical or well-formed because the sequence of words obeys or follows the rule that states that a noun phrase in English must have a specific word order that is *determiner + adjective + noun*. The second and third phrases are ungrammatical or ill-formed because they violate the rule stated above. That is to say, the word order in a noun phrase **is not** noun + determiner + adjective or adjective + noun + determiner. When a phrase or a sentence is ungrammatical or ill-formed, you should mark it with an asterisk (*).

IV.1.2. Syntax versus Grammar

People tend to use the terms *grammar* and *syntax* interchangeably. However, syntax is different from grammar. To be more specific, unlike syntax, grammar is not concerned only with the structure and construction of phrases and sentences. Indeed, as stated by Ahmed (2016), grammar does not include "only the rules of language for forming words or joining words together in sentences, but it is used to include every field of language giving fixed ways to describe everything which is concerned with language" (p. 23). In other words, grammar encompasses several fields of linguistics including phonology (the study of the sound system of a language), morphology (the study of the internal structure of words), syntax (the study of sentence structure) and semantics (the study of the meaning of words, phrases and sentences). Grammar refers to the entirety of rules that explain how sounds combine to form words and

how these words combine to form phrases and sentences. It also deals with the meaning of these words, phrases and sentences. Syntax is the sub-branch of grammar that studies the structure of phrases and sentences.

IV.1.3. Syntax versus Semantics

Syntax and semantics are both branches of linguistics. However, syntax is treated independently from semantics. Indeed, Chomsky and other linguists insisted on separating syntax from semantics (Washburn, 1994). In order to show how syntax is independent from semantics, Chomsky came up with the now-famous sentence "*Colorless green ideas sleep furiously*" in his book *Syntactic Structures* published in 1957. Chomsky composed it to show that a sentence can be grammatically well-formed or syntactically correct/acceptable but meaningless or semantically nonsensical. Sentences can have no meaning but still be correct or acceptable from the point of view of syntax. Therefore, we can say that syntax is not about meaning but about word order. Chomsky (1957) concludes that it is "relatively useless" to use meaning "as a basis for grammatical description" (p. 101).

IV.1.4. Syntactic Categories

Syntactic category can include both *lexical* and *functional* categories (also known as parts of speech) and phrasal categories.

IV.1.4.1. Lexical and Functional Categories

All words in a sentence belong to a specific part of speech. In the traditional approach, there are eight parts of speech, namely noun, verb, adjective, adverb, preposition, conjunction, pronoun and article. In modern linguistics, these parts of speech are divided into lexical words/categories and functional words/categories.

Lexical categories form the open-class words in a language. The open-class words include words that have lexical meaning. These words consist of nouns, verbs, adjectives and adverbs.

- *Nouns*: A noun is a word that refers to the name of a person, place, thing, animal or abstract idea. Examples of nouns are John, England, Titanic, dog, car, tree, music, desk, bus, queen, pizza and wind.
- *Verbs*: A verb is a word that expresses an action, for example, steal, watch, write, agree, jump, stand, read, go, emerge and stay.
- *Adjectives*: An adjective is a word that modifies a noun or a pronoun, for example, young, cruel, sharp, round, bored, silly, dangerous, lucky, thick and angry.
- *Adverbs*: An adverb is a word that modifies a verb, an adjective or another adverb, for example, quickly, carefully, very, usually, easily, tonight, slowly and always.

Functional categories form the closed-class words. The closed-class words include words that have little meaning outside of their grammatical function. These words consist of determiners, auxiliary and modal verbs, pronouns, prepositions and conjunctions.

- *Determiners*: A determiner is a word that modifies or introduces a noun. Determiners include *articles* (a, an, the), *demonstratives* (this, these, that, those), *possessives* (my, your, their, his), *quantifiers* (much, some, few, any, many) and *numbers* (cardinal numbers like one, two, three, four, five and ordinal numbers such as first, second, third, next, last).
- *Pronouns*: A pronoun is a word that can replace a noun or a noun phrase, for example, she, they, him and us.
- *Auxiliary and modal verbs*: An auxiliary verb is a verb used with a main verb to express tense and voice such as to do, to be and to have. A modal verb is a verb used with a main verb to express possibility, ability, permission or necessity like may, might, can, could, will, shall, should and must.
- *Prepositions*: A preposition is a word used to show direction, time and place such as in, at, near, behind, under, above, beneath and beside.

- *Conjunctions*: A conjunction is a word that links other constituents such as and, nor, or, but, yet and so.

IV.1.4.2. Phrasal Categories

Syntax studies the way word categories are ordered to create well-formed phrases and sentences. According to Varga (2010), "Sentences are composed not directly out of words but of constituents which may consist of more than one word, called phrases" (p. 56). This means that sentences are composed of phrases. Varga (2010) states that "A phrase is an expression which is a constituent in a sentence and is the expansion of a head (i.e. key word)" (p. 56). A sentence usually consists of a noun phrase and a verb phrase.

A noun phrase is a phrase that contains a noun or a noun plus other words, such as a determiner and an adjective. That is to say, a noun phrase can contain just a noun, a proper noun or a pronoun, a determiner and a noun, or a determiner, an adjective and a noun. In some cases, the noun phrase can contain a prepositional phrase as well. Consider the following examples:

- Men are from Mars. (The noun phrase consists of the noun *men*)
- Samantha lives with her parents. (The noun phrase consists of the proper noun *Samantha*)
- She bought a new car. (The noun phrase consists of the pronoun *she*)
- The soldier was so brave. (The noun phrase consists of the determiner *the* and the noun *soldier*)
- The big cat ate the mouse. (The noun phrase consists of the determiner *the*, the adjective *big*, and the noun *cat*)
- The man with the iron mask was an unknown prisoner during King Louis XIV's reign. (The noun phrase contains another noun phrase *the man* the prepositional phrase *with the iron mask*)

A verb phrase is a phrase that contains a verb or a verb plus other words (like adverbs) or phrases (noun phrases and prepositional phrases). Consider the following examples:

- She ran. (The verb phrase consists of the verb *ran*)
- She ran quickly. (The verb phrase consists of the verb *ran* and the adverb *quickly*)
- She published a new novel. (The verb phrase consists of the verb *published* and the noun phrase *a new novel*)
- They danced at the party. (The verb phrase consists of the verb *danced* and the prepositional phrase *at the party*)
- He placed the pizza on the table. (The verb phrase consists of the verb *placed*, the noun phrase *the pizza* and the prepositional phrase *on the table*)
- They watched a documentary on YouTube yesterday. (The verb phrase consists of the verb *watched*, the noun phrase *a documentary*, the prepositional phrase *on YouTube* and the adverb *yesterday*)

A prepositional phrase is a phrase that contains a preposition plus a noun phrase. Consider the example below:

- We sat near the fireplace. (The prepositional phrase consists of the preposition *near* and the noun phrase *the fireplace*)

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Exercise 4.1

Locate the noun phrases, the verb phrases and the prepositional phrases in the following sentences and specify their constituents.

1. The scientists worked on the problem meticulously.

……

2. She read the letter to john slowly.

……

3. The young man played football with his friends yesterday.

……

IV.2. Immediate Constituent Analysis (ICA)

Objectives

At the end of this unit, students will be able to:

- understand the principle behind immediate constituent analysis;
- analyze the structure of sentences using immediate constituent analysis;
- distinguish between immediate constituents and ultimate constituents;
- show the structure of sentences in hierarchical (tree diagram) and linear forms (bracketing analysis); and
- learn about the advantages and limitations of immediate constituent analysis.

Introduction

In order to analyze the structure of phrases and sentences, linguists developed a series of tools or analysis methods that show their structure in a hierarchical form. Sentences are hierarchically structured out of phrases and words. One of the methods used to analyze and show the structure of phrases and sentences is *Immediate Constituent Analysis*.

IV.2.1. Immediate Constituent Analysis

In order to analyze the structure of sentences, structural linguists introduced a method of sentence analysis known as *Immediate Constituent Analysis* (Also called IC Analysis or ICA). This system of grammatical analysis was first introduced by the American linguist Leonard Bloomfield in 1933 in his book entitled *Language*.

According to Mukherjee (2020), ICA "refers to the system of syntactic breakdown that segments the sentences into successive layers, or constituents till within the ultimate layer, and each constituent consists of solely a word or substantive unit of a word" (p. 28). That is to say, ICA consists of dividing the sentence into layers or constituents until the final constituents are reached. The partition of ICA is ***binary*** meaning that the principle involved is that of cutting the sentence into two constituents called *immediate constituents*, then further dividing these two

parts into two other parts, and continuing the division until the smallest units are reached. These final units are called the *ultimate constituents* of the sentence and consist of morphemes. Mudhsh et al. (2015) state that "The proponents of IC analysis also emphasized that the ultimate constituents of a sentence are morphemes and not words" (p. 1). ICA can be shown in two ways: *tree diagram* and *bracketing*.

IV.2.1.1. Tree Diagram

According to Bloomfield, a sentence is not a sequence/set/string of elements (Poor + John + ran + away) but is made up of layers of constituents (the constituent structure is hierarchical). Bloomfield has made this clear by using a tree diagram. He has taken the sentence *"Poor John ran away"* and divided it into two immediate constituents *Poor John* and *ran away*, then split each constituent into two other constituents. The immediate constituents of *Poor John* are *Poor* and *John*, and the immediate constituents of *ran away* are *ran* and *away*. The ultimate constituents of the sentence are *Poor*, *John*, *ran* and *away*. This is better illustrated in Figure 4.1

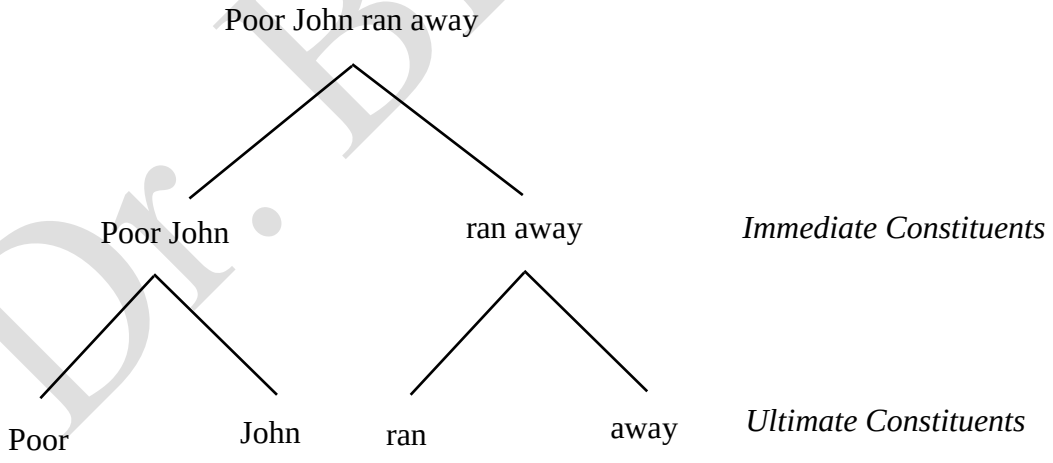

Figure 4.1. Immediate Constituent Analysis of the Sentence "Poor John ran away"

A tree diagram shows the structure of a sentence in a hierarchical form. According to Yule (2017), "One of the best ways to create a visual representation of underlying syntactic structure is through tree diagrams" (p. 297). A tree diagram is a visual representation of the

structure of the sentence. It shows how a sentence is hierarchically structured out of phrases, how each phrase is structured out of words, and how words are structured out of morphemes. A tree diagram descends from a large unit to reach small constituents using branches. Here is another example of a sentence analyzed using ICA.

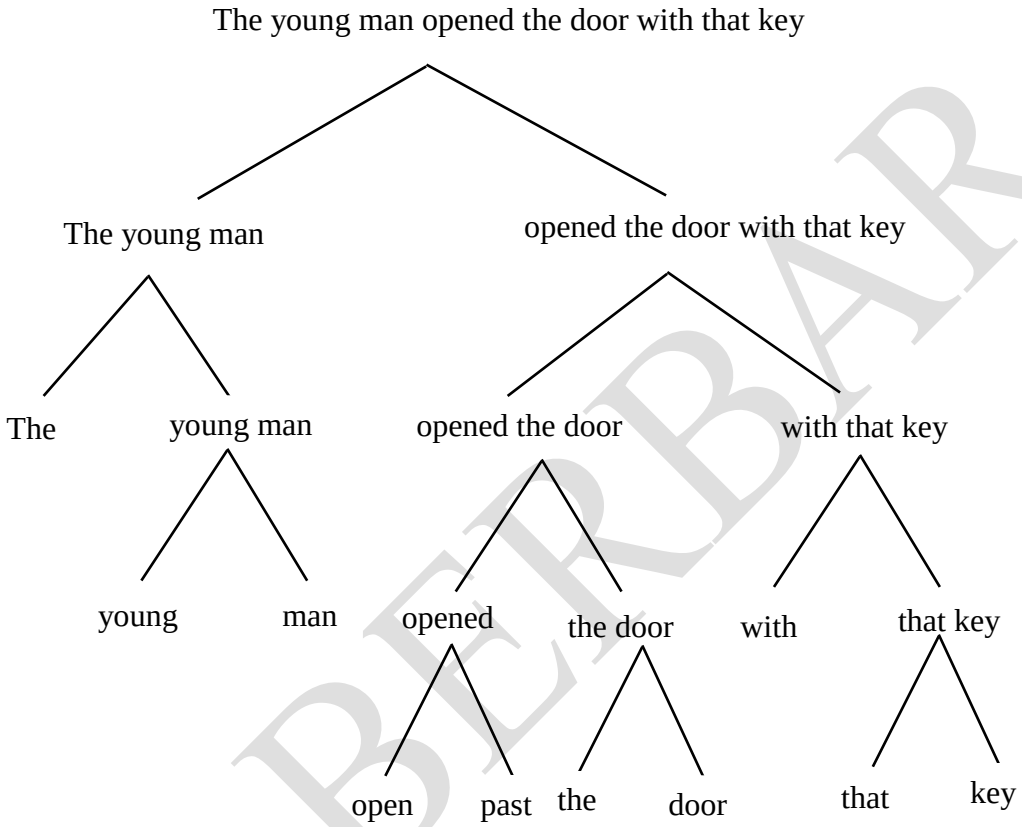

Figure 4.2. I.C Analysis of the Sentence "The young man opened the door with that key"

As shown in the tree diagram, the sentence *The young man opened the door with that key* is divided into two immediate constituents *The young man* and *opened the door with that key*. Each immediate constituent is further divided into two constituents. *The young man* is divided into two immediate constituents that are *the* and *young man*, while *opened the door with that key* is divided into *opened the door* and *with that key*. This binary segmentation continues until the smallest constituents are reached. These last constituents are called the ultimate constituents of the sentence. In the sentence provided above, the ultimate constituents are *The*, *young*, *man*, *open*, *past*, *the*, *door*, *with*, *that* and *key*.

IV.2.1.2. Bracketing

Another way to show ICA is by using bracketing analysis. Unlike a tree diagram, bracketing analysis shows the structure of the sentence in a linear form.

[[[poor] [John]] [[ran] [away]]]

IV.2.2. Advantages of Immediate Constituent Analysis

Immediate constituent analysis has the following advantages:

- It shows the structure of a sentence in a hierarchical form. It graphically displays the layers or units of a sentence and shows how these units are hierarchically organized (from the biggest unit to the smallest units) to form the sentence.
- It can be represented by tree diagrams and bracketing.

IV.2.3. Limitations of Immediate Constituent Analysis

Immediate constituent analysis has the following limitations:

- In some sentences, it is not always clear where the division between constituents should be.
- The binary division does not work in some constituents.
- It does not specify the syntactic category of the constituents. It is only concerned with the identification of the constituents of a sentence without revealing their function.
- It does not show how new sentences can be generated or formed. It only analyzes existing sentences.
- It cannot handle lexical ambiguity and syntactic (structural) ambiguity. Lexical ambiguity occurs when the same word has more than one meaning. For example, the word bat in the sentence *I found a* ***bat*** is ambiguous because it has two meanings, which are: **1.** A wooden object used to hit the ball in games like baseball, and **2.** A small animal that flies at night. Syntactic ambiguity, on the other hand, occurs when a sentence has two or more meanings. For instance, the sentence *The chicken is ready to eat* is

ambiguous because it has two different interpretations: **1.** The chicken is cooked and ready to be eaten, and **2.** The chicken can be fed. ICA takes into consideration only one meaning and ignores the others. According to ICA, there is one sentence, one structure and one meaning.

- It cannot handle compound and complex sentences.
- It does not show how sentences are related. To be more specific, it does not show the syntactic relationship between active and passive sentences, affirmative and negative sentences, and declarative and interrogative sentences. For example, the sentences *Paul opened the door* and *The door was opened by Paul* have the same meaning. However, ICA would suggest an analysis for the active sentence *Paul opened the door* and another analysis for the passive sentence *The door was opened by Paul*. Even though these sentences have the same meaning, ICA considers them as being different because they have different structures.
- Syntactic analysis of sentences is made without reference to meaning. For example, the sentences *John is easy to please* and *John is eager to please* are considered the same because they are structurally similar even though they are semantically different. ICA cannot explain such sentences.

Conclusion

Immediate constituent analysis is a system of grammatical analysis that is based on the binary principle meaning that at each stage of division, each constituent is cut into two parts. The analysis ends when the smallest indivisible units, morphemes, are reached. Even though ICA is an important tool for syntactic analysis, it has been criticized for its weaknesses. This led to the emergence of other syntactic analysis methods like *Phrase Structure Grammar*.

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Who is Leonard Bloomfield?

Leonard Bloomfield was an American linguist. He was born in 1887 and died in 1949. He is known for his book *Language* published in 1933, which influenced the subsequent course of linguistics in the United States in the first half of the twentieth century. His work helped to establish linguistics as an independent scientific discipline.

Source: https://ling.yale.edu/about/history/people/leonard-bloomfield

Glossary of Terms

Constituent: is a language unit used to build a sentence. It can be a phrase, a word or a morpheme.

Hierarchical Structure: A tree diagram shows how a sentence is hierarchically structured out of phrases, words and morphemes. We can compare this structure to the system of organizing university staff consisting of a rector, vice-rector, dean, vice dean, head of department and teachers. The sentence which is the highest unit can be compared to a university rector and the morphemes at the lowest level of analysis can be compared to teachers.

Immediate Constituents: are the two components of a sentence or phrase.

Segmentation: division of the sentence into its constituent parts.

Ultimate Constituents: are the units at the last level of analysis which cannot be analyzed further at the syntactic level.

Exercises

Exercise 4.2

The following sentences are structurally or syntactically ambiguous. Explain the different meanings of each sentence.

1. She likes reading English poems and novels.

……...

……..

2. The police arrested the man with a gun.

……...

……..

3. Tom greeted his wife, so did Henry.

……...

……...

4. They were ordered to stop drinking at midnight.

……...

……...

5. Maria bought expensive shoes and handbags.

……...

……...

Exercise 4.3

Consider the sentence: “The brave soldier lost an arm during an operation.”

1. Create bracketed analysis for the sentence.

……

……

2. Draw a representative tree diagram for the sentence.

3. What are the immediate and ultimate constituents of the sentence?

……

……

……

IV.3. Chomsky's Syntactic Theory (Syntactic Structures, 1957): Phrase Structure Grammar (PSG)

Objectives

At the end of this unit, students will be able to:

- analyze the structure of sentences using phrase structure grammar;
- understand how sentences are generated using phrase structure rules;
- identify the elements of the phrase marker;
- differentiate between phrase structure grammar and immediate constituent analysis; and
- learn about the limitations of phrase structure grammar.

Introduction

In the middle of the 1950s, the field of linguistics witnessed the biggest revolution made up by the American linguist Avram Noam Chomsky. His well-known and revolutionary book, which has changed syntax, was published under the title *Syntactic Structures* in 1957. In his book, Chomsky proposed a model of sentence analysis known as *Phrase Structure Grammar* or *PSG* for short.

IV.3.1. What is Phrase Structure Grammar?

Phrase structure grammar is a tool for syntactic analysis proposed by Chomsky. It has its origins in Bloomfield's immediate constituent analysis, which has been formalized by Chomsky into a system of generative rules. Chomsky (1957) criticized immediate constituent analysis for being inadequate and introduced a more powerful model, which he calls phrase structure grammar. According to Ahire (2017), Chomsky's theory of phrase structure grammar "proposes to describe and explain combination and order of words in larger units than word in sentence" (p. 156). Phrase structure grammar is another way of showing the structure of a sentence using phrase structure rules (PS-rules) or rewrite rules. Phrase structure grammar

describes sentences by giving the set of rules used to generate these sentences. These rules are known as *phrase structure rules* or *PS rules*.

IV.3.2. Phrase Structure Rules

Phrase structure grammar is a type of grammar that uses phrase structure rules. Phrase structure rules "state that the structure of a phrase of a specific type will consist of one or more constituents in a particular order" (Yule, 2017, p. 295). Phrase structure rules represent a set of rules that specify the different constituents of a sentence and the order in which they appear in that sentence. They define how words can be combined to generate grammatically well-formed phrases and sentences. These rules use syntactic symbols to represent different syntactic categories such as nouns, verbs, adjectives, noun phrases and verb phrases.

Let us take Chomsky's example, "The man hit the ball". This sentence consists of a noun phrase *The man* and a verb phrase *hit the ball*. The noun phrase consists of the determiner *The* and the noun *man*. The verb phrase consists of the verb *hit* and the noun phrase *the ball*, which in turn contains the determiner *the* and the noun *ball*. The phrase structure rules used to generate the sentence "The man hit the ball" are as follows:

(i) S ⟶ NP + VP

(ii) NP ⟶ Det + N

(iii) VP ⟶ V + NP

(iv) Det ⟶ the

(v) N ⟶ man, ball

(vi) V ⟶ hit

In this system of rules, *S* stands for Sentence, *NP* for Noun Phrase, *VP* for Verb Phrase, *Det* for Determiner, *N* for Noun, and *V* for Verb. Other syntactic symbols can be used in syntactic analysis. They are as follows:

PP = Prepositional Phrase

PN = Proper Noun

Adj = Adjective

Adv = Adverb

Prep = Preposition

Aux = Auxiliary

+ = followed by

* = ungrammatical

⟶ = consists of/rewrites as

For example, the first rule, S ⟶ NP + VP, asserts that a sentence (S) consists of/rewrites as a noun phrase (NP) followed by a verb phrase (VP). It states that a sentence is formed by combining a noun phrase and a verb phrase.

IV.3.3. Recursive Phrase Structure Rules

According to Chomsky (1957), if a grammar "does have recursive devices of some sort, it will produce infinitely many sentences" (p. 24). Chomsky highlights the importance of recursion in the functioning of human languages. To Chomsky, an element is said to be recursive if it has the property of repeating itself within the sentence again and again. Consistent with Yule (2017), recursion is the repeated application of a rule to generate a structure. That is to say, a recursive rule is a grammatical rule that allows an element to repeat or embed itself within its own structure, resulting in the generation of complex sentences. Recursion can be seen in adjectives or prepositional phrases. Here are some examples of recursion.

- They have a <u>lovely</u> <u>big</u> <u>old</u> <u>red</u> house.

In the sentence above, recursion can be seen in the string of adjectives. In English, there is no limit on the number of adjectives in a sentence as long as they are placed in the right order. The example above could continue with the addition of many other adjectives.

- The book was on the desk near the window in the room opposite the kitchen in the house by the river…

In the sentence above, recursion can be seen in the repetition of the prepositional phrase. This repetition is an example of recursion, where a rule allows the repetition of elements of the same kind within a sentence. The rule that creates a prepositional phrase can be repeated over and over as long as the sentence makes sense (Yule, 2010). Indeed, Yule (2010) claims that "there is no end to the recursion that would produce ever longer versions of complex sentences with this structure" (p. 99).

IV.3.4. The Phrase Marker and its Elements

The sentence "The man hit the ball" is formed using six phrase structure rules. This set of rules can be represented in a tree diagram. A tree diagram is used to display the hierarchical structure of a sentence. The representation of the phrase structure of a sentence is called a *Phrase Marker* or a *P-marker*. According to Akhtar (2006), "The tree, that is, the phrase Maker, is also the structural description of the sentence" (p. 84). That is to say, a phrase marker provides information about the structure of a sentence and indicates how it is generated using phrase structure rules. It is a visual representation that depicts the hierarchical structure of a sentence and shows the different syntactic categories, such as phrases and words.

In a phrase marker, the terminal elements represent lexical items or words like *man*, *hit* and *ball*, and the non-terminal elements represent syntactic categories labelled as *S*, *NP*, *VP*, *Det*, *N*, and *V*. The structure of the sentence "The man hit the ball" can be shown in the following phrase marker.

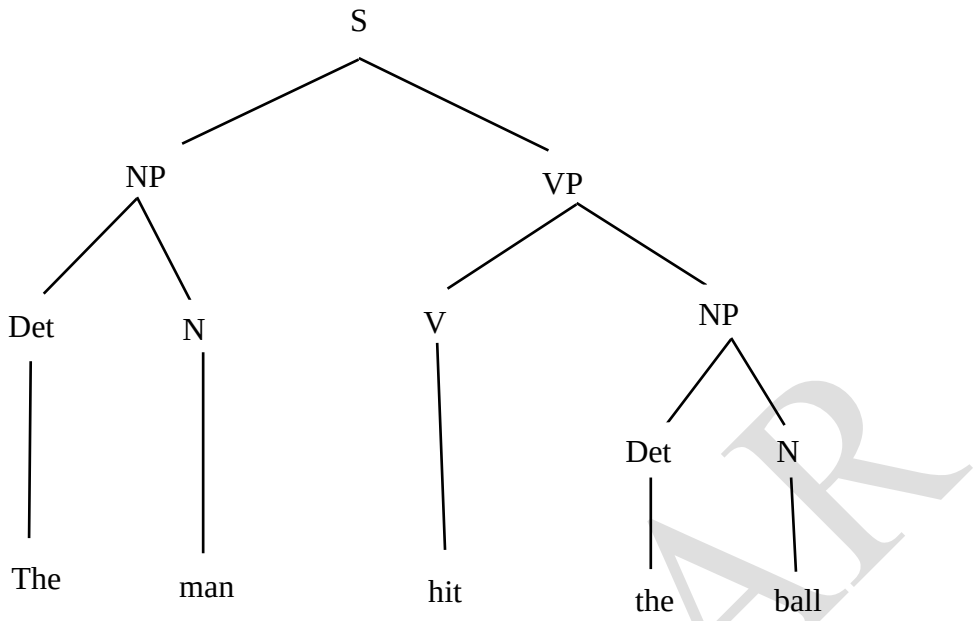

Figure 4.3. A Phrase Marker for the Sentence "The Man Hit the Ball"

The usual form of a phrase marker is a tree diagram with labelled *nodes* connected by branches. According to Speaks (2014), "A node is a 'location' in the diagram, where a name for a syntactic category is" (p. 3). We can distinguish the following types of nodes: *a root node*, *a mother node, a daughter node* and a *leaf node* (Speaks, 2014). A root node is a node located at the top of the tree that dominates all the other nodes but is itself dominated by none. For example, the node labelled *S* is a root node because it is the node under which all the other nodes in the tree fall. A mother node, also called *a parent node*, is located above other nodes. For example, the node labelled *NP* is the mother node of the *Det* and *N*. A daughter node, also known as *a child node*, is located below another node. For example, *Det* and *N* are the daughter nodes of the *NP*. A leaf node, also called *a terminal node*, cannot be further rewritten. It is a node with no daughters. For example, the leaf or non-terminal nodes represent the lexical items *the*, *man*, *hit*, *the* and *ball*. Another type of node is called a *sister node*. Sister nodes share the same mother node. For example, the nodes with the labels *Det* and *N* are sisters because they have the same mother (NP).

The relationship between nodes can be linear or hierarchical. The linear relationship, also referred to as *precedence*, denotes the linear order or sequencing of constituents in a sentence or phrase. It is represented graphically in terms of left-to-right order (Radford, 1988; cited in Abdullah, 2020). In the phrase marker, the node *V* precedes the second *NP* node because V comes before or occurs to the left of the second NP. There are two types of precedence, *immediate precedence* and *sister precedence*. Immediate precedence occurs when a node is immediately in front of another node with no intervening node between them. A node is said to sister-precede another node if they have the same mother node. For example, the node *Det* sister-precedes the node *N* because they have the same mother node (NP). However, the node *N* does not sister-precede the node *V* because they do not have the same mother node, but the node *N* immediately precedes the node labelled *V*.

The relationship between nodes can also be hierarchical. This type of relationship is known as *dominance*. In a phrase marker, dominance is graphically represented in terms of top-to-bottom order to show how higher constituents contain one or more smaller constituents. A node is said to dominate another node only if the first node occurs above the second node in the tree diagram (Radford, 1988; cited in Abdullah, 2020). For example, the node labelled *S* dominates all the other nodes because it is located higher in the tree. A special type of dominance, known as *immediate dominance*, occurs when a node is located above another node without any intervening node (Radford, 1988; cited in Abdullah, 2020). For example, the node *VP* immediately dominates the nodes labelled *V* and *NP*.

IV.3.5. Phrase Structure Grammar versus Immediate Constituent Analysis

Phrase structure grammar and immediate constituent analysis are closely related theories in linguistics. They are both models used to describe the structure of phrases and sentences. They show how sentences are hierarchically structured out of smaller units or constituents. They show how small units (words) combine to form large units (phrases and sentences).

The main difference is that phrase structure grammar uses rules and symbols to represent the relationship between different elements of a sentence. Immediate constituent analysis, on the other hand, focuses on breaking down a sentence into its immediate constituents until small indivisible units are reached. That is to say, phrase structure grammar is broader than immediate constituent analysis, which focuses mainly on identifying the constituents of a sentence.

IV.3.6. Limitations of Phrase Structure Grammar

The main limitations of phrase structure grammar are:

- It generates all and only grammatical sentences, but some of these sentences are meaningless. For example, the sentence *The boy caught the ball* is grammatical and meaningful; however, the sentence *The ball caught the boy* grammatical but meaningless. This is because PSG is a *context-free grammar* (no contextual restrictions are provided to the application of rules).
- It cannot account for sentences that present ambiguities (structural/syntactic ambiguity). Sentences that are ambiguous have many interpretations, and phrase structure grammar cannot resolve these ambiguities.
- Phrase structure grammar primarily focuses on the syntactic structure of the sentences but ignores the sematic aspect (meaning).
- It cannot account for compound sentences, passive sentences, negative sentences and interrogative sentences. Phrase structure rules generate only simple, active, affirmative and declarative sentences. That is to say, PSG cannot describe inter-sentence relationships, for example between active and passive sentences. It cannot specify how an active sentence can be transformed into a passive sentence. For example, PSG considers the sentences *The mouse ate the cat* and *The cat was eaten by the mouse* as being different because they differ in their structure.

Conclusion

In his book *Syntactic Structures*, Chomsky (1957) states that both immediate constituent analysis and phrase structure grammar are inadequate for grammatical analysis. As a result, he suggests another model, Transformational Generative Grammar (TGG), which he qualifies as "a more powerful model ... that might remedy these inadequacies" (p. 49).

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Who is Noam Chomsky?

Avram Noam Chomsky (Born in 1928-present) is an American linguist, political activist and cognitive scientist. By far, Chomsky's greatest contribution is his work in the field of linguistics. The publication of his books *Syntactic Structures* in 1957 revolutionized the field of linguistics. In this book, Chomsky challenged Bloomfield's structural linguistics by introducing the theory of Transformational Generative Grammar. Chomsky presented a reformulation of his linguistic theory in his book *Aspects of the Theory of Syntax* published in 1965.

Source: https://www.larousse.fr/encyclopedie/personnage/Avram_Noam_Chomsky/113487

Exercise 4.4

Consider the sentence "The small dog ran into the house".

1. What are the phrase structure rules used to generate the sentence?

……...

……...

……...

2. Generate two sentences using the same rewrite rules used to generate the sentence above.

……...

……...

3. Draw a Phrase Marker for the sentence.

IV.4. Chomsky's Syntactic Theory (Syntactic Structures, 1957): Transformational Generative Grammar (TGG)

Objectives

At the end of this unit, students will be able to:

- understand the scope of transformational generative grammar;
- understand the concepts of transformation and generation;
- distinguish between kernel sentences and transforms;
- differentiate between phrase structure rules and transformational rules; and
- learn about the strengths and limitations of transformational generative grammar.

Introduction

In his book *Syntactic Structures*, published in 1957, Chomsky proposed another type of grammar, which he calls *Transformational Generative Grammar* or *TGG*. TGG emerged as a reaction to the inferiority of phrase structure grammar. The limitations of phrase structure grammar, mainly its incapacity to account for passive, negative and interrogative sentences, led Chomsky to extend it to include a set of transformations.

IV.4.1. What is Transformational Generative Grammar?

Transformational generative grammar is a theory of grammar proposed by Chomsky. It is one of the most influential theories in linguistics. According to Adetuyi and Fidelis (2015), transformational generative grammar "is best explained by considering the two key words in the string. There are: transformational and generative" (p. 3). That is to say, Chomsky's approach of TGG has two aspects: transformation and generation.

IV.4.1.1. Transformation

The transformational aspect of Chomsky's theory is fundamental. Transformation denotes the act of transforming or changing one sentence into another. According to Chomsky (1957), "every sentence of the language will either belong to the kernel or will be derived from

the strings underlying one or more kernel sentences by a sequence of one or more transformations" (p. 45). For Chomsky, the first sentence is called a *kernel sentence*, and the second sentence is called a *non-kernel sentence* or *transform*. A kernel sentence (or a basic sentence) is simple, active, affirmative and declarative. It is generated through phrase structure rules or rewrite rules. A non-kernel sentence, on the other hand, is created using transformational rules or T-rules. Consistent with Chomsky (1957), a transformational rule "operates on a given string ... with a given constituent structure and converts it into a new string with a new derived constituent structure" (p. 44). That is to say, a transformational rule is a rule that transforms one syntactic structure into another. To create passive, negative and interrogative sentences, transformational rules are applied to kernel sentences. It has to be noted that transformational grammar includes both phrase structure rules and transformational rules. Phrase structure rules generate kernel sentences and transformational rules are applied to kernel sentences to create non-kernel sentences or transforms.

Transformational rules can add, delete or reorder the constituents of a sentence. Therefore, we can distinguish three types of transformational rules: *insertion rules*, *deletion rules* and *movement rules*.

Insertion rules involve the inclusion of new constituents. For example, the passivization of active sentences involves adding or inserting new constituents. Another example of an insertion transformational rule is the Do-support transformation. In any sentence where the auxiliary verb is absent, it is difficult to form an interrogative sentence. To solve the problem, the auxiliary 'to do' is inserted (Nwala, 2020). For example, the declarative sentence *Bill killed the rat* can be transformed into the interrogative sentence *Did Bill kill the rat?* by inserting the auxiliary 'to do' at the beginning of the sentence. Insertion rules can also be used to form negative versions of affirmative sentences. For example, *She is with her parents* can be transformed into the negative sentence *She is not with her parents*.

Deletion transformational rules delete "certain items of constructions as the constructions are undergoing structural changes" (Nwala, 2020, p. 77). Nwala (2020) mentions imperative sentences as examples of constructions that underwent transformations using deletion rules.

Movement rules involve the reordering or movement of constituents in a syntactic structure from one position to another (Nwala, 2020). For example, in making a passive or interrogative sentence, one part of a structure is moved to a different position. Consider the following examples:

- The police arrested the thief. NP1- AUX-V - NP2 (Active)
- The thief was arrested by the police. NP2- AUX- be +en – V – by + NP1 (Passive)

  Or, The thief was arrested. NP2 – AUX - be +en –V (Passive)

The first sentence is active, and the second sentence is passive. The second sentence is a transformation of the first. According to Chomsky (1957), some transformations are optional (such as the passivization of active sentences). Indeed, Nwala (2020) asserts that converting an active sentence into a passive sentence requires the optional "insertion of the preposition 'by', the insertion of a 'Be' verb and the aspect tense marker (be + en)" (p. 76). Another example of movement rules is the formation of questions from declarative sentences. Yule (2010) claims that "In making the question, we move one part of the structure to a different position. This process is based on a movement rule." (p. 104). For example, the sentence *Sarah is eating her sandwich* can be transformed into the question *Is Sarah eating her sandwich?*

IV.4.1.2. Generation

The second property of TGG is that it is generative. Chomsky (1957) states that "The grammar of L will thus be a device that generates all of the grammatical sequences of L and none of the ungrammatical ones" (p. 13). That is to say, grammar has generative rules that create grammatically correct or well-formed structures and fail to create ill-formed or ungrammatical ones. This is known as the *all and only* criterion (Yule, 2017). In Chomsky's

view, the grammar of a language should be so well-designed that by following its rules, one can produce all the grammatical sentences and only the grammatical sentences. A very important notion in Chomsky's approach is that of well-formed structures. For him, the grammar of a language should produce well-formed structures and reject ill-formed structures.

For example, if a grammatical rule states that a prepositional phrase in English consists of a preposition followed by a noun, one should produce all and only grammatical or well-formed prepositional phrases using this rule like *in Paris*. However, when this rule is applied, one can produce prepositional phrases like **with friend*. This prepositional phrase is not well-formed or grammatically correct, which is why it is marked with an asterisk. If we follow the rule stated above, one can produce both well-formed and ill-formed structures. Yule (2017) states that "We clearly need to be more careful in forming the rule that underlies the structure of prepositional phrases in English" (p. 289). To generate all and only well-formed prepositional phrases, Yule (2017) suggests putting a preposition before a noun phrase (not just a noun). In the introductory unit to this chapter, we have seen that a noun phrase can contain a noun, a proper noun, a pronoun, a determiner and a noun, or a determiner, an adjective and a noun.

Yule (2010) asserts that "When we have an effective rule such as 'a prepositional phrase in English consists of a preposition followed by a noun phrase,' we can imagine an extremely large number of English phrases that could be produced using this rule" (p. 97). It means that with just one rule, one can produce a large number of well-formed prepositional phrases. The number is infinite. We can have a small, finite and limited number of rules that can be used to form a large, infinite and unlimited number of well-formed structures. This small set of rules is known as generative grammar because it can be used to form or generate a large number of well-formed phrases and sentences (Yule, 2010). To be more specific, generative grammar refers to a type of grammar in which a small set of rules are used to create an infinite set of

grammatical phrases and sentences. For example, if we apply the rule that states that a prepositional phrase in English consists of a preposition followed by a noun phrase, one can generate an infinite number of prepositional phrases such as *at the university, in the fridge, near the window, by the river, in time, by accident, with George* and many others.

IV.4.2. Strengths and Limitations of Transformational Generative Grammar

Transformational generative grammar, proposed by Noam Chomsky, has several strengths. Its main strength is its generative aspect. It can generate an endless number of grammatical sentences from a limited set of rules. This theory has also limitations, among them:

- It is a highly complex linguistic theory due to its application of mathematical concepts. The rules were expressed in a mathematical way. This makes it challenging for students who might not have a strong mathematical background to understand the model established by the theory (Gbolagade, 2022).
- Chomsky's approach is syntactocentric. More specifically, it focuses heavily on syntax over semantics.

Conclusion

Transformational generative grammar is a system of language analysis proposed by the American linguist Noam Chomsky. It is an extension of phrase structure grammar with the addition of complex rules. It has strengths and limitations. Despite its weaknesses, TGG has contributed significantly to the development of linguistic theory and has impacted later methods of studying language structure. In 1965, Chomsky proposed a reformulation of his theory of TGG presented in his 1957 book.

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Exercise 4.5

Consider the sentence "Mark went to dinner with his beautiful sisters yesterday."

1. In order to form the negative sentence "Mark did not go to dinner with his beautiful sisters yesterday", a transformational rule is applied. Name this transformational rule and explain it by making reference to the transform sentence.

……

……

……

2. Generate three sentences using the same phrase structure rules used to generate the sentence above.

……

……

……

IV.5. Chomsky's Syntactic Theory (Aspects of the Theory of Syntax, 1965): The Standard Theory

Objectives

At the end of this unit, students will be able to:

- distinguish between deep structure and surface structure;
- differentiate between competence and performance;
- write sentences in the surface structure and its possible deep structures; and
- learn about the other changes brought by Chomsky to his TGG theory.

Introduction

Eight years after the publication of *Syntactic Structures*, Chomsky published another book in 1965 entitled *Aspects of the Theory of Syntax* or *Aspects* for short. In *Aspects*, Chomsky presented a reformulation of his theory of transformational generative grammar. This new theory is widely known as the *Standard Theory*. In his 1965 book, Chomsky introduced radical changes, among them two dichotomies: deep structure versus surface structure and competence versus performance.

IV.5.1. Deep Structure versus Surface Structure

In *Aspects*, Chomsky draws a fundamental distinction between deep structure and surface structure. For him, each sentence consists of two structures: deep structure and surface structure. Chomsky (1965) states that "the syntactic component of a grammar must specify, for each sentence, a deep structure that determines its semantic interpretation and a *surface structure* that determines its phonetic interpretation" (p. 16). In other words, a deep structure is related to the underlying meaning of a sentence, whereas a surface structure refers to the actual syntactic form of a sentence as it is articulated or heard.

Consider the following sentences:

- The boss cancelled the meeting.

- The meeting was cancelled by the boss.

These two sentences differ in their surface structure because they differ in their syntactic form (The first sentence is active, and the second sentence is passive). Nevertheless, a closer inspection reveals that the two sentences are closely related, even identical. They are similar because they have the same abstract representation known as deep structure (They use similar words to mean the same thing).

According to Yule (2017), the "same deep structure can be the source of many other surface structures" (p. 291), such as *It was the boos who cancelled the meeting* and *Was the meeting cancelled by the boss?* Conversely, the same surface structure can be represented in different deep structures, which is the case of ambiguous sentences that can be interpreted in many different ways. For example, the surface-level structure sentence *My father-in-law treats my son differently because he is handicapped* has four distinct deep structures, which are:

- My son is handicapped.
- My father-in-law is handicapped.
- My father-in-law treats my son kind-heartedly.
- My father-in-law treats my son harshly.

What is worth mentioning is that phrase structure rules generate the deep structure, and the surface structure originates from the deep structure by applying transformational rules. After applying transformational rules, the surface structure will be obtained.

IV.5.2. Competence versus Performance

Similar to Ferdinand de Saussure, who introduced the concepts of *langue* and *parole*, Chomsky views language as composed of *competence* and *performance*. In his book *Aspects*, Chomsky (1965) makes a distinction between "competence (the speaker-hearer's knowledge of his language) and performance (the actual use of language in concrete situations)" (p. 4).

Competence, also referred to as linguistic competence, denotes the abstract or mental knowledge that native speakers have about their language. More specifically, competence is the hidden and implicit knowledge about grammatical structures that people have in their minds. Competence, according to Chomsky, allows people to generate and comprehend an endless number of sentences, which they can determine as grammatical or not (Djeribiai, 2016).

Performance, on the other hand, is the result of competence. More specifically, it refers to what people do with their abstract linguistic knowledge. Djeribiai (2016) states that "performance is considered to be the physical representation, usually in utterances of any type of the human competence which refers to how someone uses language" (p. 103). That is to say, performance is the actual or concrete use of theoretical linguistic knowledge in real-life communicative situations. To sum up, competence involves knowing the language, and performance entails using the language.

IV.5.3. Aspects versus Syntactic Structures

The theory introduced by Chomsky in his book *Aspects* differs from the one presented in *Syntactic Structures*. The main difference between the Syntactic Structure Model and the Aspects Model is that Chomsky abandoned the concept of the kernel sentence and replaced it with the notion of deep structure. The second radical change is the inclusion of a semantic component. In *Syntactic Structures*, Chomsky neglected the role of meaning; however, in *Aspects*, he incorporated a semantic component that "determines the semantic interpretation of a sentence" (Chomsky, 1965, p.16). The meaning of a sentence is derived from the deep structure. The distinction between deep structure and surface structure is an essential feature of Standard Theory.

Conclusion

Transformational generative grammar is one of the most influential linguistic theories. It was first proposed by the American linguist Noam Chomsky in his 1957 book *Syntactic Structures*. This theory was then modified in his 1965 book *Aspects of the Theory of Syntax*. One of the most significant changes was the integration of Semantics into the theory.

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Exercise 4.6

Say whether the following statements are true or false. Correct the false ones.

1. The semantic structure identifies the form of a sentence that is seen or heard.

……...

2. Phrase structure rules represent the surface structure.

……...

3. Language competence is the native speakers' ability to understand grammatical sentences and detect ungrammatical ones.

……...

Chapter Five

Semantics: The Study of Meaning

Objectives

At the end of this chapter, students should be able to:

- understand the scope and concepts of semantics;
- identify the different types of meaning;
- understand and determine the semantic features of words; and
- explain and discuss lexical relations.

Introduction

There are five levels of language analysis: Phonology, Morphology, Syntax, Semantics and Pragmatics. As explained in the previous chapters, the phonological level deals with the sound patterns of language; the morphological level is concerned with the internal structure of words; and the syntactic level is related to the structure of phrases and sentences. There is a fourth level of language analysis, which is concerned with the study of meaning. This level of analysis is known as Semantics.

V.1. Introducing Semantics

Semantics is a core discipline of linguistics. The term semantics comes from the Greek word *sēma* which means *sign*. It was coined by the French linguist Bréal (Nagy, 2017). According to Yule (2017), "Semantics is the study of the meaning of words, phrases and sentences" (p. 320). It focuses on what words, phrases and sentences mean and not on their syntactic arrangement or pronunciation. From this definition, two types of semantics can be identified: lexical semantics (word meaning and relatedness) and phrasal/sentential semantics (the meaning of phrases and sentences) (Nagy, 2017).

Semantics is the study of meaning in language. The study of how words, phrases and sentences convey meaning is crucial to understand the complexity of human communication.

Semantics helps linguists to discover how meaning is constructed, conveyed and interpreted. Despite its importance, semantics was neglected by scholars. Indeed, Nagy (2017) states that semantics was neglected by American structural linguists like Leonard Bloomfield during 1930-1950 due to its non-observable nature. It was also banned by Chomsky who emphasized syntax as the central concern of language. However, by the late 20th century, some scholars criticized this theoretical stance, leading to a rise of diverse opinions since the 1980s. Nowadays, there is a consensus that language operates with meaning, which cannot be overlooked (Nagy, 2017).

V.2. Meaning and its Types

The field of Semantics focuses on the relationship between words and meanings, which are broadly divided into *referential meaning* and *associative/emotive meaning* (Yule, 2017). According to Yule (2017), referential meaning is the primary or literal meaning of a word, often found in dictionaries, representing its essence. Associative/emotive meaning, on the other hand, evokes specific emotions or associations, which may differ from one person to another (Yule, 2017). In other terms, associative meaning refers to the mental connections a word may have, influenced by personal experiences, cultural factors or emotions. For example, the word *home* has both referential and associative meanings. Its referential or literal meaning is a place where one lives, whereas its associative or emotive meaning involves feelings of comfort, safety or nostalgia. Similarly, the word *snake* has referential and associative meanings. The word literally means a long legless reptile without limbs. However, its associative meaning may evoke feelings of fear or danger. The word *snake* can also be used to refer to a person who acts deceitfully.

In short, referential meaning is the literal definition of a word, while associative meaning refers to the personal or cultural connections with that word. Yule (2010) asserts that when we define words, we deal with referential meaning rather than associative meaning.

V.3. Approaches to the Study of Meaning

According to Nagy (2017), there are three approaches to the study of meaning: semantic feature or componential analysis, semantic roles and semantic/lexical relations. This chapter introduces semantic features and lexical relations.

V.3.1. Semantic Features

Semantic features are unique characteristics that help in defining the meaning of a word. To understand what is meant by semantic features, consider the following sentences:

- The dog is reading a book.
- The milk drank the baby.

These two sentences are perfectly correct from the point of view of syntax but are semantically odd. In the second sentence, for instance, the problem lies in the conceptual meaning of the noun *milk*, which is different from that of the noun *baby*. This prevents one of them from being used as the subject of the verb *drank*. To be the subject of the verb *drank*, the noun *milk* should have the semantic feature of being *animate*.

The semantic property of the words *milk* (inanimate) and *baby* (animate) is a result of semantic feature or componential analysis. Nagy (2017) states that semantic features are the components of a word's meaning, which is perceived as a collection of properties with two potential values (+/-). Yule (2017) further explains that the plus (+) sign indicates the existence of a semantic feature and the minus (–) sign denotes the absence of such property. In the second sentence, the noun *milk* has the –animate (non-living being) feature, while the noun *baby* has the +animate (living being) property. The noun *milk* cannot be used as the subject of the verb *drank* because only animate beings are capable of drinking. Table 5.1 presents other examples of semantic feature analysis.

Table 5.1

Examples of Semantic Feature Analysis

	Animate	**Human**	**Female**	**Adult**
Pen	–	–	–	–
Vixen	+	–	+	+
Widower	+	+	–	+
Kitten	+	–	–	–

V.3.2. Lexical Relations

Words have relationships with each other. The way in which words are related to each other is called *lexical relations*. The semantic description of language involves characterizing the meaning of words based on their relationship to other words, using lexical relations like synonymy, antonymy and hyponymy (Yule, 2017).

V.3.2.1. Synonymy

Synonymy refers to the state of being synonymous. It denotes the relationship between words that have the same meaning or that are closely related in meaning (Nagy, 2017). These words are called *synonyms*. According to Yule (2017), synonyms are words with closely related meanings, which can sometimes be substituted for each other in sentences. Some examples of synonyms are *awful/terrible*, *hard/difficult*, *seek/search* and *smart/intelligent*. Nagy (2017) and Yule (2017) clarify that the sameness of meaning may not always be total, as only one word may be appropriate, as is the case for the words *answer* and *reply*. In addition, synonyms can vary in formal and informal uses (Yule, 2017). For example, the words *postpone* and *children* are used in formal situations, whereas their synonyms *put off* and *kids* are used in informal contexts.

V.3.2.2. Antonymy

In semantics, antonymy refers to the lexical relationship between words that are opposite in meaning. Yule (2017) asserts that words with opposite meanings are called *antonyms*. Examples of antonyms are *hot/cold*, *good/bad*, *wet/dry*, *boy/girl*, *full/empty*, *right/wrong*, *late/early*, and *night/day*. According to the character of semantic opposition, antonyms are divided into two categories: *gradable* and *non-gradable* antonyms (Yule, 2017).

Yule (2017) explains that gradable antonyms exist on a scale. For example, *hot* and *cold* are gradable antonyms because they represent two extremes on a temperature scale with an intermediate point like *warm* between them. For this reason, the negative of one member does not necessarily imply the other (Yule, 2017). For example, when someone says, "It is not hot", it does not necessarily mean that it is cold. In addition, gradable antonyms can be used in comparative constructions (Yule, 2017), for example, *The sun grew hotter as it climbed higher in the sky*.

Unlike gradable antonyms, non-gradable or complementary antonyms are direct opposites; therefore, they cannot be graded. They represent an either/or relationship, where the presence of one implies the absence of the other (Yule, 2017). For instance, *boy* and *girl* are non-gradable antonyms, where one is either a boy or a girl without a middle ground. Since there is no middle ground, non-gradable antonyms do not typically use comparative constructions (Yule, 2017). For example, we do not say that a bottle is *more empty* or *emptier* than another.

V.3.2.3. Hyponymy

Hyponymy is a relationship of "inclusion" (Yule, 2017) or "entailment" (Kreidler, 1998). More specifically, hyponymous relations involve incorporating one word's meaning into another. For example, in the sentence *She planted many flowers in her garden including roses, daisies and tulips*, the words *roses*, *daisies* and *tulips* are *hyponyms* because they are encompassed in the broader category of *flower*. Here, the word *flower* is the *hypernym* or

superordinate of its hyponyms *roses*, *daisies* and *tulips*, which are *co-hyponyms*. The superordinate or hypernym refers to a larger or broader word, while its hyponyms are more specific words. The superordinate includes all its hyponyms, and co-hyponyms are related to each other (Cao, 2022). Hypernyms are located on the superordinate level, and hyponyms are on the subordinate level. This means that the relationship between a hypernym and its hyponyms is hierarchical (Yule, 2017). This hierarchical relationship is better illustrated in Figure 5.1.

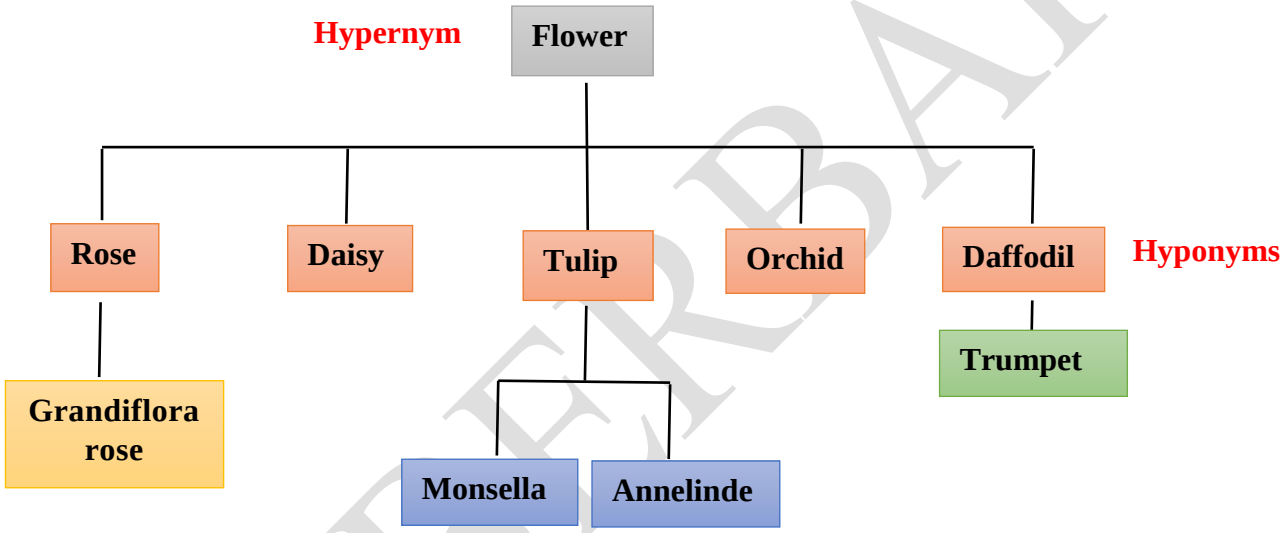

Figure 5.1. Hyponyms of Flower

It is easy to see that *flower*, which is located on the superordinate level, is the hypernym of *rose*, *daisy*, *tulip*, *orchid* and *daffodil*. They are hyponyms of the word *flower* because their meaning is included in the meaning of flower (They are all types of flower). That is why they are located on the subordinate level. It can also be seen that *tulip* is the hypernym of *monsella* and *annelinde*. Therefore, a word can be both a superordinate to multiple hyponyms and a hyponym of some higher superordinate (Nagy, 2017).

V.3.2.4. Homophones and Homonyms

The words *homophone* and *homonym* start with the Greek prefix *homo-*, which means *the same*. Both describe the relationship between words; however, they are different. Homophones

are words pronounced the same but have different spellings and meanings (Yule, 2017), such as *plane* and *plain*, which are pronounced the same but have different spellings and meanings. Other examples of homophones are *eight/ate*, *by/buy* and *brake/break*.

Homonyms, on the other hand, are words that share the same spelling and pronunciation but differ in meaning (Yule, 2017). For instance, the word *ring* can refer to a sound made by a phone or to a piece of jewellery worn on the finger as a decoration or symbol of marriage. Here are other examples of homonyms.

- *Can* (have the ability to) and *can* (a sealed container)
- *Bank* (a financial institution where people keep, borrow or exchange money) and *bank* (land along the edge of a river or lake)
- *Fly* (an insect with wings) and *fly* (move or float in the air)

To sum up, homophones are words that sound the same but are spelt differently, while homonyms refer to words that have the same spelling and pronunciation but different meanings.

Conclusion

This chapter has introduced Semantics, which is a branch of linguistics interested in the study of meaning. Meaning is central to semantics and can be referential or associative. It can be studied from the perspective of semantic features and lexical relations such as synonymy, antonymy, hyponymy, homophony and homonymy.

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Exercises

Exercise 5.1

Say whether the following statements are true or false. Correct the false ones.

1. Synonymy is the relation between two or more words that are related to one another as species of one genus.

……...

2. Semantics refers to a set of rules that set out the correct standard of usage in a language.

……...

3. Associative meaning is the literal meaning of a word.

……...

Exercise 5.2

What is the basic lexical relation between each of the words in bold?

1. He plays two musical instruments: the **piano** and the **guitar**. ……...
2. We will go **see** the **sea** this weekend. ……...
3. It has its **ups** and **downs**. ……...
4. **Rose** received a beautiful **rose** flower. ……...
5. Lisa looks **ravishing** tonight. Her friend, Lea, is equally **stunning**. ……..
6. I felt an **ecstasy** of **joy** at this incomparable beauty. ……..
7. We would like **to** order **two** glasses of lemonade, please. ……..

8. She should be looking for a replacement **vehicle**, but having another **car** in the garage would only be a reminder that there was no one left to drive it. ……..
9. I usually **park** my car near the **park**. ……..

Exercise 5.3

Identify the semantic features of the words *weed*, *ewe*, *iguana*, *rubber*, *veteran*, *cactus*, and *fern*.

Word	**Animate**	**Human**	**Animal**	**Plant**
Weed				
Ewe				
Iguana				
Rubber				
Veteran				
Cactus				
Fern				

Appendices

Appendix A: Examination Models

Third-term Examination

I. Write a clear and coherent paragraph for each of the following questions.

1. Derivational morphemes can make new words from former words. Explain how derivational morphemes make new words. Illustrate each point with an example of your own. **(5 pts.)**

……...

……...

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2. Back clipping and backformation are alike yet different. Explain this statement and support your explanation with examples of your own. **(5 pts.)**

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3. The relationship between morpheme and morph is comparable to the relationship between phoneme and phone. Explain. **(5 pts.)**

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II. Provide a sentence of your own that contains at least THREE independent morphemes and THREE dependent morphemes. Then list these morphemes and indicate their type and category. **(5 pts.)**

Sentence ……...

……...

Morpheme	**Type**	**Category**
……..	……..	……..
……..	……..	……..
……..	……..	……..
……..	……..	……..
……..	……..	……..
……..	……..	……..

All the best.

Fourth-term Examination

Answer all the questions.

I. In his book *Aspects*, Chomsky (1965) states that each sentence in a language has two levels of representation. In a coherent paragraph, discuss the statement and support your discussion with personal examples. **(5 pts.)**

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II. Consider the sentence *"That young man talked to his wife over the phone yesterday."* **(15 pts.)**

1. Draw a Phrase Marker for the sentence. **(4.5 pts.)**

2. Give two examples of recursive rules used to generate the sentence. **(1 pt.)**

a) ……

b) ……..

3. The relationship between nodes can have a ***'top-down'*** or a ***'left-to-right'*** form. In a well-structured paragraph, name and explain these two relationship forms. Support your answer with illustrations from the Phrase Marker drawn above. **(5 pts.)**

……...

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4. Conduct Immediate Constituent Analysis for the sentence using a tree diagram. **(4.5 pts.)**

All the best.

Appendix B: Some Key Answers

Exercise 1.1: Tick the right answer(s).

1. There are two branches of linguistics that are concerned with the study of speech sounds: phonetics and phonology. What is the difference between them?

- Phonetics studies orthographic spelling whereas phonology deals with pronunciation.
- Phonetics is about the physical production of sounds whereas phonology deals with symbolic sounds. ✓
- Phonetics is about sounds of language whereas phonology is about the sound systems of language. ✓

2. Phonotactics is a branch of phonology that deals with

- the restrictions on the types of sounds that are allowed to occur next to each other or in particular positions in the word. ✓
- the study of the rules governing the possible phoneme sequences in a language. ✓
- the rules concerning the ways in which syllables can be created in a language. ✓

Exercise 1.2: Find pairs of words that would contrast the following English phonemes.

/t/ ≠ /d/	***bat ≠ bad***	(Contrast in the final position)
/i:/ ≠ /i/	***seat ≠ sit***	(Contrast in the middle position)
/s/ ≠ /z/	***rice ≠ rise***	(Contrast in the final position)
/m/ ≠ /n/	***meat ≠ neat***	(Contrast in the initial position)
/æ/ ≠/e/	***bad ≠ bed***	(Contrast in the middle position)
/v/ ≠ /w/	***vest ≠ west***	(Contrast in the initial position)

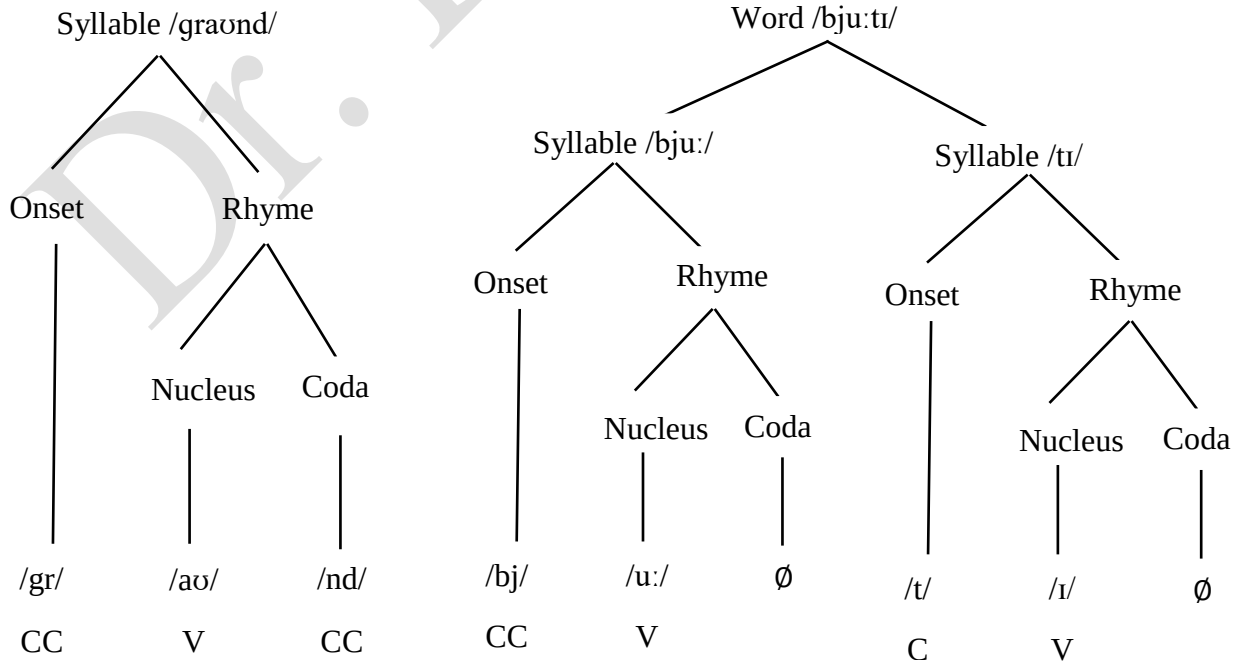
Exercise 1.3: Complete the table below so as to form minimal sets.

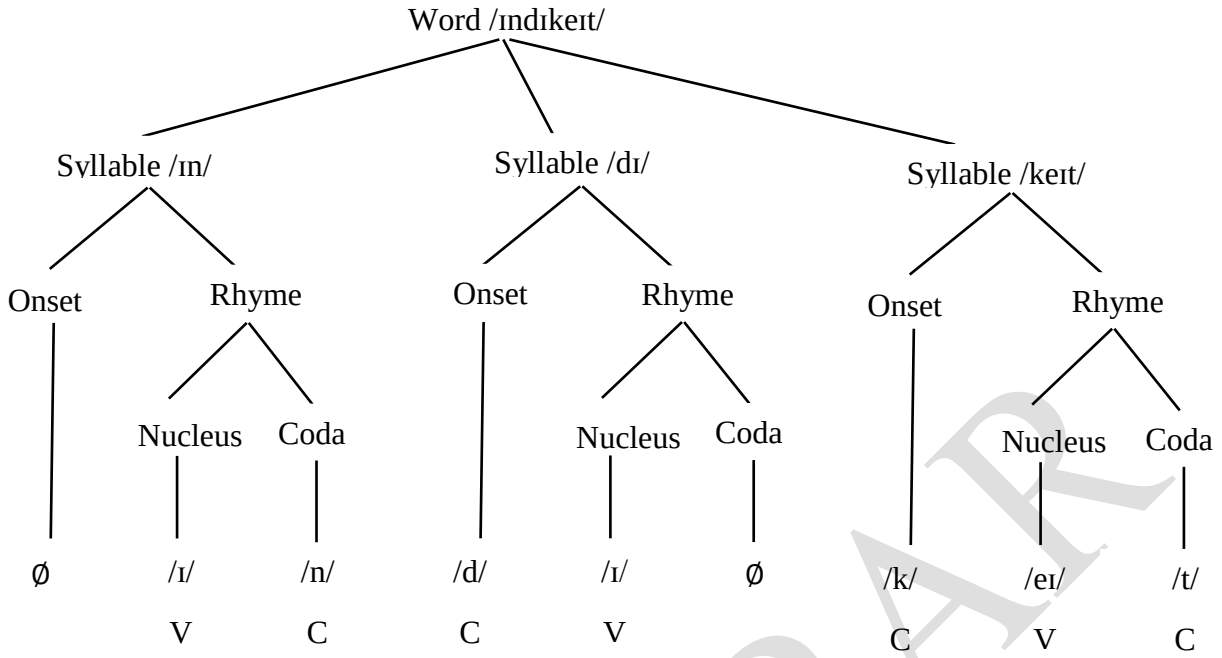
Look	***Cook***	***Book***	***Took***	Contrast in the initial position
Night	***Neat***	***Net***	***Note***	Contrast in the medial position
Fly	***Flee/flea***	***Flue/flu***	***Flow***	Contrast in the final position

Exercise 1.4: Underline the minimal pair in each of the following sentences, and then provide another pair of words in order to form a minimal set.

1. He ***came*** to the ***game*** with his brother. ***same ≠ fame***
2. My friends and I went to the movies to watch the film "The ***Cat*** in the ***Hat***". ***bat ≠ rat***
3. Lack of physical activity and improper eating behaviors are among the ***main*** causes of weight ***gain***. ***rain ≠ seine***
4. I did ***not*** hear the storm last ***night***. ***net ≠ neat***
5. The wine is ***very*** fruity with red ***berry*** notes. ***cherry ≠ merry***
6. The baby's arms are ***caught*** in a ***cot***. ***coat ≠ cat***

Exercise 1.5: Break the following words into syllables and describe the structure of each syllable by drawing a syllable tree.





Exercise 2.1: Identify cases of conversion in the following sentences and determine the part of speech.

1. If you go to Paris, visiting the Eiffel Tower is a ***must***.

*In this sentence, the word **must** is used as a noun.*

2. I will ***ship*** your stuff very soon.

*In this sentence, the word **ship** is used as a verb.*

3. The wine was ***bottled*** in France.

*In this sentence, the word **bottled** (from bottle) is used as a verb.*

4. Stop running around like a ***crazy***.

*In this sentence, the word **crazy** is used as a noun.*

5. Have you ever ***summered*** in the country?

*In this sentence, the word **summered** (from summer) is used as a verb.*

Exercise 2.2: Determine the word formation processes involved in the production of the words in bold in the sentences below.

1. **Sawdust** is always a problem in a woodworker's workshop. ***Compounding*** *(saw + dust)*
2. The **doc** prescribed me some medications. ***Clipping*** *(from the word doctor)*

3. I ate a **pretzel** this morning. ***Borrowing*** *(from German)*
4. He is **papering** the bedroom walls. ***Conversion*** *(from the noun paper)*
5. Could you persuade the readers of your newsletter to **donate** to my charity? ***Backformation*** *(from the noun donation)*
6. Could you give me a quick **recap** of the meeting? ***Clipping*** *(from the word recapitulation)*
7. We will **carpet** the living room. ***Conversion*** *(from the noun carpet)*
8. He is going to **Philly** to visit his family. ***Hypocorism*** *(From Philadelphia)*
9. A **marriage of convenience** is a marriage contracted for practical or financial reasons rather than for love. **Loan-translation or calque** (from French mariage de convenance)
10. Maria **temped** as a secretary. ***Multiple processes*** *(first through* ***clipping*** *by reducing the word temporary to temp and then through* ***conversion*** *by using the word temp as a verb).*

Exercise 2.3: Complete the table below.

Blend word	**Structure**	**Clipped word**	**Original word**
Japlish	***Japanese + English***	***Hippo***	Hippopotamus
Netiquette	***Network + etiquette***	Dorm	***Dormitory***
Pictionary	Picture + dictionary	***Bro***	Brother
Malware	***Malicious + software***	Limo	***Limousine***
Frenemy	Friend + enemy	Sec	***Second***
Email	***Electronic + mail***	***Bras***	Brassiere
Keytar	***Keyboard + guitar***	Rhino	***Rhinoceros***
Alphanumeric	Alphabetic + numeric	***Pro***	Professional

Exercise 3.1: Say whether the following statements are true or false. Correct the false ones.

1. Morphology is the study of the rules governing the sounds that form words. ***False***

Morphology is the study of the internal structure of words and the rules governing their formation.

2. Derivational morphemes are affixes that produce changes in number and tense. ***False***

Derivational morphemes are affixes that create new words by changing their part of speech, their meaning or both.

3. Words are the smallest meaningful language units. ***False***

Morphemes are the smallest meaningful language units.

4. A morph is a different phonological version of a morpheme. **False**

An allomorph is a different phonological version of a morpheme.

Exercise 3.2: Determine the function of the affixes in bold.

1. The explor**ation** of **un**known area**s** often was precursor to colonization.

-tion *is a derivational morpheme/suffix.*

un- *is derivational morpheme/prefix.*

-s *is an inflectional morpheme.*

2. We were at John**'s** house last weekend.

-'s *is an inflectional morpheme*.

3. She occupies the larg**est** suite in the hotel.

-est *is an inflectional morpheme*.

4. At present, the main quota with the addition**al** three-tenths amounts to 16.25% of tax**able** income.

-al *is a derivational morpheme/suffix*.

-able *is a derivational morpheme/suffix*.

Exercise 3.3: Examine the following passage carefully then list five free morphemes and five bound morphemes that occur in the first sentence and indicate their category. When you list the bound morphemes, indicate the words they are attached to.

Huntington's disease is a rare, inherited illness that causes the progressive breakdown of nerve cells in the brain. It impacts a person's functional abilities and usually results in movement, thinking and psychiatric disorders.

Free Morpheme	**Category**	**Bound Morpheme**	**Category**
Is	*Grammatical*	*-ed in "inherited"*	*Derivational*
Rare	*Lexical*	*-ness in "illness"*	*Derivational*
Brain	*Lexical*	*-ive in "progressive"*	*Derivational*
The	*Grammatical*	*-s in "causes"*	*Inflectional*
Cause	*Lexical*	*-s in "cells"*	*Inflectional*

Exercise 3.4: The sentence *The oldest oak trees in the woods swayed in the wind* contains different types of morphemes. Identify all the morphemes and determine the type and category of each morpheme.

The is a free grammatical morpheme.

old is a free lexical morpheme.

-est is a bound inflectional morpheme.

oak is a free lexical morpheme.

tree is a free lexical morpheme.

-s is a bound inflectional morpheme.

in is a free grammatical morpheme.

the is a free grammatical morpheme.

wood is a free lexical morpheme.

-s is a bound inflectional morpheme.

sway is a free lexical morpheme.

-ed is a bound inflectional morpheme.

in is a free grammatical morpheme.

the is a free grammatical morpheme.

wind is a free lexical morpheme.