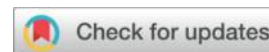




The Arabic Language between Derivation and Affixation



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Abstract:

This study aims to explore the role of two fundamental mechanisms in enriching the morphological and lexical structure of the Arabic language: derivation and affixation. The research is based on the hypothesis that the derivational system represents the central structure for generating Arabic words, whereas affixation constitutes a complementary mechanism with a relatively limited presence. Through a descriptive, analytical, and comparative approach, the relationship between derivation and inflection was examined, as well as the benefits of affixation in word formation, identifying what is original in Arabic and what has entered it due to contact with other languages. The study concludes that the construction of Arabic words is based on two interrelated processes: internal transformation (derivation) and external transformation (affixation), both contributing to the generation of an unlimited number of structures with multiple meanings, confirming the richness of Arabic and its ability to adapt to scientific and cognitive developments.

Keywords: Arabic language; morphology; derivation; affixation; inflection.

Introduction:

The Arabic language is capable of forming new linguistic structures; it presents itself in a flexible way that allows it to interact with changes and developments surrounding human life. This is evident through its mechanisms represented in derivation, affixation, analogy, metaphor, Arabization, and others.

Arabic is considered one of the oldest Semitic languages that has preserved its essential components through the centuries, enabling it to endure and spread thanks to the revelation of the Holy Qur'an in its tongue, which conferred upon it a sacred and eternal character. Scholars of comparative linguistics have agreed that Arabic retained unique phonetic and morphological characteristics distinguishing it

from its Semitic sisters; it is marked by the diversity of sound articulations and the precision of its inflectional system, in addition to its flexibility in generating words and assimilating modern knowledge.

One of the most prominent characteristics of the morphological system in Arabic is derivation, which means generating an unlimited number of words from one root while maintaining the semantic relationship between the original and its derivatives. Derivation is considered the most important means of forming structures and producing vocabulary, granting Arabic a high capacity to assimilate scientific and cultural developments. Derivational studies in Arabic developed since the third century AH, when Ibn Jinni devoted extensive sections to it in his book *Al-Khasa'is*, thus establishing what is called the “School of Derivation.”

Alongside derivation, there appears the mechanism of affixation, which means adding suffixes or prefixes to the root or form. This mechanism is relatively limited in Arabic compared to agglutinative languages such as Turkish and Finnish. The term entered modern Arabic linguistic studies under the influence of Western linguistics, which classified languages into isolating, agglutinative, inflectional, and polysynthetic types.

The linguistic system of Arabic is fundamentally based on derivation, while affixation represents a complementary means for generating forms, particularly in the patterns of derivatives such as nouns of time, place, and the *mim* source.

The importance of this research stems from its aim to reveal the relationship between derivation and affixation through a descriptive, analytical, and comparative approach, showing how these two mechanisms interact in building the Arabic morphological system and identifying what is original in the system and what entered it due to contact with other languages. The Arabic language, thanks to its dual derivational-affixational system, can generate an unlimited number of words and meanings, reflecting the richness of its structural system and its ability to adapt to civilizational transformations. Thus, the research is based on the hypothesis that Arabic word construction rests on two complementary processes: internal transformation (derivation) and external transformation (affixation), both highlighting the dynamic nature of Arabic and its capacity for continual renewal in response to the requirements of modern times in science and technology—a fact acknowledged by both Arab and Western scholars.

First: Derivation

Derivation is one of the most important factors in developing the Arabic language and increasing its vocabulary, and it is one of the most prominent means for the evolution of its words; “for everything

added to the original structure to achieve a verbal or semantic purpose is among the most significant sources of richness in meaning and expression.”

Derivation is a linguistic phenomenon that has distinguished the Arabic language since ancient times and is described as “the most sophisticated of languages, even compared to Aryan languages, due to its flexibility and extensive derivational capacity.”

The phenomenon of derivation was known among the ancient Arabs; they resorted to it out of necessity, as it was the best way for verbal production and linguistic generation. Abu al-Fath Uthman Ibn Jinni (393 AH) is considered the founder of the derivation school, indeed its very originator in its broad sense, for he succeeded in systematizing the process and giving it great importance. In his book *Al-Khasa'is*, in the chapter on “Major Derivation,” he said:

“This is a topic that none of our predecessors have named, except that Abu Ali—may God have mercy on him—used it and relied on it when the minor derivation was insufficient; however, he did not name it, though he resorted to it out of necessity and comforted himself with it. But this permutation (taqlīb) is ours.”

Among those who dedicated independent works to derivation, we mention several early scholars: Al-Asma'i, Qutrub, Abu al-Husayn al-Akhfash, Abu Nasr al-Bahili, Al-Mufaddal ibn Salama, Al-Mubarrad, Ibn Duraid, Al-Zajjaj, Ibn al-Sarraj, Al-Rummani, Al-Nahhas, Ibn Khalawayh, and others.

1) Definition of Derivation:

In *Lisan al-Arab* it is stated: “Shaqqa – yashuququ – shaqqan – shuquqan... *shaqqa* the dawn, i.e., it broke forth; *shaqqa* the plant, i.e., it came out of the ground. From it comes *ishtaqqqa* something, on the pattern *ifta'ala*, meaning to take its part; *ishtaqqqa* a word from a word, i.e., derived it from it.”

Technically, it is “the extraction of one form from another with agreement in meaning, basic material, and structural pattern, so that the second denotes the meaning of the original with an additional sense, due to which it differs in letters or structure, such as *darib* from *daraba*, and *hazir* from *hazira*.”

For the derivational process between two or more words to be valid, the following conditions must be met:

- Sharing the same number of letters, which are three in Arabic.
- These letters must appear in the same order in the related words.
- There must be a common semantic element between these words, since the meaning of a word is composed of several combined elements.

When these conditions are met, we can distinguish the original from the derivative and the authentic from the borrowed.

2) The Origin of Derivation:

We do not wish here to delve into the dispute among linguists regarding the origin of derivation, as a long linguistic debate arose particularly between the Basran and Kufan schools. The best way to resolve this, similar to the debate over the origin of language, is what Dr. Tammam Hassan proposed as a decisive view: the Basrans regarded the verbal noun (*masdar*) as the origin of derivation, since it denotes only the event itself, while the Kufans' theory was based on simplicity and augmentation; thus, the simplest form, namely the triliteral past verb in the third person singular, was seen as the origin.

However, if a connection exists among words, none should be made the origin of the other; rather, they should all be linked to the three root consonants (fa', 'ayn, lam), which form the basis for studying derivation. Hence, the triliteral root is the real origin of derivation according to lexicographers; the verbal noun is derived from it, as is the past verb. From this new understanding of derivation arises the classification of derived words into *inflected* and *inflexible*: the first shows clear relationships among its members through permutations of root letters on different patterns (such as verbs and adjectives), while the second does not, such as *rajul* (man), *faras* (horse), and *kitab* (book). Thus, the verbal noun is a derived, inflected form, as is the past verb, since both derive from one of the forms of the triliteral root.

3) Types of Derivation:

Linguists have divided derivation into three types: minor, major, and greatest.

The first type, known as *minor derivation* (*ishtiqaq saghīr*), is described by Ibn Jinni as follows: "The minor type is that which people know and have in their books, as when you take a root and examine its meanings, gathering its semantic range though its forms and structures differ. For example, the root (s-l-m): you derive from it the meaning of safety in its various inflections—*salima*, *yaslamu*, *salim*, *Salman*, *Salma*, *salamah*..."

This means that minor derivation is the process of forming one word from another with a change in form without altering the root letters or their order. Any added letters that specialize the meaning do not affect the general sense. Linguists call this morphological derivation, and it is what usually comes to mind when derivation is mentioned. It is the most frequent in Arabic and largely responsible for the growth of its vocabulary, as most Arabic word structures result from this type of derivation.

The second type, *major derivation* (*ishtiqaq kabīr*), is considered an innovation of Ibn Jinni, though he noted that Abu Ali al-Farisi had preceded him in it. It consists of "taking a triliteral root and forming from it and its six possible permutations one common meaning that unites all six combinations and their derivatives, even if one seems remote from the others, for it can be returned to them by interpretive reasoning, as derivational scholars do with one arrangement, e.g. (k-l-m), (k-

m-l), (m-k-l), (m-l-k), (l-k-m), (l-m-k).” Ibn Jinni held that these six permutations must share a general meaning, such as strength or intensity. Because it depends on letter permutation, some linguists call it *phonetic permutation*, in contrast to morphological permutation, or *derivational permutation* due to its link to derivation.

This type of derivation is less used in Arabic because of the difficulty in finding a unifying meaning among the six permutations, which led to criticism. Dr. Subhi al-Salih commented: “The truth is that Ibn Jinni, in the chapter on major derivation, if he had stopped short where his knowledge failed him to find a unifying meaning among some permutations, we would have said: he tried, and that is the extent of his knowledge, and it is an honor that he sought to uncover hidden relations and subtle meanings. But he strained the language he loved and believed in, confining it within a narrow path that stifled its spirit—namely, the narrowness of major derivation.” From this, we conclude that despite its rarity, major derivation remains one of the factors of Arabic linguistic growth, as each usable permutation provides a root material capable of generating minor derivations, reflecting the constant dynamism of the Arabic language.

The third type, *the greatest derivation (ishtiqaq akbar)*, was given a separate chapter by Ibn Jinni entitled *Alternation of Words for Related Meanings*, in which he demonstrated connections among roots regardless of whether they were trilateral or quadrilateral, initial or final. He wrote:

“This is a depth of Arabic that cannot be fully explored nor encompassed, and most of Arabic speech rests upon it, though it remains unrecognized.”

He supported his view with examples such as the Qur’anic verse: ‘*Do you not see that We have sent the devils against the disbelievers to incite them with incitement?*’ (Maryam: 84), explaining: “That is, they agitate and disturb them—this corresponds in meaning to *they shake them with shaking*; the hamza (‘) is akin to *ha*, so the two words are close in sound due to the closeness of meaning.”

This derivation relies on substituting phonetically similar sounds to convey a shared semantic function while preserving the order of radicals, as in *nahaqa* and *na‘aqa* (he brayed/cawed). This substitution, however, is not intentional but rather results from dialectal variation: “The purpose is not that Arabs deliberately replaced one letter with another, but rather that different dialects expressed the same meaning with forms differing only by one letter.”

Another type can be included among the forms of derivation—*compounding (naḥt)*, which some linguists called *great derivation (ishtiqaq kubbar)*. This kind of derivation was not common among Arabs, since other derivational types sufficed for their linguistic needs. It means “to take two words and fuse them into one that partakes of both,” as Dr. Subhi al-Salih explained. Ibn Faris was considered the leading advocate of compounding among early Arabic linguists, not only citing around

sixty examples but also developing a theory of analogical derivation, viewing words with more than three letters as often compounded, e.g. *sahsaqala* from *sahala* and *saqala*.

Examples from linguistic works include: *hallala* (to say “la ilaha illa Allah”), *hamdala* (“alhamdu lillah”), and *hawqala* (“la hawla wa la quwwata illa billah”).

Compounding, though rare, was a genuine linguistic phenomenon regulated by Arabic principles, used to generate new words for the sake of brevity and conciseness.

Among the types of derivation, the most frequent in Arabic is minor (morphological) derivation, as discussed above. It is the most widespread and productive because of the morphological changes that occur in its forms. Through it, one can derive from a root the three verb forms (past, present, and imperative), as well as the derived forms: active participle, passive participle, adjective, comparative, nouns of time and place, instrument noun, exclamatory verbs, infinitive (*masdar*), *mim* source, noun of instance, noun of manner, diminutive, and nisba adjective. Some linguists, including Al-Suyuti, counted fifteen kinds of changes that can affect the root to produce new forms, but all ultimately reduce to two types:

1. Vowel changes within the word, known as *internal modification*.
 2. Vowel changes plus the addition of new consonants, known as *augmentative letters*.
- Morphologists have taken great interest in identifying these augmentative letters and the contexts in which each is added.

4.The Relationship Between Derivation and Morphology:

Derivation is closely linked to morphology, as it is through derivation that words are generated and their morphological structures diversified. Ibn Jinni explains this relationship by saying: “It should be known that between morphology and derivation there exists a close kinship and a strong connection, because morphology consists of taking a single word and inflecting it in various forms; for example, you take (ḍaraba) and construct from it as you would from (ja‘fara), thus you say (ḍarbaba)... Likewise with derivation — do you not see that you come to (al-ḍarb), which is the verbal noun, and derive from it the past tense (ḍaraba), then derive from it the present tense (yaḍribu), and then the active participle (ḍārib)... Hence they are closely related and intertwined.” The difference between them—morphology and derivation—lies in the method each uses to handle the word and the purpose for doing so.

Derivation concerns itself with generating words from one another by taking one word from another sharing a common general meaning, on the condition of unity in the number and order of the root letters (trilateral or quadrilateral). If new meanings result from beneficial additions in form, this is because every increase in structure leads to an increase in meaning. Through

derivation, the branch is determined from the root, and the original is distinguished from the derived.

Morphology, on the other hand, deals with the word—verb or noun—from the point of view of the rules governing its formation, such as “the states of verb structures: past, present, and imperative; basic and augmented; sound and defective... It also explains the states of noun structures: static or derived (and types of derivatives), masculine and feminine, singular and plural, shortened, defective, or extended, diminutive and relative, and penetrates to reveal the internal transformations affecting word structures such as vowel alternation, substitution, and assimilation.”

Morphology is thus “the measure of Arabic; through it, the roots of Arabic speech are known and distinguished from the additional elements, and derivation cannot be understood without it.”

Morphology “is more general than derivation because forming a word such as *qardada* from *ḍarb* is called morphology, not derivation, since it pertains specifically to what the Arabs themselves coined.”

In general, derivation and morphology share some common areas of study, but the difference between them is that morphology investigates the outward patterns and the meaning of each pattern, whereas derivation examines the inner meanings and the interrelations among the meanings within the same root. Accordingly, the relationship between derivation and morphology is complementary. They are “phenomena occurring in language and inherent to every nation... meaning that the original signification of a word is simple, then its meaning diversifies and expands proportionally to the evolution of that language.” The merit goes to the affixes that specialize meanings and add new semantic dimensions—affixes that, in modern linguistic studies, are called *affixes*.

Second: Affixation:

Affixation is the second method of word-formation and generation in Arabic, though it applies to a limited number of structures, as will be clarified later.

The term *Affixation* is not originally Arabic in the sense it has in other languages; it results from the typological classification of languages based on structural form and composition, as languages use it in word formation and sentence construction. This classification has allowed the distinction between the following groups of languages:

- A. Inflectional or derivational languages,
- B. Agglutinative languages,
- C. Isolating (monosyllabic) languages,
- D. Polysynthetic languages.

However, the boundaries between these types are not strict, as there is clear overlap among them. All these phenomena—*isolation*, *agglutination*, and *derivation*—exist across languages, and it is difficult for any language to be devoid of them.

Agglutinative languages are those whose words are formed from an original stem composed of one or more syllables that remain stable, while additional elements attach to the root as prefixes or suffixes to vary morphological forms. The term entered Arabic linguistic studies first through Orientalist research on the Arabic language and later through Arab scholars who studied abroad, leading Arabic to be influenced by Western linguistic perspectives. Consequently, every increase in the structure of an Arabic word came to be called *affixation*.

1) The Concept of Affixation:

Linguistically, affixation comes from *laṣīqa–yalṣaqu*, meaning “to stick or attach.” “*Laṣīqa* something to something else means it adhered or clung to it; hence, *lāṣiq* (attached), *laṣṣāq*, *alṣaqahu bihi* (he made it stick), *iltasaqa* (became attached), *talāṣaqa* (mutually attached).” In *Lisān al-‘Arab*: “The letter of attachment is the *bā*’, which grammarians so named because it joins what precedes it with what follows it, as in: *marartu bi-Zayd* (I passed by Zayd).” *Terminologically*, affixation refers to adding an element to the beginning of a word (*prefix*), to its end (*suffix*), or within it (*infix*). European languages mainly use prefixes and suffixes for word formation, with less use of infixes (internal modification). All of these are called *affixation*. In Arabic, affixation is limited to prefixes and suffixes only, though some Arab linguists note its existence in certain forms where meaning appears linked to the word’s pattern rather than the affix. Hence, affixation in Arabic includes prefixes, suffixes, and infixes. Accordingly, Arabic affixes are of two types: derivational affixes and semantic affixes. Derivational affixes form part of the scientific and technical term-building process, becoming part of the word’s structure, while semantic affixes are external elements that add meaning but are not integral to the structure.

Arabic uses both consonantal and vocalic patterns, employing the ten recognized “augmentation letters” contained in the mnemonic phrase *sa’altumūnīhā*. One or more of these sounds may be added to achieve the desired derivational form.

A. Examples of Derivational Affixes:

Derivational affixes are part of the word’s structure and apply to both verbs and nouns, each carrying a distinct meaning.

Table 1: Affixes of Augmented Verb Forms.

Form of Augmented Trilateral Verb	Type of Affix	Extra Letters
<i>aḥʿala</i>	Prefix	ʿalif (Hamzah)
<i>fāʿala</i>	Infix	long <i>alif</i>
<i>faʿʿala</i>	Infix	doubled middle radical
<i>infaʿala</i>	Two prefixes	hamzah of connection and <i>nūn</i>
<i>iftaʿala</i>	Prefix + infix	hamzah of connection and <i>tāʾ</i>
<i>ifʿalla</i>	Prefix + suffix	hamzah of connection and doubled final radical
<i>tafaʿʿala</i>	Prefix + infix	<i>tāʾ</i> and doubled middle radical
<i>tafāʿala</i>	Prefix + infix	<i>tāʾ</i> and <i>alif</i>
<i>istafʿala</i>	Prefixes	<i>alif, sīn, tāʾ</i>
<i>ifʿawʿala</i>	Prefix + two infixes	hamzah of connection, <i>wāw</i> , doubled middle radical
<i>ifʿālla</i>	Prefix + infix	hamzah of connection, <i>alif</i> , final radical
<i>ifʿawwala</i>	Prefix + two infixes	hamzah of connection, <i>wāw</i> , doubled <i>wāw</i>

From the *prefixes of the imperfect tense*, which change the verb tense from past to future and indicate person and number, gathered in *ʿanīta*, we note:

Table 2: Prefixes of the Imperfect Tense

Affix	Pronoun	Imperfect Verb
Hamzah	I (first person singular)	ʿaḥʿalu
Yāʾ	He (third person singular)	yaḥʿalu
Tāʾ	You (second person singular)	taḥʿalu
Nūn	We (first person plural)	naḥʿalu

For derived nouns, examples include:

- The prefix *mīm*, which plays a central role in forming various derivatives from the same root: active participle (*muslim*), passive participle (*maktūb*), place noun (*malʿab*), time noun (*maghrib*), the *mīm*-source (*maʿkal*), and instrument nouns (*miftāḥ*, *minjara*).
- The suffix *-iyy* for relational adjectives (*ʿarabiyy*), or the diminutive *-uyay-* within the word (*shuyʿayr*), among others that alter internal structure.

B. Examples of Semantic Affixes:

These are “elements attached to the word that add meaning but are not part of its structure.” Examples include:

- Prefix *sīn* indicating futurity, as in *sa-tadhhab* (you will go);
- Definite article prefix *al-* as in *al-kitāb* (the book);
- Feminine suffixes such as *-t*, *-ā*, or *-ā'* (*Fāṭima*, *kubrā*, *ṣaḥrā'*);
- Number suffixes:
 1. Dual suffix *-ān* or *-ayn*, as in *muslimān*, *muslimayn*;
 2. Plural suffixes *-ūn*, *-īn*, or *-āt*, as in *muslimūn*, *muslimīn*, *muslimāt*;
- Emphasis suffixes: the heavy *nūn* (*la-af'alanna*) and the light *nūn* (*la-af'alan*).

Thus, affixation is a limited means of word formation compared with derivation, due to the inherent nature of Arabic itself.

Results of the Study:

1. Word formation in Arabic follows two complementary paths: the derivational path (internal transformation of the root) and the affixational path (adding prefixes or suffixes).
2. Derivation forms the central mechanism of Arabic word formation and lexical expansion, occupying the largest share of the lexicon, while affixation serves as a secondary but supportive process.
3. Arabic retains its distinctiveness among living languages through the clear connection between words and their roots, granting it vast generative capacity.
4. The study confirms that the relationship between derivation and morphology is organic and complementary in generating new forms, while affixation plays a supplementary but enriching role.
5. The results show that the Arabic system combines both internal and external transformations, reflecting its dynamic and adaptive linguistic nature.

Conclusion:

This study reveals the vital role that both derivation and affixation play in shaping Arabic structures and enriching its lexicon. It has been shown that Arabic, unlike many other languages, relies primarily on the derivational system for word generation, while employing affixation as a complementary mechanism to broaden and refine meaning.

Therefore, the Arabic morphological system functions through a dynamic complementarity between derivation and affixation, granting it a unique capacity to produce an unlimited number of words and to accommodate modern scientific and conceptual developments. These findings affirm Arabic's status as a language of structural richness and high adaptability, capable of interacting with civilizational and cultural transformations.

The study highlights the need for further linguistic research comparing Arabic with other languages to underscore its distinctive morphological system and its potential to absorb contemporary sciences and technologies.

References:

1. Ibn 'Asfūr al-Ishbīlī, *al-Muqarrab*, 1st ed., 1972.
2. Abū al-Fath 'Uthmān ibn Jinnī (392H), *al-Khaṣā'is*, ed. Muḥammad 'Alī al-Najjār, al-Maktaba al-'Ilmiyya, Egypt.
3. Abū al-Fath 'Uthmān ibn Jinnī, *al-Munṣif*, commentary on al-Māzinī's *al-Taṣrīf*, ed. Ibrāhīm Muṣṭafā and 'Abd Allāh Amīn, 1373H.
4. Aḥmad ibn Fāris, *Maqāyīs al-Lugha*, ed. 'Abd al-Salām Hārūn, Cairo.
5. Aḥmad al-Ḥamlawī, *Shadhā al-'Arf fī Fann al-Ṣarf*, ed. 'Irfān Maṭrajī, Mu'assasat al-Kutub al-Thaqāfiyya, Beirut, 2nd ed., 2003.
6. Tammām Ḥassān, *Manāhij al-Baḥth fī al-Lugha*, Dār al-Thaqāfa, Cairo, 1979.
7. Tammām Ḥassān, *al-Lugha al-'Arabiyya: Ma'nāhā wa-Mabnāhā*, Dār al-Thaqāfa, Casablanca.
8. Tawfiq Muḥammad Shāhīn, *'Awāmil Tanmiyat al-Lugha al-'Arabiyya*, Maṭba'at al-Da'wa al-Islāmiyya, Cairo, 1st ed., 1980.
9. Ḥasan Zāzā, *al-Lisān wa-al-Insān: Madkhal ilā Ma'rifat al-Lugha*, Dār al-Ma'ārif, Egypt, 1971.
10. Jalāl al-Dīn al-Suyūṭī, *al-Muzhir fī 'Ulūm al-Lugha wa-Anwā'ihā*, al-Maktaba al-'Aṣriyya, Ṣaydā-Beirut, 1987.
11. Jurjī Zaydān, *al-Falsafa al-Lughawiyya wa-al-alfāz al-'Arabiyya*, Maṭba'at al-Hilāl, Cairo, 3rd ed.
12. Ṣubḥī al-Ṣāliḥ, *Dirāsāt fī Fiqh al-Lugha*, Dār al-'Ilm li-l-Malāyīn, Beirut, 9th ed., 1981.
13. 'Abd al-Ḥamīd al-Sayyid, *al-Mughnī fī 'Ilm al-Ṣarf*, Dār al-Ṣafā', 1st ed., 2009.
14. 'Abd al-Ṣabūr Shāhīn, *al-'Arabiyya Lughat al-'Ulūm wa-al-Taḥqīq*, Dār al-'Itisām, 1986.
15. 'Alī al-Qurayshī, *Tawḥīd al-'Ulūm fī al-Jāmi'āt al-'Arabiyya wa-al-Islāmiyya*, IslamWeb Library, 1998.
16. 'Alī 'Abd al-Wāḥid Wāfī, *'Ilm al-Lugha*, Dār Nahḍat Miṣr, 9th ed., 2004.
17. Farḥāt 'Ayyāsh, *al-Ishtiqāq wa-Dawruh fī Numū al-Lugha al-Ḥayya*, Dīwān al-Maṭbū'āt al-Jāmi'iyya, Algiers, 1975.
18. *Lisān al-'Arab*, Ibn Manẓūr, 10th ed., Dār Ṣādir, Beirut, 1995.
19. Muḥammad Muḥammad Yūnis, *Wasf al-Lugha al-'Arabiyya Dalāliyyān fī Ḍaw' Maḥmūd al-Dalāla al-Markaziyya*, University of al-Fātiḥ, Tripoli, 1993.
20. Mario Pei, *Asās 'Ilm al-Lugha*, tr. Aḥmad Mukhtār 'Umar, 'Ālam al-Kitāb, 8th ed., Cairo, 1998.
21. Najāt 'Abd al-'Azīm al-Kūfī, *Abniyat al-Af'āl*, Dār al-Thaqāfa, Egypt, 1989.

22. Nuhād al-Mūsā & Da‘ūd Abū ‘Awda, *‘Ilm al-Ṣarf*, al-Sharika al-‘Arabiyya al-Muttaḥida, Cairo, 1st ed., 2008.
23. Yehuda Sulaymān Imām, “Means of Word Formation in Arabic and Hausa,” *Journal of African Studies*, University of Africa, Sudan, No. 42, December 2009.