

## Aspectually Relevant Lexical Semantic Properties: Morphological Realisations of Semantic Primitives as Diagnostics for Aspectual Interpretations

Dr. Mohammad Melfi Alharbi  
*Assistant Professor of Linguistics*  
*Department of Languages and Translation*  
*Taibah University*  
*Medina, Saudi Arabia*  
*mmharbe@taibahu.edu.sa*

*Abstract.* this study addresses the relationship between the structural semantic properties of scalar change specified by change of state verbs denoting events of change of state and the aspectual interpretations these events depict. It considers Rappaport Hovav's argument that lexical semantic properties of event-denoting verbs determine their aspectual interpretations, and builds upon the premise of the lexical semantic decomposition approach of Pinker & Levin and Rappaport Hovav that there are structural semantic properties that regulate the morphosyntactic behaviour of verbs. It then discusses the influence that overt morphological realisations of the semantic primitives of CAUSE and CHANGE have on the interpretation of the aspect the event-denoting verb is expressing. The study also provides an analysis of how verbs of directed motion in Arabic realise the aspect-determinant property of telicity.

The paper concludes that Arabic verbs denoting scalar change events can belong to one of three different classes as to the aspectual nature of the scalar change they specify; i.e., a verbs can belong to the class of (i) two-point scalar change, (ii) multi-point scalar change, or (iii) suppressive multi-point scalar change. Analyses of data from the Arabic language reveal that morphological realisations of the semantic primitives of CAUSE and CHANGE serve as diagnostics for the type of aspect an event-denoting verb specifies. They can also suppress a multi-point scalar change and force a two-point change interpretation on the event indicating that the semantics of bound morphemes expressing semantic primitives also serve as determinants of aspect. Moreover, discussions on telicity realisations reveal that the lexical semantic properties of verbs of directed motion in Arabic are radically affected; telic interpretations are associated with a change in metaphorical location while atelic interpretations cancel that change. The implications this phenomenon has on translation are alluded to.

**Keywords:** aspectual classes, lexical semantics, scalar change, telicity, morphological realisations.

### 1. Introduction

Most studies of aspect tend to wrongly adopt Vendler's (1967) classification of events as states, activities, achievements and accomplishments. These studies inaccurately apply this classification to verbs while, in fact, these are different classes of events. A unique property of events is that, in many cases, the same verb can occur in constructions that depict different event types (see Rappaport Hovav, 2008, for a thorough discussion). Such accounts wrongly assume that the verb's lexical semantic properties solely determine the class the verb belongs to (Al-Dobaian, 2018). Recent developments in semantic theory, which came in the form of lexical semantic decomposition, have

teased out certain determinants of aspect classification. Some of these determinants include (i) telicity, (ii) duration and (iii) dynamicity.

The present study provides and accounts for these determinants of event classes in Arabic and how they are realised morphosyntactically. An interesting cross-linguistic distinction is that some languages, such as Arabic, allow telicity to be realised both inside and outside the verb phrase (VP), whereby a verb's lexical semantic properties are radically affected by each type of realisation. For example, *hada* 'guide' is initially processed as a telic event with the lexical semantic representation of [x causes y to follow <guidance>]. However, the same verb's lexical semantic representation radically changes into [x provides guidance to y] when the telicity of the event is suppressed by a device outside the VP where the verb *hada* occurs. Such a phenomenon suspends the primitive path of the verb that has consequences on translation and second language acquisition. It also sheds light on interesting relevant phenomena in under-researched languages such as Arabic. The study contributes to our understanding of the lexical semantic determinants of morphosyntactic behaviour of event-denoting verbs.

It is worthwhile to note that these determinants of aspectuality are interrelated. For example, Adel (2019) observed the centrality of temporal properties such as perfective tenses and imperfective tenses to the realisation of aspectual properties such as telicity. The general assumption here is that perfective tenses realise telic events, while imperfective tenses express atelic ones. This out-of-the-blue assumption does not, however, accommodate the telic interpretation that certain verbs have even within imperfective constructions, as in *The flight arrives at 3.30 pm*. A lexical semantic decomposition account assumes that the inherent lexical semantic properties of the verb can intervene in the aspectual interpretation of the event the verb depicts (Blank, 2013). For example, the verb *arrive* has the lexical semantic properties of an unaccusative verb (Levin, Rappaport Hovav & Keyser, 1995) which expresses a punctual event. These events which occur punctually happen and finish at the endpoint; hence, their telic interpretation cannot be suppressed by other linguistic devices such as temporal expressions.

While linguists take Vendler's classifications as linguistic facts, their misapplication result in them being limited to the verb's lexical semantic properties. Rappaport Hovav (2008: 13-14) points to Vendler's awareness that his classification of events applies to linguistic units that go beyond verbs. In her view, "the properties which define Vendler's classes are dynamicity, duration and telicity, at least some of which are not determined once and for all at the lexical level, but, rather, at the VP level, as a result of aspectual composition" (14).

The employment of temporal properties as surface realisations for aspectual properties seems to be undermined by the various ways morphologically rich languages employ express tenses overtly (for a review of the dispute amongst linguists on the realisation of tense in Arabic, see Bahloul, 2008; Gadalla, 2017). In the core of this enterprise arise a number of questions: (i) what determines aspectuality in Arabic? (ii) do lexical semantic properties of verbs play a role in determining the aspectuality of events in Arabic? (iii) what are these aspectually relevant semantic properties? (iv) with regard to lexical semantic properties that are realised morphosyntactically, does this relationship between aspect and semantics affect the morphosyntactic realisation of the lexical properties? and (v) if temporal properties are abstract notions that are assumed to be universal, is it true that Arabic does not have a system to realise them morphosyntactically? While it is almost impossible to cover all of these questions within the limited space of this paper, we shall try to provide an account of the realisation of aspect in Arabic and how it is determined. In particular, this paper attempts to show that different aspectual interpretations of the events denoted by the same verb radically influence the

semantic properties of the verb. Moreover, we shall attempt to show that morphological realisations of semantic primitives such as CAUSE and CHANGE encoded into the lexical semantic representations of event-denoting verbs can be used as diagnostics for aspectual interpretations.

First and foremost, we have assumed that Arabic does have a detailed system of tense and aspect. We also assume that telicity, as a determinant of aspect, can be realised morphosyntactically within or outside the VP in an intricate system where a subset of the lexical semantic properties of verbs can interact with the aspectual properties of events. To provide an account of the surface realisations of aspectual properties in Arabic, we will adopt the lexical semantic decomposition approach as explicated in Levin and Rappaport Hovav (2005) and Rappaport Hovav and Levin (2010). This work also builds on the analyses of scalar change verbs provided in the work of Rappaport Hovav (2008, 2014a & b, 2015a & b) amongst others.

## 2. Lexical Semantic Decomposition Approach and Aspectually Relevant Lexical Semantic Properties

The main premise of the lexical semantic decomposition approach is that there is a subclass of the lexical semantic properties of verbs that determines their morphosyntactic behaviour. These properties are referred to as the structural properties or semantic primitives. They are distinguished from the idiosyncratic semantic features which are cognitively salient and differentiate between individual verbs in one language. The former types are those which are not expected to be found in the lexical entry of words in a dictionary. For example, a verb like *break* has the lexical semantic primitives of CAUSE and BECOME and, thus, has the lexical semantic representation of an externally-caused change of state event given below (Levin *et al.*, 1995).

[x [CAUSE] [y BECOME <state>]]

It is argued that it is these notions of CAUSE and BECOME that enable verbs like *break* to occur in transitive constructions. It is worthwhile to note that one of the most important aspects of the lexical semantic decomposition approach is to identify what determines the incorporation of semantic primitives into verbs, i.e., why does the verb *break* incorporate the causative meaning (*She broke the vase*) while verbs like *disappear* cannot (*\*He disappeared the rabbit.*). Such a question lies beyond the scope of this paper and its discussion shall cease here.

The semantic property of *change* is considered central in determining the aspectual classes of verbs (Beavers & Koontz-Garboden, 2012; Dowty, 1979; Filip, 1999; Rappaport Hovav, 2008; Talmy, 1976; Verkuyl, 1989). For Rappaport Hovav (2008:17), certain verbs specify events of scalar change such as *warm* and *cool*, while others denote events of nonscalar change such as *laugh* and *scream*. The former type encodes a scale in their lexical semantic representation. The semantic property of scale is defined as a gradually ordered set of values of the attributes specified by the verb. Hence, the verb *warm*, for instance, specifies an ordered set of the attributes of warmth, and the verb *cool* encodes an ordered set of the attributes of coolness and so forth.

This account, however, is an out-of-the-blue generalisation, as one can argue that the ordered set of values is not an inherent property of the entire class of (scalar) change verbs. Data from agglutinative languages, such as Arabic, show that the Arabic counterparts of English scalar change verbs fall into three different categories on the basis of the type of change they denote. For this classification, we shall use the overt morphological realisation of the CAUSE primitive as a diagnostic for the internal temporal structure of the change of state event. Overt realisation of the causative meaning with the verbs mapped onto the morphological form of *fa'ala* can take either the form of the causative morpheme (*a-*) or the form of the gemination where the middle consonant is duplicated. Alharbi (2014) argues that the gemination is associated with the intensity of externally-caused change of state

events depicted by verbs which inherently denote a causing event and a change of state event such as *kasara* ‘break’ – *kassara* ‘break into pieces’. However, to my knowledge, with verbs that require an overt morphological marker, the aspectual interpretation of the causative meaning has received little attention within the literature. This is the focus of the following section.

### 3. Scalar Change as an Aspectually Relevant Semantic Property and Morphological Diagnostics of Aspect

This section is devoted to discussing the relationship between the lexical semantic properties of event-denoting verbs and the realisation of the internal temporal structure of the events they depict as manifested by the morphological causative/inchoative markers they select. Verbs denoting events of scalar change in Arabic can be divided into three classes according to the aspectual interpretation of the change. It is worthwhile noting that this classification is based on the work of Beavers (2006, 2008) and Rappaport Hovav (2008). However, it is slightly modified given the inapplicability of their typology to Arabic verbs depicting scalar change events. These classes are as follows:

#### 3.1 Inherent Two-Point Scale Verbs

Scale events depicted by change verbs belong to two different types: (i) two-point scales and (ii) multi-point scales (Beavers, 2006, 2008; Rappaport Hovav, 2008). As indicated by these labels, the former type has two values to the change property specified by the verb; at one point on the scale, the attribute is present while at the other end of the scale, the attribute is suppressed. By contrast, the latter type has an attribute with many values. For example, the events depicted by the verbs ‘die’ and ‘widen’ differ in the fact that the property they encode has different scales; when someone dies, he/she acquires the property of being dead after they have dispossessed the property of being alive. In contrast, an increase in the value of [wide] associated with a road makes the sentence ‘The road widened’ true (See Rappaport Hovav, 2008 for further discussion).

It is clear that this classification does not distinguish events from verbs; in fact, verbs are usually referred to as event-denoting lexemes, hence both terms are almost used interchangeably. Although Rappaport Hovav’s classification is meant to apply to events, it does not make it clear whether it is possible for a verb to depict events of different types, which is the case in morphologically rich languages such as Arabic, as we will try to show in this paper. In fact, implicit in her account is the assumption that the classes are distinct in the sense that a verb which belongs to one class cannot have the interpretation of another class. This is definitely incorrect as there are cases where verbs can occur in constructions with two different aspectual interpretations.

Inherently, two-point scale events are depicted by verbs denoting events of punctual change from one state to the other. The punctuality of the change is inherent within the lexical representation of the verb; the verb lexicalises the point at which the change ensues such as *waṣala* ‘reach’, *saqata* ‘fall’, *qama* ‘stood’, *qaʿada* ‘sat’ and so forth. The verb *waṣala* ‘reach’, for example, encodes the semantic elements of ‘connection’ between an entity and a space or between one entity and another. Unless that connection ensues, the theme argument has not acquired the attribute denoted by the verb. Compare the following two examples:

1. a. *waṣala al-walad-u ilā al-faṣl-i*.  
reached the-boy-nom to the-classroom-gen  
‘The boy reached the class.’
- b. *\*yaṣilu al-walad-u ilā al-faṣl-i*. (in a circumstance where the boy is on his way)  
reach the-boy-nom to the-classroom-gen  
‘The boy reaches the classroom’.

The ungrammaticality of (1b) results from the fact that the verb denotes a two-point event scale and that the imperfective form is an inappropriate temporal expression for a two-point scale event. The perfective and imperfective forms are linked to the telicity of events (which is another determinant of aspectuality). Due to space limitation, this will not be discussed further (see Adel, 2019, for a thorough discussion).

Added to the semantic element, we can argue that overt morphological realisation of the CAUSE primitive provides an accurate diagnostic for the aspectual interpretation of the event denoted by the verb. This morphological diagnostic can serve as material evidence for our semantic analysis of the verb. First, it is important to note that the causative morpheme (*a-*), that attaches to change of state verbs which do not lexicalise the causative meaning into the verb root, is associated with a two-point scale interpretation. By contrast, expressing the causative meaning by means of duplicating the middle consonant of the triliteral root of the verb is linked to a multi-point scale interpretation (see next subsection).

Verbs of two-point change events in Arabic occur in the *afcala* morphological form in order to realise the causative primitive, i.e., they add the causative morpheme (*a-*) as in *saqaṭa* ‘fall’ – *asqaṭa* ‘caus-fall’, *qaʿada* ‘sit’ – *aqʿada* – ‘caus-sit’, *qama* ‘stand’ – *aqama* ‘caus-stand’. Verbs of this class are anomalous and, in many cases, ungrammatical, when they are mapped onto the *fa<sup>cc</sup>ala* morphological form; they do not realise the causative meaning by duplicating the middle consonant of the verb root. Consider the following examples:

2. a. *saqaṭa al-qalam-u*.  
       fall-pst the-pen-nom  
       ‘The pen fell.’
- b. ? *tasāqaṭa*               *al-qalam-u*.  
       fall-intens-pst       the-pen-nom  
       ‘The pen fell.’
- c. *asqaṭa*               *al-katib-u*               *al-qalam-a*  
       caus-fall-pst   the-writer-nom       the-pen-acc  
       ‘The writer dropped the pen.’
- d. \**saqaṭa*               *al-kātib-u*               *al-qalam-a*  
       fall-caus-pst       the-writer-nom       the-pen-acc  
       ‘The writer dropped the pen.’

The intransitive form of the verb *saqata* in (2a) bears no morphological realisation of the semantic properties that are relevant to aspectual interpretations. Yet, the event of falling is conceptualised as an uncontrolled movement from a particular spot towards a surface beneath that spot. These two places that the verb denotes can be seen as physical manifestations of the two-point scalar change the verb lexicalises. Consequently, the verb cannot occur in constructions expressing different degrees of downward movement. The anomalousness of (2b) results from the fact that the verb is mapped onto the *tafa<sup>c</sup>ala* form that is appropriate to intense events. An event denoting the falling of a single object from a spot towards a surface is dispossessed of multi-point interpretations. Yet, in the case of an event where multiple objects participate in the same event, the verb can appropriately be mapped onto the intense form of *tafa<sup>c</sup>ala* as in *tasāqaṭat al-aqlam* – literally: the pens fell (in big numbers). However, this morphological behaviour of the verb does not contradict the fact that the verb denotes two-point scalar change. This is also evident in (2d) where the ungrammaticality of the construction

is due to the mapping of the two-point scalar verb *saqata* ‘fall’ onto the causative form *fa<sup>cc</sup>ala* which is specific to multi-point scalar change event-denoting verbs.

It is worthwhile noting that a difference in those aspectually relevant lexical semantic elements is concomitant to a change in the morphosyntactic behaviour of the verb. An interesting example comes from the behaviour of the verb *hawa* ‘fall’. This verb is equivalent to the verb *saqata*. They only differ in the fact that while *saqata* denotes falling towards a surface, *hawa* does not specify in its meaning the spot where the falling object reaches. This denotation of no surface allows the verb to occur in the *tafā<sup>c</sup>ala* form even if it projects a singular argument as in *tahāwa al-najm* ‘The star fell’. The event depicted by this example is definitely a multi-point scalar change, where the falling is interpreted as it is broken down into a series of falling events with no surface ending the event specified by the verb. These verbs will be discussed in detail in the following section.

### 3.2 Inherent Multi-Point Scalar Change Verbs

Multi-point change events are those events in which the theme argument is conceptualised as undertaking different degrees of change depicted by the verb. In the view of Rappaport Hovav (2008, 2014a & b), there are different degrees for the attribute the verb specifies. For example, the verb *warm* denotes different degrees of the attribute ‘warmth’. In many accounts that look at the realisation of aspect in English, the majority of change of state verbs belong to this class. In fact, it is clearly implicit in these accounts that once a verb has a multi-point scalar change denotation, this interpretation is considered to be a core element of its meaning; it cannot be suppressed. As will be discussed in the next subsection, however, in some cases, the scalar change can in fact be suppressed and a different interpretation is enforced upon the verb.

Hence, the important question this enterprise teases out is: how do we differentiate between inherent multi-point scales and suppressible multi-point scales? Following the premises of the lexical semantic decomposition approach, analysing the semantic properties of these verbs will help identify those elements of meaning which are relevant to aspectual interpretations. In addition, the morphological realisation of semantic primitives shall serve as diagnostics for the aspectual interpretations a verb may denote. By applying this method of analysis, we find that there are verbs that inherently denote multi-point scalar changes. These verbs include: *jammada* ‘freeze’, *ša<sup>cc</sup>ada* ‘elevate’, *‘allama* ‘teach’, *darraba* ‘train’ and *hajjara* ‘stiffen’. These verbs denote events of change that cannot be conceptualised as occurring punctually; rather, the change is conceived of as taking place in a series of stages of the attribute denoted by the verb. Take, for example, the event of a cook freezing a piece of meat by placing it inside a freezer for five hours. During that period, we can envisage that the entity’s physical state begins to change *gradually* because of the low temperature atmosphere until it gets to the state of being completely frozen. It is beyond the human mind’s conceptualisation that the change depicted by the verb ‘freeze’ occurs punctually. Consequently, that property of multi-point scalar change is considered to be inherent in the verb ‘freeze’ and other members of the class.

This inherence of the property of the multi-point change can be evidenced by means of the morphosyntactic realisation of the semantic primitives of cause and change denoted by these verbs. Consider for example the behaviour of the verb *jammada* ‘freeze’ below:

- 3 a. *jammada*                      *al-ṭāhi*      *al-laḥm-a*  
       freeze-caus-pst      the-cook      the-meat-acc  
       ‘The cook froze the meat.’  
   b. *ta-jammada*                      *al-laḥm-u*.  
       antic-freeze-pst      the-meat-nom.  
       ‘The meat froze.’

- c. \**a-jmada*      *al-ṭahi*      *al-laḥm-a*.  
       caus-freeze-pst    the-cook      the-meat-acc  
       ‘The cook froze the meat’.
- d. *Jamuda*      *al-laḥm-u*.  
       freeze-pst    the-meat-nom  
       ‘The meat froze.’

We notice in the examples above that the causative (3a) and inchoative (3b) semantic primitives are expressed in the *fa<sup>cc</sup>ala* and *tafa<sup>cc</sup>ala* morphological forms respectively, which are associated with the multi-point scalar change events. The multi-point change interpretation can be argued to be inherent to these verbs. This inherence is manifested in the fact that the interpretation that these event-denoting verbs specify cannot be suppressed; the ungrammaticality of (3c) above is attributed to enforcing a two-point scalar change on the events specified by an inherent multi-point verb. However, the sentence in (3d) may represent a counterexample to this analysis, whereby the verb *jamada* ‘freeze’ occurs in an intransitive construction with no morphological marking appropriate for a multi-point change interpretation. This would indicate that the verb allows the suppression of the multi-point change aspectual interpretation. This is, of course, incorrect, since this form of the verb in (3d) is known as the deadjectival verb form; it describes the final state of the theme argument after it undergoes the change specified by the verb and acquires the attribute the event specifies. Moreover, only a subclass of the members of this class can be mapped onto the deadjectival form; other verbs such as ‘*allama* ‘teach’ specifying an intellectual change, *darraba* ‘train’ denoting a behavioural change, and *ḥajjara* ‘stiffen’, cannot occur in the deadjectival verb form. Hence, this is not a general behaviour that is attested by all members of the class.

There are, however, verbs that denote events of multi-point change and allow this aspectual interpretation to be suppressed and a two-point change meaning enforced. The next subsection provides a discussion for this class of verbs.

### 3.3 Suppressible Multi-Point Scalar Change Verbs

In her account of aspectually relevant semantic properties, Rappaport Hovav (2008) treats verbs such as *warm* and *cool* as multi-point scalar verbs. Although not stated explicitly, she assumes that this multi-point change the verbs specify cannot be suppressed. However, Arabic equivalents of these verbs exhibit an interesting behaviour; differently from the above-mentioned two classes, they can occur in morphological forms that are associated with both meanings. It should be noted, however, that the multi-point change element is conflated into the meanings of the trilateral roots of members of this class. This indicates that the basic lexical semantic representation of this verb class contains the multi-point change meaning, but this semantic element can be suppressed by means of overt morphological markers introducing the causative semantic primitive. Consider the behaviour of the verb *barada* ‘cool’ in the following sentences:

- 4 a. *barrada-t*      *al-umm-u*      *al-ḥalīb-a*.  
       cool-pst-fem    the-mother-nom    the-milk-acc  
       ‘The mother cooled the milk.’
- b. *abrada*      *al-marīḍ-u*      *al-ḥumma*      *bi*      *al-mā’-i*.  
       cool-pst    the-patient-nom    the-fever-acc    with    the-water-gen  
       ‘The patient cooled the fever with water.’

The geminated form of the verb *barrada* in (4a) has a multi-point change interpretation where the event of causing the milk to cool is conceptualised as occurring in multiple stages. However, this meaning of the gradual change is cancelled by mapping the verb onto the *aḥ<sup>cc</sup>ala* form in (4b), i.e., the

causative morpheme (*a-*) forces a punctual change interpretation by suppressing the gradual change the verb root specifies. These interesting instantiations of scalar change verbs point to the fact that there is an interplay between semantic primitives such as scalar change that verbal roots denote and the aspectual interpretation of that change. And more interestingly, other semantic primitives that are realised by means of bound morphological markers can also play a role by imposing certain modifications on the type of change the verb denotes and enforce an aspectual interpretation of the internal structure of the event that the verb does not originally denote.

#### 4. Telicity

Telicity is an essential determinant of aspectuality. It refers to the lexical boundedness of the event (Laleko, 2008). If the verb depicts a telic event, it has an endpoint. However, if it expresses an atelic event, it does not have an endpoint. Interestingly, these aspectual properties can modify certain semantic properties of the verb and radically affect its lexical semantic representation. For example, the verb *tahdi* 'guide' can have both telic and atelic interpretations, each of which is associated with a completely different meaning of the verb.

The question that arises here, where a single verb can be a member of two different aspectual classes and given the fact that the classification of the verb influences the lexical semantic properties of the verb, is: how can we determine the aspectual class that the verb belongs to? Levin and Rappaport Hovav (2005:90) state that "all the material in the VP the verb heads can determine the aspectual classification of the event description". Others, however, propose that telicity is determined semantically as well as syntactically (Hinrichs, 1985; Krifka, 1992; Verkuyl, 1989: 80, among others). We follow this latter position, since some examples in Arabic show that telicity is determined by the semantic properties of the verbs as well as the linguistic material outside the VP (See Laleko, 2008: 152-154 for a discussion). Levin and Rappaport Hovav (2005: 90) maintain that certain verbs have atelic interpretations if they participate in intransitive constructions. This observation can be said to apply to verbs of directed motion in Arabic such as *hada* 'guide' and *arshada* 'direct'. In the view of Krifka (1992), when verbs of directed motion have the properties of telic events, the position of the entity that traverses a path is mapped onto the event. Consider the use of the verb *hada* in the following examples:

- 5 a. *hada al-rajul-u yahdī ila al-kheir-i.*  
       This the-man-nom guide to the-goodness-gen  
       'This man provides guidance to the goodness.'
- b. *hada al-rajul-u akha-hu ila ta'ifat-i-hi*  
       guide-pst the-man-nom brother-his to cult-gen-his  
       'The man convinced his brother to follow his cult's religion.'
- c. *hadayt-u-hu ila al-ṣawab-i lakina-hu faḍḍala al-baṭil-a*  
       guide-pst-I-him to the-truth-gen but-he favoured the-falsehood-acc  
       'I provided guidance to him but he refused it.'

These verbs are lexical causatives that denote a change of location. This location, however, is metaphoric since they can express a change in one's intellectual affiliation such as *hada* 'guide', or one's problematic situation such as *arshada* 'direct'. Given Krifka's discussion of telic events that involve a change of location, and Levin and Rappaport Hovav's (2005) argument that a verb lacking a direct object is atelic, one can observe the centrality of the entity that is caused to move along the path in determining the telicity of the event in verbs like *hada*. Hence, (5a) has an atelic interpretation since there is no entity that moves along the path of the directed motion verb *hada*. However, in (5b),



this entity is mapped onto the position of the first argument of the CHANGE primitive in the semantic representation of the telic version of the verb *tahdi* given below:

[x CAUSE [y CHANGE] loc]

The entity is represented by (y) in the lexical semantic representation of the verb *hada* and this argument surfaces as the direct object in (5b). By contrast, the atelic variant of the verb has a semantic representation that lacks a direct object, i.e., there is no change that is inflected on the theme argument. According to Alharbi (2021: 448), this behaviour of the verb has the properties of denoting an atelic event. This atelicity, marked by the absence of a lexical endpoint, is realised syntactically by the absence of a direct object. For the author, “the moving object that would traverse a path is not specified” (4348). At the lexical semantic level, atelicity is connected with a lexical semantic representation of the verb that lacks the CAUSE primitive and, hence, it is interpreted as the potential causer’s inability to control people’s choices. Possession of that ability to change people’s intellectual affiliations renders the event telic (i.e., having an endpoint). At the syntactic level, this is expressed by the projection of a direct object. This is the result of having both CAUSE and CHANGE semantic primitives in the lexical semantic representation of the verb; the direct object is the argument linked to the CHANGE primitive. Similarly, in (5c), there is a direct object for the verb which gives it a telic reading. However, the second clause of the sentence denies this interpretation and forces an atelic one. This is consistent with Levin and Rappaport Hovav’s (2005) position that telicity can be determined by material outside the VP. Hence, the verb’s lexical semantic representation of its occurrences in (5b) and (5c) above does not include the CHANGE semantic primitive.

This interesting observation has consequences on the translation of the verb into other languages. Any translation must take into consideration the radical changes in the verb’s lexical semantic properties that result from the aspectual interpretation that the context favours. These discussions show the strong influence of the aspectual properties on the verb’s lexical semantic properties that are often taken for granted by translators.

## 5. Conclusion

Assuming the premises of the lexical semantic decomposition approach that the lexical semantic properties of verbs can determine their morphosyntactic behaviour (Levin *et al.* 1995; Levin & Rappaport Hovav, 2005; Pinker, 1994, 2007, 2013; Rappaport Hovav & Levin, 1998) and building on the work on aspectually relevant semantic properties (Beavers, 2006, 2008; Beavers & Koontz-Garboden, 2012; Rappaport Hovav, 2008, among others), this paper has provided discussions on lexical semantic properties that are relevant to aspect in Arabic. Analyses of verbs denoting change of state revealed that Arabic verbs of scalar change can be classified into three classes according to the aspectual interpretation of that change. These are (i) two-point scalar change verbs which denote events that change punctually from one state to another, (ii) multi-point scalar change verbs that specify events of gradual change of state, and (iii) multi-point scalar change verbs that can be suppressed by the use of an overt morphological marker that forces a two-point change interpretation. Moreover, scrutinising the morphological behaviour of these classes of verbs indicates that overt morphological markers that express the semantic primitives of CAUSE and CHANGE intervene with the aspectual properties. These markers indicate the aspectual interpretation of the change the verb specifies and force a particular aspectual reading if the verb specifies a different aspectual denotation of the change it depicts.

The study also provides discussions on telicity realisation of verbs of directed motion in Arabic. It further points to the change in the lexical semantic representation of the verb that a specific telicity

interpretation enforces. It has been demonstrated that this phenomenon has implications on translating these types of verbs. Therefore, translators should be aware of these implications.

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## الخصائص الدلالية المؤثرة في التركيب الزمني للحدث: توظيف التعابير الصرفية للمفاهيم الدلالية كإشارات على التفسير الزمني للحدث

د. محمد بن ملفي الحربي

أستاذ علم اللغة المساعد - قسم اللغات والترجمة

كلية الآداب والعلوم الإنسانية

جامعة طيبة، المدينة المنورة

**مستخلص.** تتناول هذه الدراسة العلاقة ما بين الخصائص الدلالية التركيبية للتغيير المتدرج الذي تعبر عنه الأفعال التي تصف حوادث التغيير (أفعال التغيير) والتفسيرات الزمنية التركيبية لهذا التغيير الذي تعبر عنه تلك الأفعال. تناقش الدراسة آراء رابابورت هوفاف الخاصة بمدى تأثير الخصائص الدلالية لأفعال التغيير على التفسيرات الزمنية التركيبية لهذا التغيير. كما يعتمد البحث على الركائز الأساسية للنظرية التحليلية الدلالية والتي تشير إلى وجود خصائص دلالية تركيبية تتحكم في السلوك الصرفي والنحوي للأفعال. كذلك تلقي الدراسة الضوء على تأثيرات التعابير الصرفية للمفاهيم الدلالية التي تحويها معاني الأفعال كمفهوم السبب والنتيجة على التفسير الزمني للحدث. كما تقوم الدراسة بتحليل الأفعال التي تحوي معانٍ حركية بهدف الوصول إلى كيفية قيام هذه الأفعال بصياغة التفسيرات الزمنية للحدث (منتَه أو لا منتَه).

تخلص الدراسة إلى أن الأفعال في اللغة العربية والتي تصف الأحداث المتدرجة التغيير تنقسم إلى ثلاثة أقسام من حيث الطبيعة الزمنية لهذا التغيير. هذه الأقسام هي كالتالي: (1) التغيير ثنائي الدرجة، (2) التغيير متعدد الدرجات، (3) التغيير متعدد الدرجات القابل للإلغاء. تشير التحليلات من اللغة العربية بأن التعابير الصرفية للمفاهيم الدلالية تعمل كإشارات للتفسير الزمني للحدث. كما أن لدى تلك التعابير القدرة على إلغاء قراءة زمنية متعددة الدرجات وفرض قراءة زمنية للحدث ثنائية الدرجات مما يشير إلى أن المحدد لسلوك المفردة لا ينحصر في ما تحمله الأفعال من معانٍ بل يتعدى ذلك إلى بعض التعابير الصرفية. أيضاً، النقاشات في مدى حدية الحدث (منتَه أو لا منتَه) تشير إلى أن الخصائص الدلالية للأفعال الحركية تتأثر جذرياً بنوع الحدث، فإن كان الحدث منتهياً دل الفعل على تغيير للحالة، أما إن كان لا منتَه فإن التغيير هنا يُلغى. هذه الظاهرة لها آثارها على مجالات عدة منها الترجمة.

**الكلمات المفتاحية:** الأقسام الزمنية، الخصائص الدلالية، التغيير المتدرج، الحدية الزمنية، التعابير الصرفية