

LOCATIVE ALTERNATION IN ENGLISH AND JORDANIAN SPOKEN ARABIC

SHEHDEH FAREH – JIHAD HAMDAN
University of Jordan, Amman

1. Introduction

Contrastive studies have a long history. Fisiak (1981: 3) suggested that the roots of theoretical contrastive linguistics, as the term is used today, go back to the last decade of the nineteenth century. While phonology and syntax are the core of a large number of contrastive studies, semantics has started to catch up only recently. One of the areas that has attracted considerable attention over the past two decades is verb subcategorization and the type of semantic constraints that govern verb argument structure in English and other languages as well (Pinker 1989; Radford 1981, 1988; Haegeman 1991).

Pinker (1989) investigated four linguistic phenomena in English, viz., the dative, causative, passive, and locative alternations; his basic concern was to suggest a theory that can adequately answer the question of why particular verbs subcategorize for particular argument structures. For instance, the verb *scatter* in (1) below sounds natural while the verb *disperse* in (2) sounds natural in (2a) and odd in (2b) though the two verbs often appear in monolingual dictionaries as synonyms (Cowie 1989).

- | | |
|--|--------------|
| (1a) Ali scattered the seeds onto the field. | [NP onto-NP] |
| (1b) Ali scattered the field with seeds. | [NP with-NP] |
| (2a) Ali dispersed the seeds in the field. | [NP in-NP] |
| (2b) *Ali dispersed the field with seeds. | [NP with-NP] |

Examples (1) and (2) show that the locative verb *scatter* alternates (i.e., occurs in two lexically related constructions) but the locative verb *disperse* does not.

Pinker (1989: 97) posited that he is unaware of any cross-linguistic surveys of locative constructions. However, he mentioned (through reference to other studies) that alternations similar to the English locative, but often marked with verb affixation, were found in Hungarian, Indonesian, Russian, German, Berber, Igbo and

Japanese. To our knowledge, this observation is still valid, particularly in relation to English and Arabic.

2. Objectives of the study

This is a preliminary paper that aims at investigating the locative structures in Jordanian spoken Arabic (JSA) and comparing them with their English equivalent forms. It also aims at establishing semantic criteria to account for the locative shift in JSA. Specifically, the study attempts to accomplish the following objectives:

1. Showing that JSA has a locative alternation marked with a preposition as is the case in English.
2. Amassing locative verbs in JSA.
3. Classifying these verbs into two categories; alternating and nonalternating on the basis of acceptability judgements by native speakers of JSA (see section 4 below).
4. Establishing semantic criteria to account for alternation or nonalternation in JSA by testing Pinker's constraints of locative alternation in English against the Arabic data and specifying special constraints wherever Pinker's constraints fail to apply.

The paper proceeds as follows. Section 3 below defines the concept of locative alternation and provides illustrative examples showing that JSA has a locative alternation marked with a preposition as is the case in English. Furthermore, it reviews Pinker's theory of argument structure and the constraints he proposed for the locative alternation in English. Section 4 describes the procedure followed by the researchers for amassing the locative verbs in JSA and classifying them into alternators and nonalternators. Section 5 reports on the researchers' attempt to apply Pinker's constraints to the Arabic data with a view to testing the extent to which these constraints succeed in accounting for the locative alternation in JSA. Concluding remarks are presented in section 6.

3. Locative alternation

3.1. Concept and forms of locative alternation in English and JSA

The locative alternation in both English and JSA is a process that implies change in the meaning of the verb undergoing alternation since it involves a transfer of a substance, a mass or a set of objects (theme, content) into or onto a container or surface (goal, container). The alternation in English is realized by two major types of constructions. In the first type, as in (3) below, the preposition *into* or *onto* alternates with the preposition *with*. In the second type, the preposition *from* alternates with the preposition *of*, as in (4) below.

(3a) Ali loaded sugar into the cart.

- (3b) Ali loaded the cart with sugar.
 (4a) Ali emptied water from the bucket.
 (4b) Ali emptied the bucket of water.

On the other hand, the locative alternation in JSA is realized by four types of constructions. In the first type, the preposition *fi* 'into/onto' alternates with the preposition *bi* 'with'. In the second, *ʕa* 'on (to)' alternates with *bi* 'with'. In the third, *fi* 'into' alternates with *fi* 'into'. In the fourth, *min* 'from' alternates with *min* 'of' or with *ʕan* 'off'. Below are illustrative examples. It is worth noting that the JSA sentences are broadly transcribed as spoken.

- (5a) muusa sattaʕ likyaas fi ddukkaaan.
 Musa crammed the-sacks in the-store
 'Musa crammed the sacks into the store.'
- (5b) muusa sattaʕ iddukkaaan bi likyaas.
 Musa crammed the-store with the-sacks
 'Musa crammed the store with sacks.'
- (6a) muusa rashag il-mayyi ʕa l-walad.
 Musa splashed the-water on the-boy
 'Musa splashed water on the boy.'
- (6b) muusa rashag il-walad bi l-mayyi.
 Musa splashed the-boy with the-water
 'Musa splashed the boy with water.'
- (7a) muusa daxxal isbaʕu fi l-xaatim.
 Musa inserted finger-his into the-ring
 'Musa inserted his finger into the ring.'
- (7b) muusa daxxal il-xaatim fi sbaʕu.
 Musa inserted the-ring into finger-his
 'Musa put the ring onto his finger.'
- (8a) muusa faththa zzeet min ittanaki.
 Musa emptied the-oil from the-tin
 'Musa emptied oil from the tin.'
- (8b) muusa faththa ttanaki min izzeet.
 Musa emptied the-tin from the-oil
 'Musa emptied the tin of oil.'

As is clear, each type of locative constructions in both JSA and English has two different but related forms. In his analysis of the locative alternation in English, Pinker (1989: 124-125) suggested that one of these forms is the base for the other, i.e., the base functions as an 'input' to the derived form. This classification is based on whether the content or goal is obligatory or not. For example, we can say *he piled the books* but not *he piled the shelf*. In such a case the content (theme) is obligatory

and this suggests that the verb naturally takes the theme as object and thus it is the base form from which the second one is derived. Although these judgments are compatible with the judgments of many native speakers of English, Pinker (1989: 125) holds that they are still subjective.

As for JSA, we also find it difficult to determine objectively which form is the base. However, the distinction, as it stands, seems to be more important to determining which form is acquired earlier in the process of language acquisition than to theoretical contrastive studies. Therefore, we decided not to investigate this issue any further.

In both JSA and English locative alternations, the two alternating forms are not synonymous. For example in (3a), i.e., the *content-oriented* form, the theme (sugar) does not necessarily fill or cover the container (cart), whereas in (3b), i.e., the *container-oriented* form, the goal (the cart) must be completely filled or covered by the content. This means that applying the locative alternation rule to constructions like (3a) above must result in this holism effect; otherwise, the verb does not undergo alternation. The lack of the *holism effect* accounts for the ungrammaticality of sentences like (9b) below:

- (9a) Ali pushed the car into the road.
 (9b) *Ali pushed the road with the car.

In the second type of English locative alternation constructions, the application of the alternation rule should result in complete depletion of the container (e.g., *the bucket* in (4b) above). If the application of the rule does not result in the depletion effect, the verb will not alternate.

- (10a) Ali read a chapter from the book.
 (10b) *Ali read the book of a chapter.

Sentence (10b) is unacceptable because the application of the alternation rule to (10a) does not result in the complete depletion of the goal/container (i.e., *the book*); the chapter whether read by Ali or not will continue to be a part of the book.

Likewise, the four forms of the locative alternation in JSA, i.e., $fi \rightarrow bi$, $\zeta a \rightarrow bi$, $fi \rightarrow fi$, $min \rightarrow min$, are not synonymous. In the first three types, the application of the alternation rule to (5a), (6a) and (7a) above results respectively in the *holism effect* as in (5b), (6b) and (7b). In the fourth type of alternation, the application of the alternation rule to (8a) above results in the depletion effect in (8b).

Now let us review, though rather sketchily, Pinker's theory of argument structure and the constraints he proposed for the locative alternation in English.

3.2. Pinker's theory of argument structure and constraints on English locativization

3.2.1. Pinker's theory

Pinker's theory of argument structure is based on a principal assumption: every set of grammatical functions (e.g., subjects, second objects, and prepositional objects)

which a verb can appear with "... is licensed by a different, fully formed argument structure associated with that verb" (Pinker 1989: 71). By way of exemplification, the verb *go* has one argument structure, corresponding to (11) below, whereas the verb *eat* has two, corresponding to (12a) and (12b).

- (11) Ali went.
 Subj V
- (12a) Ali ate.
 Subj V
- (12b) Ali ate an apple.
 Subj V Obj

In other words, the term *argument structure* is used "... to refer to a strictly syntactic entity, namely the information that specifies how a verb's arguments are encoded in the syntax" (Pinker 1989: 71). Thus a lexical entry of a verb specifies, among others, rich collections of information including the verb argument structure and its meaning, or semantic structure (see also Bresnan 1982). In light of this, a verb like *eat*, which has two different argument structures, has two distinct lexical entries sharing morphology and components of their semantic structures. The two lexical entries are linked by means of a lexical rule, which takes one entry as its input and produces the second as its output. In his theory, Pinker focuses on changes of argument structures among verbs, i.e., alternations. Below is a further example of the alternation between the argument structures of the locative verb *pile*.

- (13a) Ali piled the books onto the table.
 (13b) Ali piled the table with books.

What is worth noting here is that the argument structure of a certain verb is determined by a set of *broad-range* and *narrow-range* semantic constraints. The former are often viewed as universal and the latter as language-specific (Gropen et al. 1989). However, Pinker (1989: 95) hopes that the kind of constraints on locativization in English "... should show tendencies towards universality". After all, it may turn out that the constraints that govern a certain alternation in two languages (or even more than two) have many things in common. Moreover, it is quite natural to find in a language a verb or a set of verbs that can subcategorize for two argument structures, while their nearest semantic equivalents in another language can subcategorize for one argument structure only.

3.2.2. Constraints on locativization in English

Pinker (1989) observed that locativizable verbs in English should meet a number of constraints. Some of these constraints are general in nature or *broad-range*; others are specific or *finer-grained*. Below are more details about them.

3.2.2.1. Broad-range constraints

Pinker (1989: 124) argued that a locativizable verb in English should "... allow one to predict both a type of motion and an end state." In other words, an alternating verb should meet two *broad-range* semantic constraints. The first is that the verb specifies the manner in which an object or a substance moves to a container (e.g., in a continuous stream as in pouring or as a mist as in spraying). The second constraint is that this kind of motion causes the container, i.e., *the goal* to change state (e.g., to be filled). These constraints work in coordination. If one is lacking, the verb will not alternate. The cooperative nature of these constraints explains why the alternation of verbs such as *fill* and *pour* is not possible.

(14a) John filled the tank with gas.

(14b) *John filled gas into the tank.

(15a) John poured water into the bucket.

(15b) *John poured the bucket with water.

The verb *fill* in (14a) allows us to predict only the state of the container, i.e., it is completely filled with gas, but it does not specify the manner in which the object (the gas) moved into the container. Thus sentence (14b) is unacceptable. Likewise, the verb *pour* in (15a) specifies the motion of the object (water) to the container (bucket); the motion here takes the form of a continuous stream. However, the verb does not allow us to predict the end state of the container (e.g., whether the bucket became full, half-full or even continued to be empty because it was leaking). The failure of such verbs to meet the two *broad-range* constraints, as one whole, renders them nonalternating.

Although the *broad-range* constraints allow us to identify the basic semantic features of alternating locative verbs in English, they are not sufficient conditions for the alternation to occur (Pinker 1989: 124). In fact, these constraints, as Pinker noted, fall short of answering the question of why some verbs specify a motion or end state and others do not. For instance, it is not sufficient to say that *pour* does not alternate because it does not specify an end state. Still, one needs to know why the verb *pour* is not capable of having a component of meaning specifying that the container is completely filled, in which case a sentence like (16b) will be licensed.

(16a) Ali poured water into the container.

(16b) *Ali poured the container with water.

This leads us to outline another set of constraints, i.e., the *finer-grained* constraints.

3.2.2.2. Finer-grained constraints

Pinker suggested a set of *finer-grained* criteria (or narrow-range constraints) that "... determine whether the verb can retain components of meaning for end states or mo-

tions" (1989: 124), the two broad-range criteria for locativization. Below is a summary of the *narrow-range* constraints which Pinker (1989: 126-128) proposed for the English locative alternation, regardless of which argument structure is the base.

1. Verbs that indicate "simultaneous forceful contact and motion of a mass against a surface" (Pinker 1989: 126), e.g., *smear, brush, dab, daub, plaster, rub, slather, smudge, spread* and *streak*.
(17a) He smeared grease on his hands.
(17b) He smeared his hands with grease.
2. Verbs that indicate vertical arrangement on a horizontal surface, e.g., *heap, pile, and stack*.
(18a) He heaped bricks on the floor.
(18b) He heaped the floor with bricks.
3. Verbs indicating the application of force to a mass causing ballistic motion in a specified spatial distribution along a trajectory, e.g., *splash, inject, spatter, spray, sprinkle* and *squirt*.
(19a) She splashed water on the car.
(19b) She splashed the car with water.
4. Verbs that cause a mass to move in a widespread or nondirected distribution, e.g., *scatter, bestrew, sow, and strew*.
(20a) The farmer scattered seeds onto the field.
(20b) The farmer scattered the field with seeds.
5. Verbs that indicate that "... a mass is forced into a container against the limits of its capacity" (Pinker 1989: 126), e.g., *pack, cram, crowd, jam, stuff* and *wad*.
(21a) They packed the crack with oakum.
(21b) They packed oakum into the crack.
6. Verbs which indicate that "... a mass of size, shape, or type defined by the intended use of a container ... is put into the container, enabling it to accomplish its function" (Pinker 1989: 126), e.g., *load* and *stock*.
(22a) He loaded the gun with bullets.
(22b) He loaded bullets into the gun.
7. Verbs that indicate a specific kind of empty end state regardless of manner, e.g., *clean, cleanse, clear, empty* and *strip*.
(23a) He cleared dishes from the table.
(23b) He cleared the table of the dishes.

On the face of it, alternators in this class do not meet the first broad-range constraint for locativization, (see 3.2.2.1. above) which indicates that an alternator should allow one to predict the type of motion. It seems that this constraint is not as powerful with verbs showing *depletion* (e.g., *clean*, *empty*, etc.) as it is with verbs showing *holism* (e.g., *load*, *smear*, *fill*, etc.). This claim will also be tested against verbs of depletion in the Arabic data.

Before closing this section, it is useful to observe that Pinker (1989: 129-130) reported two other subsets of alternators where the alternation occurs between the *from* form and a form without an *of*-phrase, as in *she wiped crumbs from the table* / *she wiped the table *of crumbs* and *he vacuumed lint from the carpet* / *he vacuumed the carpet *of lint*. The two subsets specify either a particular manner of removal via contact with the source, or a particular instrument of removal.

The fact that these structures do not reflect alternation between two argument structures, each with a preposition, may cast some doubt on their inclusion amongst alternators.

4. Amassing and classifying locative verbs in JSA

To the authors' knowledge, locative verbs in Arabic have not been studied. Therefore, a primary objective of this paper was to identify and amass such verbs in one variety of Arabic, viz., JSA, the variety that the researchers speak natively. To achieve this objective, the authors followed the following procedure:

- (1) The authors compiled a preliminary list of 90 locative verbs in JSA. As the authors were, at the time of data collection, teaching a course in English syntax to two groups of fourth year English majors at the University of Jordan, they thought it would be a good idea if they could engage their students in the task of compiling a larger list of locatives in JSA. For this purpose, the authors introduced a sample of locative constructions in English representing both alternating and nonalternating verbs and compared and contrasted them with similar forms in JSA. The students, who were speakers of JSA, were encouraged to collect more locative verbs in this variety and hand them in to their instructors. Through this assistance, the authors, at this stage, were able to expand their list to 134 locatives.
- (2) The amassed collection of verbs was tentatively classified into two groups: 65 alternating and 69 nonalternating. Each alternator was used in two short but informative sentences representing its two possible argument structures, whereas each nonalternator was represented by one sentence only. All sentences were audio taped by one of the researchers as spoken in JSA. The exact word order of this variety still awaits further research; however, El-Yasin (1985) argued that it is SVO. We shall adopt this order when we present the JSA data.

- (3) At a later stage, two Jordanian colleagues who have research interest in contrastive linguistics were requested to review the taped sentences with a view to determining their acceptability. They were also requested to suggest further locative verbs, if any. Most of their judgments were found to be compatible with those of the researchers, particularly in connection with nonalternators. However, they noted that some of the examples containing alternators were rather odd or 'forced.' They also suggested the addition of five verbs to the list, four alternators and one nonalternator. The addition of these verbs to the original list rendered it almost exhaustive. It contained 69 alternators and 70 nonalternators.
- (4) To further validate the resultant list of alternators and nonalternators, the authors tested their acceptability against the intuition of 40 native speakers of JSA. The informants were graduate students in the Department of Linguistics and Phonetics at the University of Jordan. The informants did the task in a language lab under no time constraints. However, most of them completed it in 50-60 minutes. They were requested to judge the stimulus sentences as acceptable or unacceptable on the basis of their first response to each sentence. Furthermore, the subjects were requested not to change their answers. Any sentence that was judged as unacceptable by 15% or more of the informants was excluded from the data. The final version of the list (after the exclusion of two alternating verbs) contained 67 alternators and 70 nonalternators. Further analysis of the data was confined to this list. The complete list of alternators and nonalternators appear in the Appendix. For space limitation, only alternators appear in short illustrative sentences.

5. Constraints on locative alternation in JSA

The authors tested Pinker's constraints against the Arabic data first, then they proposed new constraints for alternation where Pinker's constraints actually failed to apply. This section proceeds as follows: 5.1. and 5.2. below test Pinker's broad-range and finer-grained constraints against the Arabic data, whereas 5.3. presents the proposed constraints for those alternations in JSA which were not licensed by Pinker's constraints.

5.1. Broad-range constraints

As reported earlier (see 3.2.2.1), the inherent semantic structure of locativizable verbs in English makes it possible for one to predict both a specific type of motion and a change in the end state. Likewise, alternators in Arabic enable us to make similar predictions. On examining the alternating verbs in our list, we found that they tend to indicate a specific type of movement (for the object or content) followed by a change in the state of the container. The verb *hasha* 'stuff', for example, involves causing a mass (e.g., cotton) by means of stuffing to completely fill a container (e.g., a pillow).

- (24a) muusa_hasha l-guṭun fi liwsaadi.
Musa stuffed the-cotton into the-pillow
'Musa stuffed cotton into the pillow.'
- (24b) muusa_hasha liwsaadi bi l-guṭun.
Musa stuffed the-pillow with the-cotton
'Musa stuffed the pillow with cotton.'

On the other hand, the verb *bahhar* 'spice' in (25) below does not alternate because it does not show the specific manner of spicing, whereas the result of the verb *dagg* 'hammer' (26) does not guarantee the *holism effect*.

- (25a) muusa bahhar itṭabiix bi l-fifil wi l-lamuun.
Musa spiced the-food with the-pepper and the-lemon
'Musa spiced the-food with pepper and lemon.'
- (25b) *muusa bahhar il-fifil wi l-lamuun fa ṭṭabiix.
Muusa spiced the-pepper and the-lemon onto the-food
'Musa sprinkled pepper and lemon onto the food.'
- (26a) muusa dagg il-musmaar fi l-heet.
Musa hammered the-nail into the-wall
'Musa hammered the nail into the wall.'
- (26b) *muusa dagg il-heet bi l-musmaar.
Musa hammered the-wall with the-nail
'Musa hammered the wall with the nail.'

So far, it has been demonstrated that both English and JSA alternating locatives are governed by the same set of broad-range constraints. Now let us examine the other set of constraints where one naturally expects the two unrelated languages to start to diverge.

5.2. Finer-grained constraints

Prior to testing Pinker's finer-grained constraints against the Arabic data, it is useful to remember that such constraints are often viewed as language-specific. Moreover, it was claimed that some of them may turn out to be dialect-specific (Gropen *et al.* 1989: 243). If this is correct, then one would logically expect that some speakers of JSA may not always find themselves at ease with some of the examples cited in this paper.

To test Pinker's constraints against the Arabic data, the following procedure will be adopted. Each constraint will be taken up at a time. All verbs governed by the constraint in question will be cited. However, for space limitation only one or two illustrative examples will be provided. An attempt will also be made to show why some English locatives alternate while their nearest JSA equivalents do not.

5.2.1. Constraint 1: Verbs indicating simultaneous forceful contact and motion of a mass against a surface

On examining the amassed list, the researchers found that this constraint licensed the alternation of the following verbs: *laghmaṭ* 'smear', *dahaṇ* 'paint', *dahaṇ* 'spread', *labbas* 'coat', *tarrāz* 'embroider', *xathṭhab* 'smudge', *ratwash* 'slather', and *latt* 'daub'.

- (27a) muusa laghmaṭ idee bi shshahmeh.
Musa smeared hands-his with the-grease
'Musa smeared his hands with grease.'
- (27b) Musa laghmaṭ ishshahmeh fa idee.
Musa smeared the-grease on hands-his
'Musa smeared grease on his hands.'
- (28a) muusa dahan irrghiif bi zzibdi.
Musa spread the-loaf with the-butter
'Musa spread the loaf with butter.'
- (28b) muusa dahan izzibdi fa rrghiif.
Musa spread the-butter on the-loaf
'Musa spread butter on the loaf.'

The verb plaster in the sense of 'cover a wall with a soft mixture' alternates, whereas its nearest equivalents in JSA *maṣjan*, *ṭayyan* and *jafsan* do not. This may be ascribed to the fact that these verbs and their themes are cognates (i.e., *maṣjuuni*, 'paste', *tiini* 'clay' and *jafsiin* 'gypsum', respectively). In reality, the meaning of the theme is inherent in the semantic structure of the verb, hence it does not appear with the verb. For instance, *muusa maṣjan ilheet* 'Musa plastered the wall' sounds more natural in JSA than *muusa maṣjan ilheet bi l-maṣjuuni* 'Musa plastered the wall with paste'. In other words, such verbs seem to subcategorize for the goal (e.g., *ilheet*) only. That is, they occur in one argument structure.

5.2.2. Constraint 2: Verbs indicating vertical arrangement on a horizontal surface

This constraint accounts for the alternation of *sattaf*, *taras* and *rass* whose nearest English equivalent is 'stack'.

- (29a) muusa sattaf likyaas fi l-maxzan.
Musa stacked the-sacks in the-store
'Musa stacked the sacks in the store.'
- (29b) muusa sattaf il-maxzan bi likyaas.
Musa stacked the-store with the-sacks
'Musa stacked the store with sacks.'

It seems that *kawwam* 'pile', and *saffat* 'stack' do not alternate, unlike their English relevant forms, because their inherent semantic structure does not necessarily require a specific form of arrangement. For instance, *saffat* may indicate vertical as well as horizontal arrangement on a surface; *kawwam*, on the other hand, may imply heaping a mass or objects on a surface, not necessarily in a certain specific manner.

5.2.3. Constraint 3: Verbs indicating the application of force to a mass causing ballistic motion in a specified spatial distribution along a trajectory

Alternators in this class include *tartash* 'splash', *baxx* 'squirt', *rashsh* 'spray', *rashag* 'splash'.

(30a) muusa tartash ?awafii bi l-mayyi.
Musa splashed clothes-his with the-water
'Musa splashed his clothes with water.'

(30b) muusa tartash il-mayyi fa wafii.
Musa splashed the-water on clothes-his
'Musa splashed water on his clothes.'

Pinker included the verb *inject* in this class. The nearest equivalent of this verb in JSA is *dagg*, which does not seem to alternate. The meaning of *Musa injected penicillin into Salma's arm* is often conveyed by *muusa dagg ibrit bansaliin fi draa' salma* 'Musa gave Salma a penicillin shot in her arm'.

5.2.4. Constraint 4: Verbs that cause a mass to move in a widespread or nondirected distribution

Alternators in this group include the *karkab* 'strew', *baðar* 'sow', *zara?* (when it means *baðar*) and *farash* 'bestrew', e.g., *muusa farash il-ward fa ttariig* 'Musa bestrewed flowers on the road.'

(31a) muusa baðar il-habb fi l-hagil.
Musa sowed the-seeds into the-field
'Musa sowed the seeds onto the field.'

(31b) muusa baðar il-hagil bi l-habb.
Musa sowed the-field with the-seeds
'Musa sowed the field with seeds.'

It is noteworthy that when *zara?* means 'plant', not 'sow', it alternates under one condition only, i.e., when the theme is a plural noun, probably to ensure *holism*.

(32a) muusa zara? ishshajara/ishshajar fi l-hagil.
Musa planted the-tree/the-trees in the-field
'Musa planted the tree/the trees in the field.'

(32b) muusa zara? il-hagil bi *ishshajara/ishshajar.
Musa planted the-field with the-tree/the-trees
'Musa planted the field with *the tree/ the trees.'

5.2.5. Constraint 5: Verbs indicating that a mass is forced into a container against its capacity

This constraint accounts for the alternation of *hasha* 'stuff', *lasam* 'wad' and *zatam* 'cram'.

(33a) muusa hasha l-kuusa bi rruz.
Musa stuffed the-marrow with the-rice
'Musa stuffed the marrow with rice.'

(33b) muusa hasha rruz fi l-kuusa.
Musa stuffed the-rice into the-marrow
'Musa stuffed rice into the marrow.'

The verb *jamma?*, the nearest equivalent to 'crowd' in Pinker's list, does not alternate because it does not imply forcing a mass/objects/people into a container, e.g., a hall, against its capacity. For instance, one can say:

(34) muusa jamma? xamsi min ansaaru fi l-qaafa
Musa grouped five of supporters-his in the-hall
likbiiri fashaan iyawtu mafaa.
large so-that vote-they with-him.
'Musa grouped five of his supporters in the large hall so that they would vote for him.'

As is clear, *jamma?* simply means 'grouped or asked to come, probably with some insistence.' Similarly, *hashar*, which may translate as 'crowd' in one sense, does not alternate because its inherent semantic structure does not necessitate 'crowdness'. In fact, *hashar* can be used with singular animate nouns, in which case it becomes synonymous with 'kept someone inside a place against his will'.

(35) muusa hashar ittaalib/ittullaab fi ssaf.
Musa kept the-student/the-students in the-class
'Musa kept the student/ the students (against his/ their will) in the class.'

5.2.6. Constraint 6: Verbs indicating that a mass of size, shape, or type defined by the intended use of a container ... is put into the container, enabling it to accomplish its function

This constraint can account for the alternation of *fabba* 'pack' and *hasha/fabba* 'load.'

(36a) muusa ʕabba shshanti bi l-ʔawaaʕi.
Musa packed the-suitcase with the-clothes.
'Musa packed the-suitcase with the-clothes.'

(36b) muusa ʕabba l-ʔawaaʕi fi shshanti.
Musa packed the-clothes into the-suitcase
'Musa packed the clothes into the suitcase.'

5.2.7. Constraint 7: Verbs indicating a specific kind of empty end state regardless of manner

On examining our proposed list of alternating verbs, we found that this constraint can account for the alternation *faḏḏa* 'empty', *ʕazzal* 'clear', *naffax* 'puff off', *naḏaḥ* 'bale out', and *naḏḏaf* 'clean/cleanse'.

(37a) muusa faḏḏa ssooba min il-kaaz.
Musa emptied the-stove from the-kerosene
'Musa emptied the stove of kerosene.'

(37b) muusa faḏḏa l-kaaz min issooba.
Musa emptied the-kerosene from the-stove
'Musa emptied kerosene from the stove.'

(38a) muusa ʕazzal ittawli min isshuun.
Musa cleared the-table from the-dishes
'Musa cleared the table of the dishes.'

(38b) muusa ʕazzal isshuun ʕan ittaawli.
Musa cleared the-dishes from the-table
'Musa cleared dishes off the table.'

However, *ʕarra*, and *shallaḥ* the possible equivalents of 'strip off one's clothes' do not alternate because, according to Talmy (cited in Pinker 1989: 130), verbs that indicate the removal of objects/conditions from people's possession never alternate. In Pinker's list of empty-end state alternating verbs, it seems that the verb *strip* is not used in the sense of 'strip off one's clothes', but in the sense of 'removing something off nonhuman objects' (e.g., *strip the bark off a tree/strip a tree of its bark*).

In 3.2.2.1. above, the researchers noted that the verbs of depletion in English do not seem to fully obey the broad-range condition regarding motion in a specific manner. It seems that the Arabic verbs are not an exception. In fact, the acts of *tifḏaayi* 'emptying' and *tanḏiif* 'cleaning' may be carried out in different manners.

5.3. Additional constraints for alternation in JSA

A final and closer examination of the list of JSA alternators revealed that a number of them were left unaccounted for by Pinker's narrow-range constraints. These verbs may classify into three subsets:

1. the *masaḥ* 'wipe' subset
2. the *daxxal* 'insert'/*tallaʕ* 'pull out' subset
3. the *laʕ* 'put round' subset.

The authors were able to suggest three additional finer-grained constraints to account for alternation in connection with these verbs.

5.3.1. Constraint 8: Verbs indicating removal of substance via forceful contact with and/or motion against the goal

This constraint applies to the *masaḥ* subset that includes *nashshaf* and *jaffaf* 'dry'.

(39a) muusa masaḥ il-ghabara ʕan ittaawli.
Musa wiped the-dust off the-table
'Musa wiped the dust from the table.'

(39b) muusa masaḥ ittaawli min il-ghabara.
Musa wiped the-table from the dust
'Musa wiped the table from the dust.'

5.3.2. Constraint 9: Verbs whose content and goal are both involved in a bi-directional motion by means of which either the content or the container is caused to get into/onto or out of the other

This constraint applies to the *daxxal/tallaʕ* subset which includes *xashshash*, *dass*, *fawwat*, *hatt* and *zarrag*, which all translate here as 'insert'. It also applies to *fallat*, *tallaʕ* 'pull out', *mazzaʕ* and *mallaḥ* 'slip off' or 'free.'

(40a) muusa fawwat isbaʕu fi l-xaatim.
Musa inserted finger-his into the-ring
'Musa inserted his finger into the ring.'

(40b) muusa fawwat il-xaatim fi sbaʕu.
Musa inserted the-ring into finger-his
'Musa put the ring onto his finger.'

If the content or the container lacks the ability of motion, the verb will not alternate. In (41) below, the container (e.g., *il-xuzug* 'the hole') cannot move, in which case the verb *daxxal* does not alternate.

(41a) muusa daxxal isbaʕu fi l-xuzug.
Musa inserted finger-his into the-hole
'Musa inserted his finger into the hole.'

(41b) *muusa daxxal il-xuzug fi sbaʕu.
Musa inserted the-hole into finger-his
*Musa inserted the hole into his finger.

It seems that the locative arguments of the *daxxal* verbs are obligatory. If either is deleted, the sentence becomes unacceptable.

(42a) *muusa daxxal isbau.
Musa inserted finger-his

(42b) *muusa daxxal il-xaatim.
Musa inserted the-ring

5.3.3. Constraint 10: Verbs indicating that a stretch of flexible mass (cloth, string, leather) is caused to wind round an object and stay there for a while before subsequent removal

This constraint applies to *laff*, *ʕassab* 'wind' or 'wrap' (e.g., ~ a bandage round one's head), *rabat*, *hazzam* 'tie' (e.g., ~ a belt round ones waist) and *hawwat* 'put round'.

(43a) muusa laff raasu bi l-hatta.
Musa wrapped head-his with the-head cover
'Musa wrapped his head with the head cover.'

(43b) muusa laff il-hatta ʕa raasu.
Musa wrapped the-head cover on head-his
'Musa wrapped the head cover round his head.'

6. Conclusion

In this paper we compared and contrasted locativizable verbs in English and JSA within the framework of the theory of verb argument structure as outlined by Pinker (1989). Below is a summary of our findings:

- Both English and JSA have a locative alternation marked with a preposition. The prepositions involved in English are:

a) *into/onto* → *with* or vice versa

b) *from* → *of*

In JSA the prepositions are:

a) *fi* 'into' → *bi* 'with' or vice versa

b) *bi* 'with' → *ʕa* 'onto' or vice versa

c) *fi* 'into' → *fi* 'into'

d) *min* 'from' → *min/ʕan* 'of/from'.

- Though many locative verbs in English share subcategorization with their JSA relevant forms, one-to-one correspondence does not always exist. For instance, *load* and *hammal* alternate; however, *pile* alternates but *kawwam*, does not.

- Locativizable verbs in both English and JSA allow one to predict a specific type of motion (of the content /theme) and a change in the end state (of the container/goal). The verbs of depletion, however, seem to be an exception.
- Some JSA and English verbs alternate only when the theme (content) is a non-count mass noun, e.g., *fahm* 'coal') or when it is a count noun but in the plural form (e.g., *kyaas* 'sacks'). Such verbs include *hammal* 'load' *ʕabba* 'load', and *zaraʕ* 'plant'.

(44a) muusa hammal il-fahim fi ssayyara.
Musa loadedthe-coal into the-car
'Musa loaded coal into the car.'

(44b) muusa hammal issayyara bi l-fahim.
Musa loadedthe-car with the-coal
'Musa loaded the car with coal.'

(45a) muusa hammal il-kiiis/likyaaas fi ssayyara.
Musa loadedthe sack/the sacks into the-car
'Musa loaded the sack/the sacks into the car.'

(45b) muusa hammal issayyara bi *l-kiiis/likyaaas.
Musa loadedthe-car with the sack/the sacks
'Musa loaded the car with *the sack/the sacks.'

- Pinker's finer-grained constraints can account for the alternation of a large number of locative verbs in JSA. However, they fail to account for the alternation of three subsets of verbs, namely, the *masah* 'wipe', the *daxxal* 'insert'/*tallaʕ* 'pull out' and the *laff* 'put round' subsets. Therefore, three new constraints have been proposed to account for the alternation of these verbs.

The fact that Pinker's finer-grained constraints can account for the majority of locative alternations in JSA provides some preliminary evidence that such constraints show tendencies toward universality. To validate this point, further research on locativization in other languages is needed.

- Some verbs in both JSA and English seem to be similar or synonymous as *pile* and *kawwam*, but it was found that unlike *pile* that alternates, *kawwam* does not. This lack of correspondence in argument structure may be attributed to some subtle differences between the semantic structures of these verbs. Pinker (1989: 126) holds that *pile* indicates vertical arrangement of objects on a surface. Upon examining the use of *kawwam*, we found that its meaning does not necessarily require a specific form of arrangement; it implies a disorderly heap of objects or mass on a surface.

7. Some Arabic locativizable verbs alternate when used in a particular sense only such as *rabat* (in the sense of 'wind' or 'wrap') not in the sense of 'tie', and *hatt* (in the sense of 'insert') not in the sense of 'place' or 'put.'

In fact, researchers who may suggest that certain verbs are alternating need to provide the reader with illustrative examples in complete sentences since the same verbs may alternate in one sense and may not alternate in another. Unfortunately, Pinker (1989) does not provide the context for many verbs which he cited as alternating. We tried to address this need by providing a complete list of JSA alternating verbs with illustrative examples (see Appendix).

8. It seems that languages do not have a large number of locative verbs. Rappaport and Levin's (1985) list included 142 locative verbs in English, of which only 34 are alternating. Similarly, the number of locative verbs in JSA is very close to the English total. We have amassed 137 verbs: only 67 of them appear in both forms. Whether or not other varieties of Arabic as well as other languages have a relatively small set of locatives and why is still open to further research.
9. The findings of this study suggested some differences between English and JSA in terms of the finer-grained constraints that govern locativization. Yet, one may wish to know how such differences may influence the process of foreign/second language learning in this domain. Moreover, further research in this area may determine which type of locative verbs, i.e., alternators or nonalternators, are acquired earlier.

REFERENCES

- Bresnan, J. (ed.) 1982. *The mental representation of grammatical relations*. Cambridge, Mass.: MIT Press.
- Cowie, A. P. (ed.) 1989. *Oxford advanced learner's dictionary of current English*. Oxford: Oxford University Press.
- El-Yasin, M. 1985. "Basic word order in Classical Arabic and Jordanian Arabic". *Lingua* 65: 107-122.
- Fisiak, J. (ed.) 1981. *Contrastive linguistics and the language teacher*. Oxford: Pergamon Press.
- Gropen, J., S. Pinker, M. Hollander, R., Goldberg and R. Wilson. 1989. "The learnability and acquisition of the dative alternation in English". *Language* 65: 203-257.
- Haegeman, L. 1991. *Introduction to government and binding theory*. Oxford: Blackwell.
- Pinker, S. 1989. *Learnability and cognition: The acquisition of argument structure*. Cambridge: MIT Press.
- Radford, A. 1981. *Transformational syntax*. Cambridge: CUP.
- Radford, A. 1988. *Transformational grammar*. Cambridge: CUP.
- Rappaport, M. and B. Levin. 1985. A case study in lexical analysis: The locative alternation. Unpublished manuscript, MIT Center for Cognitive Sciences.

APPENDIX

ALTERNATING VERBS

1.	daxxal	insert	a)	muusa	daxxal	il-xaatim	fi	sba?u.
			Musa	inserted	the-ring	into	finger-his	
			b)	muusa	daxxal	isba?u	fi	l-xaatim.
			Musa	inserted	finger-his	into	the-ring	
2.	faðða	empty	a)	muusa	faðða	l-mayyi	min	il-barmiil.
			Musa	emptied	the-water	from	the-barrel	
			b)	muusa	faðða	l-barmiil	min	il-mayyi
			Musa	emptied	the-barrel	of	the-water	
3.	hat	put	a)	muusa	hat	haaluu	fi	lihraam.
			Musa	put	himself	into	the blanket	
			b)	muusa	hat	lihraam	fa	haaluu.
			Musa	put	the-blanket	on	himself	
4.	baxx	squirt	a)	muusa	baxx	il-mayyi	fa	l-gami:s.
			Musa	squirted	the-water	on	the-shirt	
			b)	muusa	baxx	il-gamiis	bi	l-mayyi.
			Musa	squirted	the-shirt	with	the-water	
5.	baðar	sow	a)	muusa	baðar	il-gamih	fi	l-hagil.
			Musa	sowed	the-wheat	into	the-field	
			b)	muusa	baðar	il-hagil	bi	l-gamih.
			Musa	sowed	the field	with	the-wheat	
6.	baram	wrap	a)	muusa	baram	haaluu	bi	lihraam.
			Musa	wrapped	himself	with	the-blanket	
			b)	muusa	baram	li-hraam	fa	haaluu.
			Musa	wrapped	the-blanket	around	himself	
7.	ballat	tile	a)	muusa	ballat	issaaha	bi	shshuhaf.
			Musa	tiled	the-yard	with	the-stones	
			b)	muusa	ballat	ishshuhaf	fi	ssaaha.
			Musa	tiled	the-stones	into	the-yard	
8.	sattaf	stack	a)	muusa	sattaf	liyaas	fi	l-maxzan.
			Musa	stacked	the-sacks	into	the-store	
			b)	muusa	sattaf	il-maxzan	bi	liyaas.
			Musa	stacked	the-store	with	the-sacks	
9.	jaffaf	dry	a)	muusa	jaffaf	il-mayyi	fan	idee.
			Musa	dried	the-water	off	hands-his	
			b)	muusa	jaffafa	idee	min	il-mayyi.
			Musa	dried	hands-his	off	the-water	
10.	hazzam	wind	a)	muusa	hazzam	wastu	bi	ligshaat.
			Musa	wound	waist-his	with	the-belt.	
			b)	muusa	hazzam	ligshaat	fa	wastu.
			Musa	wound	the-belt	around	waist-his	
11.	hasha	stuff	a)	muusa	hasha	rruz	fi	l-kuusa.
			Musa	stuffed	the-rice	into	the-marrows	
			b)	muusa	hasha	l-kuusa	bi	rruz.
			Musa	stuffed	the marrows	with	the-rice	
12.	hammal	load	a)	muusa	hammal	il-kutub	fi	ssayyara.
			Musa	loaded	the-books	into	the-wagon	
			b)	muusa	hammal	issayyara	bi	l-kutub.
			Musa	loaded	the-wagon	with	the-books	

13. xashshash	insert	(see 1 above)					
14. xaḏḏab	smudge	a) muusa Musa	xaḏḏab smudged	il- <u>hinna</u> the-hinna	ʕa onto	idee. hands-his	
		b) muusa Musa	xaḏḏab smudged	idee hands-his	bi with	l- <u>hinna</u> the-hinna	
15. dahan	paint	a) muusa Musa	dahan painted	il- <u>booya</u> the-paint	ʕa onto	l- <u>heet</u> the-wall.	
		b) muusa Musa	dahan painted	il- <u>heet</u> the-wall	bi with	l- <u>booya</u> the-paint	
16. dahan	spread	a) muusa Musa	dahan spread	izzibdi the-butter	ʕa onto	l-xubiz. the-bread	
		b) muusa Musa	dahan spread	il-xubiz the-bread	bi with	zzibdi. the-butter	
17. dass	insert	(see 1 above)					
18. rabat	wind	(see 10 above)					
19. rashag	splash	a) muusa Musa	rashag splashed	il- <u>mayyi</u> the-water	ʕa onto	ssayyara. the car	
		b) muusa Musa	rashag splashed	issayyara the-car	bi with	l- <u>mayyi</u> the-water	
20. rashsh	spray	(see 19 above)					
21. rass	stack, pack, jam	a) muusa Musa	rass stacked	liyaas the-sacks	fi into	l-maxzan. the-store	
		b) muusa Musa	rass stacked	il-maxzan the-store	bi with	liyaas. the-sacks	
22. rassaf	stud	a) muusa Musa	rassaf studded	il-xashab the-wood	bi with	ssadaf. the-shells	
		b) muusa Musa	rassaf studded	issadaf the-shells	ʕa onto	l-xashab. the-wood	
23. rassaf	pave	a) muusa Musa	rassaf paved	lihjaar the-stones	fi onto	ttariig. the-road	
		b) muusa Musa	rassaf paved	ittariig the-road	bi with	lihjaar. the-stones	
24. zaraʕ	sow	(see 5 above)					
25. zaraʕ	plant	a) muusa Musa	zaraʕ planted	ishshajar the-trees	fi into	l-bustaan. the-orchard	
		b) muusa Musa	zaraʕ planted	il-bustaan the-orchard	bi with	shshajar. the-trees	
26. zarrag	insert	(see 1 above)					
27. zaʕam	wad	a) muusa Musa	zaʕam wadded	il-xuzug the-hole	bi into	l-xirga. the-cloth	
		b) muusa Musa	zaʕam wadded	il-xirga the-cloth	fi into	l-xuzug. the-hole	
28. shadd	wind	(see 10 above)					
29. tarraz	embroider	a) muusa Musa	tarraz embroidered	il- <u>hariir</u> the-dress	ʕa with	θθoob. with-the-silk	
		b) muusa Musa	tarraz embroidered	iθθoob the-dress	bi with	l- <u>hariir</u> with-the-silk	
30. tartash	splash	(see 19 above)					

31. tamm	put into	a) muusa Musa	tamm put	ittraab the-soil	fi into	l- <u>hufra</u> the-hole	
		b) muusa Musa	tamm put	il- <u>hufra</u> the-hole	bi with	ttraab. the-soil	
32. tantar	pile	a) muusa Musa	tantar piled	il- <u>kutub</u> the-books	ʕa onto	ttawli. the-table	
		b) muusa Musa	tantar piled	ittawli the-table	bi with	l- <u>kutub</u> the-books	
33. ʕabba	fill	(see 12 above)					
34. ʕabba	load	a) muusa Musa	ʕabba loaded	rsaas the-bullets	fi into	l-musaddas. the-pistol	
		b) muusa Musa	ʕabba loaded	l-musaddas the-pistol	bi with	rsaas. the-bullets	
35. hashha	load	(see 34 above)					
36. ʕarram	pile up	a) muusa Musa	ʕarram piled up	issidir the-tray	bi with	rruz. the-rice	
		b) muusa Musa	ʕarram piled up	irruz the-rice	fi into	ssidir. the-tray	
37. ʕazzal	remove, clear off	a) muusa Musa	ʕazzal cleared off	il- <u>ghurfi</u> the-room	min from	il-karaasi. the-chairs	
		b) muusa Musa	ʕazzal cleared off	il-karaasi the chairs	min from	il- <u>ghurfi</u> the-room	
38. ʕassab	wrapped (tightly)	a) muusa Musa	ʕassab wrapped	raasu head-his	bi with	l-lafha. the-scarf	
		b) muusa Musa	ʕassab wrapped	il-lafha the-scarf	ʕa onto	raasu. head-his.	
39. hawwat	surround	(see 10 above)					
40. ʕaffar	scatter	a) muusa Musa	ʕaffar scattered	irramil the-dust	ʕa onto	wafii. clothes-his	
		b) muusa Musa	ʕaffar scattered	awafii clothes-his	bi with	rramil. the-sand	
41. ghammas	dip	a) muusa Musa	ghammas dipped	il-xubiz the-bread	fi into	zzeet. the-oil	
		b) muusa Musa	ghammas dipped	izzeet the-oil	bi with	l-xubiz. the-bread	
42. farash	spread	a) muusa Musa	farash spread	il- <u>ghurfi</u> the room	bi with	l-mukeet. the-carpet	
		b) muusa Musa	farash spread	il-mukeet the-carpet	fi into	l- <u>ghurfi</u> the-room	
43. fawwat	insert	(see 1 above)					
44. gantar	pile up	(see 32 above)					
45. kaddas	stack	(see 21 above)					
46. karkab	strew	a) muusa Musa	karkab strewed	il- <u>ghurfi</u> the-room	bi with	l- <u>kutub</u> the-books	
		b) muusa Musa	karkab strewed	il- <u>kutub</u> the-books	fi into	l- <u>ghurfi</u> the-room	
47. labbax	taint, smudge	(see 14 above)					
48. labbad	cram, jam	a) muusa Musa	labbad crammed	il- <u>gutun</u> the-cotton	fi into	l-kiis. the-sack	
		b) muusa Musa	labbad crammed	il-kiis the-sack	bi with	l- <u>gutun</u> the-cotton	

49. labbas	coat	a) muusa Musa	labbas coated	irruxaam the-marble	fa onto	l- <u>heet</u> . the-wall
		b) muusa Musa	labbas coated	il- <u>heet</u> the wall	bi with	rruxaam. the-marble
50. ghazz	pierce	a) muusa Musa	ghazz pierced	il-ibri the-needle	fi into	limxaddi. the-pillow
		b) muusa Musa	ghazz pierced	limxaddi the-pillow	bi with	l-ibri. the-needle
51. laṣam	wad	(see 27 above)				
51. latt	taint, smudge	a) salma Salma	lattat tainted	haalha self-her	bi with	l-boodra. the-powder
		b) salma Salma	lattat tainted	il-boodra the-powder	fa onto	haalha. self-her
52. lattax	taint	(see 14 above, but replace <i>hinna</i> by <i>tiini</i> 'mud')				
53. layyat	smudge	(see 14 above, but replace <i>hinna</i> by <i>tiini</i> 'mud')				
54. laghmat	smear	(see 14 above, but replace <i>hinna</i> by <i>zifiti</i> 'tar')				
55. laff	wind	(see 10 above)				
56. mazzat	slip off	a) muusa Musa	mazzat slipped	isbaṣu finger-his	min from	il-xaatim. the-ring
		b) muusa Musa	mazzat slipped	il-xaatim the-ring	min from	isbaṣu. finger-his
57. mallas	pull out, take off	a) muusa Musa	mallas took	iidu hand-his	min from	il-geed. the-cuffs
		b) muusa Musa	mallas took	il-geed the-cuffs	min from	iidu. hand-his
58. tallaṣ	pull out	(see 57 above)				
59. xallas	pull out	(see 57 above)				
60. fallat	take off	(see 57 above)				
61. gaam	snatch, pull out	(see 57 above)				
62. masah	clean, wipe	a) muusa Musa	masah cleaned	ittaawli the-table	min from	il-ghabara. the-dust
		b) muusa Musa	masah cleaned	il-ghabara the-dust	fan from	ittaawli. the-table
63. nashshaf	dry	(see 9 above)				
64. naḡah	bale out	(see 2 above)				
65. naḡaf	clean	(see 37 above)				
66. naffax	puff off	(see 37 above)				
67. ratwash	(see 19 above, but replace <i>il-heet</i> by <i>haal</i> 'himself')					

NONALTERNATING VERBS

- | | | | |
|-------------------------|--------------------------|--|------------------------|
| 1. atxam 'fill' | 2. naḡar 'spread' | 3. shatāb 'remove' | 4. waggāṣ 'drop' |
| 5. sakkar 'close' | 6. nazzal 'let down' | 7. hayyal 'let fall down' | 8. ḡatt 'deposit' |
| 9. waggaf 'park' | 10. taff 'spit' | 11. ballal 'drench' | 12. ḡashar 'crowd' |
| 13. bahhar 'spice' | 14. ḡabbat 'fix' | 16. shallaḡ
'strip off one's clothes' | 17. ḡabas 'imprison' |
| 18. ḡakk 'scratch' | 19. xabba 'hide' | 20. xardag
'make holes into' | 21. xazzan 'store' |
| 22. xalaṣ 'take off' | 23. dagg 'hammer' | 24. dallaa 'let down' | 25. dabbas 'staple' |
| 26. dalag 'spill' | 27. zaḡzaḡ 'move' | 28. rahḡal 'deport' | 29. zarkash 'decorate' |
| 30. zayyan 'decorate' | 31. sajan 'imprison' | 32. sadd 'close' | 33. sarag 'steal' |
| 34. ṣabb 'pour' | 35. nahab 'rob' | 36. jaraf 'dig out' | 37. kabb 'throw' |
| 38. mazzaf 'tear out' | 39. shafaṣ 'suck' | 40. mass 'suck' | 41. saffaṣ 'pile' |
| 42. tarad 'kick out' | 43. tayyar 'let fly' | 44. ṣallag 'hang' | 45. ḡatta 'cover' |
| 46. ḡarra 'glue' | 47. ḡamar 'cover' | 48. ḡhammas
'make wet' | 49. ḡashshaṣ 'rob' |
| 50. kabb 'spill' | 51. ḡashaṣ 'scrape' | 52. ḡaḡaṣ 'scrape' | 53. kawwam 'pile' |
| 54. kaffan 'shroud' | 55. lawwaḡ 'pollute' | 56. maḡa 'clean' | 57. malla 'fill' |
| 58. nafaṣ 'blow' | 59. nagaṣ 'put in water' | 60. nagaṣ 'transfer' | 61. naggat 'drop' |
| 62. harrab 'smuggle' | 63. wassax 'dirty' | 64. sammar 'nail' | 65. lazzag 'plaster' |
| 66. laḡas 'lick' | 67. ḡhasal 'wash off' | 68. farsha 'paint' | 69. daṣṣ 'push' |
| 70. ḡhazz 'give a shot' | | | |