



# A Comparative Study on Morphology Between English and Arabic Language

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The point of this investigation is to portray the Arabic and English morphological frameworks so as to recognize the similitudes and contrasts between them. There are a few different ways of framing words in English and Arabic, yet the most widely recognized ways are deduction, affectation and exacerbating. This part is an endeavor to talk about the derivational frameworks of English and Arabic similarly. The investigation and depiction of the components of morphology: affectation, induction and exacerbating. The two portrayals will cover the structure, the importance and the circulation of morphemes. The circulation of morphemes is the aggregate of the considerable number of settings in which they can happen. A full comprehension of any morpheme includes understanding its dissemination just as its significance. The different sorts of limitations on the blends of morphemes, the request in which morphemes can be masterminded, sets of morphemes which can never happen together in a similar word, classes of morphemes required to happen in specific conditions will be given. Complex examples of choice of allomorphs will be given. The kind of importance inferred without any morpheme of a given request will be brought up. All allomorphs will be recorded and runs for the right choice will be given. General morphophonemic proclamations which apply all around in the framework will be made.

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## 1.1 MORPHOLOGY:

The term morphology is by and large credited to the German artist, author, writer, and scholar Johann Wolfgang von Goethe (1749– 1832), who begat it right off the bat in the nineteenth century in an organic setting. Its derivation is Greek: transform signifies 'shape, structure', and morphology is the investigation of structure or structures. In science morphology alludes to the investigation of the structure and structure of life forms, and in topography it alludes to the investigation of the setup and development of land frames. In phonetics morphology alludes to the psychological framework associated with word arrangement or to the part of semantics that manages words, their inside structure, and how they are shaped.

Morphology is the investigation of word-development and association. Morphology encourages us to portray how words are made up in a language. Each word is comprised of at least one morpheme. Morphemes are the littlest units of language that have their own importance or linguistic capacity. Consider the word 'perfection'. If we somehow managed to split this word up into littler units of importance we would likely do the accompanying: love + li + ness. Today we will discuss the morphology of English and how words can be framed in various ways<sup>1</sup>.

## 1.2 MORPHEMES

A noteworthy manner by which morphologists explore words, their interior structure, and how they are shaped is through the distinguishing proof and investigation of morphemes, regularly characterized as the littlest etymological pieces with a linguistic capacity. This definition isn't intended to incorporate all morphemes, however it is the standard one and a decent beginning stage. A morpheme may comprise of a word, for example, hand, or a significant bit of a word, for example, the – ed of looked, that can't be separated into littler important parts. Another manner by which morphemes have been characterized is as a blending among sound and significance. We have intentionally decided not to utilize this definition. A few morphemes have no solid structure or no persistent structure, as we will see, and some don't have implications in the customary feeling of the term.

The term 'transform' is now and then used to allude explicitly to the phonological acknowledgment of a morpheme. For instance, the English past tense morpheme that we spell -ed has different transforms. It is acknowledged as [t] after the voiceless [p] of hop (cf. hopped), as [d] after the voiced [l] of repulse (cf. repulsed), and as [əd] after the voiceless [t] of root or the voiced [d] of marry (cf. established and married). We can likewise call these transforms

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<sup>1</sup> Bauer, L. (2003). Introducing linguistic morphology.



allomorphs or variations. The presence of one transform over another for this situation is controlled by voicing and the spot of verbalization of the last consonant of the action word stem. Presently think about the word reexamination. We can break it into three morphemes: re-, consider, and -ation. Consider is known as the stem. A stem is a base morpheme to which another morphological piece is connected. The stem can be straightforward, comprised of just a single part, or complex, itself made up of more than one piece. Here it is ideal to consider a basic stem [Snodgrass, R. E. (1993). *Standards of bug morphology*. Cornell University Press. Page.no: 30-45].

In spite of the fact that it comprises verifiably of more than one section, most present-day speakers would regard it as an unanalyzable structure. We could likewise call think about the root. A root resembles a stem in comprising the center of the word to which different pieces join, however the term alludes just to morphologically straightforward units. For instance, differ is the stem of contradiction, since it is the base to which -ment joins, however concur is the root. Taking differ now, concur is both the stem to which dis-joins and the foundation of the whole word. Returning now to reevaluation, re- and -ation are both appends, which implies that they are connected to the stem. Attaches like re-that go before the stem are prefixes, and those like -ation that follow are additions. A few perusers may ask why we have not broken -ation down further into two pieces, -ate and -particle, which work freely somewhere else. In this specific word they don't do as such (cf. \*reconsiderate), and subsequently we treat -ation as a solitary morpheme. It is vital to pay attention to the possibility that the linguistic capacity of a morpheme, which may incorporate its importance, must be consistent. Think about the English words exquisite and rapidly. They both end with the addition -ly. In any case, is it the equivalent in the two words? No – when we include -ly to the descriptive word brisk, we make a qualifier that depicts how quick somebody accomplishes something. Be that as it may, when we include -ly to the thing love, we make a descriptive word. What superficially has all the earmarks of being a solitary morpheme ends up being two. One appends to descriptors and makes qualifiers; different joins to things and makes modifiers.

There are two different sorts of fastens that you will experience, infixes and circumfixes. Both are exemplary difficulties to the idea of morpheme. Infixes are segmental strings that don't join to the front or back of a word, but instead some place in the center<sup>2</sup>.

### 1.2.1 Free and bound morphemes

From these two precedents, we can make an expansive refinement between two sorts of morphemes. There are free morphemes, that is, morphemes which can remain independent from

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<sup>2</sup> Booij, G. (2010). Construction morphology. *Language and linguistics compass*, 4(7), 543-555.



anyone else as single words, (for example open and visit). There are likewise bound morphemes, that is. those which can not ordinarily remain solitary, however which are normally appended to another structure. (for example re-, - ist, - ed, - s). You will perceive this last set as a gathering of appends. So. all attaches in English are bound morphemes. The free morphemes can be commonly considered as the arrangement of discrete English word-shapes. When they are utilized with bound morphemes, the fundamental word-structure included is in fact known as the stem. For instance:

carelessness

<b>cure</b>	<b>-less</b>	<b>-ness</b>
<b>stem</b>	<b>suffix</b>	<b>suffix</b>
<b>(free)</b>	<b>(bound)</b>	<b>(bound)</b>

undressed

<b>un-</b>	<b>dress</b>	<b>-ed</b>
<b>prefix</b>	<b>stem</b>	<b>suffix</b>
<b>(bound)</b>	<b>(free)</b>	<b>(bound)</b>

There are various English words in which the component which is by all accounts the 'stem' isn't, indeed, a free morpheme. In words like get, diminish and rehash, we can perceive the bound morpheme re-, yet the components - ceive, - duce and - peat are obviously not free morphemes. There is still some contradiction over the correct portrayal of these components and you may experience an assortment of specialized terns used to depict them. It might work with a straightforward qualification between those structures like - cive and – duce as 'bound stems' and different structures like dress and fix as 'free stems'.<sup>3</sup>

### 1.3 DERIVATIONAL VERSUS INFLECTIONAL

The distinction among derivational and inflectional morphemes merits stressing. An inflectional morpheme never shows signs of change the linguistic class of a word. For instance, both old and more seasoned are descriptive words. The - er enunciation (from Old English - ra) essentially makes an alternate rendition of the modifier. Be that as it may, a derivational morpheme can change the syntactic class of a word. The action word educate turns into the thing educator in the

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<sup>3</sup> Taft, M., & Zhu, X. (1995). The representation of bound morphemes in the lexicon: A Chinese study. *Morphological aspects of language processing*, 293-316.



event that we include the derivational morpheme - er (from Old English - ere). Along these lines, the postfix structure - er can be an inflectional morpheme as a major aspect of a modifier and furthermore a particular derivational morpheme as a component of a thing. Because they (- er) look the equivalent doesn't mean they do a similar sort of work. In the two cases, they are bound morphemes. At whatever point there is a derivational postfix and an inflectional addition joined to a similar word, they generally show up in a specific order: First the derivational - er connects to instruct, at that point the inflectional - s is added to yield instructor<sup>4</sup>.

#### 1.4 MORPHS AND ALLOMORPHS

The answer for different issues stays disputable. One approach to treat contrasts in inflectional morphemes is by proposing variety in morphological acknowledgment rules. So as to do this, we draw a relationship with certain procedures effectively noted in phonology . In the event that we consider 'telephones' as the genuine phonetic acknowledgment of 'phonemes', at that point we can propose transforms as the real structures used to acknowledge morphemes . Along these lines, the structure feline is a solitary transform understanding a lexical morpheme. The structure felines comprises of two transforms: understanding a lexical morpheme and an inflectional morpheme ('plural'). Similarly as we noticed that there were 'allophones' of a specific phoneme, at that point we can perceive allomorphs of a specific morpheme.

Take the morpheme 'plural'. Note that it tends to be joined to various lexical morphemes to create structures like 'feline + plural' , 'sheep + plural', and 'man + plural'. Presently, the real types of the transforms which result from the single morpheme 'plural' end up being unique. However, they are for the most part allomorphs of the one morpheme. It has been proposed, for instance, that one allomorph of 'plural' is a zero-transform and the plural type of sheep is really 'sheep+ $\emptyset$ '. Something else, those supposed 'sporadic' types of plurals and past tenses in English are depicted as having individual morphological acknowledgment rules. Therefore , 'man + plural' or 'go + past', as investigations at the morpheme-level, are acknowledged as men and went at the transform level<sup>5</sup>.

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<sup>4</sup> Matsumoto, Y. (1988, October). From bound grammatical markers to free discourse markers: history of some Japanese connectives. In Annual Meeting of the Berkeley Linguistics Society (Vol. 14, pp. 340-351).

<sup>5</sup> Bonet, E. (2009). Morph insertion and allomorphy in Optimality Theory. International journal of English studies, 4(2), 73-104.

## 1.5 MORPHEME-BASED MORPHOLOGY

In morpheme-based morphology, word shapes are broke down as game plans of morphemes. A morpheme is characterized as the negligible significant unit of a language. In a word, for example, autonomously, the morphemes are said to be in-, depend, - ent, and ly; depend is the root and different morphemes are, for this situation, derivational attaches. In words, for example, hounds, hound is the root and the - s is an inflectional morpheme. In its least difficult and most gullible structure, along these lines of breaking down word shapes, called "thing and-game plan", regards words as though they were made of morphemes put after one another ("linked") like dots on a string. Later and complex methodologies, for example, appropriated morphology, try to keep up the possibility of the morpheme while pleasing non-linked, analogical, and different procedures that have demonstrated dangerous for thing and-course of action speculations and comparative methodologies.

Morpheme-based morphology presumes three fundamental adages:

- Baudoin's "single morpheme" theory: Roots and appends have a similar status as morphemes.
- Bloomfield's "sign base" morpheme speculation: As morphemes, they are dualistic signs, since they have both (phonological) structure and importance.
- Bloomfield's "lexical morpheme" speculation: morphemes, joins and roots alike are put away in the vocabulary.

Morpheme-based morphology comes in two flavors, one Bloomfieldian and one Hockettian. For Bloomfield, the morpheme was the insignificant structure with significance, yet did not have meaning itself.[clarification needed] For Hockett, morphemes are "meaning components", not "structure components". For him, there is a morpheme plural utilizing allomorphs, for example, - s, - en and - ren. Inside much morpheme-based morphological hypothesis, the two perspectives are blended in unsystematic ways so an author may allude to "the morpheme plural" and "the morpheme - s" in a similar sentence.



## 2. MORPHOLOGY IN ENGLISH

### 2.1 INTRODUCTION:

Morphology is the investigation of word-formation and association. Morphology encourages us to portray how words are made up in a language. Each word is comprised of at least one morpheme. Morphemes are the littlest units of language that have their own importance or syntactic capacity. Consider the word 'exquisiteness'. If we somehow managed to split this word up into littler units of importance we would likely do the accompanying: love + li + ness. Today we will discuss the morphology of English and how words can be shaped in various ways. The zone of etymology in which he has been doing this work is known as morphology, which manages the littlest important units and how they consolidate to shape bigger units (e.g., words). This part covers only this territory<sup>6</sup>.

### 2.2 MORPHEMES AND ALLOMORPHS

When we take a gander at different expressions of English, we understand that it is conceivable to separate some of them into their constituent parts, where each part bears some sort of significance. For example, a word like meatball can be separated into meat and ball, and a word like bounced can be separated into hop and - ed. Moreover, our certain information additionally reveals to us that these two words can't be separated any further. Henceforth, if we somehow happened to separate the word bounce any further, say, into ju and mp, there is no significance left by any means. Words like meat are somewhat trickier. We could break this word into m and eat, where eat appears to endure meaning. The issue is this eat bears no important relationship to its appearance in meat. At the end of the day, an important piece of the word meat isn't eat. The equivalent applies if we somehow happened to separate meat into me and at, or to separate ball into b and all: Me and at don't bear the first implying that they had in meat as aren't a piece of the word meat, and all does not have any significant relationship to ball as isn't a piece of the word ball. Obviously, numerous different words can't be separated by any stretch of the imagination, as we did with meatball and hopped: Cat, for example, can't be separated into any further constituents (in spite of the fact that felines can be separated into feline and - s).

When we find the littlest important units along these lines, we have found morphemes. Now and then morphemes are additionally finished words in English, as we saw with the word feline. More often than not, notwithstanding, words in English include more than one morpheme. Besides, in the event that we analyze a portion of these morphemes, we find that they seem to

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<sup>6</sup> Snodgrass, R. E. (1993). *Principles of insect morphology*. Cornell University Press.



change their phonetic structure somewhat. Consider, for instance, the English plural marker - s. Give cautious consideration to the precise articulation of the plural markers in the English words in the three sections recorded underneath<sup>7</sup>.

<u>List #1</u>	<u>List #2</u>	<u>List #3</u>
finks	rugs	bushes
bats	computers	buzzes
laps	scams	kisses
rocks	tubs	judges

When we pronounce these words, we find that while all are plural, they have slightly different sounds. They are all, however, instances of the very same morpheme, namely, English plural -s. When we find different phonetic variants of the very same morpheme, we refer to these variants as *allomorphs* of the same *morpheme*. (This is obviously similar to allophones of a phoneme, but, again, here we are speaking of the smallest meaningful units, not just segments.)

### 2.2.1 Some simple contrasts in morphology

Morphemes can be separated into various sorts, and by different criteria. For instance, meatball isolates into the morphemes meat and ball, and hopped partitions into the morphemes hop and - ed. While these are legitimate morphological divisions, it appears to be instinctively clear that the status of meat or ball or bounce is here and there not quite the same as the status of a morpheme like - ed.

Additionally following from the sans bound difference is a refinement among various types of bound morphemes. The model given above was - ed, as in hopped. The bound morpheme - ed is an addition, which implies that it is bound to one side of the stem, bounce. English additionally has bound morphemes to one side of the stem, that is, prefixes. For example, the word interstate is included the bound morpheme bury and the free morpheme express; the morpheme entomb is a prefix. Human dialects additionally incorporate a third kind of bound morpheme, this sort found not to one side or to one side of the stem, however inside the stem. English does not have such infixes, however Tagalog, a language verbally expressed in the Phillippines, does For example, in Tagalog, the infinitival type of the action word is set apart by the infix - um-, as the accompanying precedents appear:

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<sup>7</sup> Embick, D. (2010). Localism versus globalism in morphology and phonology (Vol. 60). MIT Press.





<u>Tagalog bare verb</u>	<u>English bare verb</u>	<u>Tagalog infinitive</u>	<u>English</u>
<u>infinitive</u>			
sulat	write	<u>sumulat</u>	to write
kuha get	take, get	<u>kumuha</u>	to take, to
bili	buy	<u>bumili</u>	to buy

We morpheme (e.g., discovering that another morpheme - choke implies in the exceptionally later past). For things, action words, descriptive words and qualifiers which we call the major lexical classes speakers promptly include new morphemes. Consequently, we call these open-class morphemes. Paradoxically, for the morphemes that incorporate the utilization of is shown above or the utilization of - ed, we utilize the term shut class morphemes in light of the fact that these classifications don't promptly enable speakers to add passages to them. Shut class morphemes incorporate not just bound morphemes like - ed, - ing, and so forth, yet in addition free morphemes like the relational words (e.g., in, at, on, under), the determiners (a(n), the), the conjunctions (e.g., and, or, however), the proforms (e.g., the pronouns she, they, him, it, and so forth.) and the non-topical action words (i.e., modals like can, ought to and must and assistants like be and have).

### 2.2.2 Words and various leveled structure

Words, as they are perceived by local speakers of English, in this manner include either a solitary morpheme (e.g., ketchup) or connections (mixes) of morphemes, once in a while a free morpheme and a bound morpheme (e.g., rodent s), some of the time a free morpheme alongside another free morpheme (e.g., ratfink), and some of the time blends (ratfink-s). Seen from this point of view alone, one would accordingly imagine that words may have a direct structure, maybe along the lines of the precedent beneath:

ratfinks rodent + fink + - s

Since a rodent is a N(oun) as is a fink, we could in this manner reformulate the direct portrayal to mirror the status of the words significant constituent parts:

ratfinks N + N + - s

At first look, nothing would appear to contend against such a straight investigation of the structure of words, however (as one may expect) a to some degree increasingly watchful



examination uncovers that a direct portrayal of word structure doesn't generally mirror our fundamental phonetic learning as local speakers. Consider a word like misery, involved the morphemes un-, cheerful, and -ness. Glad is an ADJ(ective), so a straightforward direct portrayal would be to some degree like the accompanying:

misery un-happyADJ -ness

The essential issue with this direct portrayal is that there is nothing in this portrayal to show that misery is a thing, not a modifier.

Along these lines of doing the direct portrayal works, however just up until this point. Actually, on the off chance that we cautiously analyze un-and -ness by joining them with different structures we find that they make them intrigue impacts. Consider un-, specifically, its uses in the accompanying words:

unimportant	unsafe
untrue	unaware
unruly	uncivil
untidy	unclean

Essentially, the significance of these employments of un-is something like not X. Significantly more vitally for the present dialog, each and every morpheme that un-is connected to in the posting above is a modifier<sup>8</sup>. This means un-isn't in charge of making the thing despondency out of the modifier upbeat. Undoubtedly, it creates the impression that un-can't join itself to a thing, not ever, as proposed by the marks on the un-+ N shapes underneath:

- \*the undoor
- \*the unwindow
- \*the uncomputer
- \*the unrock
- \*the unbook
- \*the unwood

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<sup>8</sup> Kleinberg, J. (2002, July). Bursty and hierarchical structure in streams. In Proceedings of the eighth ACM SIGKDD international conference on Knowledge discovery and data mining (pp. 91-101). ACM.



### 2.2.3 Compounds

Above we found out about the various leveled structure of words like rehospitalize and reshippable. Yet, shouldn't something be said about words like blackbirds or seashells? Specifically, what is the stem of these words? Truth be told, on the off chance that we consider the distinction among bound and free morphology, we find that stems are commonly free while fastens are bound. Be that as it may, shouldn't something be said about seashells? It appears to have two stems, ocean and shell, however just the stem on the right (shell) bears a fasten (i.e., the word \*seas-shell is not well shaped). We call this sort of word a compound.

Compound words are some of the time set apart in English by spelling: If two stems are composed together as a solitary word (as in stunner or pillbox), at that point it's presumably a compound. Then again, shouldn't something be said about words like White House (where the US President lives)? Or on the other hand organize administrator? For reasons unknown, these are additionally mixes, yet English spelling gives us no piece of information to this status.

How might we figure out which words are mixes and which are only two words hung together (e.g., as adjective+noun)? A few tests are accessible. One path is to check whether we can tuck different words in the middle of the two terms. On the off chance that it's a compound, it won't work, yet in the event that it's only two words, we may think that its conceivable to put different words in the middle. Consider, for instance, White House, which is a compound word alluding to the habitation of the US President, and white house, which is certifiably not a compound and depicts the house where one of my companions lives. Assume that the White House of the mid nineteenth century was made of wood; along these lines, coincidentally, is the white house that my companion lives in. We may hence utilize the word wooden to portray these two habitations. Would we be able to put wooden between the two terms of both White House and white house? Attempt it: The President lived in the White wooden House. Sounds terrible. Presently attempt my companion's home: My companion lives in the white wooden house. Note that this utilization sounds significantly better. The one test for a compound is in this manner that genuine mixes don't permit mediating material; non-mixes like regular adjective+noun mixes do permit such interceding material<sup>9</sup>.

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<sup>9</sup> Neidle, C. J. (2000). *The syntax of American Sign Language: Functional categories and hierarchical structure*. MIT press.

## 2.3 INFLECTIONAL MORPHOLOGY

Up until now, we have treated appends like the past attach - d on worked (e.g., She buckled down) similarly that we treated the fasten - ize on formalizeV. In any case, most speakers have the instinct that, for instance, the attach - d is here and there unique in relation to the fasten - ize. All things considered, - d appears to tell when someone accomplished something while - ize just changes a modifier into an action word. In customary terms, we describe this natural as the distinction between inflectional morphology and derivational morphology. It is, obviously, some of the time hard to differentiate between the two sorts. There are, be that as it may, three criteria by which one can by and large figure out what attach has a place into which gathering.

Proximity to stems: When both derivational and inflectional morphology are available on a similar side of a stem, derivational morphology will dependably be nearer to the stem. For the precedent word formalize, we in this way see affectations like - s, - d, and - ing are dependably to one side of the derivational join - ize, that is, further from the stem formal:

- |    |                    |                        |
|----|--------------------|------------------------|
| 1. | <u>formalized</u>  | *formal <u>ed</u> ize  |
|    | <u>formalizes</u>  | *formal <u>s</u> ize   |
|    | <u>formalizing</u> | *formal <u>ing</u> ize |

2. Classification/which means change: Inflectional morphology will never show signs of change the lexical class or the importance of a stem (e.g., from thing to action word, and so forth.). Derivational morphology may change the class or the significance of a stem. Consequently, the expansion of - s to an action word as in She buckles down will never show signs of change the action word to, state, a thing or a descriptor; on the other hand, the expansion of - ize to modifiers (e.g., formalize) constantly transforms them into action words.

3. Efficiency: by and large, we locate that inflectional morphology is more gainful than derivational morphology. For instance, the append - s connect to all of the a large number of action words in English (works, plays, does, keeps, strolls, discombooblates, and so on endlessly). Paradoxically, despite the fact that fastens like - ize would show up similarly free in that they connect to descriptive words, they don't join just to any descriptor. Subsequently, formal permits - ize connection, however one can't join - ize to yellow, enormous, unpleasant, keen, imbecilic, light, incredible, brilliant, little, dim, extensive, green, awful, substantial, fine, minor, terrible, single, inept, staggering, insane, coprophagous, supercalifragilisticexpialidocious, and many, numerous others. It is conceivable to recognize, at that point, between inflectional morphology and derivational morphology.



When we confine our concentration to inflectional morphology, in any case, it likewise appears to be evident that not different kinds are equivalent. Think about the fasten - d on action words (e.g., looked) and the attach - s on things (e.g., sections). The contrast between these two is (in any event at this dimension) scarcely □deep□: We recognize ostensible articulation (i.e., inflectional appends on things) and verbal intonation (inflectional attaches on action words)<sup>10</sup>.

### 2.3.1 Verbal inflection

Maybe the most widely recognized sorts of inflectional morphology one sees on action words include understanding, tense, and perspective.

Understanding. The - s one sees on action words in English, as in She buckles down, is known as an understanding morpheme. The idea of understanding originates from the way that this morpheme possibly shows up when certain syntactic subjects are available. In particular, one watches this morpheme in English when the subject is third-individual solitary (i.e., she, he, it or any particular thing), however never when the subject includes some other mix of individual and number (i.e., for the pronouns I, you, we, they or any plural thing).

The understanding morphology on the action word saw in English is subject understanding. Not all dialects have subject understanding. Mandarin, for instance, has no morphology on the action word by any means, let alone to show anything about the individual or number of subjects. On the other hand, different dialects may have a far more prominent assortment of subject understanding morphemes than English does. Such solid understanding, rather than the frail understanding example of English which has not only a solitary morpheme for understanding (as in English), yet four unique morphemes (- e, - st, - t, - en), the presence of which is controlled by the specific individual and number attributes of the subject.

Subject understanding accordingly flags a connection between the type of subject of the sentence and the nearness as well as the type of a morpheme appended to the action word. It is advantageous calling attention to, be that as it may, that while dialects like English, have subject understanding, different dialects may have object understanding, which flags a connection between the type of the item (individual and number, for instance) and a morpheme that shows up on the action word.

Tense. Tense speaks to the planning of occasions regarding the snapshot of talking. Most dialects (not every one of them) utilize either two-way (twofold) or three-way tense qualifications.

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<sup>10</sup> Booij, G. (1996). Inherent versus contextual inflection and the split morphology hypothesis. In *Yearbook of morphology 1995* (pp. 1-16). Springer Netherlands.



English, for instance, utilizes a two-way qualification. The English - d morpheme that shows up in the straightforward past tense (e.g., Janet inspected the mollusk) demonstrates that the occasion occurred preceding the snapshot of talking. On the other hand, the absence of tense expression on the English action word demonstrates non-past. Consequently, the action words in the accompanying models both demonstrate non-past, one showing some present occasion and the other a future occasion<sup>11</sup>.

I fathom that issue. (present event)

I leave tomorrow for Arizona. (future event)

(Do whatever it takes not to jumble tense-related morphology on the activity word with morphology showing up elsewhere. The English future tense, for example, isn't stepped morphologically on the essential activity word by any stretch of the creative energy, in any case, most ideal situation, anyway the use of partners like will or should. It is, accordingly, immaterial to the trading of tense accentuation appearing on activity words.)

Point. Aspectual stepping, every now and again appearing on activity words, signals whether a given even is done or not (i.e., in headway or not). Consider the going with sentences from English:

She walked around the store.

She was walking around the store.

Note as an issue of first significance that the two sentences are already, so the complexity between the two can't be one of tense. Regardless, the speaker of the main point of reference is apparently recommending that the woman's walking is, for each and every practical reason, wrapped up. Then again, by communicating the second model, the speaker is hailing that the woman's walking was in some sense still in headway. All things considered, when communicated alone, the second sentence sounds especially odd and divided; a decently progressively reasonable model would be the going with:

She was strolling to the store when a pooch bit her on the lower leg.

For this circumstance, it winds up obvious that the woman's walking was in progression when some other event occurred, explicitly, her stunning social occasion with an enthusiastic canine.

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<sup>11</sup> Matthews, P. H. (1972). *Inflectional morphology: A theoretical study based on aspects of Latin verb conjugation* (Vol. 6). CUP Archive.



Viewpoint, by then, demonstrates something about the completedness of events. In English, perspective is encoded by inflectional morphology, yet this morphology is scattered over both the rule activity word (walk+ing) and the aide activity word, here is<sup>12</sup>.

### 3. MORPHOLOGY IN ARABIC

#### 3.1 OVERVIEW:

Arabic is a Semitic vernacular with rich design morphology. An Arabic word might be made out of a stem (containing a consonantal root and a configuration), notwithstanding appends and clitics. The secures consolidate inflectional markers for stressed, sexual introduction, or potentially number. The clitics fuse a few (anyway not every single) social word, conjunctions, determiners, possessive pronouns and pronouns. Some are proclitic (joining to the beginning of a stem) and some enclitics (interfacing with the finish of a stem). Arabic fits in with the Afro-Asiatic posse. The imaginative tongue, called Modern Standard Arabic or Literary Arabic, is the fundamental expert sort of Arabic. It is used as a piece of most created reports and furthermore in formal talked occasions, for instance, locations and news broadcasts. Moroccan Arabic was legitimate in Morocco for a long time, before the country joined the Arab League.

Arabic is a Central Semitic tongue, almost related to Aramaic, Hebrew, Ugaritic and Phoenician. The systematized formed Arabic is obvious from and more preservationist than most of the talked blends, and the two exist in a state known as diglossia, used alongside one another for particular societal limits<sup>13</sup>.

The current created lingo (Modern Standard Arabic) is gotten from the vernacular of the Quran (known as Classical Arabic or Quranic Arabic). It is comprehensively instructed in schools, universities and used to contrasting degrees in workplaces, government and the media. The two formal combined sacks are gathered as Literary Arabic, which is the official lingo of 26 states and the ceremonial tongue of Islam. Current Standard Arabic, as it were, takes after the syntactic standards of Quranic Arabic and utilizations a critical piece of a similar vocabulary. Regardless, it has discarded some syntactic improvements and vocabulary that no more have any accomplice in the talked blends and got certain new advancements and vocabulary from the talked combinations. An extraordinary piece of the new vocabulary is used to show thoughts that have developed in the post-Quranic time, especially in present day times.

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<sup>12</sup> Lasnik, H. (1995). Verbal morphology: Syntactic structures meets the Minimalist Program. *Evolution and revolution in linguistic theory: Studies in honor of Carlos P. Otero*, 251-275.

<sup>13</sup> McCarthy, J. J., & Prince, A. S. (1990). Foot and word in prosodic morphology: The Arabic broken plural. *Natural Language & Linguistic Theory*, 8(2), 209-283.



Arabic has influenced various language around the globe every single through it history; without a doubt the most affected language are Urdu, Persian, Kurdish, Turkish, Somali, Swahili, Bosnian, Kazakh, Bengali, Hindi, Malay, Indonesian, Tigrinya, Pashto, Punjabi, Tagalog, Sindhi and Hausa. In the midst of the Middle Ages, Literary Arabic was an important vehicle of society in Europe, especially in science, math and soundness<sup>14</sup>.

Consequently, various European language have moreover acquired various words from it. Various articulations of Arabic beginning stage are furthermore found in obsolete language like Latin and Greek. Arabic effect, principally in vocabulary, is found in Romance language, particularly Spanish, Catalan, Portuguese, and Sicilian, inferable from both the closeness of Christian European and Muslim Arab advancements and 800 years of Arabic culture and vernacular in the Iberian Peninsula suggested in Arabic as al-Andalus.

Arabic is a morphologically rich and complex language, for nominals, the inflectional variations are as per the following:

- Number: solitary, double, plural.
- Gender: Masculine, Feminine
- Case: nominative, accusative, genitive.
- State: unequivocal, uncertain, build.

### 3.2 ARABIC MORPHOLOGY:

Arabic has a rich morphology and a solitary word can work as a whole sentence in English. For instance the Arabic word *faja' alnāhum* (فَجَعَلْنَاهُمْ) found in stanza (23:41) can be converted into the English sentence "and We made them". The reason that such a minimal linguistic structure is conceivable is that the single word can be partitioned into 4 unmistakable morphological segments[ Watson, J. C. (2002). The phonology and morphology of Arabic. Oxford University Press on Demand.];(23:41:4)  
*faja' alnāhum* and We made them

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<sup>14</sup> Mansouri, F. (2005). Agreement morphology in Arabic as a second language. Cross-linguistic aspects of Processability Theory, 117-253.





. Morphological segmentation for word

- *fa* -a prefixed combination ("and")
- *jaal* -the stem, an ideal past tense action word ("made") curved as first individual manly plural
- *nā* -a suffixed subject pronoun ("We")
- *hum* – a suffixed article pronoun ("them")

This single-word sentence has VSO (action word subject-object) request. By and large Arabic is fairly adaptable with respect to word request since case endings can be utilized to decide the job of each word in a sentence. Word request is commonly used to stress distinctive pieces of a sentence. In the Quranic Arabic corpus, a grammatical form tag has been allotted to each morphological portion that makes up a word. For instance the word above has 4 grammatical feature labels, with one tag for every one of its 4 segments

CONJ - combination . V - action word , PRON - pronoun (for the joined subject pronoun)

PRON - pronoun (a second pronoun fragment for the joined article pronoun)

Albeit numerous fragments can be intertwined into a solitary word normally just a single portion will be recognized as the stem. Any fragments going before the stem are prefixes and any portions following the stem are additions. Prefix and postfix sections are discretionary while the stem portion is the unmodified type of the word. Sporadically a word will have two stems, for example, the compression  $\text{عَمَّ} = \text{مَا} + \text{عَنْ}$ :

(78:1:1)

'amma

About

what



Figure A contraction of two stems in word (78:1:1).

## Prefixes

Just as a major aspect of-discourse labels, different intonation highlights are appointed to each morphological section. For instance, highlights for individual, sex and number. The highlights for prefixes end in + and are appeared in figures 3 to 7 below. Looking at the impact of improved setting touchy morphology on Arabic data recovery. In Proceedings of the ACL workshop on computational ways to deal with semitic dialects. Relationship for Computational Linguistics.]. Conversely includes for additions begin with +.

Feature	Name	Segment part-of-speech / description
Al+	determiner ( <i>al</i> )	DET – determiner prefix ("the")
bi+	preposition ( <i>bi</i> )	P – preposition prefix ("by", "with", "in")
ka+	preposition ( <i>ka</i> )	P – preposition prefix ("like" or "thus")
ta+	preposition ( <i>ta</i> )	P – particle of oath prefix used as a preposition ("by Allah")
ya+	vocative particle ( <i>yā</i> )	VOC – a vocative prefix usually translated as "O"
ha+	vocative particle ( <i>hā</i> )	VOC – a vocative prefix usually translated as "Lo!"

Fig . Features identifying prefixed segments

Feature	Name	Segment part-of-speech / description
A:INTG+	interrogative particle ( <i>alif</i> )	INTG – prefixed interrogative particle ("is?", "did?", "do?")
A:EQ+	equalization particle ( <i>alif</i> )	EQ – prefixed equalization particle ("whether")

Fig . Features identifying the particle *alif* as a prefix.

Feature	Name	Segment part-of-speech / description
w:CONJ+	conjunction ( <i>wa</i> )	CONJ – conjunction prefix ("and")
w:REM+	resumption ( <i>wa</i> )	REM – resumption prefix ("then" or "so")
w:CIRC+	circumstantial	CIRC – circumstantial prefix ("while")

(wa)		
w:SUP+	supplemental (wa)	SUP – supplemental prefix ("then" or "so")
w:P+	preposition (wa)	P – particle of oath prefix used as a preposition ("by the pen")
w:COM+	comitative (wa)	COM – comitative prefix ("with")

*Fig Features identifying the particle wāw as a prefix.*

Feature	Name	Segment part-of-speech / description
f:REM+	resumption (fa)	REM – resumption prefix ("then" or "so")
f:CONJ+	conjunction (fa)	CONJ – conjunction prefix ("and")
f:RSLT+	result (fa)	RSLT – result prefix ("then")
f:SUP+	supplemental (fa)	SUP – supplemental prefix ("then" or "so")
f:CAUS+	cause (fa)	CAUS – cause prefix ("then" or "so")

*Fig Features identifying the particle fa as a prefix.*

Feature	Name	Segment part-of-speech / description
l:P+	preposition (lām)	P – the letter <i>lām</i> as a prefixed preposition
l:EMPH+	emphasis (lām)	P – the letter <i>lām</i> as a prefixed particle used to give emphasis

l:PRP+	purpose ( <i>lām</i> )	P – the letter <i>lām</i> as a prefixed particle used to indicate purpose
l:IMPV+	imperative ( <i>lām</i> )	P – the letter <i>lām</i> as a prefixed particle used to form an imperative

Fig . Features identifying the particle *lām* as a prefix.

### Roots and Lemmas

In Arabic and other Semitic languages such as Hebrew, similar words may be grouped together according to a root. This is a sequence of typically 3 or 4 consonants (known as radicals) which together form a trilateral or quadrilateral root. From a single root a wide variety of words may be formed, with distinct yet related meanings. For example from the trilateral root *kāf tā bā* (ك ت ب) the verb "write" may be formed, as well as its derivatives in Arabic including "writing", "book", "author", "library" and "office".

The concept of a lemma is also used to group similar words together at a finer level of granularity than a root. The lemma groups word-forms that differ only by inflectional (as opposed to derivational) morphology, and do not vary in meaning. Unlike the root, the lemma is an actual word selected to represent the group and is typically the same word as used in dictionary headings. A third feature used to group words together is the SP (special) feature. Certain groups of verbs and particles have special rules in Arabic grammar with regards to case endings and syntactic roles<sup>15</sup>.

Feature	Name	Description
ROOT:	root	Indicates the (usually trilateral) root of a word, for example ROOT:ktb
LEM:	lemma	Specifies the common lemma for a group of words, for example LEM:kitaAb
SP:	special	Indicates that the word belongs to a special group, for

<sup>15</sup> Stallard, D., Devlin, J., Kayser, M., Lee, Y. K., & Barzilay, R. (2012, July). Unsupervised morphology rivals supervised morphology for arabic mt. In *Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics: Short Papers-Volume 2* (pp. 322-327). Association for Computational Linguistics.

example SP:<in~

*Fig 3.8. Root and lemma features.*

### Person, Gender and Number

In Arabic, words may inflect for person, gender and number. Unlike in English words inflect not only for plural and singular but also for the dual. For example there is a distinct word-form to represent "two books". In the Quranic Arabic corpus, the features for person, gender and number are combined using a concatenative notation. For example 3MS represents third person, masculine, singular.

Feature	Arabic Name	Values	Description
person	الاسناد	1, 2, 3	first person, second person, third person
gender	الجنس	M, F	masculine, feminine
number	العدد	S, D, P	singular, dual, plural

*Fig . Features for person, gender and number.*

### Derived Nouns

In Quranic Arabic, the active participle, passive participle and verbal noun are three types of nominals which are derived directly from verbs. In the Quranic Arabic corpus these are tagged with the noun or adjective part-of speech-tag and include one out of three possible *derivation* features. For example active participles are tagged in the corpus as POS:N ACT PCPL. The verbal features above that apply to verbs also apply to derived nouns (aspect, mood, voice and form) and are used to indicate the morphology of the original verb that the noun was derived from. Figure 3.<sup>16</sup>14 below shows the derivation features used to indicate the type of a derived noun:

Feature	Arabic Name	Description
ACT PCPL	فاعل اسم	Active participle
PASS PCPL	مفعول اسم	Passive participle

<sup>16</sup> McCarthy, J., & Prince, A. (1990). Prosodic morphology and templatic morphology. In *Perspectives on Arabic linguistics II: papers from the second annual symposium on Arabic linguistics* (pp. 1-54).

VN	مصدر	Verbal noun
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Fig 14. Derivation features.

### Nominal Features

The feature Al+ is used to denote the prefixed determiner *al* ("the") attached to nominals (nouns, proper nouns and adjectives). In Arabic there is no indefinite article ("a"/"an" in English). Instead *tanwīn* is used and diacritics are attached to the end of a word to mark it as indefinite. The features DEF and INDEF are used to indicate the state of a noun as definite or as indefinite respectively (see figure 15 below). Nominals may be found in one of three *grammatical cases*: the nominative case, the accusative case, and the genitive case (see figure 16):

Feature	Arabic Name	Description
DEF	معرفة	Definite state
INDEF		
<hr/>		
Feature		
NOM	نكرة	Indefinite state
ACC		
GEN		

Fig State features.

Fig 16. Case features.

### Suffixes

In the Quranic Arabic Corpus, three features are used to indicate suffixes. These are attached pronouns, the vocative suffix and the *nūn* of emphasis. The vocative suffix is denoted by the morphological feature +VOC and is used only with the word *allāh* to produce the vocative word-form *allāhumma*. The morphological feature +n:EMPH is used to denote the emphatic usage of *nūn* as an attached suffix.



Attached pronoun suffixes are identified using the PRON: compound morphological feature. Pronouns attached to nouns are possessive pronouns, and when attached to verbs they are either subject or object pronouns. An attached pronoun may inflect for person, gender and number. A concatenative notation is used with the PRON: tag. For example PRON:3MS represents a third person masculine singular suffixed pronoun. Similarly PRON:2D represents a second person dual suffixed pronoun. See figure 9 above for person, gender and number features<sup>17</sup>.

## **3.2 DUAL NOUN MORPHOLOGY**

### **3.2.1 Introduction to Dual Noun Morphology**

Numerous languages make a refinement in the middle of particular and plural: English, for instance, recognizes man and men, or house and houses. In a few language, notwithstanding such solitary and plural structures, there is additionally a double frame, which is utilized when precisely two individuals or things are implied. In numerous language with double structures, utilization of the double is obligatory, and the plural is utilized just for gatherings more noteworthy than two. Nonetheless, utilization of the double is discretionary in a few language, for example, numerous cutting edge Arabic tongues including Egyptian Arabic lingo.

### **3.2.2 Overview of using Dual Noun of other languages:**

Among living language, Modern Standard Arabic has a required double number, checked on things, verbs and descriptive words. A number of the communicated in Arabic vernaculars have a double checking for things (just), yet its utilization is not required. In like manner, Akkadian had a double number, however its utilization was bound to standard expressions like "two hands", "two eyes", and "two arms".

In different language, for example, Hebrew, the double exists just for words naming time compasses (day, week, and so on.), a few measure words, and for words that normally come in sets and are not utilized as a part of the plural with the exception of in talk: eyes, ears, et cetera. In Slovene, the utilization of the double is compulsory, aside from things that are regular sets, for example, trousers, eyes, for which the plural structure can be utilized.

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<sup>17</sup> Darwish, K. (2002, July). Building a shallow Arabic morphological analyzer in one day. In *Proceedings of the ACL-02 workshop on Computational approaches to semitic languages* (pp. 1-8). Association for Computational Linguistics.



Albeit moderately couple of language have the double number and most have no number or just particular and plural, utilizing diverse words for gatherings of two and gatherings more noteworthy than two is not extraordinary. English has words recognizing double versus plural number, including: *both/all*, *either/any*, and *neither/none*, *between/among*, *former /first*, and *latter/last*. Japanese, which has no grammatical number, also has words *dochira* (which of the two) and *dore* (which of the three or more), etc.

The double in Hebrew has likewise decayed, by and large being utilized for just time, number, and normal combines even in its most antiquated structure. The double frame is additionally utilized as a part of a few advanced Indo-European language, for example, Scottish Gaelic, Slovenian, Frisian and Sorbian. The double was a typical highlight of all early Slavic language toward the start of the second thousand years CE. The double is additionally found in the Sanskrit dialect<sup>18</sup>.

### 3.2.3 Generation Dual Arabic Noun Morphology

AlNeqrat expressed "A double thing is a thing that alludes to two persons or two things" for instance on the off chance that we need to create the double of the word *kitab* "book" to the double it will be *kitabān* "two books". He said likewise that there are a few conditions identified with create the double from the solitary things and they are as following:

- (i) The noun must be singular because the dual and plural are not affected by duality.
- (ii) It singular must be suitable to its meaning and form, just like *rajulan* "two men" its singular *rajul* "man" while the noun *abawan* "parent" its singular *abo wa umm* "father and mother"
- (iii) It must be inflected noun (the nouns that its end is changed according to its location in the sentence), but the structured nouns (the nouns that its end aren't changed according to its location in the sentence as the pronouns example; "you" *enta* "we" *nahnu* these nouns are not effected by duality<sup>19</sup>.

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<sup>18</sup> Clahsen, H. (2003). Derivational morphology in the German mental lexicon: A dual mechanism account Harald Clahsen, Ingrid Sonnenstuhl, James P. Blevins. *Morphological structure in language processing*, 151, 125.

<sup>19</sup> Baerman, M., Brown, D., & Corbett, G. G. (2005). *The syntax-morphology interface: A study of syncretism* (Vol. 109). Cambridge University Press.





## CONCLUSION

In this paper, we checked on the morphological analyzers required to construct a labeled corpus labeled with the morphological highlights examinations for each word. This paper demonstrated the aftereffects of contrasting three diverse uninhibitedly accessible morphological analyzers and stemmers. The correlation relied upon a best quality level for assessment which contains two 1000-word reports from the Qur'an and the Corpus of Contemporary Arabic. The outcomes demonstrated that morphological analyzers and stemmers have neglected to examine about quarter of the expressions of the test archives. Along these lines, we began to scan for different strategies that improve the exactness of the morphological analyzers. To comprehend the morphology issue well, we examined the tri-exacting foundations of the Qur'an and the word types put away in the expansive lexical asset. The aftereffects of this investigation demonstrated that about 40% of these tri-exacting roots are faulty roots which include more test building up a powerful morphological analyzer.

We have built up a morphological analyzer for Arabic content which relies upon pre-put away arrangements of prefixes, additions, roots and examples. These rundowns were separated by alluding to customary sentence structure books. The joins records have been confirmed by investigating the Qur'an, the Corpus of Contemporary Arabic, the Penn Arabic Tree bank and the content of 15 conventional Arabic language dictionaries as our fourth corpus. The prefixes list contains 215 prefixes. The postfixes list contains 127 additions and the examples list contains 2730 action word designs and 985 things designs.

The morphological analyzer was created to dissect the word and indicate its morphological highlights. We have recognized numerous morphological highlights, which we trust that a morphological analyzer for Arabic content can deal with. For this reason, we have built up a Morphological Features Part-of-Speech Tag Set, which can be utilized in creating morphological analyzers. Likewise, it very well may be utilized to morphologically comment on corpora. The morphological highlights label comprises of string of 22 characters, where each character in a particular position in the tag speaks to a morphological element for the broke down word.

To assess the consequences of various morphological analyzers, we propose building up a highest quality level for assessment. The content of the highest quality level is chosen from various sorts, spaces and classifications of vowelized and non vowelized content.



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