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## **THE INTERFACE BETWEEN VERBAL SEMANTICS AND CLAUSE STRUCTURE IN ARABIC *HITTING* AND *BREAKING* VERBS**

### 1. INTRODUCTION

The *Hitting* and *Breaking* verbs are grammatically relevant in Modern Standard Arabic (henceforth, MSA), as they are in English. The relation between these classes and the way to determine how arguments are expressed supports Charles Fillmore's argument that the meaning of a verb is based on the systematic components of meaning; that is the template of the event, and the idiosyncratic properties of the verb root. The current study investigates Fillmore's argument of verb meaning components within the *Daraba* 'hitting' and the *kasara* 'breaking' verbs in MSA. I will show that the two classes are distinguished by a number of grammatical and semantic properties in MSA, as they are in English. Section 2 introduces some basic assumptions that I adopt to describe the structure of verb meaning. Section 3 discusses the syntactic and semantic diagnostic tests used to separate the *Daraba* 'hitting' verbs from the *kasara* 'breaking' verbs in MSA. Finally, section 4 discusses the tests with the aim of identifying some characteristic properties that are sensitive to verb classes, and that distinguish these constructions from those that are not class-sensitive.

### 2. VERBS OF *HITTING* AND *BREAKING* IN ENGLISH

This paper investigates the relationship between verbal semantics and clause structure in MSA. The departure point of this study is the classical

paper of Fillmore (1970) *The Grammar of Hitting and Breaking*, in which he distinguishes two classes of English transitive verbs: (1) *surface contact* verbs as in (*hit, slap, strike, bump, stroke*) vs. *change of state* verbs as in (*break, bend, fold, shatter, crack*). By the means of a number of syntactic tests alternations, Fillmore shows that the members of each class share certain syntactic and semantic properties that distinguish them from the members of the other class. Additionally, he argues that the correlation between these syntactic and semantic properties supports the lexical semantic claim that verb meaning has two basic components: (1) syntactic components of meaning that are shared by an entire class (assumed to be grammatically different); and (2) idiosyncratic components that are specific to the individual root.

An important syntactic test that distinguishes *hitting* verbs from *breaking* verbs is the *causative alternation*, which is systematically proved to be possible with the *breaking* verbs, whereas it is systematically impossible with the *hitting* verbs.

- (1) (a) John broke the window.
- (b) The window broke.
- (c) John hit the window.
- (d) \*The window hit.

A second valid syntactic test to distinguish the members of the two classes from one another is the *possessor ascension*, in which the possessor of a body part noun can be expressed as a direct object. This test is systematically valid with the *hitting verbs*, but not with the *breaking* verbs.

- (2) (a) I hit his leg.
- (b) I hit him on the leg.
- (c) I broke his leg.
- (d) \*I broke him on the leg.

A third diagnostic test to the *hitting* verbs from the *breaking* ones is the *adjectival-stative reading*, that is allowed by the *breaking* verbs, but not by the *hitting* verbs.

- (3) (a) The window is still broken.
- (b) \*The window is still hit.

On the semantic level, the basic difference between the *hitting* and the *breaking* verbs is relevant to the result of the action denoted by the verb, specifically a “separation in [the] material integrity” of the patient (Hale and Kyser, 1987). With the *breaking* verbs, the entailment cannot be cancelled; in contrast with the *hitting* verbs, where the entailment can be.

- (4) (a) I broke the window. (Where the window is cracked)  
(b) I hit the window. (Where the window is not cracked)

A second semantic difference between the two classes is that the *breaking* verbs impose some selectional restrictions based on the physical properties of the object, whereas the *hitting* verbs do not. However, the *hitting* verbs have their own selectional restrictions that are related to the instrument used if it is mentioned in a construction. In the years following Fillmore’s work, a lot of studies have been carried out on these two verb classes, identifying more diagnostic tests, such as the *middle alternation*, the *with/against alternation*, and the *conative alternation*. These alternations and more are discussed in Levin’s (1993).

### 3. WHAT CAN BE INFERRED FROM VERB CLASSES?

Levin (1993), Levin and Hovav (1995, 2005), R.H. Hovav and Levin (1998) amongst others were inspired by Fillmore’s approach to produce a considerable amount of research in the area of verb classes. The majority of such research was concerned with a number of hypotheses that were already, at least partially, referred to in Fillmore’s (1970). These hypotheses include:

1. Verb meaning is of two components namely: systematic, which forms an “event template”, and idiosyncratic, which is root-specific.
2. Only systematic components are “grammatically relevant”, i.e. relevant to argument realization.
3. Grammatically determined verb classes are basically sets of verbs that share the same *event template*, which is responsible for distinguishing one class from the other. However, the idiosyncratic features of their meaning distinguish roots of verbs that belong to the same class.

Levin (1993) argues that the notion of verb class is a rather artificial one because the important theoretical construct is the meaning component. She further explains that the verb sets are semantically determined as a leading step towards understanding the elements of meaning that are relevant for determining the expression of arguments. Based on this, and since the two verb classes under investigation in this study are both transitive with the same set of semantic roles: agent, patient, and optional instrument, the event template that defines each class and helps in understanding the grammatical differences among them must be more than a plain list of semantics roles.

Thus, the study of verb classes is important to better address two basic questions: (1) exactly what is an *event template*, and what would be the best way to represent it? and (2) what are the valid tests for grammatical relevance? However, in this paper I put the greater focus on the latter question, restating it as: What kinds of grammatical constructions or tests are relevant for identifying semantically based verb classes?

#### 4. VERBS OF *DARABA* "HITTING" AND *KASARA* "BREAKING" IN MSA

MSA, like other Semitic languages, is rich on the morphological level where inflection and word formation is carried out by word pattern morphology and affixes. Formally, the basis of a word in MSA is composed of a two to five consonant-based root. However, the most common is the three consonant-based root. This consonant-based root (R) constitutes the basic root meaning of a word. For instance, the root consonants R1 = k, R2 = s, R3 = r denote the semantic field of *breaking*. Inflected forms of verbs are formed by modifying the vocalic patterns and by adding gender, person, and number affixes, e.g. *kasar-a* break in the 3SG.M is *y-aksir-u* and F-write *t-aksir-u*.

##### A. CAUSATIVE-INCOHATIVE ALTERNATION

Many verbal roots of MSA occur in both transitive and intransitive forms, as illustrated in (5) with the root *fataHa* 'open'. What is interesting is that these roots have a productive pattern where the intransitive forms show incohesive meaning, while the transitive forms have causative meaning. It is worth mentioning that these forms of verbs show a morphologi-

cal change when they are in the intransitive form by adding a morpheme to the beginning of the verb. The most common morphemes that mark the inchoative form are *?in-* and *ta-*.

- (5) (a) fataHa            l-waladu            l-baaba  
           open-pst        the-boy-Nom.        the-door-Acc.  
           ‘the boy opened the door’
- (b) ?in-fataHa      l-baabau  
           open-pst        the-door-Nom.  
           ‘the door opened’

The examples in (6) and (7) show that the *kasara* ‘breaking’ verbs virtually allow both the causative and inchoative forms with the addition of a marking morpheme in the latter.

- (6) (a) kasara            l-waladu            l-naafiðta  
           break-pst        the-boy-Nom.        the-window-Acc.  
           ‘the boy broke the window’
- (b) ?in-kasarat      l-naafiðtu  
           break-pst        the-window-Nom.  
           ‘the window broke’
- (7) (a) θana            zaydu            l-milʕaqtu  
           bend-pst        Zayd-Nom.        the-spoon-Acc.  
           ‘Zayd bent the spoon’
- (b) ?in-ʔanat        l-milʕaqtu  
           bend-pst        the-spoon-Nom.  
           ‘the spoon bent’

On the other hand, the examples in (8) and (9) show that the *Daraba* ‘hitting’ verbs allow only for the causative form, while the inchoative form is impossible.

- (8) (a) Daraba            l-waladu            l-ʕazarata  
           hit-pst            the-boy-Nom.        the-tree-Acc.  
           ‘the boy hit the tree’
- (c) \*\*?in-Darabat    l-ʕazaratu  
           hit-pst            the-tree-Nom.  
           \*\*‘the tree hit’

- (9) (c) naqara            l-Taaʔiru            raʔs-i  
 poke-pst            the-bird-Nom.      head-my-Acc.  
 'the bird poked my head'
- (d) \*\*ʔin-taqarat    raʔs-i  
 poke-pst            head-my-Nom.  
 \*\*'my head poked'

Tables (1) and (2) introduce lists of the *kasara* 'breaking' and *Daraba* 'hitting' verbs, respectively. Moreover, the gloss column in both tables suggest some selectional restrictions based on the properties of the argument assigned to the patient thematic role in the causative structures with the *kasara* 'breaking' verbs (*kasara zaydun l-kuba* 'Zayd broke the glass'/\**kasara zaydun l-burtuqalta* '\*Zayd broke the orange'); and the properties of the argument assigned to the instrument thematic role in the causative structures with the *Daraba* 'hitting' (*Darba zaydun l-baaba bi-qadamihi* 'Zayd hit the door with his foot'/\**Darba zaydun l-baaba bil-mindiil* '\*Zayd hit the door with the tissue'). The behaviour of the *hitting* and *breaking* verbs in MSA with respect to the *causative-incohesive alternation* is highly reminiscent of their English correspondents.

TABLE 1. Non-exclusive list of the *kasara* verbs

Root	Gloss/selectional restrictions	Intransitive	Transitive
kasara	break (e.g. glass, window)	?inkasar	kasara
θana	bend (e.g. spoon, stick)	?inθana	θana
Tawa	fold (e.g. blanket, cloth)	?inTawa	Tawa
baʕθara	scatter (e.g. crumbs, papers)	tabaʕθara	baʕθara
ʃaraxa	crack (e.g. glass, screen)	?inʃaraxa	ʃaraxa
ʃaqqqa	split (e.g. nuts, fruits)	?inʃaqqqa	ʃaqqqa
mazaqa	tear (e.g. paper, cloth)	tamazaqa	mazaqa
Hallala	dissolve (e.g. syrup, liquid)	taHallala	Hallala
mazzaʕa	pull apart (e.g. clothes)	tamzaʕa	mazzaʕa
gaʕʕada	wrinkle (e.g. hair, clothes)	tagaʕʕada	gaʕʕada
ʃaḏḏa	splinter (e.g. wood, seashell)	taʃaḏḏa	ʃaḏḏa
HaTTama	shatter (e.g. glass, furniture)	taHaTTama	HaTTama

TABLE 2. Non-exclusive list of the *Daraba* verbs

Root	Gloss/selectional restrictions	Intransitive	Transitive
Daraba	hit (w. stick)	*?inDaraba	Daraba
qaraʕa	knock	*?inqaraʕa	qaraʕa
lakama	punch (w. fist)	*?inlakama	lakama
Safaʕa	slap (w. hand)	*?inSafaʕa	Safaʕa
daaʕaba	tickle (w. fingers)	*?indaʕaba	daaʕaba
jalada	whip (w. whip)	*?injalada	Jalada
naqara	poke (w. beak)	*?intaqara	naqara
daqaa	pound (w. hammer)	*?indaqaa	daqqa
rabbata	caress (w. palm)	*tarbbata	Rabbata
Sadama	bump (into wall)	#?iSTadama	Sadama

#?iSTadama is not an inchoative form; it has an idiosyncratic reflexive meaning of bumping into a wall or tree either walking, riding, or driving.

### 3.2. ENTAILING A RESULT

As noted in section 1, the action denoted by the *breaking* verbs entail a nonreversible result, whereas that denoted by the *hitting* verbs entail a reversible result. Similar to English, the majority, if not all, of the *kasara* 'breaking' verbs in Arabic entail a result that is nonreversible, while the nonreversible result is impossible with the *Daraba* 'hitting' verbs. Examine the following examples in (10).

- (10) (a) mazaqa    zaydun    malaabisa-hu    fi    l-muʕaazarati  
 tear-pst    Zayd-Nom.    clothes-Acc-his    in    the-fight-Gen.  
 'Zayed tore his clothes in the fight'
- (b) daqqa    zaydun    l-baaba    b-l-miTraqati  
 knock-pst    Zayd-Nom.    the-door-Acc-    with-the-door knocker-Gen.  
 'Zayed knocked the door with the door knocker'

As shown in (10.a), the result of the verb *mazaqa* 'tore' cannot be reversed; that is, the torn clothes will stay torn. Also, there is no probability in constructions with the similar verb forms to deny a result. In (10.b), the result of the verb *daqqa* 'knock' is reversible, and its effect ends immediately with the end of the action. A probability for denying the result can be denoted in some constructions but with a different verb root.

- (11) (a) Sawwaba    zaydun            l-Darbata    naHwa    l-ʃaʒarati  
           aimed-pst    Zayd-Nom.    the-hit-Acc.    towards    the-tree-Gen.  
           'Zayed aimed his hit towards the tree'

The discussion provided in this section of the *hitting* and *breaking* verbs in MSA asserts that Fillmore's labelling of these two verb classes as *surface contact* and *change of state* verbs, respectively, can be extended to MSA, which supports the universality of Fillmore's classification and arguments of these two verb classes.

### 3.3. THE WITH/AGAINST ALTERNATION

According to Levin (1993), the *hit* verbs allow for alternating between *with* and *against* with no changes in the thematic roles of the syntactic arguments. Consider the following examples in (12) from Levin (1993, 67):

- (12) (a) Brian hit the stick against the fence.  
       (b) Brian hit the fence with the stick.

In both (12.a) and (12.b) *Brian* is the *agent*, *the stick* is the *instrument*, and *the fence* is the *location*. However, she states, "A hallmark of this alternation is the use of the preposition *against* to head the prepositional phrase expressing the location." (1993: 68). Based on this *hallmark*, it is agreed upon that the *break* verbs behave differently to the *hit* verbs in this regard. Although the *break* verbs also allow for alternating between *with* and *against*, the two constructions do not paraphrase one another.

- (13) (a) Brian broke the stick against the fence.  
       (b) Brian broke the fence with the stick.

In (13), the two constructions carry different meanings since in (a), *Brian* is the *agent*, *the stick* is the *instrument*, and *the fence* is the *location*, while in (b) *Brian* is the *agent*, *the fence* is the *patient*, and *the stick* is the *instrument*.

In MSA, the *Daraba* 'hitting' and the *kasara* 'breaking' verbs behave differently than they do in English. Unlike English, the *Daraba* 'hitting' verbs do not allow for alternating between *with* and *against*, even with different meanings.



- (14) (a) Daraba    l-waladu    l-suura    bi-l-ƴaSaa  
 ??hit-pst    the-boy-Nom.    the-fence-Acc.    with-the-stick-Gen.  
 'the boy hit the fence with the stick'
- (b) \*\*Daraba    l-waladu    l-ƴaSaa    Didda    l-suuri  
 hit-pst    the-boy-Nom.    the-stick-Acc.    against    the-fence-Gen.  
 'the boy hit the stick against the fence'

Also, the *kasara* 'breaking' verbs do not allow for alternating between *with* and *against*; they only allow for constructions with *bi* 'with' and not *Didda* 'against'. However, in the *kasara* 'breaking' verbs constructions with *bi* 'with' the thematic roles are different. In such a construction, the *subject* is the *agent*, the *direct object* is the *patient*, and the *indirect object* (the noun preceded by the preposition) is the *instrument*.

- (15) (a) kasara    l-waladu    l-suura    bi-l-ƴaSaa  
 break-pst    the-boy-Nom.    the-fence-Acc.    with-the-stick-Gen.  
 'the boy hit the fence with the stick'
- (b) \*\*kasara    l-waladu    l-ƴaSaa    Didda    l-suuri  
 break-pst    the-boy-Nom.    the-stick-Acc.    against    the-fence-Gen.  
 \*\*'the boy hit the stick against the fence'

### 3.4. THE CONATIVE ALTERNATION

The word *conative*, derived from the Latin *conor/conari* 'to try', is mostly used with reference to the *conative alternation*, a transitivity alternation that modifies the interpretation of a transitive verb towards denoting "an 'attempted action' without specifying whether the action was actually carried out" (Levin 1993: 42). On the other hand, the transitive variant specifies that the action has indeed been carried out. For more illustration, consider (16) and (17):

- (16) (a) The officer shot the thief.  
 (b) The officer shot at the thief
- (17) (a) The kid kicked the rock.  
 (b) The kid kicked at the rock.

According to Levin, the conative alternation is restricted to transitive verbs involving contact and motion; her assumption of *attempted action*,

and Goldberg's (1995) very similar idea of *intended result* are shown in later studies to be oversimplifications of the resulting semantics of all alternating verbs. Based on that, Broccias (2001) distinguishes at least two cases: one case "where the action denoted by the (transitive use) of the verb does not necessarily take place", and one case "where the verbal event does take place, though in a bit-by-bit fashion" (2001: 69).

With regard to the *hitting* and *breaking* verbs in English, Guerssel et al. (1985) state that the *conative alternation* is allowed only by the *hitting*, but not the *breaking* verbs.

(18) (a) The kids hit the piñata.

(b) The kids hit at the piñata.

(19) (a) The kids broke the piñata.

(b) \*\*The kids broke at the piñata.

According to Guerssel et al. (1985), and as shown in (18) and (19), verbs that integrate into *conative alternation* have meanings that involve motion as well as contact components. Consequently, and since only the *hitting* verbs involve both motion and contact, this licenses them to enter this alternation. On the other hand, the *breaking verbs* are pure change of state; a notion of contact is not inherent in its meaning, which forbids them from entering the *conative alternation*.

The *Daraba* 'hitting' and the *kasara* 'breaking' verbs behave differently from their English correspondents and are inconsistent with Guerssel et al.'s (1985) argument that verbs which alternate within *conative alternation* imply meaning that involves motion as well as contact, as both verb classes do not allow for the *conative alternation*.

(20) (a) Daraba      l-waladu      l-ʃazarata      bi-qdami-hi  
hit-pst      the-boy-Nom.      the-tree-Acc.      with-foot-Gen.-his  
'the boy hit the tree with his foot'

(b) \*\*Daraba      l-waladu      naHwa      l-ʃazarati      bi-qdami-hi  
hit-pst      the-boy-Nom.      at      the-tree-Acc.      with-foot-Gen.-his  
'the boy hit at the tree with his foot'

(21) (a) kasara      l-waladu      l-saaʃata      bi-l-miTraqti  
hit-pst      the-boy-Nom.      the-watch-Acc.      with-the-hammer-Gen.  
'the boy broke the watch with the hammer'

- (b) \*\*kasara l-waladu naHwa l-saaʿati bi-l-miTraqti  
 hit-pst the-boy-Nom. at the-watch-Acc. with-the-hammer-Gen.  
 ‘the boy broke the watch with the hammer’

However, the *attempted action* denoted by the *conative alternation* can be achieved in a construction with the noun derived from the *hitting verbs* and a different verb root. This construction is not allowed by the *breaking verbs*.

- (22)(a) saddada l-waladu Darbatan naHwa l-ʿazarati bi-qdami-hi  
 aim-pst the-boy-Nom. (a)hit-Acc. at the-tree-Gen. with-foot-Gen.-his  
 ‘the boy hit at the tree’
- (b) Sawwaba l-mulaakimu lakmatan naHwa l-mulaakimi l-ʔaaxar  
 aim-pst the-boxer-Nom. (a)punch-Acc. at the-boxer-Gen. the-other  
 ‘the boxer punched at the other boxer’

### 3.5. THE MIDDLE ALTERNATION

The *middle alternation* is another alternation used to determine verbs behavior. In this alternation, the subject changes between the altered and the unaltered constructions.

- (23) (a) The mother cut the bread.  
 (b) The bread cuts easily.

The subject in (23.b) is in a different relation to the verb *cut* from the relation that the subject in (23.a) has; that is, the first is the patient of the action while the latter is the agent. Crystal (1985) refers to the *middle constructions* as *ergative constructions*. Ergativity means, “the subject of intransitive use of broke is the same as the object of its transitive use, and the Agent of the action is thus said to appear as the ‘ergative subject’” (Crystal, 1985: 111–112). In accordance with Levin, Trask draws attention to the middle alternation, stating that it is “denoting verbs whose subject is not an agent” (1993: 71).

Thus, only the *breaking verbs* allow for the *middle alternation* and not the *hitting verbs*. The investigation carried out by Fillmore (1997), and Hale and Kayser (1987) clearly show that only English *breaking verbs* allow for the *middle alternation*, whereas the *hitting verbs* do not. This remark is in

accordance with the fact that roots of the *breaking verbs* allow for both intransitive and transitive constructions, (see section 1)

- (24) (a) The glass breaks easily.  
 (b) \*The ball hits easily.

Once more, the similarity between English and Arabic is striking, the *kasara* 'breaking' verbs allow for the *middle alternation*, while the *Daraba* 'hitting' verbs do not. Again, this remark about the Arabic *hitting* and *breaking* verbs is in accordance with their behaviour within the *causative-incohortive alternation*, (see section 0.3.1).

- (25)(a) ?inkasira      l-zujaaja      bi-sahuulati  
 break-pst      the-glass-Acc.      with-ease-Gen.  
 'the glass breaks easily'
- (b) \*\*?inDariba      l-zujaaja      bi-sahuulati  
 hit-pst      the-glass-Acc.      with-ease-Gen.  
 '\*\*the glass hits easily'

### 3.6. THE BODY-PART POSSESSOR ASCENSION ALTERNATION

The English *body-part possessor ascension alternation* is exemplified by the following sentences:

- (26) (a) Sam hit/bumped/tapped/whacked Bill's arm.  
 (b) Sam hit/bumped/tapped/whacked Bill on the arm.
- (27) (a) Sam broke/cracked/fractured/snapped Bill's arm.  
 (b) \*\*Sam broke/cracked/fractured/snapped Bill on the arm.

As with the various constructions described earlier, the second construction shown in (b) sentences is associated with a very schematic meaning, and only verbs that are compatible with this meaning can occur in the construction. Like the locative alternation, the *body-part possessor ascension alternation* provides two different grammatical constructions for describing the same basic type of event. In the (a) constructions, the direct object is a complex syntactic constituent that contains a head NP specifying a particular body part (arm) and a genitive NP specifying

the possessor of the body part (Bill's). In (26.b), the two NPs are expressed as separate constituents – the possessor NP is the direct object (it has 'ascended' out of the modifier position in the complex NP of the first construction), and the body-part NP is the object of a preposition (typically on or in); note that in this construction the possessive relationship is not overtly marked but is instead inferred. As shown in (26) and (27), while the *hitting verbs* allow for this alternation the *breaking ones* do not. The previous research has argued for different explanations to this phenomenon. The most agreed upon are two main semantic features that may be relevant: one involving the notion of *contact* and the other involving the notion of *affectedness*. It is worth mentioning that although both verb classes manifest physical contact, this contact involves more physical *affectedness* in the constructions with the *hitting verbs*.

In MSA *hitting* and *breaking* verbs the situation is very similar. The *Daraba* 'hitting' verbs allow for the *body-part possessor ascension alternation*, while the *kasara* 'breaking' verbs do not. Additionally, MSA offers more ascending constructions with the *hitting verbs*.

- (28)(a) Daraba      l-waladu      qadama      ?axii-hi  
hit-pst      the-boy-Nom.      foot-Acc.      brother-Gen.-his  
'the boy hit his brother's foot'
- (b) Daraba      l-waladu      ?axaa-hu      ʕala      qadami-hi  
hit-pst      the-boy-Nom.      brother-Acc.-his      on      the-foot-Gen.-his  
'the boy hit his brother on the foot'
- (c) Daraba      l-waladu      ?axaa-hu      min      qadami-hi  
hit-pst      the-boy-Nom.      brother-Acc.-his      from      the-foot-Gen.-his.  
'the boy hit his brother on his foot'
- (29)(a) kasara      l-waladu      qadama      ?axii-hi  
break-pst      the-boy-Nom.      foot-Acc.      brother-Gen.-his  
'the boy broke his brother's foot'
- (b) \*\*kasara      l-waladu      ?axaa-hu      ʕala      qadami-hi  
broke-pst      the-boy-Nom.      brother-Acc.-his      on      foot-Gen.-his  
\*\*'the boy broke his brother on the foot'
- (c) \*\*kasara      l-waladu      ?axaa-hu      min      qadami-hi  
broke-pst      the-boy-Nom.      brother-Acc.-his      from      foot-Gen.-his.  
\*\*'the boy broke his brother on his foot'

The sentences in (28) show that the *Daraba verbs* in MSA allow for this alternation with two different prepositions na'mely: *šala* 'on' and *min* 'from'. The different prepositions suggest slightly different meanings: in the construction with *šala* 'on' the *hit* is exactly on the foot, while in the construction with *min* 'from' the *hit* is possibly on the foot or on an area close by. The construction with the *min* 'from' preposition is not allowed by the *kasara* 'breaking' verbs just as the construction with the *šala* 'on' preposition is.

To sum up the discussion thus far, the criteria I have used to distinguish the *kasara* 'breaking' from the *Daraba* 'breaking' verbs in MSA are summarized in the following table.

TABLE 3. Summary of differences between the *kasara* 'breaking' and the *Daraba* 'breaking' verbs in MSA

Test	Daraba 'hit'	kasara 'break'
Causative-Incohesive alternation	No	Yes
Selectional restrictions	Instrument	Patient
Entailing a result	No	Yes
With/against alternation	No	No
Conative alternation	Yes (with root modification)	No
Body-part possessor ascension alternation	Yes	No

## 5. GRAMMATICAL RELEVANCE DETERMINATION

The discussion of the considered verbs in the previous sections within certain alternations have shown that there are some characteristic properties that are sensitive to verb classes, and that distinguish these constructions from those that are not class-sensitive. It turned out that even though Arabic is a rich language on the morphological level, not all morphological processes are sensitive to the discussed verb classes. The causative morpheme *?in-* used to change transitive verbs to intransitive ones (as seen in 0.3.1) is highly productive in MSA and occurs with the majority of Arabic verbs that allow for the causative-incohesive alternation; fewer of these verbs alternate to the intransitive form with the addition of the

morpheme *ta-*. The frequent use of these two morphemes in Arabic to change transitive verbs into intransitive ones supports my argument that the causative-incohesive constructions in MSA are not class-sensitive to verb classes. Thus, the non-class-sensitive constructions can be described as *affix-driven* or *affix-dependant*. This can be explained in terms of the fact that these constructions, e.g. causative-incohesive, are triggered by specific affixes whose existence verifies the grammatical and semantic changes of the constructions of these alternations.

In contrast, the previous discussion has shown class-sensitive constructions such as the constructions in (22) where a different verb root, *saddada* or *Sawaaba*, is used with the noun derived from the *Daraba* 'hitting' to denote the attempted result of a conative construction. The other discussed alternations have shown no or very little morphological changes, which proves them to be non-class-sensitive constructions. I claim that such constructions should affect only the systematic or templatic aspects of verb meaning. There is not enough room in this paper to verify or disprove this claim; a complete model of what a verb's event template should look like needs to be developed before this. However, I argue, based on my intuition of Arabic, that semantic effects of the class-sensitive alternations are more constrained and restricted than those of non-class-sensitive alternations.

## 6. CONCLUSION

It is striking that verb classes like *hitting* and *breaking* are grammatically relevant in two languages as different as English and Arabic. This similarity offers additional support for the existence of strong cross-linguistic principles which govern the relationship between verbal semantics and clause structure/argument expression. It is worth mentioning that most constructions seem to apply to the same classes across a wide range of languages, such as the causative-incohesive alternation, among other various object alternations.

Such studies are of great importance to distinguish the principles of argument realization that are truly universal from those that are language-specific. The study attempted to outline the main systematic differences between the *Daraba* 'hitting' and the *kasra* 'breaking' verbs in MSA to distinguish between these two classes following the steps of Fill-

more (1970). The two classes were examined through a number of syntactic and semantic alternations. The final section of the study, briefly, discussed which of these tests can be classified as non-class-sensitive and which as class-sensitive, pointing out that non-class-sensitive alternations are affix-driven or affix-dependant, which is not the case with the class-sensitive ones. Also, the non-class-sensitive alternations are less constrained and restricted than the non-class-sensitive alternations.

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## THE INTERFACE BETWEEN VERBAL SEMANTICS AND CLAUSE STRUCTURE IN ARABIC *HITTING* AND *BREAKING* VERBS

### Summary

This paper investigates the relationship between verbal semantics and clause structure in Modern Standard Arabic (MSA). The departure point of this study is the classical paper of Fillmore (1970) *The Grammar of Hitting and Breaking*, in which he distinguishes two classes of English transitive verbs: (1) *surface contact* verbs, as in (*hit, slap, strike, bump, stroke*) vs. *change of state* verbs, as in (*break, bend, fold, shatter, crack*). In his paper, Fillmore argues that the meaning of a verb is based on the systematic components of meaning; that is the template of the event, and the idiosyncratic properties of the verb root. Similar to English, the *Daraba* 'hitting' and the *kasara* 'breaking' verbs are grammatically relevant in MSA. I show that the two classes are distinguished by a number of grammatical and semantic properties in MSA, as they are in English, by the means of a number of testing alternations. The paper concludes that *hitting* and *breaking* verbs are strikingly similar in English and Arabic, which supports the universality of the principles that govern the relationship between verbal semantics and argument structure.

**Key words:** Arabic, verb classes, verbal semantics, argument structure, hitting verbs, breaking verbs

## WSPÓŁDZIAŁANIE MIĘDZY SEMANTYKĄ CZASOWNIKA A STRUKTURA ZDANIA W ARABSKICH CZASOWNIKACH TYPU *UDERZAĆ* I *ŁAMAĆ*

### Streszczenie

Przedmiotem badań w niniejszym artykule jest relacja między semantyką czasownika a strukturą zdania we współczesnym standardowym języku arabskim. Punktem wyjścia dla dociekań autorki jest klasyczna praca Fillmore'a

z 1970 roku pt. *The Grammar of Hitting and Breaking*, w której wyodrębnione zostały dwa rodzaje angielskich czasowników przechodnich: (1) czasowniki opisujące styczność z powierzchnią (*bić, policzkować, razić, zderzać się, klepać, uderzać*) oraz (2) czasowniki wyrażające zmianę stanu z jednego w drugi (*łamać, zginać, składać, roztrzaskać, pękać*). Według Fillmore'a znaczenie czasownika zasadza się na systemowych składnikach znaczenia, tj. matrycy wydarzenia oraz specyficznych właściwościach rdzenia czasownika. Z gramatycznego punktu widzenia, czasownik *Daraba* ('uderzać') oraz *kasara* ('łamać') są istotne w języku arabskim; podobnie jak ich odpowiedniki *hit* i *break* w języku angielskim. Autorka udowadnia, że charakterystyczne cechy gramatyczne i semantyczne obu grup czasowników można uchwycić za pomocą testów diagnostycznych. Autorka konkluduje, że czasowniki typu *uderzać* i *łamać* w obu językach są zaskakująco do siebie podobne, co może stanowić potwierdzenie tezy o uniwersalności zasad rządzących relacjami między semantyką czasownika a strukturą zdania.

**Słowa kluczowe:** język arabski, rodzaje czasowników, semantyka czasownika, struktura zdania, czasowniki typu *uderzać* i *łamać*