A Comparative Analysis of Locative and Directional Motion Events in English and Arabic

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Abstract

This paper provides a contrastive analysis of locative and directional motion events in English and Arabic. Within a micro-parametric approach to crosslinguistic variation, it argues that both languages encode the distinction between manner and direction in their inventory of motion verbs. In the prepositional domain, purely locative and directional prepositions are shown to exist in the two languages; they respectively derive locative and directional interpretations with manner of motion verbs. The class of ambiguous prepositions, which gives rise to both locative and directional interpretations, is shown to be distinctive of English. Implications of this contrastive analysis to the bidirectional acquisition of English and Arabic locative and directional motion constructions are discussed.

Keywords: Arabic motion verbs, Spatial prepositions, Locative directional ambiguity



1. Introduction

Motion verbs crosslinguistically encode a motion event, typically but not necessarily expressing displacement (Levin, 1993). As Miller (1973) noted, languages have different ways to express how an object moves from one place at a given time to another place at some subsequent time. These motion events involve a moving entity (Figure) and a generally larger and more stable object in relation to which movement takes place (Ground) (Talmy, 1985, 2001). The topographical relationship between these two entities is generally mediated by a spatial preposition such as the locative *in* or the directional *to* or their Arabic counterparts *fi*-and *ila*, respectively. While the former locative prepositions locate the movable Figure with respect to the Ground, the latter directional prepositions express a change in the location of the moving object along a path or a trajectory. This is illustrated in 1 below.

- a. ʒarati al-bintu fi al-ħadiqati ran the girl in the park 'the girl ran in the park'
- 2. b. ʒarati al-bintu ila al-ħadiqati ran the-girl to the-park 'the girl ran to the park'

In (1, a) above, *albint* (the girl) is inside the park having a walk while in (1b) she has not reached the park yet and she is moving along a trajectory whose endpoint is marked by the park. Putting minor word differences aside, Arabic and English converge on the way they express locative and directional motion events with manner of motion verbs. This clear-cut locative/directional division is blurred when a third class of ambiguously locative and directional prepositions is involved (e.g. over, under, behind). This will be presented in the coming section.

2. Problem

Apart from the purely locative or directional prepositions, English also has a class of ambiguous prepositions which lend themselves to both locative and directional interpretations in the exact same context. In Arabic, however, spatial prepositions tend to be interpreted categorically either as locative or directional. The examples in (2) below highlight this contrast between Arabic and English.

2) a. hallaqati atairatu fawqa almadrasti

flew the plane over the school

'The plane flew over the school' Locative reading only

b. hallaqati atairatu wara?a almadrasati

flew the plane behind the school

'The plane flew behind the school' Locative reading only

In the English equivalent of (2, a), the scene can be construed either as locational with the



plane hovering over the school, a more positional and locative reading, or the plane could be interpreted as having started flying away from the school and has reached it, hence, the directional reading. However, the Arabic example allows only a locative reading. The preposition behind in the English translation of (2, b) may receive similar interpretations where the plane was either flying in the back of the school or has just moved to that area. The Arabic example again allows only for a locative reading and excludes the directional interpretation. This article will try to highlight these typological differences in motion events encoding in English and Arabic. Such a contrastive analysis will hopefully make evidence-based empirical predictions about the bidirectional crosslinguistic influence these languages may have in the process of foreign/second language acquisition.

This article is organized as follows. First, Ramchand's (2008) First Phase Syntax framework and the cartographic approach to prepositions in Svenonious (2010) will be outlined first as this will serve as the framework of analysis. Section Four will then discuss the locative directional ambiguity in English motion events. The lexical distinctions Arabic motion verbs lexicalize will then be discussed and compared to their English equivalents in Section Five before arguing for the categorical locative or directional status of Arabic spatial prepositions in Section Six. As the analysis unfolds, similarities to Moroccan Arabic will also be presented. Based on this comparative account, the paper also draws implications concerning the bidirectional acquisition of motion events encoding in foreign and second language acquisition in cases where Arabic and English could be the learners' mother tongue or the target language being learnt. Finally, a conclusion sums up the paper.

3. Theoretical Framework

Ramchand (2008) developed a very articulated view of the functional sequence within the verb phrase. Based on event structure, the verbal predicate is split into three main subevental components: a causing subevent, a process-denoting subevent and the resulting state subevent. Ordered in a hierarchy, each subevent heads its own projection. The initP (initiation phrase) represents the outer causational projection responsible for introducing the external argument, the initiator argument. Every dynamic predicate expresses a causational or initiational state that leads to the process procP (process phrase), which hosts the argument undergoing the change labeled Undergoer. The lowest projection corresponds to the result of process and the resultee, the argument associated with the resultant state, occupies the specifier of resP, the result Phrase. Only verbs which lexically entail a result state project a resP. The tree diagram below illustrates how the system works with the durative manner of motion verb *run* and the punctual directed motion verb *arrive*.



In (3, a) above, John is the initiator of the event of running and he is also the undergoer of the running event. However, this activity verb does not entail any result unlike the punctual *arrive* which projects a result phrase in (3, b). The event denoted by arrive would not be complete without John reaching his final destination, hence, being a resultee.

To account for the directional locational ambiguity in motion events, a more refined account of the internal structure of spatial prepositional phrases is also needed. Such an account is found in much current research on the syntax of prepositions (van Riemsdijk & Huybregts 2002, Koopman 2010, van Riemsdijk 1990, Svenonius 2010, Kracht 2002). Following Jackendoff (1983), this line of research distinguishes between place prepositions (e.g in, on, at) and path prepositions (to, from, into). Locational place prepositions give information about the physical configuration of the relationship between a Figure (the moving entity) and a Ground (the stationary landmark) and are always unbounded, not specifying an endpoint while directional path prepositions encode the trajectory that the Figure traverses in the motion event. These latters express either the goal of motion as is the case with the preposition *to* or the source as is the case with *from* and they are normally bounded. In terms of syntactic structure, while locative prepositions project only a category Place, a category Path is postulated above the category Place for their directional counterparts.

4. Locative and Directional Ambiguity in English Motion Events

Within the microparametric approach, crosslinguistic differences in directed motion events are accounted for with recourse to the featural make-up of motion verbs and the adopositions they occur with. In the present study, I adopt the insights from Ramchand (2008) and Son and Svenonious (2008). In the case of inherently directed motion verbs (e.g. arrive, advance, come, depart, enter, fall, return, rise), I assume that the telic interpretation arises from the lexical meaning of the verbs, encoded in their syntactic representation as a ResP. The spatial preposition just further describes the endpoint of this result state. This is represented in the tree diagram below.



3)



In the case of manner of motion verbs, I assume that the goal of motion interpretation is licensed thanks to the lexicalized Proc head and a covert Dir[ectional] functional head, which dominates a Path head (e.g. to) (Son, 2007, Son & Svenonious, 2008). In English, manner of motion verbs are assumed to optionally project a null Dir[ectional] head. This null directional head may dominate an overt or covert Path (to) with projective prepositions such as behind. Extended prepositions, on the other hand, are assumed to lexicalize the path component in their core meaning as they are interpreted directionally more readily than their projective counterparts. The tree diagram in (4) below represents both the locative and the directional interpretations with the verb run and the ambiguous preposition *behind*.





Following Svenonious (2010), directional prepositions that encode both place and path features will spell out as complexes by a Place-to-Path head movement as in (4, a). The PlaceP head will move to the head position of the PathP to check the directionality feature and hence yield a directional reading. It can be indicative that in the case of manner of motion verbs, an overt *to* is only marginally licit as in he ran to behind the school (Svenonious, 2010; Gruber, 1965). On the locative reading, however, the preposition behind remains in situ under the PlaceP head, resulting in a locative reading.

This featural composition of motion verbs and adpositions is subject to crosslinguistic variation. At this point, a legitimate prediction is that motion verbs and prepositions in a typologically different language such as Arabic will bear a different featural make-up, resulting in crosslinguistic variation. In the discussion on the Arabic motion verbs, it will be shown that while the distinction between directed motion and manner of motion verbs can be maintained, Arabic prepositions and semi-prepositions can be either locative or directional and never lexically ambiguous. To derive a directional reading with the Arabic equivalents of the English ambiguous prepositions, it will be shown that a directional path head must be obligatorily overt, especially with manner of motion verbs as they do not entail any resulting state. This will be discussed in more detail in the next section on Arabic.

5. Encoding Locative and Directional Motion Events in Arabic

According to Fassi-Fehri (1997), Arabic verbs lexicalize either the state and manner (e.g. intaŝaba) or motion and manner (tadaĥraʒa, inzalaqa). State manner verbs generally express the existence of an entity (Figure) in a certain location. Ghalim (2010) further describes this class as expressing an internal spatial configuration (ʒalasa, waqafa). These verbs do not entail any change of location and express states rather than dynamic events. Manner of motion verbs, on the other hand, encode the manner of motion along a trajectory that needs to be specified with a spatial preposition, be it locative or directional. Other verbs may also conflate the path as in directed motion verbs (daɣala (enter), ɣaraʒ, (go out)). These verbs may express motion towards a goal even in the absence of a directional preposition.

The three major verb classes presented above are attested in typologically different languages encoding similar lexico-semantic distinctions. When they combine with the prepositions inventory in a particular language, however, they result in different spatial interpretations. These interpretive contrasts will be discussed below with reference to the combinatorial possibilities which Arabic motion verbs may have with locative and directional prepositions. But first, let's outline the basic spatial prepositions that might be involved in the expression of a typical motion event in their prototypical senses.

Prototypical Arabic spatial prepositions:

Locative prepositions:

5)

True prepositions: fi (in, at) bi (in,at) 3ala(on)

Semi-prepositions: amama, khalfa, fawqa, wara, tahta, bein

Directional prepositions:

Goal paths: ila (to), li(to) hatta(up to) nahwa(towards)



Source paths: min(from) Son 'away from'

Route paths: fabr (across) xilal 'through' hawlə 'around'

In Arabic, locative and directional meanings are prototypically expressed by the preposition fi (in/at) and *ila* (to/towards), respectively. Jahfa (1989, 2000) analyzed these prepositions as underlyingly spatial with directional prepositions being more complex than simple locative prepositions. A directional preposition such as *ila* encodes both path and location in a containment relation to designate the nearing or the limit of the motion event (Wright, 1981). With their simpler internal featural make-up, locative prepositions can occur in stative contexts, which admit only homogeneous eventualities without any change in their internal structure. These could be the true non-derived prepositions or the semi-prepositions (Ryding, 2005). In Moroccan Arabic, spatial preposition are also analysed as either locative expression position (f- (in), fla (on)) or relative position (fuq (on top of)/ taht(under), mor (behind)) and directional (mn- (from)/l- (to)) (Ech-Charfi, n.d). The examples below illustrate this with stative predicates in (a) and nominal sentences in (b). The data is drawn from both Standard Arabic and Moroccan Arabic.

6) **Standard Arabic:**

a.intaŝaba al-miŝbaħu ʕala aṫ-ṫawilati (Fassi Fehri, 1997) Erect-PAST DEF-lamp-NOM on DEF-table-OBL 'The lamp stood on the table' b. al-miŝbaħu ʕala a ṫ-ṫawilati DEF-lamp-NOM on DEF-table-OBL 'The lamp is on the table'

Moroccan Arabic:

c.lktab bqa fuq tbla

Def-book remain-PAST-3 SG on DEF-table

'The book remained on the table'

d. Iktab fuq tbla

Def-book on DEF-table

'The book is on the table'

While locative prepositions are admitted in the stative contexts above, directional prepositions such as *ila* are ruled out as their directional meaning component entails a path that encodes a change of location, thus, requiring dynamic eventualities. This restriction is further illustrated in the motion events below.



Standard Arabic: 7) a) Daxala al-waldu ila d-dari enter-PST Def-boy-Nom to DEF-house-OBL 'The boy entered the house' b) 3ara al-waldu ila d-dari Run-PAST DEF-boy-NOM to Def- house-OBL 'The boy ran to the park' c) zara al-waldu fi ddari run-PAST DEF-boy-NOM in Def-house-OBL 'The boy ran in the park' **Moroccan Arabic:** d) dylt l-ddar enter-PAST 1SG to DEF-house 'I entered the house'

- e) 3rit l- ddar ran-PAST 1SG to DEF-house 'I entered the house'
- f) 3rit
 f- 1-ħadiqa
 ran-PAST 1SG in DEF-park
 'I ran in the park'

Jahfa (1989, 2000) notes that the behaviour of locative and directional prepositions can be attributed to the PATH and IN meaning components in their conceptual structure. As is clear from the examples above, manner state verbs select only a locative preposition as in (7 a, e). By contrast, manner of motion verbs admit both locative or directional prepositions (7 c, d, g, h), deriving atelic interpretations with both prepositions more readily, unlike English in which PP's headed with the bounded preposition to necessarily give rise to telic events. Directed motion verbs on the other hand lexicalize directionality in their core meaning and they are typically telic even in the absence of a directional preposition. Thus, it seems that the directional preposition only further modifies the resulting locative state of a directed motion events. Following Berrissoul (2010) and Ghalim (2010), even if the path may not be syntactically expressed with directed motion verbs, it may be assumed to be part of the conceptual structure of the verb. Thus, we assume in the footsteps of Ramchand (2008) that even in standard Arabic and Moroccan Arabic directed motion verbs project a ResP while manner of motion verbs are activity verbs in the sense of Vendler (1957) and project only a ProcP to the exclusion of a ResP. The first phase syntactic representations of a verb such zara (run) and wasala (arrive) will be similar to their English counterparts presented in (3) above.



8)



Apart from the extra ResP layer, projected by verbs of directed motion, the two diagrams above seem identical. However, the event described in (8, b) entails that the initiator and the undergoer of the process reaches the endpoint of the motion event by virtue of being also a resultee. The complex preposition *ila* (to), merging both meaning components of to and in/at, only further describes the result encoded by the verb. This representation justifies the culminating telic interpretation derived from the example, which entails that the child (alwaladu) has reached the park (alhadiqatu) at the end of the motion event. In (8, a), however, the telic interpretation of the event is only a defeasible implicature. The child cannot be said to have reached the park in all contexts with manner of motion verbs (e.g. 3ara (run)).

3ara alwaladu ila al-ħadiqati lakinahu lam ya s^cil hunak
 'the boy ran to the park but he did not arrive there'

The interpretation of the preposition ila as either limiting the event or actually reaching its endpoint, thus, cannot be an inherent feature of the preposition on its own as it arises compositionally with the specific motion verbs it modifies. In the spirit of the Arabic grammatical tradition, Wright (1981) noted that *ila* merely implies the motion towards an object regardless of whether this object is reached or not while *hatta* (up to) indicates motion towards and at the same time arrival at an object. The meaning of *ila* may be naturally modified to designate the limit of the act when the governing predicate entails such endpoint result as is the case with the verb *waŝala* (arrive), and *daxala* (enter) etc...These observations



are captured in (10) below.

*zara alwaladu hatta al-hadiqati lakinahu lam ya s^cil hunak
'the boy ran to the park but he did not arrive there'

6. On the Categorical Status of Spatial Prepositions in Arabic.

In the literature on Arabic motion event encoding, spatial prepositions are also classified into static locatives *fi-*, *bi-*, *Sala* (in, at, on, respectively) and directional *ila* (to), *naħwa* (towards) (Saeed, 2014, Brissoul 2013, Ghalim, 2007, 2010, Jahfa, 1989, 2000) due to the presence or absence of a directionality component in their meaning. As discussed in the previous section, the same distinction can be maintained with Moroccan Arabic prepositions, which are etymologically related to their Arabic equivalents (Ech-Charfi, n.d). In addition, the counterparts of the English ambiguously locational and directional prepositions (behind, over, under etc...) pattern with the prototypical locative prepositions, be they prepositions or circumstantial adverbs. Hence, the traditionally labeled locative adverbs or semi-prepositions such as *xalf* (behind), *wara?* (behind), *fawq* (over/on top of), *taht* (under) do not yield any locative/directional ambiguity with both manner of motion verbs and directed motion verbs. Ech-charfi (n.d) cross-classifies Moroccan Arabic prepositions (foq (on top of)/tht (under), g∂ddam (in front of) /mor (behind) as both locative and directional. His example with the Moroccan Arabic verb daz (go, pass) in (daz foq/ tôht/ gôddam/ mor l-kôdya (He went over/below/from this side/on the other side of the hill)) can be said to inherently encode direction of a special sort: route; thus, the sentence can be assigned a route reading and not a goal-directed reading; it is also indicative that a purely directional preposition such as l- (to) may take each of these locative prepositions as a complement to derive a goal-directed reading. We, consequently, maintain that Arabic prepositions can be either locative or directional. The polysemy that may arise may be accounted for compositionally when the class of verb they complement is taken into consideration. Manner of motion verbs, which do not entail any direction nor result in their core meaning necessitate purely directional complements while inherently direction motion verbs may do with locative prepositions to describe the endpoint of the directed motion event, lexically entailed by the verb. This stands in stark contrast with English where the ambiguous prepositions (e.g behind, under, over) result in both locative and directional readings with manner of motion verbs (e.g run, swim). The examples below are illustrative.

Standard Arabic:

11)

a.Jalstu	taħta/fawq/war	a?a alqantara	locative	
	under/on/behin	U		
'I sat under/on/	behind the bridge			
b. dahabtu il	a taħti/fawqi/wara	Pi alqantara	directional	
Go.PERF.1SG	to under/over/be	hindDEF-bridge		
'I went unde	er/over/behind the	bridge'		
c.3ara	at-tiflu	taħta/fawq/wara?a	alqanťarati	locative



locative

Run.PERF.3SG.MS DEF.boy under/on/behind DEF.bridge 'The boy ran under/on/behind the bridge'

 d. ʒara a-tiflu ila taħti/fawqi/wara?i alqantarati directional Run.PERF.3SG.MS DEF.boy to behind DEF.bridge
 'The boy ran under/on/behind the bridge'

lgntra

DEF-bridge

Moroccan Arabic:

12)	
12)	a.Glst
	Sit.PERF.1SG
	'I sat under/ bel

[°]I sat under/ behind/on the bridge[°] b. Mshit (l-)tht/mor/foq lqntra directional Go.PERF.1SG to under DEF-bridge

under/on/behind

tht/mor/foq

'I went under the bridge'

- c.Jrit under/foq/mor lqntra locative
 Run.PERF.1SG.MS under/on/behind DEF.bridge
 'I ran under/on/behind the bridge'
 d. Jrit l- tht/foq/mor lqntra directional
 e.Run.PERF.1SG.MS to under/on/behind DEF.bridge
- f. 'I ran under/on/behind the bridge'

The locative nature of Arabic semi-prepositions taħt, fawq, and wara? is evident in (11, a) above, for they occur with a verb, not involving any displacement (3alasa, sit). With directed motion verbs, the presence of a locative preposition may be obligatory especially in standard

Arabic (11, b) as the accomplishment verb (λ ahaba) lexicalizes the direction of motion and

the goal PP further specifies the trajectory of motion. With other verbs such as daxla (enter), the locative preposition tends to be optional. In the case of the manner of motion verb 3ara/3ra in (c) above, the locative preposition is construed only as locative and the directional meaning is derived by adding an overt directional preposition (ila/l-). Unlike English, which is argued to license a null directional preposition (Svenonious, 2010), Arabic does not seem to allow such an option to license directional readings of locative prepositions. The presence of an overt directional preposition is obligatory either on its own or heading another locative preposition. With the background presented in the previous sections, locative prepositions are, thus, assumed to project only a PlaceP unless an overt directional preposition is present to independently license a PathP. The tree diagrams below illustrate these observations.







It seems that both English and Arabic encode motion events with motion verbs and spatial prepositions. The prototypical locative and directional prepositions in both languages also seem to match in their feature make-up. However, the prepositions that result in the locative directional ambiguity in English can be said to be specified for both the locative and the directional feature, which their Arabic counterparts lack as they can be used only as locative. They can be used, however, in directed motion events if directional interpretation can be justified by the lexically telic nature of this class of verbs with the locative preposition furthers modifying the culmination endpoint denoted by the telic event expressed by the verb (Berrissoul, 2010). The directional preposition can still license a Path Phrase to modify the ResP, taking the PlaceP phrase as a complement. Given that this class of verbs is inherently directional, the resulting sentences are more or less synonymous. This can be represented as follows.

placeP

DP

alħadiqati

3ara

wara?a



InitP a) alwaldu init was^vala procP <alwaldu> proc was^sala ResP <alwaldu> Res was^vala PathP ila PlaceP wara?i almadrasati InitP b) alwaldu init was^rala procP



The role that the aspectual class of the verb plays in the interpretation of Arabic spatial prepositions and by extension motion events is also clear in the uses, where the locative preposition fi- is used in directional contexts. It has been noted in the Arabic grammatical literature since Sibawyh that a given preposition may be used in the context of another by substitution (Inaba) if the extended usage can be traced back interpretatively to the basic prototypical meaning of the preposition. Semantic extensions in the use of prepositions were also explained in terms of the notion of verb implication (TaDmin), whereby the meaning of a given verb contextually implies the meaning of another, hence, licensing the use of the



preposition normally associated with this latter verb. (For a review of the controversy between the Kufa and Basra Arabic grammatical tradition, see Al-'Atyya, 2008)). Of particular relevance to the concerns of the present paper are the instances where the locative preposition fi- is used in directional contexts instead of the prototypically directional *ila*. Below are illustrative verses from The Quran (the numbers next to the examples refer to the chapter (Sura) and the verse (Aya) in order).

15) a) a?ina lamarduduna filħafira (79:10)'Will we indeed be returned to [our] former state [of life]?' b) wa adχil yadaka fi ʒaybika (27: 12)'And put your hand into the opening of your garment [at the breast]' c) isluk yadaka fi ʒaybika (28: 32)'Insert your hand into the opening of your garment' d) aw tarqa: fi assama? (17:93)'or you ascend into the sky' e) fa raddu: aydiyahumu fi afwahihimu (14:9)'but they returned their hands to their mouths'

All the verbs in the verses above denote directionality and and a culminating endpoint of the motion events (radda (return) raqa (ascend) salak, $ad\chi ala$ (insert)); as argued for the directed motion verbs above, they may be said to project a result phrase as part of their lexical meaning regardless of the spatial preposition used. This licenses the use of a locative preposition to signal the endpoint of the trajectory of the goal-directed motion event expressed by the verb.

7. Implications

The contrastive analysis presented in this paper is couched within a micro-parametric approach to cross-linguistic variation, which explains typological differences in terms of the lexical distinctions encoded in the functional and lexical inventories of particular languages (Chomsky, 1995). In the spatial domain, Son and Svenonious (2008) and Svenonious (2010), among others, attributed differences in the expression of directed motion events to the features instantiated by motion predicates on the one hand and the prepositions they combine with on the other hand. From a psycholinguistic perspective, the process of L1 acquisition can be seen as a process of feature assembly (Stringer, 2005) whereby the child acquires his L1 categories and the features they are associated with. L2 acquisition, by implication , is viewed as a process of feature reassembly (Lardiere, 2000, 2008, 2009).

From this latter perspective, L2 learners already have their L1 features specified on functional and lexical categories from a universal set; therefore, they need to reassemble these features in line with the L2 to match the target norm. In the acquisition of motion events, L2 learners

need to distinguish manner of motion verbs from inherently directed motion verbs. They need as well to decipher the featural make-up of the adpositions available in the target language or even the inventory of spatial cases.

Based on the contrastive analysis between English and Arabic presented in this paper, it seems that the distinction between manner of motion verbs and directed motion verbs may be acquired both by English-speaking learners of Arabic and Arabic-speaking learners of English in a straightforward manner. However, its grammatical reflexes may be more problematic, especially with L2 verbs that may be instantiated for features in a way different from the L1; the English verb *dance* is a case in point. While this verb could be used directionally in English as in (*He danced into the room*), hence, instantiating a directionality feature, its Arabic equivalent (raqasa) cannot be used in the same way. Goal directed constructions with such verbs as *dance* may prove problematic to Arab EFL learners.

Similarly, the purely locative and directional uses of spatial prepositions should not be problematic bi-directionally as the locative feature tends to be unmarked in its distribution in the two languages. In the case of English ambiguous preposition, Arab learners seem to be at a disadvantage. As discussed above, Arabic does not allow a null directional preposition to license the directional interpretation of ambiguous prepositions. Therefore, these directional interpretations may be harder to tap even for advanced Arabic-speaking EFL learners. Although the predictions outlined in this section are based on the micro-parametric contrastive analysis argued for in this paper, they are still in need of empirical confirmation from bidirectional acquisition studies.

8. Conclusion

This paper contrasted two important domains in the expression of motion events, namely, motion verbs and the inventory of prepositions in both English and Arabic. It was found out that while both languages can be said to exhibit the two main motion verb classes widespread crosslinguistically: manner of motion verbs and inherently directed motion verbs, they may differ on the featural specification of individual verbs, especially in terms of directionality. Similarities and differences also emerged in the inventory of prepositions in the two languages. Both English and Arabic had purely locative and directional prepositions; English was shown to have a class of ambiguous prepositions that give rise to both locative and directional readings with manner of motion verbs. Arabic, however, seems to be categorical in its featural specification of prepositions, for they are either locative or directional. Similarities between the two languages were argued to have a facilitative effect on the process of L2 acquisition while the differences were predicted to have a debilitative effect.

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