

Universal Morphology (UM)

Hijab M. Alqahtani¹, Abdulrahman M. Alshabeeb²

Abstract

The theory of Universal Grammar (UG), usually credited to Noam Chomsky (1980), stipulates that if different human beings are brought up under normal conditions, then they will always develop a set of commonly- shared properties, conditions or whatever, distinguishing, for example, nouns from verbs, or function words from content words. Previously, Greenberg (1963) developed a set of forty five linguistic universals after exploring thirty languages. These language universals covered grammar, syntax and morphology. Michael Tomasello (2003) held out that with the passing of time, human species evolved a genetically universal grammar common to all peoples and that the variability in modern languages is basically on the surface only. Syntacticians and other researchers hold the belief that the idea of a universal grammar can be traced back to Roger Bacon's observations in his 1245 overview that all languages are built upon a common grammar (Westacott, 1955).

Similarly, yet not typically, this research paper proposes a hypothesis that human beings have a default set of forming vocabulary. The study explores ways of forming words in four languages, namely English, Arabic, Tamil and Hausa. Since these languages belong to entirely different language families, then pinpointing any similarities in forming words constitute valuable evidence on the validity of the theory.

Keywords: *Universal Morphology, Word Formation, English Morphology, Arabic Morphology.*

Introduction

(Elesawy, 2002: 10) stressed that "Vocabulary is a determinative factor in man's life. Choice of vocabulary items plays an instrumental role in man's ability to express himself and exchange thoughts and ideas with other people. Language first forms were vocabulary items referring to concrete objects in man's surrounding environment."

From the theoretical framework perspective, every language has a system for building up and augmenting their vocabulary. This phenomenon has been recognized as "Word Formation". The first attempt at rendering a definition of word formation was undertaken by Hans Marchand. Marchand (1969: 10-19) who disclosed that word formation is that branch of the science of language which studies the patterns on which a language forms new lexical units, supposedly all languages stemmed from one Adamic language (Bleek et al., 1869). It is supposed also that the survivors on the board of Noah's Ark spoke a unified language. People enjoyed the privilege of speaking unknown Lingua Franca until the incident of the Tower of Babel (Hodge, 2013). The divisions and subdivisions of languages were intensified with the fragmentation of the Pangea or the continental drift (Ince, 2018). Established languages that were formerly dialects within one major family

¹ Associate Prof., Arabic Language education Institute, Imam Mohammad ibn Saud Islamic University (IMSIU), hijqahtani@imamu.edu.sa

² Department of English, College of Languages and Translation, Imam Mohammad Ibn Saud Islamic University (IMSIU), Saudi Arabia, amashebeeb@imamu.edu.sa

share, rather expectedly, some common features, most important of which is a set of techniques for forming vocabulary. Romance Languages, given birth by extinct Latin, are but one good example (Alkire, 2010). Morphologically speaking, there exists more than one classification of languages: agglutinative, fusional, inflectional, synthetic and the like (Lieber, 2015). Languages that fall under any of these classifications share some common tools that form their own vocabulary.

Literature Review:

English Language has been merited to be an entity, a common factor, usually referred and compared to in many a domain. In this connection, word formation is no exception.

Hang (2003) investigated word-formation in both English and Chinese. He compared the rules of word-derivation and inflection in the two languages using the theory of prototypes. Although Chinese is a tonal language, Hang was able to detect a shared core between the two languages. Graliński and Krynicki (1999) studied word-formation between English and Polish through machine translation. Although computational linguistics has achieved remarkable successes in studying semantic roots, they discovered that the machine did not recognize more than 3000 lexemes. Perkles (2008) explored compounding in English and Russian and found that the two languages have developed similar patterns to compound nouns.

Abdulsada (2008) compared word formation in both English and Arabic. He found out that antonomasia is very rare in Arabic. Likewise, he held out that coinage is lethargic in Arabic and that what is said about the ability of Arabic to produce neologism is chauvinistic more than linguistic. Al-Jarf (2015) drew the same comparison between English and Arabic. Although her research was translation- oriented, that is to say it was developed for the sake of translation, yet she managed to set numerous examples on the different methods of forming words in Arabic and to compare them with their English counterparts. Elesawy (2002: P.93-94) conducted a contrastive study between modern standard Arabic and English in so far word formation is concerned. She concluded that "Each linguistic system has its own means of enlarging its resources and enriching its lexical repertoire. Word-formation processes are almost the same in most languages... English and Arabic employ nearly the same processes with minor differences in the labels assigned to some categories and in the sub-categorization of others. For instance, English word -formation comprises a large number of processes (fourteen processes): derivation, blending, compounding, conversion, shifting, reduplication, idiomatic usage, coining, analogic creation, clipping, initializations and acronyms, eponyms, back formation and borrowing. Arabic word-formation, on the other hand, comprises eight processes, namely: derivation, blending, Arabicization, translation, metaphoric usage of language, coining, analogic creation and metathesis and mutation."

Methodology:

This study endeavors to compare eleven vocabulary- building tools in four languages that belong to entirely different families. These languages are: English, a West-Germanic / Indo-European, Arabic, Semitic language, Tamil, a Dravidian language predominantly spoken by the Tamil people of India and Sri Lanka and finally Hausa, a Chadic language (a branch of the Afroasiatic language family) spoken in Niger, in Northern Nigeria, and in Chad (Comrie et al., 2003). The comparative / contrastive method is adopted with the ultimate aim of proving that if the afore-mentioned languages share some groundwork for forming their lexicon, then there exists an innate universal morphology that all human beings share.

The researcher was eager to incorporate a fifth language, a conlang (constructed language) preferably to explore the relation between word formation in both natural and artificial or man-made languages or a language that had been revived or accumulated like Hebrew or Urdu, but this might need a recommended separate study so as not to deviate from the focus of the experiment.

Analysis and Discussion:

Crystal (2003: 523 – 524) defined word formation as "the whole process of morphology and variation in the construction of words. Proper understanding of the word-formation in a language needs a classification of such processes on formal grounds. Bauer (1983) classifies the word-formation in English as follows: Compounding, Prefixation, Suffixation, Conversion, Backformation, Clipping, Formation of blends, Formation of acronyms and Word manufacturing.

1- Onomatopoeia:

It might be a good idea to usher the techniques of word formation by onomatopoeia which represents the oldest way of devising words according to the "Ding – Dong Theory" which stipulates that primitive man acquired the language by imitating natural sounds (Taylor, 1997). The following examples are from English:

Munch	يمضغ
Hush up!	اصمت

Interjections also comes on the top of onomatopoeic expressions like "Blah - blah, Boo, Ha-ha, Hurrah, Oops, Ouch, Wow, Yuck, Yum".

This phenomenon mushrooms out in Arabic as in the following examples:

الحصان	صليل
تذمر الإنسان	دمدم

The following example on onomatopoeia is from Tamil:

muṇumuṇu = 'murmur'.

Inflectional Morphology in Tamil

In Inflectional Morphology, many suffixes may be attached to the base. Some of the suffixation processes may be seen in the following examples:

1. x4 + suf

1. [[eLhut-]V + tulsuf]N 'script'

2. [[paaT-]V + tulsuf]N 'song'

3. [[ooT-]V + tulsuf]N 'cause to drive'

2. x + suf + suf

1. { [putti]N + caali]suf + tanam]suf }N 'intelligence, quality of being intelligent'

3. x # x

1. { [[kooTTai]N # kaTTu]V }V 'nurture ambition'

2. { [eri]V + naTcattiram]N }N 'meteor'

4. x + suf # x

1. { [putti]N + caali]suf # [payyan]N }N 'intelligent boy'

2. { [aLhak-]N + aana]suf # [peN]N }N 'beautiful girl'

3. { [kaaT-]N # Tu]suf # [vaLhi]N }N 'forest route'

4. { [aLhai-]N + ppu]suf ## [itaLh]N }N 'greeting card'

5. x # x # x

1. { [kaar]adj # [kaala]N # [meekam]N }N 'The cloud of the rainy season'

2. { [maarkaLhi]N # [maata]N # [pani]N }N 'The mist of Markazhi month'

Syntactically, the noun forming suffixes such as [-kaaran] and [-kaari] are attached to nouns. These bases cannot be attached to adjectives or verbs. So, the base has to have the syntactic information especially the sub-categorization features so as to put the restriction in the operation of WFR's. The base may be represented as:

1. { [veelai]N + [kaaran]suf}N

2. { [veelai]N + [kaari]suf}N

3. { [kolai]N + [kaaran]suf}N

as against

4. * [karuppu]adj + [kaaran]suf

5. * [paaTu]adj + [kaaran]suf

6. * [paTi]adj + [kaaran]suf

However, [veLLai] + [kaaran] is possible but not

*[karuppu]adj + [kaaran]suf. It seems that [veLLai kaaran] is like an attributive construction as in [veeTTai + kaaran], [tooTTam] + [kaaran].

[kuTi kaaran] is also possible in which the formative [kuTi] is used as noun rather than a verb though the formative can function both as noun and verb.

The suffixes [-tal] and [-ttal] are attached to verbs but not nouns. Moreover, the suffix [-tal] is attached to intransitive verbs and the suffix [-ttal] is attached to transitive verbs. So the base must have the sub-categorization features: the suffix [-tal] may be attached to those verbs that are marked [-transitive] and the suffix [-ttal] may be attached to those verbs that are marked [+transitive]. This may be seen in the following examples.

7. [piri]V-intr + tal] 'separating' (intr.)

8. [piri]V-tr + ttal] 'separating' (tr.)

9. [kalai]V-intr + tal] 'disordering' (intr.)

10. [kalai]V-tr + ttal] 'disordering' (tr.)

11. [eri]V-intr + tal] 'burning' (intr.)

12. [eri]V-tr + ttal] 'burning' (tr.)

13. [vaLar]V-intr + tal] 'growing' (intr.)

14. [vaLar]V-tr + ttal] 'growing' (tr.)

Nominalizing suffix [-tanam] is attached mainly to adjectives to derive nouns. This may be seen in the following examples:

15. [periya]adj + tanam]suf 'generosity'

16. [nalla]adj + tanam]suf 'good quality'

17. [kaLLaa]adj + tanam]suf 'stealthiness'

18. [kanca]adj + tanam]suf 'stinginess'

19. * [kaLLan]N + tanam]suf

20. * [paaTu]V + tanam]suf

21. * [kancan]N * tanam]suf

22. [ooTu]V + tanam]suf

However, [-tanam] is attached to the derived noun [putti + caali] 'intelligent' which will be used as noun also but in [putti + caali # payyan] 'intelligent boy' [putticaali] is an adjective. It is also attached to the nouns like kuRumpu 'mischief,' pookkiri 'rowdy' etc. as in kooLhai + tanam 'cowardice,' kaaTu + tanam 'rudeness.'

2-Reduplications:

Reduplication, also known as "Tautonyms", comes next to onomatopoeia. Hatch (1995, P: 196) defines it as "all or parts of the words are repeated to add quantity, intensity, or smallness qualities by repetition or elongation."p. 196. This phenomenon is found on a large scale in Hindi and other south-eastern Asian languages. Following are some examples from English:

Itty-bitty	شيء صغير الحجم
Mumbo-jumbo	كلام غير مفهوم

Reduplication found its way into Arabic. There exists a group of verbs that are made up of four letters and the two initials are repeated in the two finals. Here follows some examples of reduplication in Arabic:

destabilize	زعزع
Very spicy	حار نار
Not utter a word	سكتم بكتم (عامية)

The following examples are from Tamil:

pooka	pooka	pookapooka	in course of time
arakka	parakka	arakka parakka	hurriedly

And from Hausa the following example is recorded:

Lakakai - Lakakai	Slowly
Yanzu - Yanzu	Immediately

3-Eponyms:

The term "Eponym" which refers to proper names has been defined as "A real or fictitious person whose name has become synonymous with an era, event, object, practice, or the like." (Douglas, 1990). Here follows some examples in English:

Kleenex	مناديل الورق
Xerox	ماكينة تصوير المستندات

English also retains some eponymous phrases which comprises eponymic adjectives: "Achilles' heel, Caesarean section, Descartes doubt, Freudian slip, Gordian knot, Hippocratic Oath, Julian calendar, Oedipal complex and Platonic love" and eponymic verbs: "Bowdlerize, Galvanize, Hoover, Mesmerize and Pasteurize" to mention some.

We find a trace for this concept in Arabic as in:

يوسف أفندي	يوسفي
نسبة إلى الخوارزمي	خوارزمية

Also, eponymy in Arabic is the translation of what Arab morphologists call (النسبة) Nisba) and an eponym is المنسوب إليه . Hassan (2004:603) defines Nisba as a noun to which a stressed ي - is added such as محمد (محمد) Muhammad) is eponymized as محمدي .

For example, Hashim can be Hashimi which is used to refer to a well-known Arab tribe. The adjective شمسي (solar) describes a thing connected with (شمس) the sun).

Source: Ingeish, B. (2012) Eponymy in English and Arabic University of al-Qadissiya /College of Education. Journal of Humanities

4-Acronyms:

Danks (2003:98) explains that an acronym is "a word coined by taking the initial letters of the words in a title or phrase and using them as a new word." Here are some examples from English:

AIDS	Acquired Immune Deficiency Syndrome	مرض الإيدز
FAQ	Frequently asked questions	أسئلة ماثرة بكثرة

If we move to Arabic, we find the same phenomenon, though on a lesser scale as in the following examples:

الأوابك	منظمة الدول العربية المصدرة للبترول
واس	وكالة الأنباء السعودية
أبجدية	ألف باء جيم دال
سامراء	سر من رأى

5-Borrowing

Loaning and exchanging words among languages is a well-established concept that dates back to time in memorial. Sturtevant (1973) noted that ever since England became a maritime nation, and particularly since the establishment of English-speaking nations in distant parts of the world, words have been freely adopted from nearly all known tongues. Apart from foreign plurals, here are some examples of loans that English borrowed from Arabic:

Assassin	يغتيال
Kismet	قسمة ونصيب
Alcohol	الكحول
Coffee	القهوة
Cotton	القطن
Algebra	الجبر

English has loaned some other words which retained their original forms as in "A la mode, Alma mater, Anno domini, Avant-garde, Bureau, Coup d'état, Curriculum vitæ, Déjà vu, Fiancée, Fiasco, Graffiti, Guerrilla, Junta., Laisser – aller, Mal –de-mere, Pari passu, Rendezvous, Sabotage, Siesta, Terra incognita and Vice versa".

Arabic borrowed a lot of words. It managed to assimilate a good portion of its borrowings, yet had to transliterate a large number of loaned words, most especially those related to cultural and technological concepts. Here are some examples.

Helicopter	هليكوبتر
Hormone	هرمون
lorry	لوري
Cigarette	سيجارة
Villa	فيلا
Gallon	جالون
Turbine	توربين

Tamil borrowed some words from English, but its loans came mainly from Dutch and Portuguese as in the following examples:

Dutch (kantōr)	Tamil (kantoor)	Office
Portuguese (sapātu)	Tamil (sapato)	Shoe
Dutch (kokkis)	Tamil (sapato)	Cookies
English (Coffee)	Tamil (kōfii)	Coffee
English (Doctor)	Tamil (dakuthar)	Doctor

In Hausa, we find the following words borrowed from Arabic:

Iyali	أسرة
Lardii	مقاطعة
Jaahilcii	جهل
ldhadi	الاحد
saydd	شاهد

Reference:

Joseph H. Greenberg (1947) Arabic Loan-Words in Hausa, *WORD*, 3:1-2, 85-97, DOI: 10.1080/00437956.1947.11659308

6-Compounding:

Pyles (1971: 289) defines compounding as "putting together two or more words to make a new word with a meaning in some way." It means fusing two whole words together to form a new word with a different meaning. This concept is found extensively in English.

Lifelong	Verb + Adjective
Pickpocket	Verb + Noun

It has been noted that the same technique can be traced in Arabic as in the following examples:

اسم + صفة	برمائي
أداة نفي + اسم	لا مركزية

In Tamil, we encounter the following examples:

<i>talai</i> 'head'	<i>aNai</i> 'support'	<i>talaiyaNai</i>	Pillow
<i>maram</i> 'wood'	<i>peTTi</i> 'box'	<i>marappeTTi</i>	Wooden box

Existence of a longest form in compounding

In Tamil, as it appears, there is nothing like biggest compound. Tamil allows the formation of compounds by adding nouns one after another.

tamizhp palkalaikkazhaka aaTcikkuzhu kuuTTa varalaaRu

Tamil university syndicate meeting history

`the history of the syndicate meetings of Tamil university'

As there is limitation in the formation of long sentence due to memory limitation, there is also limitation in the formation of long word, though theoretically there is no limitation.

viRu viRu ... ndaTai `fast walk'

In Hausa, we have the following example:

Suruka (inlaw)	Uwa (mother)	Surukuwa	Mother – in - law
----------------	--------------	----------	-------------------

7-Blending:

Crystal (1981: P. 449) defines a "blend" as "the result of two elements

fusing to form a new word or construction. "Most blends are constituted by means of fusing the initial segment of a word with terminal of another as in the following examples:

Brunch	BR (B reakfast)	UNCH (l unch)
Smog	SM (S moke)	OG (F og)

The same phenomenon is found in Arabic as follows:

دخان	ضباب	ضبخان
مكان	زمان	زمكان
يمين	شمال	شمين (عامية)
متفائل	متشائم	متشائل
لوز	مشمش	مشلوز
الله	حسبي	حسيل
موت	حضر	حضرمي

Source: <https://www.iasj.net/iasj/download/2cb15d130d495f88>

8-Clipping:

Clipping means cutting off a part of the word and use it without violating the original meaning. This segment could be the beginning, the middle or the end of a word, or both leaving a part to stand for the whole. The resultant form is called a clipped form (Stageberg :1974:121). Clipping is widely used in English as in the following examples:

G ymnasium	G ym
I nfluenza	Flu
T elephone	Ph one

Oriabi (2012, P. 22) investigated the phenomenon of clipping in Arabic and concluded that "Arabic does not use clipping; the word in Arabic has no ability to be divided or cut. If such phenomenon is found, it is so little. Clipping in English is widely and commonly used especially in certain groups such as school groups, college groups, medical groups, and so on. The members of these groups need to communicate quickly and confidently, so clipping shapes their own language. Arabic partition is so little."

The same concept exists in Arabic, though not wide-spread and probably is confined only to nicknames as in:

حليم	عبد الحليم
عزوز	عبد العزيز

Hausa renders the following example of black clipping:

Hajjuwaa	juwaa	Giddiness
----------	-------	-----------

9-Back Formation:

The term, "Retronym" refers to the words that emerge retrospectively. For example a "regular coffee" appeared to distinguish from a mere coffee from a decaffeinated coffee. Some other examples are "Desk-top, Whole bread and Bar soup".

(O' Grady, 1996: P.159) defines the process of backformation as "A process that creates a new word by removing a real or supposed affix from another word in the language. (Romaine, P.73) has noted that verbs constitute the part of speech most often back-formed. Here are some examples in the English language.

(V) Babysit	Coined From	(N) Babysitter
(V) Bulldoze	Coined From	(N) Bulldozer

The same concept does exist in Arabic as in the following example:

تفويج (اسم)	مشتق من	فوج (اسم)
يحلحل (فعل)	مشتق من	حل (اسم)

10- Coinage:

Coining is sometimes called word-manufacture. Gorlach (1995) enumerates seven factors for the success of newly-coined words most notable of which is the productivity of the pattern employed. Here are some examples from English:

Saudization	سعودة
Sky scraper	ناطحة سحاب

11-Derivation:

Derivation simply refers to the processes whereby new words are formed from existing ones (Finch 2000). Some examples are:

(V) empower	يقوي
(N) Farmer	فلاح
(Adj.) Careful	حريص
(Adv.) Possibly	من المحتمل

This technique prospers in Arabic as in the following example:

الجنر الثلاثي (كتب)				
مكاتبة	مكتوب	مكتبة	كاتب	كتاب

The following examples are from Tamil:

a	cuttam 'cleanliness'	acuttam	uncleanliness
azhaku 'beauty'	aana	alakkaana	beautiful

Also, in Hausa, Sani (2002:109) notes that the key morphological process is the use of derivational morphemes in deriving nouns from verbs. In Hausa, about eleven derivational morphemes are employed to derive nouns from verbs in Hausa Language, and they are suffixes. Some of them are discussed below as follows:

A. waa derivational morpheme: Some nouns are derived from verbs when -waa morpheme is suffixed to the verbs. This morpheme always has a high tone and a long vowel, as exemplified thus:

Verb stem	Derived from	Gloss
a) Gamàà	gamààwaa	finish
b) taaràà	taarààwaa ather	together
c) zubàà	zubààwaa	pour
d) yankàà	yankààwaa	slaughter
e) ginàà	ginààwaa	build
f) fasàà	fasààwaa	break

B.-iyaa derivational morpheme

Semantically, -iyaa means act of. There are verbs in Hausa which when -iyaa morpheme is suffixed to them, they change gerundives.

(12) Verb stem	derived from	Gloss
a) kafàà	kafiyaa	stand firm
b) murdaa	murdiyaa	twist

- c) waràà waariyaa separate
 d) goocèè goociyaa slide/slip
 e) goodèè gòòdiyaa thank
 f) daurèè dauriyaa be steadfast

c. -yayyaa derivational morpheme

Certain nouns in Hausa are derived from verbs by suffixing –yayyaa morpheme to the verbs. The -aa vowel can be shortened to become -a at the end of the verbs which usually takes place during the process of derivation, and the tone pattern of the verbs remain the same.

Verb stem derived from Gloss

a) ja jààyyàà pull

b) ki kiyayyàà hate

d) au derivational morpheme: Another derivational morpheme used in deriving nouns from verbs is the -au morpheme.

Verb stem derived from Gloss

saadà sààdau to meet'

It is ripe time to assemble all the previous data about the four languages and their employment of the eleven investigated word formation techniques:

#	Tool	English	Arabic	Tamil	Hausa
1	Onomatopoeia	✓	✓	✓	
2	Reduplication	✓	✓	✓	✓
3	Eponyms	✓	✓		
4	Acronyms	✓	✓		
5	Borrowing	✓	✓	✓	✓
6	Compounding	✓	✓	✓	✓
7	Blending	✓	✓		
8	Clipping	✓	✓		✓
9	Back Formation	✓	✓		
10	Coinage	✓	✓		
11	Derivation	✓	✓	✓	

Before extracting results, the researcher craved for taking the extra mile and exploring these eleven features in three other languages that belong to entirely different categorization. These languages are:

- Basque (a language isolate) which does not belong to any family of languages. This language is spoken in northern Spain.
- Sumerian (an extinct language) that has Semitic affinities.
- Esperanto (a constructed or man-made language) that has Latin affiliation.

Basque has adopted many words from Latin through loaning. For example "lore" which means "flower" is a borrowing of "flore" (Trask: 1997)

Sumerian uses derivation. For example, the vowel /e/ may be prefixed to a root; thus, from "me" which means "speak", we get "e-me" which means "speech" (Pinches: 1884).

Esperanto employs two means, derivation as in "San" = "health" + "a" = Sana "healthy". It uses also compounding as in "pag" = "pay" + "pov" = "able" we get "pag(i)pova" which means "able to pay".

Results:

By grace of the comparative- contrastive method, this research- paper was able to trace eleven different ways of forming vocabulary in four languages that belong to entirely different families. Significantly enough, more than 75% of the techniques utilized in building up vocabulary were identified. Though each technique wavered quantitatively in presence in the four languages, most especially in Tamil and Hausa, yet this presence does indicate that human beings have a default mechanism for forming vocabulary and that without any language input or data they would use these techniques in forming, building up and augmenting their vocabulary. The researcher tends to call this "Universal Morphology".

Recommendations:

Hypothesis and Experimentation are crucial tools in the field of linguistics. They do not cause damage or endanger lives. (Gera, 2003: P. 81) mentioned on the tongue of Herodotus that the Egyptian Pharaoh Psammetichus I (664–610 B.C.) conducted an experiment "to determine whether human beings have an innate capacity for speech, and if so, which particular language is innate. He ordered two infants to be brought up in a remote place by a shepherd who was forbidden to speak in their presence. After two years, the children began to speak, and the word that they repeated most often was becos, which turned out to be the Phrygian word for bread." In 1866, lamentably enough, after the elapse of 2476 years of the Psammetichus experiment, the Linguistic Society in Paris issued a ban on searching into the origin of language (Graffi, 2005). This research recommends further investigation into universal elements linking-up human languages, a matter that would help us know more about ourselves and our history.

Acknowledgement

This work was supported and funded by the Deanship of Scientific Research at Imam Mohammad Ibn Saud Islamic University (IMSIU)(grant number IMSIU-RG23161).

I am also heavily indebted to the University's Rector and other professors for their valuable insights and true guidance. They have been an inspiration to me through their useful tips of advice that has assisted me with accomplishing this task. I am really appreciative of their kind help.

References

- Abdulsada, Mohammed. (2008). Processes of Word Formation In English And Arabic, Journal of the College of Education, Babylon Univ., 2. 71-87.
- Al-Jarf, Reima. (2015). "English and Arabic Word-formation Processes for Translation Students" in "Contrastive Analysis for Translation Students", Riyadh : Al-Obeikkan Printing Press, 165-167.
- Alkire, Ti. (2010). Romance Languages: A Historical Introduction, Cambridge Univ., Press.
- Bauer, L. (1983). English Word-formation, Cambridge: Cambridge University Press.
- Bleek, Wilhelm Heinrich Immanuel. (1869), On the Origin of Language, New York: Schmidt.
- Chomsky, Noam. (1980). "Rules and Representations." Columbia University Press.

- Comrie , Bernard - Matthews, Stephen and Polinsky , Maria. (2003) . The Atlas of Languages: The Origin and Development of Languages Throughout the World, New York: facts on File.
- Crystal, D. (2003). A Dictionary of Linguistics and Phonetics. 6th ed. Oxford: Blackwell publishing.
- Danks, Debbie. (2003). Separating Blends: a Formal Investigation of the Blending Process in English and Its Relationship to Associated Word Formation Processes. University of Liverpool.
- Douglas, Auriel. (1990). Webster's New Dictionary of Eponyms. New York: Simon & Schuster.
- Elesawy, M. Eman. (2002). Word- formation in Modern Standard Arabic and English, M. A. Thesis, Minia Univ., P. 10.
- Finch, G. (2000). Linguistic terms and concepts. New York: St Martin's Press.
- Gera Deborah Levine. (2003). Ancient Greek Ideas on Speech, Language, and Civilization, Oxford Univ., Press. P. 81.
- Gorlach , Manfred. (1991). Introduction to Early Modern English . Cambridge University Press.
- Graffi, Giorgio. (2005). The problem of the origin of language in western philosophy and linguistics. *Lingue e Linguaggio*. 4. 5-26. 10.1418/19784.
- Graliński, F. and Krynicki, G. (1999). "Word-Formation Analysis in Polish-to-English Machine Translation" *Speech and Language Technology*, 4 (185-202).
- Greenberg, Joseph H. (1963). "Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements", *Universals of Language*, London: MIT Press, pp. 110-113.
- Hang, W. Y. (2003). "Prototype theory and differences of word formation between English and Chinese", *Journal of Sichuan International Studies University*, 3 (146 -57).
- Hatch, Evelyn & Cheryl Brown. (1995). *Vocabulary ,Semantics , and Language Education*. Cambridge University Press.
- Hodge , Bodie. (2013). *Tower of Babel*, Arizona : Master Books.
<https://uea.org>
- Ince, Martin. (2018). *Continental Drift: The Evolution of Our World from the Origins of Life to the Far Future*, California: Blueprint.
- Lieber Rochelle. (2015). *Introducing Morphology*, Cambridge Univ. Press.
- Marchand , Hans. (1969). *The Categories and Types of Present-day English Word-formation : A Synchronic- diachronic Approach*. University of Alabama.
- O' Grady,William. (ed.) et.al. (1996). *Contemporary Linguistics :An Introduction*. 3'd ed .Longman .
- Oriabi, Hawraa Hasan. (2012). A Contrastive Study of clipping in English and Arabic, *College of Education Magazine, Univ., of Thi – Qar*, No. 10, P. 22.
- Perkles, M. (2008). *Compounds in English and Russian: A Comparative Analysis*. Master Thesis, Vienna University.
- T. G. Pinches, T. G. (1884). *Language of the Early Inhabitants of Mesopotamia*, in *Journ. Roy. Asiatic Soc.*
- Pyles ,Thomas. (ed.) (1971). *The origins and Development of the English Language*, New York: Harcourt Brace Jovanovich ,Inc.
- Ramaswami. R. (2001). *Lexical Formatives and Word Formation Rules in Tamil*. Retrieved from <http://www.languageinindia.com/dec2001/nramaswami.html>
- Romaine , Suzanne. (2000). *The Cambridge History of The English Language*. Volume IV (1776-1997) Cambridge University press.
- Samaila, Zubairu & Kadiri, Goodluck & Ekwueme, Joekin. (2020). *COMPARATIVE STUDY OF ENGLISH AND HAUSA AFFIXATION*. *International Journal of Current Research*. 7. 1-10.

- Sankaraveleyuthan, Rajendran. (2015). A Comprehensive Study of Word Formation in Tamil. 10.13140/RG.2.1.2363.0805.
- Stageberg, Norman.(1974) An Introductory English Grammar. London: Holt, Rinehart and Winston, Inc.
- Sturtevant, E.H. (1973). Linguistic Change: An Introduction to the Historical Study of Language, University of Chicago Press.
- Taylor, Charles V. (1997). The Origin of Language, CEN Tech. J., Vol. 11, no. 1, 1997.
- Tomasello, Michael. (2003). "Constructing a Language: A Usage-Based Theory of Language Acquisition." Harvard University Press.
- Trask, R. L. (1997). The History of Basque, London and New York: Routledge.
- Unubi, Abraham. (2017). Selected Derivational Morphological Processes in English, Hausa, Igala and Some other Languages of the World.
- Westacott, E. (1955). Roger Bacon in Life and Legend, New York: Philosophical Library.