

The Semantic Behaviour of Verbs of Emotion in Arabic

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ABSTRACT

This study aims to explore the semantic characteristics of verbs of emotion in Arabic by providing a multi-level analysis that involves three levels: examining the compatibility between the default meaning of morphological verbal forms and the derived emotional verbs; investigating thematic roles' representation of the derived verbal forms; and determining the existence of semantic change in the derived verbal forms. The study found that the derived verbs of emotions are compatible with certain default meanings of the morphological forms among other meanings. For instance, Form II is mainly compatible with the causative meaning, while Form X verbs of emotion tend to express the basic meaning of emotions that can be found in Form I verbs. The thematic roles that are assigned to the syntactic arguments of verbs of emotions are experiencer and stimulus. There are many cases of semantic change, in which derived verbal forms, that belong to emotional roots, leave the semantic field of emotions to other semantic fields. The implications of this study will be useful to research on verbs belonging to other semantic fields. It is also important to develop a WordNet application of emotions.

Keywords: Semantic Behaviour; Verbs of Emotions; Thematic roles; Derived verbs; Ten Forms; Arabic.

1. Introduction

In modern Arabic linguistic literature, Arabic verbs categorised into ten main forms (Form I, Form II, Form III, Form IV, Form V, Form VI, Form VII, Form VIII, Form IX, and Form X). Each verbal form is a morphologically dependant stem which has its unique semantics and grammatical characteristics. In Arabic, Form I stem is the base form from which nine verbal forms are derived (Form II – Form X). Each form is governed by a canonical morphological pattern that includes positions for three root consonants, augmented consonants, and series of vowels. The root is an abstract morpheme that does not exist as an independent stem. The stems that share a certain root are semantically related as the root denotes to a basic meaning. From a given root such as *c-t-b* that denotes to the notion of blame, 8 verbal forms are derived as illustrated in Table 1. These derived verbs share related meanings within the notion of blame.

Table 1: derivation of the ten forms from the root *c-t-b*

Form	Root	Pattern	Verb	English Gloss
Form I	<i>c-t-b</i>	$C_1aC_2aC_3$	<i>catab</i>	to blame
Form II	<i>c-t-b</i>	$C_1aC_2C_2aC_3$	<i>cattab</i>	to reprove
Form III	<i>c-t-b</i>	$C_1āC_2aC_3$	<i>cātab</i>	to admonish
Form IV	<i>c-t-b</i>	$ʔaC_1C_2aC_3$	<i>ʔacātab</i>	to grant someone good will
Form V	<i>c-t-b</i>	$taC_1aC_2C_2aC_3$	<i>taʔattab</i>	to be angry
Form VI	<i>c-t-b</i>	$taC_1āC_2aC_3$	<i>taʔātab</i>	to admonish one another
Form VII	---	$ʔinC_1aC_2aC_3$	---	---
Form VIII	<i>c-t-b</i>	$ʔiC_1taC_2aC_3$	<i>ʔiʔatab</i>	to retreat
Form IX	---	$ʔiC_1C_2aC_3C_3$	---	---
Form X	<i>c-t-b</i>	$ʔistaC_1C_2aC_3$	<i>ʔistaʔtab</i>	to regard him with good will

* C1, C2, and C3 represent the first, second, and third consonantal root letters respectively.

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There is a variation in the derivation of the ten forms from a given root, as not all the ten forms belonging to a certain root are derived. The validity of deriving a verbal form is dependent on its existence in Arabic dictionaries as a lexical entry. This existence means that there is a compatibility between the semantics of the root and the semantics of the morphological pattern of the verbal form. For example, as mentioned in Table 1, Form VII and Form IX are not derived from the root *c-t-b*, because there is no existence of them in Arabic dictionaries, which means that there is no compatibility between the semantics of the root and the semantics of the pattern. Typically, Form VII denotes to concrete meanings and passive meaning of Form I, and Form IX denotes to the semantic fields of colors, natural beauty, and physical disability.

Each of the derived ten forms has a unique functional meaning and grammatical features that interact with basic meaning of the root, consequently, the semantic behaviour of each verbs form needs to be studied to determine the validity of deriving a verbal form from a given root belonged to a certain semantic field. Therefore, the current study seeks to investigate semantic behaviour of verbs of emotions to determine how will differ from verbal form to another.

2. Data and Methodology

The current study presents a semantic analysis to Arabic verbal forms of emotions. This analysis involves three aspects: analysing default meaning of verbal forms, thematic roles of verbal forms, and semantic change in verbal forms. The linguistic data 100 roots that refer to the semantic field of emotions, this data is taken from Alshdaifat (2015)¹ semantic classification with some modifications. From the 100 emotional roots, 8 augmented verbal forms (Form II, Form III, Form IV, Form V, Form VI, Form VII, Form VIII, and Form X) have been semantically examined in the current study, based on their usages and contexts in Arabic dictionaries namely Taj al-Arus Min Jawahir al-Qamus (Zabidi: 1984) and Lexicon of the Modern Arabic Language (Omar: 2008).

Verbs of emotions refer to qualities that express interior feelings or interactive feelings to others. The emotions have been discussed in the literature, and many scholars have provided sub classes of emotions: Ekman (1972) categorized them into six basic emotions: joy, surprise, anger, fear, disgust, and sadness, While Plutchik (1980) proposed eight emotions including: joy, trust, fear, surprise, sadness, disgust, anger and anticipation. In this study, the situations in which verbs of emotions are used, could involve positive emotional situations: happiness, admiration, love, and surprise, and negative emotional situations: sadness, hate, anger, fear, and regret.

Traditionally, default meanings of the derived verbal forms have been provided in Arabic literature since Medieval Arab grammarians' era, such as causation, exaggeration, interaction, reflexive meanings (Sibawaih 1966; Ibn Jinnī 1960). These default meanings are general; thus, they need to be examined within context of different semantic fields. The current study examines those default meanings of each verbal form empirically within the field of emotions to determine whether these default meanings go along with the verbs of emotions.

In this study, thematic roles theory is adapted to analyse predicate-argument structure of verbs of emotions; and examine the semantic similarities between the arguments of verbs of emotions, which share a similar behavior; and test if the verbs can be alternatively used in specific syntactic frames. Two of the thematic roles are appropriate to be utilised here in describing the syntactic positions of Form I verbs of emotions:

- The grammatical **subject** ↔ The **experiencer** role.
- The grammatical **object** ↔ The **stimulus** role.

As stated by Chomsky (1981: 36) "each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument". Therefore, the syntactic frame relies on the transitivity/intransitivity of the verbs of emotions. A transitive verb of emotion has two semantic roles: the experiencer in subject's position and stimulus in object's position, while an intransitive verb has only one semantic role in the subject position which is the stimulus.

¹. Alshdaifat (2015) investigated the formation of nominal derivatives depending on providing 44 semantic classes of Arabic trilateral roots.

The syntactic frames are as follows:

- For transitive verbs: Verb + Experiencer + Stimulus:

ḥabba Ahmad Fatima ‘Ahmad loved Fatima’.

- For intransitive verbs: Verb + Experiencer

gaḍiba Ahmad ‘Ahmad is angry’.

- For intransitive verbs with a preposition: Predicate + Experiencer + PREP-Stimulus

gaḍiba Ahmad ‘ala Fatima ‘Ahmad got angry at Fatima’.

gaḍiba Ahmad min Fatima ‘Ahmad got angry with Fatima’.

gaḍiba Ahmad li-Fatima ‘Ahmad got angry for Fatima’.

- For Causativetransitive verbs: Verb + Stimulus + Experiencer:

gamma Ahmad Fatima ‘Ahmad made Fatima sad’

da‘ar Ahmad Fatima ‘Ahmad made Fatima scared’

kabat Ahmad Fatima ‘Ahmad made Fatima suppressed’

In the literature, many scholars have discussed the semantic roles of psych verbs in different languages. The experiencer role is defined by Andrews (1985:70) as “a participant who is characterized as aware of something”, while Dowty (1989) made the experiencer is not in control of experiencing a state (or an action). On the other hand, the stimulus role is the participant that “causes some emotional reaction or cognitive judgment in the Experiencer” (Dowty 1991:579). Other terms, are used in the literature, that refer to the same semantic role of stimulus: ‘causer’ (Pesetsky 1995) and ‘theme’ (Belletti and Rizzi 1988, Grimshaw 1990).

Accordingly, here the current study provides explanations of the two main terms:

(i) **Experiencer:** the entity that feels or experiences the emotions i.e. the entity that perceives the emotions. Nonetheless, this entity is not in control.

(ii) **Stimulus:** the entity that motivates or causes the emotional response in the experiencer i.e. the entity which is experienced by the experiencer.

Arabic is a derivational language in which the words that share the same root are semantically related. For instance, from the derivationally productive root *ḥ-b-b* which refers to the notion of love, there are seven verbs derived: Form I *ḥabb* ‘to love’, Form II *ḥabbab* ‘to make someone love something or someone’, Form III *ḥābb* ‘share mutual love’, Form IV *aḥabb* ‘to be passionately attracted to’, Form V *taḥabbab* ‘to show love or affection to’, Form VI *taḥābb* ‘to love one another’, and Form X *istaḥabb* ‘to find nice’. In contrast, some derived verbal forms have a semantic change (semantic shift) when a verbal form refers to a different semantic field. For example, from the root *s-‘-d* which refers to the notion of happiness, one of the derived forms denotes to a different semantic field *sā‘ad* ‘to help’, while the rest derived verbs refer to emotions. The current study investigates the existence of semantic change within each derived verbal form (Form II – Form X).

3. Form II Analysis

3.1 Meanings of Form II

Traditionally, medieval Arab grammarians discussed default meanings of Form II verbs. Commonly, Form II represents intensity in the basic meaning of Form I verb or less commonly represents a causative meaning. Here, throughout the verbs of emotions the causativity is the dominant default meaning. For instance, from Form I verb *ḥazin* ‘to feel sad’, the derived Form II *ḥazzan* ‘to make someone feel sad’ does not involve intensity in the meaning of Form I verb, but it involves a causative meaning. Accordingly, all Form II verbs of emotions could be defined potentially ‘to

cause someone to feel an emotion'. In the following sentences, the subject Ahmad makes the object Fatima feel an emotion:

- *farrāḥa* Ahmad Fatima 'Ahmad made Fatima feel happy'.
- *xajjala* Ahmad Fatima 'Ahmad made Fatima feel shy'.
- *mallala* Ahmad Fatima 'Ahmad made Fatima feel bored'.

3.2 Thematic roles of Form II

It was clear above that the syntactic behaviour radically changed from intransitive in Form I verbs to transitive in Form II verbs. In addition, Form II verbs semantically represent a causative meaning. Consequently, thematic roles assigned to predicate-argument structures are completely switched here in Form II verbs. The grammatical subject of Form II verbs is assigned to the stimulus role while it is assigned to the experiencer role in Form I verbs. Likewise, the grammatical object of Form II verbs is assigned to the experiencer role while it is assigned to the stimulus role in Form I verbs. The following table clarifies the different distribution between Form I and Form II.

Table 2: Thematic roles structure of Form II

Predicate-Argument	Form I			Form II		
	Verb	Subject	Object	Verb	Subject	Object
	↑	↑	↑	↑	↑	↑
Example	<i>xāfa</i>	Ahmad	Fatima	<i>xawwafa</i>	Ahmad	Fatima
		↓	↓		↓	↓
Thematic Roles		Experiencer	Stimulus		Stimulus	Experiencer
Sentence Meaning	'Ahmad feared Fatima'			'Ahmad frightened Fatima'		

3.3 Semantic change in Form II

A semantic change is slightly found in Form II verbs that are derived from a given Form I verb of emotion. Thus, out of the 66 Form II verbs, only four verbs have semantically changed, belonging to other semantic fields. Some Form II verbs do not remain expressing emotional semantics, and they gain different meanings away from emotional semantics. In Table 3, four cases of semantic changes were reported in Form II verbs.

Table 3: semantic change in Form II

Root	Form I	English Gloss	Form II	English Gloss
<i>ṭ.r.b</i>	<i>ṭarib</i>	'to be delighted'	<i>ṭarrab</i>	'to sing, chant'
<i>ḥ.y.y</i>	<i>ḥayiy</i>	'to feel shy'	<i>ḥayya</i>	'to greet, salute'
<i>ḥ.r.j</i>	<i>ḥarij</i>	'to feel embarrassed'	<i>ḥarraj</i>	'to plant with trees'
<i>š.f.q</i>	<i>šafiq</i>	'to feel pity for'	<i>šaffaq</i>	'to give (someone) to drink with mercy'

4. Form III Analysis

4.1 Meaning of Form III

Form III mostly indicates to an interaction meaning in which two entities are interchangeably involved in an action or a state. Grammatically, these two entities are subject and object, i.e. the subject responds emotionally back to the object. For example, Form III verb *bāḡad* in the sentence '*bāḡad Ahmad Fatima*', denotes that the grammatical subject *Ahmad* and the grammatical object *Fatima* are involved in hating each other. While, Form I verb *baḡad* in the sentence '*baḡad Ahmad Fatima*', denotes that the object *Fatima* is hated by the subject *Ahmad*.

- *fāza* Ahmad Fatima 'Ahmad frighten Fatima back'.

- *māqata* Ahmad Fatima ‘Ahmad *hated* Fatima back’.
- *ġāyaḍa* Ahmad Fatima ‘Ahmad *annoyed* Fatima back’.
- *xāšā* Ahmad Fatima ‘Ahmad *dreaded* Fatima back’.

4.2 Thematic roles of Form III

Despite the fact that two arguments, namely the subject and the object, of Form III are interchangeably involved in the verb’s meaning, only one argument should be assigned to one thematic role i.e. it is not possible to assign both of the subject and the object to the experiencer thematic role. Therefore, the experiencer role is assigned to the subject who experiences the emotions, while the stimulus role is assigned to object who motivates the emotional response in the experiencer. For example, in the sentence *ḥābba Ahmad Fatima* ‘Ahmad loved Fatima back’, Ahmad is the subject who experiences the love or responded back the love to Fatima (the object) who loved him beforehand and motivated him to love her back, so the meaning of the sentence still involves that both of them loves each other interchangeably. In the following table exemplify the thematic role structure of Form III.

Table 4: Thematic roles structure of Form III

	Form I		Form III		
Predicate-Argument	Verb	Subject	Verb	Subject	Object
	↑	↑	↑	↑	↑
Example	<i>ḍaġin</i>	Ahmad	<i>ḍāġan</i>	Ahmad	Fatima
		↓		↓	↓
Thematic Roles		Experiencer		Experiencer	Stimulus
Sentence Meaning	‘Ahmad bear a grudge’		‘Ahmad bear a grudge against Fatima’		

4.3 Semantic change in Form III

A number of Form III verbs, that are originally derived from Form I verbs of emotions, have a dissimilar meaning far from the emotions. These verbs do not share the default meaning of Form III verbs i.e. their meanings do not refer that two entities and is interchangeably involved in an action or a state. The following table includes four examples of Form III and their Form I verbs meanings.

Table 5: semantic change in Form III

Root	Form I	Emotional meaning	Form II	Changed meaning
<i>s.ʿ.d</i>	<i>saʿid</i>	‘to be happy’	<i>sāʿad</i>	‘to help’
<i>ġ.y.r</i>	<i>ġār</i>	‘to feel jealous’	<i>ġāyar</i>	‘to be different’
<i>ḥ.r.d</i>	<i>ḥarid</i>	‘to feel angry’	<i>ḥārad</i>	‘(she) cease to yield milk’
<i>n.d.m</i>	<i>nadim</i>	‘to feel regret’	<i>nādam</i>	‘to drink with someone’

5. Form IV Analysis

5.1 Meanings of Form IV

Similar to Form II, the meanings of Form IV are mainly attributed to causative sense. This morphological structure serves an important syntactic function by which an intransitive Form I verb becomes transitive in Form IV verbs. For example, from the intransitive Form I verb *ḥazin* ‘to feel sad’, the transitive Form IV verb *ʿaḥzan* ‘to make someone feel sad’ is derived. On contrast, if Form IV verbs such as *ʿaḥabb* ‘to love’ are derived from the transitive Form I verb *ḥabb* ‘to love’, they will not involve causative sense, thus, the derived Form IV denotes the same meaning of Form I verb. Table 6 exemplifies the two types and their different meanings.

Table 6: Meanings of Causative and non-Causative Form IV

Intransitive Form I	Meaning	Form IV	Causative Meaning
<i>bahija</i> Ahmad	<i>Ahmad feels happy</i>	<i>ʔabhaja</i> Ahmad Fatima	<i>Ahmad made Fatima feels happy</i>
Transitive Form I	Meaning	Form IV	Non-Causative Meaning
<i>baḡaḍ</i> Ahmad Fatima	<i>Ahmad hated Fatima</i>	<i>ʔabḡaḍa</i> Ahmad Fatima	<i>Ahmad hated Fatima</i>

5.2 Thematic roles of Form IV

Two types of the thematic role structure are recognized in Form IV verbs of emotions. First, with causative Form IV verbs, the subject is the causer of the emotions, while the object is who feels the emotions. Semantically, this type is similar of Form II verbs. Second, with non-causative Form IV verbs, the subject is who experiences the emotions, while the object is who causes the emotions. The following table clarifies the two thematic role structure of Form IV verbs.

Table 7: Thematic roles structure of Form IV

Predicate-Argument	Causative Form IV			Non-Causative Form IV		
	Verb	Subject	Object	Verb	Subject	Object
	↑	↑	↑	↑	↑	↑
Example	<i>ʔabhaja</i>	Ahmad	Fatima	<i>ʔabḡaḍa</i>	Ahmad	Fatima
		↓	↓		↓	↓
Thematic Roles		Stimulus	Experiencer		Experiencer	Stimulus
Sentence Meaning	'Ahmad made Fatima feels happy'			'Ahmad hated Fatima'		

5.3 Semantic change in Form IV

A semantic change exists in some derived Form IV verbs that are derived from Form I verbs of emotions. These derived Form IV verbs are distant semantically from emotions. In the following table four cases of semantic changes are attested in Form IV verbs.

Table 8: Semantic change in Form IV

Root	Form I	Emotional meaning	Form IV	Changed meaning
<i>haniʔ</i>	<i>haniʔ</i>	'to enjoy'	<i>ʔahnʔ</i>	'to give a gift'
<i>wajad</i>	<i>wajad</i>	'to adore'	<i>ʔawjad</i>	'to create'
<i>rāq</i>	<i>rāq</i>	'to please or delight'	<i>ʔarāq</i>	'to shed'
<i>karih</i>	<i>karih</i>	'to hate'	<i>ʔakrah</i>	'to force'

6. Form V Analysis

6.1 Meanings of Form V

Form V meanings are commonly close to their the basic meanings of Form I. In many cases Form V and Form I, from a given root, express the same meaning, such as Form I *bahij* and Form V *tabahhaj*, both of them means 'to feel happy'. Specific meanings can be found in Form V, including: (1) Reflexive meaning of the causative Form II, such as *bahhaj-tuhu* 'I made him happy' that will be in Form V *tabahhaj* 'he became happy by himself'; (2) Bearing meaning where the subject bears the endurance of emotions, such as *taʔaššaq* 'to bear the love'; and (3) Requestative meaning, such as *tawaddad* 'to seek the affections of'.

6.2 Thematic roles of Form V

Form V verbs behave similarly as Form I verbs. Syntactically, both of them is mainly intransitive. The subject of

intransitive Form V verbs assigned to the experiencer role, such as *tassaf* Ahmad ‘Ahmad regretted’ the subject Ahmad feels the emotions. With transitive Form V verbs, *taʿaššaq* Ahmad Fatima ‘Ahmad adored Fatima’, the subject is assigned to the experiencer role while the object is assigned to the stimulus. These roles and their syntactic arguments are clarified in Table 9.

Table 9: Thematic roles structure of Form V

	Intransitive Form V		Transitive Form V		
Predicate-Argument	Verb	Subject	Verb	Subject	Object
	↑	↑	↑	↑	↑
Example	<i>tassaf</i>	Ahmad	<i>taʿaššaq</i>	Ahmad	Fatima
		↓		↓	↓
Thematic Roles		Experiencer		Experiencer	Stimulus
Sentence Meaning	‘Ahmad regretted’		‘Ahmad adored Fatima’		

6.3 Semantic change in Form V

A little of Form V verbs that derived from Form I verbs of emotions shifted semantically away from emotional meanings to other semantic fields. Here in the following table Form I verbs of emotions and their derived Form V verbs that have unemotional meanings.

Table 10: Thematic roles structure of Form V

Root	Form I	Emotional meaning	Form V	Changed meaning
<i>r.h.b</i>	<i>rahib</i>	‘to fear’	<i>tarahhab</i>	‘to become a monk or nun’
<i>s.r.r</i>	<i>sarr</i>	‘to feel happy’	<i>tasarrar</i>	‘to keep a mistress’
<i>ʿ.n.q</i>	<i>ʿaniq</i>	‘to feel impressed’	<i>taʿannaq</i>	‘to dress up’

7. Form VI verb

7.1 Meanings of Form VI

The meanings of Form VI mainly denote reciprocity in an emotion between two entities or more. So usually the subject of the verbs here is dual or plural, for example, *taʿādal ṣadiqān* ‘two friends blame each other’. Another meaning of Form VI is the pretending i.e. the subject pretends to show a certain emotion, such as *taḥāzan* ‘to pretend to be sad’ that derived from Form I verb *ḥazin* ‘to feel sad’.

7.2 Thematic roles of Form VI

Form VI verbs of emotions behave, with regard to thematic roles, like Form I verbs of emotions. As for intransitive VI verbs, the experiencer thematic role is assigned to the subject position. In contrast, transitive Form VI verbs of emotions take two thematic roles, the experiencer for the subject and the stimulus for the object.

Table 11: Thematic roles structure of Form V

	Transitive Form VI			Intransitive Form VI		
Predicate-Argument	Verb	Subject	Object	Verb	Subject	Object
	↑	↑	↑	↑	↑	↑
Example	<i>takārah</i>	Ahmad	Fatima	<i>taḥāzan</i>	Ahmad	
		↓	↓		↓	↓
Thematic Roles		Experiencer	Stimulus		Stimulus	Experiencer
Sentence Meaning	‘Ahmad hated Fatima’			‘Ahmad pretends to be sad’		

7.3 Semantic change in Form VI

Among 32 Form VI verbs of emotions, only one verb has un-emotional meaning, which is *tanādam* ‘to drink together, have a drink together’ that is derived from Form I verb *nadim* ‘to repent (of), rue, regret’. This un-emotional meaning is also found in its Form III *nādam*, but the difference between them is that Form VI is intransitive while Form III is transitive.

8. Form VII verb

8.1 Meanings of Form VII

The meanings of Form VII verbs mainly refer to tangible actions, therefore, verb of emotions within this Form VII are the least derived verb form. Form VII may involve the passive meaning of Form I, for example, the passive Form I *du^cir* ‘he is scared’ is equal of Form VII *inḍa^car*. However, the main meaning here is that Form VII may be resultative of Form I verb’s action, such as Form I *jaḍaba Ahmad Fatima* and its Form VII *injaḍabat Fatima* ‘(Form I) Ahmad attracted Fatima, (Form VII) Fatima accepted to be attracted’.

8.2 Thematic roles of Form VII

Only 6 of the 12 Form VII verbs express emotional meaning while the other verbs express non-emotional tangible meanings. These 6 Form VII emotional verbs include: *inḡamm* ‘to be sad’, *inḍa^car* ‘to be scared’, *inkabat* ‘to be suppressed’, *inza^caj* ‘to be annoyed’, *injaḍab* ‘to be attracted’, and *inḡamm* ‘to be anxious’. These verbs are characterized by their derivation from causative Form I verbs, while the other non-emotional Form VII are derived from non-causative Form I verbs. The thematic roles are switched as exemplified in Table 12, the subject of Form I is assigned to the Stimulus thematic role, while the subject of Form VII is assigned to the experiencer thematic role.

Table 12: Thematic roles structure of Form VII

	Causative Form I			Form VII	
Predicate-Argument	Verb	Subject	Object	Verb	Subject
	↑	↑	↑	↑	↑
Example	<i>ḡamma</i>	Ahmad	<i>Fatima</i>	<i>inḡamma</i>	Ahmad
		↓	↓		↓
Thematic Roles		Stimulus	Experiencer		Experiencer
Sentence Meaning	‘Ahmad made Fatima sad’			‘Ahmad is sad’	

8.3 Semantic change in Form VII

6 of 12 Form VII verbs, that are derived from Form I verbs of emotions, have un-emotional meanings. These meanings involve abstract meanings, such as *inmall* ‘to lie’ even this verb in Jordanian dialect has an emotional meaning ‘to be bored’ and tangible meanings, such as *inḡasaf* ‘to be fragmented’. The following table shows Form I meanings and their meanings in Form VII verbs.

Table 13: Semantic change in Form VII

Root	Form I	Emotional meaning	Form VII	Changed meaning
<i>m.l.l</i>	<i>mall</i>	‘to feel bored’	<i>inmall</i>	‘to lie’
<i>ḡ.r.d</i>	<i>ḡarid</i>	‘to be angry’	<i>inḡarad</i>	‘to be alone with’
<i>ḡ.s.f</i>	<i>ḡasif</i>	‘to bear a grudge’	<i>inḡasaf</i>	‘to be fragmented’

9. Form VIII Analysis

9.1 Meanings of Form VIII

The meanings of Form VIII verbs generally express the same meanings of their Form I verbs with an intensity of quality, for example, both of Form VIII verb *ʔiltahaf* and its Form I verb *lahaf* refer to the meaning ‘to be eager’ but with intensity of this meaning for Form VIII. Some Form VIII may have a reflexive meaning of the causative Form II, such as verb *ʔibtahaj* ‘to become happy by himself’ which is reflexed from Form II verb *bahhaj* ‘to make someone happy’.

9.2 Thematic roles of Form VIII

The thematic behavior of Form VIII verbs is identical of the behavior of Form I verbs. The transitive Form VIII verbs take two thematic roles: The **Experiencer** role that is assigned to the subject who feels the emotions and the Stimulus role that is assigned to the object who motivates the emotions in the experiencer. In contrast, the intransitive Form VIII verbs take only the Experiencer thematic role which is assigned to the subject as exemplified in Table 14.

Table 14: Thematic roles structure of Form VIII

	Transitive Form VIII			Intransitive Form VIII	
Predicate-Argument	Verb	Subject	Object	Verb	Subject
	↑	↑	↑	↑	↑
Example	<i>ʔidʔagan</i>	Ahmad	<i>Fatima</i>	<i>ʔigtamm</i>	Ahmad
		↓	↓		↓
Thematic Roles		Experiencer	Stimulus		Experiencer
Sentence Meaning	‘Ahmad hated Fatima’			‘Ahmad is dejected’	

9.3 Semantic change in Form VIII

Form VIII verbs involve many cases of semantic changes where these verbs denote unemotional meanings that are far away from their emotional meanings in Form I verbs. In Table 15, three Form I verbs of emotions and their derived unemotional Form VIII verbs.

Table 15: Semantic change in Form VIII

Root	Form I	Emotional meaning	Form VIII	Changed meaning
<i>ʔ.t.b</i>	<i>ʔatab</i>	‘to blame’	<i>ʔitatab</i>	‘to leave something’
<i>n.d.m</i>	<i>nadim</i>	‘to regret’	<i>ʔintadam</i>	‘to become easy’
<i>h.y.m</i>	<i>hām</i>	‘to fall in love’	<i>ʔihtām</i>	‘to trick’

10. Form X Analysis

10.1 Meanings of Form X

In general, Form X verbs refer to requestative meaning such as *ʔistaʔtaf* ‘to ask someone’s sympathy’, however Form X verbs of emotions reflect mainly the basic meaning of Form I verbs of emotions. For example, Form X *ʔistabhaj* that is derived from Form I *bahaj* refers to the same meaning ‘to be happy’. Another meaning of Form X is estimative sense such as *ʔistamall* ‘to consider someone/something boring’ that is derived from Form I *mall* ‘to feel bored’.

10.2 Thematic roles of Form X

Form X verbs involve causative and non-causative verbs. The subject of causative Form X verbs is assigned to stimulus thematic role, while the object is assigned to the experiencer thematic. In contrast, for non-causative Form X verbs, two thematic roles are assigned to the grammatical roles, the experiencer is assigned to the subject and the stimulus is assigned to the object role as exemplified in Table 16.

Table 16: Thematic roles structure of Form X

	Causative Form X			Non-Causative Form X		
Predicate-Argument	Verb	Subject	Object	Verb	Subject	Object
	↑	↑	↑	↑	↑	↑
Example	<i>ʾistarhab</i>	Ahmad	Fatima	<i>ʾistajw</i>	Ahmad	Fatima
		↓	↓		↓	
Thematic Roles		Stimulus	Experiencer		Experiencer	Stimulus
Sentence Meaning	‘Ahmad frightened Fatima’			‘Ahmad hated Fatima’		

10.3 Semantic change in Form X

The derived Form X verbs are mainly dedicated to emotional meanings by reflecting the basic meaning of their Form I verbs. However, Form X verbs slightly involve a semantic change, such as the verb *istarāc* ‘to be generous’ which is derived from Form I verb *rāc* ‘to feel fear’.

11. Conclusion

The current study has provided semantic analysis of the verbs of emotions in Arabic to capture generalizations on morphology-semantic interface by analysing the semantic behaviour of the nine verbal forms within the semantic field of emotions, including: Form I, Form II, Form III, Form IV, Form V, Form VI, Form VII, Form VIII, and Form X. Firstly, the current study has examined the default meanings of morphological patterns of the derived forms to determine whether they are compatible with the emotional meanings or not, especially if there are several default meanings of the verbal form. Secondly, this study has analysed the predicate-argument structure of verbs of emotions by determining the appropriate thematic roles that differ from verbal form to another. Thirdly, this study has investigated the existence of semantic changes in the derived verbs from emotional roots.

The findings of this study bring out three aspects. First, in view the fact that each verbal form has a number of default meanings, the study found that verbs of emotions tend to a certain default meaning among other meanings. For instance, verbs of emotions in Form II and Form IV refer to a causative meaning, while other forms such as Form V, Form VIII, and Form X refer mainly to the basic meaning of Form I verbs of emotions. Second, at the level of thematic roles analysis, the study has presented a description of two thematic roles that are compatible with the grammatical arguments of verbs of emotions, including: (i) Experiencer: the entity that feels or experiences the emotions i.e. the entity that perceives the emotions. Nonetheless, this entity is not in control; (ii) Stimulus: the entity that motivates or causes the emotional response in the experience, i.e. the entity which is experienced by the experiencer. The study found that the grammatical subject is assigned to the experience role and grammatical object is assigned to the stimulus role, except if the verbs have causative meaning, then the thematic roles are switched i.e. the grammatical subject is assigned to the stimulus role and grammatical object is assigned to the experience role. Third, at the level of semantic change, the study has found in each derived verbal form verbs that have away meaning from their roots' meanings. For example, the Form III *sāad* ‘to help’ is derived from the emotional root *s.ād* ‘to be happy’. Finally, the importance of this study comes from encouraging further studies to be conducted other studies on other semantic fields such as verbs of motion. Additionally, this study could be useful to develop WordNet applications and sentiment analysis of verbs of emotions.

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الخصائص الدلالية لأفعال المشاعر في اللغة العربية (دراسة تحليلية دلالية)

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ملخص

لما كان هدفُ هذه الدراسة الكشفَ عن خصائص أفعال المشاعر الدلالية في اللغة العربية، فستقومُ على منهج وصفي تحليلي مُتعدّد المستويات، ويشتمل على ثلاثة جوانب: أولها تحليل معاني الأوزان الصرفية للأفعال المزيدة، والوقوف على مدى توافقها مع حقل المشاعر الدلالي، وثانيها تحليل بنية أفعال المشاعر النحوية الدلالية وفقاً لنظرية الأدوار الدلالية الحديثة، وثالثها تحليل ظاهرة التغير الدلالي التي تلحق بعض الأفعال المزيدة المنتمية إلى أفعال مجردة تعود إلى حقل المشاعر ولتحقيق الدراسة هدفها فقد طُبِّعت على ثمانية أبواب لأفعال مزيدة مُشَنَّعة من أفعال ثلاثية مجردة في حقل المشاعر، هي: أفعَل - يُفَعِّلُ، وفَعَّلَ - يُفَعِّلُ، وفَاعَلَ - يُفَاعِلُ، وانْفَعَلَ - يَنْفَعِلُ، وأفْتَعَلَ - يَفْتَعِلُ، وَنَعَّلَ - يَنْعَلُ، وَتَفَاعَلَ - يَتَفَاعَلُ، واستنْفَعَلَ - يَسْتَنْفَعِلُ وبتوظيف الدراسة نظرية الأدوار الدلالية وُجِدَ تباينٌ في سلوك أفعال المشاعر الدلالي من فعلٍ مزيدٍ إلى آخر، فعناصر الجملة النحوية تكتسب دوراً دلاليّاً وفقاً لخصائص الوزن الصرفي الدلالية، وتوصلت الدراسة إلى تحديد معاني الأفعال المزيدة المتوافقة مع أفعال المشاعر، وحددت حالات التغير الدلالي في تلك الأفعال المزيدة؛ إذ ابتعدت دلالتها عن حقل المشاعر وتكمن أهمية الدراسة في فتحها آفاقاً لدراسة حقول دلالية أخرى، ويمكن أن تقيد في التطبيقات الحاسوبية الدلالية والمعجمية.

الكلمات الدالة: الأدوار الدلالية، أفعال المشاعر، اللغة العربية، الخصائص الدلالية، الأوزان الصرفية، البنية النحوية، الأفعال المزيدة.

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