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**| RESEARCH ARTICLE**

# Coextension Paths and Access Paths: A Comparative Study of Abstract Motion in English and Arabic

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**| ABSTRACT**
This paper examines the elements of abstract motion as represented by coextension path expressions and access path expressions. The elements include Path, Manner, Duration, and Mover. It does so by comparing English and Arabic languages with the purpose of building a model for abstract motion in Arabic and of performing a comparative analysis of the linguistic representation of abstract motion in the two languages under consideration. The study found that the two types of abstract motion under consideration differ in how they express the four components of motion, namely, path, manner, duration, and mover. They also differ in the degree of specificity of each component and in perspective. Moreover, this paper attempted to draw a comparison between English and Arabic expression of abstract motion and found out that abstract motion represented by access and coextension path expressions exist in both languages in parallel ways except for some slight differences on the grammatical and semantic levels. It is discovered that abstract motion in both languages has a cognitive bias towards path and distance. This applies to both English and Arabic. There are differences between English and Arabic in the type of verbs used to realize abstract motion. Arabic uses a limited number of verbs in realizing abstract motion, which is different from verbs used for actual motion. Finally, the study is hoped to be useful in the characterization of abstract motion in Arabic and in understanding the difference between access paths and extension paths.

**| KEYWORDS**
Abstract Motion, English, Arabic, Coextension path, Access path, Mover, Manner, Path, Duration, Cognition

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## 1. Introduction

Human beings experience motion in their daily lives in different forms. Some are physical movements, and some are imagined movements. Human conceptualization of movement, whether physical or nonphysical, has been the focus of extensive inquiry in cognitive linguistics since the 1980s. Language is the tool that helps people depict or describe the world as they see it or imagine it (Talmy 2000, 20). According to (Lakoff & Johnson 1980), language and reality are connected through the process of cognition. Language usually reflects our conception of the world, not the world itself. Therefore, our knowledge of the world is acquired contextually. Our understanding of nonphysical motion referred to as abstract or fictive, represents an essential aspect of general human conceptualization. Abstract motion conceptualization is a mental process by which human beings can structure static scenes (Matlock 2010). Human beings tend to categorize their experiences into structural patterns. These are reflected in linguistic categories, as Geeraerts (1997) confirms. Therefore, understanding the dynamics of abstract motion in general and comparing this understanding across languages will shed light on human conceptualization and on motion conceptualization in particular. This paper aims to explore the expression of abstract motion in Arabic by comparing it to English abstract motion expression both on the cognitive semantic level and the grammatical level. The study seeks to discover the similarities and differences in the expression of abstract motion between English and Arabic and between the Coextension Path and Access Path types of abstract motion.

There were many studies in Arabic that discussed physical/actual motion as opposed to abstract motion ( see Dawood 2000, Alqarny 2010, Abdulrahim, 2013 von Stutterheim, Bouhaous, & Carroll 2017, Nassar, Al-Ashqar & Shatanawi 2020, to mention a few). All these studies had arrived at similar conclusions about actual motion in Arabic, namely, that Arabic and English are similar in their use of motion concepts and how actual motion is expressed, but they differ significantly in how the different components of actual motion are lexicalized. On the other hand, the literature on abstract motion in Arabic is lacking opposite in other languages. There is a significant body of literature available on abstract motion in languages such as English, Spanish, and Japanese and other languages of the world (see respectively Langacker 1986, Talmy 1996, 2000, Matlock 2001, 2004, Bohnemeyer, 2010, Spanish Rojo & Valenzuela 2003, 2009, Matsumoto 1996, Amagawa 1997). In Arabic, there is only one study found about this important subject. This study is performed by Abdulkareem and Al-Jashamy (2021) on emanation paths which is one type of abstract motion. The study was within Talmy's cognitive semantic framework, and it investigated emanation paths in Arabic compared to Talmy's model. The study examined the structure of abstract motion, especially emanation paths, and revealed that Arabic used more concrete verbs to describe abstract motion and used specific categories that are not mentioned within Talmy's framework.

Consequently, this study aims to fill the gap in the literature by investigating the linguistic manifestations of abstract motion in Arabic represented by two of its types, namely, access path expressions and coextension path expressions. The purpose is to find out how abstract motion is structured in Arabic and to pinpoint the similarities and differences between English and Arabic as regards these two types of abstract motion. Moreover, the use of motion verbs in the expression of abstract motion in Arabic will be pinpointed. The research hoped to shed light on this important field that relates language to cognition and conceptualization.

### *1.1 Theoretical Framework*

Cognitive linguistics asserts that different language communities conceive of or comprehend events in the world differently, resulting in different conceptions of the same reality and, thus, different representations. In the actual world, motion is a fundamental human notion that serves as an organizational framework for a number of more abstract representations. Physical motion has been explained by many linguists as having a cognitive basis best represented by the theory of image schema (Talmy, 2000). This theory has acquired popularity due to the fact that it captures the origin of the phenomenon as a bodily and cognitive experience.

Meaning-form associations are investigated by Leonard Talmy (2000b: 24). He contends that a single semantic element may be represented through the use of a mixture of linguistic components. However, according to Talmy, examining this connection between semantic elements and linguistic components may reveal several fundamental laws and patterns. His lexicalization patterns, in particular, investigated the semantic elements of motion and how they are realized by linguistic elements. He asserted that the connection between meanings and linguistic forms would produce an array of universal patterns that may be different when compared cross-linguistically, and on that basis, he came up with his famous typology of motion events (Talmy, 2000, Férez. 2008).

A motion event, according to Talmy, is a scenario comprising motion as well as the continuance of a fixed place. According to him, the fundamental motion event consists of one object (the figure) moving or being located in relation to another object (the ground). There must also be a Path for this motion plus the fact of motion. A Motion event can be linked to an external Co-event, which is usually related to it in terms of Manner or Cause (2000b). Consequently, there are four basic components of motion; Figure and ground, Path, and of course, the fact of motion. Talmy defined motion as the presence of movement or "*locatedness,*" which refers to maintaining a stationary location. Path refers to the route followed or site occupied by the Figure object with respect to the Ground object (Talmy, 1985, 1991, 2000). The term, Figure, refers to "a moving or conceptually movable entity whose path or site is in question". The Ground is "a reference frame, or a reference object stationary within a reference frame, with respect to which the Figure's path or site is characterized" (Talmy, 2000b: 26).

### *1.2 Abstract Motion*

People regularly use physical motion in their everyday life to describe nonactual or imagined motion in situations where no physical movement is involved. This is referred to as fictive motion by Talmy (2000a) and as subjective motion or abstract motion by others (Langacker, 1986, Matsumoto 1996, Rojo and Valenzuela, 2003, Matlock 2004, 2010)

Abstract motion constitutes a significant part of human linguistic and conceptual abilities and is defined in various ways. Langacker (1986) refers to abstract motion as a dynamic cognitive process that motivates linguistic activity to produce a sense of action/movement. He stressed the aspects of time and directionality in abstract motion. Talmy (2000a) identified abstract motion as situations in which the immediate meaning of a sentence attributes a kind of movement to a stationary object. Matlock (2010) defines abstract motion as a "dynamic conceptualization" that shapes human descriptions of static scenes. The characteristics of abstract motion include an implicit motion, conceptually linked objects, and mental stimulation that move to and from these

abstract concepts and objects. It could be seen in such sentences as "the trees follow the courtyard" or recitation of the alphabet from A to Z. In any case, the sense of motion arises in such sentences while there is no explicit motion in reality (Matlock, 2010).

All languages have ways of describing stationary situations by making use of motion constructions and forms (Talmy 2000a). Talmy mentions 6 types of abstract motion which he calls "fictive," which include emanation, arrival, access, and coextension paths, among others (1996, 2000b). This paper will focus only on two of these types, which are access paths and coextension paths, both of which correspond to the two modes of tracking specified by Langacker as sequential scanning and summary scanning, respectively (1996). Both types of abstract motion are chosen because they are manifestations of subjective motion, i.e., the movement of the conceptualizer (the speaker) herself, which Langacker confirms that it is the reason behind abstract motion conceptualization in the first place (1990, 1991, 1996). The same phenomenon is referred to by Talmy as fictivity (2000a). One of the goals of this paper is to investigate the role of subjectivity in construing motion where no motion exists outside the representation.

In abstract motion constructions, no element moves physically or changes its location from one point in space to another, as expected in actual motion constructions. The movement found in these constructions is rather "mental". The conceptualizer mentally traces a Figure element as moving in a certain direction (Matsumoto 1996, Rajo & Valenzuela 2003).

## 2. Data collection

The data for this study consists of translations of English abstract motion sentences found in the literature. The researcher is a native speaker of Arabic and used intuitive knowledge and experience to produce the equivalent translations. Further Arabic reference books such as Lisan AL-Arab and Al-Maa'ni were used to check the meaning of verbs used in the illustrative examples of abstract motion. In the following lines, a discussion of coextension paths and access paths as types of abstract motion will proceed in a comparative way, starting with English and moving on to Arabic. A summary of the main similarities and differences will be given at the end of each section.

## 3. Discussion of Coextension Path and Access Path Expressions

The components of motion expressed in these two types of fictive motion in English were discussed by Matsumoto (1996). He points out that coextension and access paths represent two kinds of abstract motion in which the figure does not actually move. Instead, implicit motion is cognitively simulated in the conceptualizer's mind due to the process of mentally tracing the path described by the sentence. This process often involves visualization of a moving entity as part of the tracing (see Talmy 1983, 1989, Langacker 1986, 1987, 1990, Matsumoto1996). The expressions exemplified in 1 and 2 below do not allow all components of motion to be linguistically specified, and they differ from one another as well in the components of motion they specify.

(1) Coextension Path Expressions
a) The highway goes from California to Washington.
b) The mountain range goes from Dakota to New Orleans.

(2) Access Path Expressions
a) The car is parked across the street.
b) There is a cabin through the forest.

A coextension path is defined by Talmy as a description of the location, direction, or form of a spatial object relative to a path (Talmy 2000a). This object is usually static, and no actual moving entity is seen as navigating the path specified. Yet, the presence of motion is sensed but not literally identified in such configurations. The motion is either that of the observer or her attention or the object itself. Access path, on the other hand, pertains to the location of a static object relative to a path that can be traced to that object. Here, the object is static as well, and no actual moving entity is seen as navigating the path specified (Talmy 2000a). The sense of motion is depicted as a moving entity, whether it is the observer or her attention (Talmy 2000a, Matsumoto 1996 Langacker 1986, 1987, 1990).

Typical Arabic examples can be presented below that basically have expressed the same kind of semantic representation of fictive motion in 1 and 2 above.

(3) Coextension Path Expressions
**a) يمتد الطريق السريع من كاليفورنيا الى واشنطون.**
**b) تمتد سلسلة الجبال من داكوتا الى نيو اورلينز.**

(4) Access Path Expressions

**a) السيارة متوقفة في الجهة المقابلة من الشارع.**
**b) هناك كوخ عبر الغابة.**

### *3.1 Coextension paths*

The account of coextension path expressions in English and Arabic will attempt to classify them according to what Talmy (2000a) calls "general fictivity" into two subparts based on whether the moving entity represented by the NP in the subject position supports motion or not (see also Matsumoto 1996). Moreover, the components of motion present in each subpart will be discussed separately as follows:

(5) **Type I,** where the moving entity supports motion
a. The road went up the hill (as we proceeded).

**(كلما تقدمنا، اتجه الطريق إلى أعلى التل)**

b. The highway enters California there. (Hypothetical motion)

**(يمتد الطريق السريع الى كاليفورنيا من هناك)**

(6) **Type II,** where the moving entity does not support motion
a. The mountain range goes from Canada to Mexico. (Mental tracing)

**(تمتد سلسلة الجبال من كندا إلى المكسيك)**

b. The fence descends from the hill to the valley.

**(ينحدر السياج من الهضبة الى الوادي)**

Type I coextension path expressions are based on the actual motion of the observer. In other words, such expressions represent the described entity as moving from the perspective of a mover or her experience. Type II coextension path expressions are based on the mental tracking of a random moving entity at a random time. Such expressions contain a static object in the subject NP position that does not support the motion. Both types represent abstract motion. Yet, they demonstrate somewhat different properties, as will be pointed out. The examples also show that Arabic differs from English in the type of motion verbs used, as will be explained later. Below is an illustration of the difference in conceptualization between Type I and Type II expressions which correspond to Figure 1a and 1b, respectively:

**Figure 1-a The mover is the speaker**

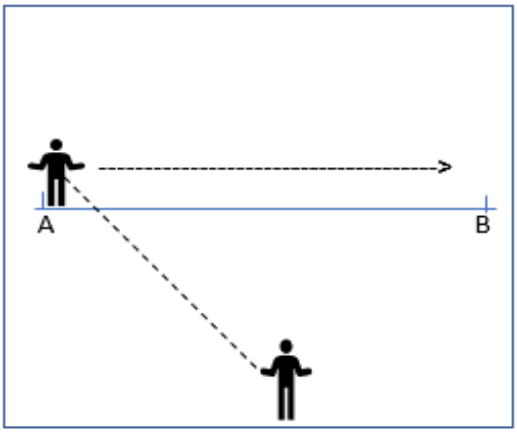
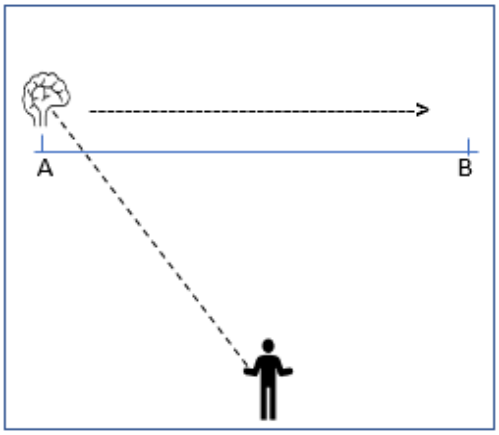



**Figure 1-b The mover is the attention**



**1) Path of Motion**

The sentences in (5) and (6) above show that the path of motion is expressed in English coextension path expressions in the form of a prepositional phrase illustrated by (5-a) and (6-a and b) or as part of the meaning of a path verb illustrated by (5-b) as Matsumoto indicated (1996).

The path in Arabic sentences is always expressed by prepositional phrases. Here, there is a noticeable difference between English and Arabic. The verbs (go) and (enter), although they express general motion, cannot be used by non-agentive subjects in Arabic. They are replaced by the verbs (**اتجه**) headed and (**يمتد**) extend in (5-a) and (5-b) and (6-a), respectively. This might be explained by the fact that the verbs (**go**) and (**enter**) are perspective verbs. They indicate a deictic meaning from the first-person perspective. Another reason might be the fact that the NP subject in these examples does not support the actual motion. The road and the highway both facilitate the motion of moving entities, but they do not actually move. The use of these two verbs can be in the following sentences,

(7) **Type I,** where the moving entity supports motion

a. The road went up the hill (as we proceeded).

b. **ذهبت السيارة الى أعلى التل**

c. **ذهبت (أنا) الى أعلى التل**

d. ***ذهب الطريق الى أعلى التل**

The contrast between the sentences in (7) demonstrates that the semantic content of the verb (**يذهب**) **go** requires an animate object because it involves volition. Therefore, even when the NP subject supports the motion, it is not capable of actual voluntary motion. Yet, this movement is acceptable from inanimate moving entities such as cars, trains, cats, etc., for the fact that they are capable of movement. The same thing can be said about the verb (**يدخل**) **enter,** as shown in (8) below. The verb has a deictic meaning and expresses volition.

(8) **Type I** where the moving entity supports motion

a. The highway enters California there. (Hypothetical motion)

b. **دخلت السيارة الى كاليفورنيا من هناك**

c. **دخلت (أنا) كاليفورنيا من هناك**

d. * **دخل الطريق الى كاليفورنيا من هناك**

The rejection of using these predicates in (7) and (8) in Arabic to talk about stationary objects that do not support the motion, as in (6) above, is strong. Another phenomenon related to the expression of the path is exemplified by (9) below.

(9) a. *The road runs (along the shore).

***(يمتد الطريق { بمحاذاة الشاطئ})**

b. the man runs every day (along the shore).

**(يركض (الرجل) كل يوم {بمحاذاة الشاطئ})**

A comparison between the a and b examples, in this case, indicates that path is not specified in the meaning of the underlined verbs in English nor in Arabic. It is also apparent that the (9-b) sentences do not need a path to be expressed, while it is obligatorily expressed in the (9-a) sentences in both languages. In such a case, a prepositional phrase must be used to denote the path. Example (9-a) is unacceptable without such a phrase, while (9-b) is. This means that path of motion is a basic component that must be specified in coextension path expressions in English. This case is true of Arabic as well.

The examples also show that a manner verb like (**يجري**) **run** cannot be used with inanimate static entities such as ***the road,*** although it might be used with inanimate moving entities such as ***water***. If we repeat the same examples, but with a path verb such as (**يصعد**) climb up, they become acceptable as in (10) below. The underlined verbs are directional verbs. They denote the direction of motion rather than the manner, as the case is in English.

(10) a. The road began to climb up/ go down (along the shore).

**(بدأ الطريق بالصعود / الانحدار {على طول الشاطئ})**

b. He began to climb up/ go down (along the shore).

**( بدأ (الرجل) بالصعود / الانحدار (على طول الشاطئ))**

In Arabic, path representation is divided between the verb itself and the underlined satellite prepositional phrase with both moving and static entities. Therefore, the prepositional phrase is optional in (10-a) and (10-b) in Arabic. The verbs (**يصعد**) **climb** and (**ينحدر**) go down are directional path verbs in Arabic.

**2) Manner of Motion**

This section discusses the expression of the manner in fictive motion constructions in English and Arabic. In the following sentences, an attempt was made to express the manner of motion along a specified path in coextension path expressions.

(11) a. *The road {walks / hustles} through the park.

**(*{يسير / يسرع } الطريق عبر المتنزه)**

b. *The road goes through the forest {happily / slowly}.

**(*يمر الطريق {بسعادة / ببطء} عبر الغابة)**

c. *The road runs through the forest {by car / on foot}.

**(*يمر الطريق عبر الغابة {بالسيارة / سيرًا على الأقدام})**

(12) a. The man {walks/hustles} through the park.

**(*{يسير / يسرع} الرجل عبر المتنزه)**

b. The man runs {happily / slowly} through the forest.

**(*يركض الرجل {بسعادة / ببطء} عبر الغابة)**

c. The man goes through the forest {by car / on foot}.

**(*يمر الرجل عبر الغابة {بالسيارة / سيرًا على الأقدام})**

The comparison between the examples in (11) and (12) above, in both languages, proves that manner of motion cannot be conveyed in coextension path expressions (Matsumoto 1996). Using manner verbs as in (11-a) or manner adverbials as in (11-b) and (11-c) makes these sentences unacceptable. Even in Type II coextension path expressions, it is not acceptable to add any description of manner as demonstrated in (13).

(13) a. *The mountain range {slows down/ speeds up} from Canada to Mexico.

**(*{تتباطأ / تتسارع } سلسلة الجبال من كندا إلى المكسيك)**

b. This fence descends from the plateau to the valley.

**(*{يتباطأ / يتسارع }هذا السياج من الهضبة الى الوادي)**

Matsumoto (1996) found a case in English in which coextension path expressions included a motion verb or an adverb showing manner exemplified by (14-a) and (14-b), respectively, quoted from him below (P. 363).

(14) a. The road {rambles / wanders} through the forest.

**(*{تجول/ تنقل } الطريق خلال الغابة)**

b. The road descends slowly.

**( *ينحدر الطريق {ببطء})**

He explained this case by saying that the manner verb in (14-a) and the manner adverb in (14-b) are used to describe a feature related to the path, which is the shape or the steepness of the path, rather than the manner with which a moving entity moves along the path. The Arabic counterpart examples show that it is not possible for such verbs or adverbs to be used in coextension

path expressions. In my opinion, this is based on two grounds. The reason is that the verb in (14-a) (**تجول/ تنقل**) **ramble** involves the traversal of three points at least and in different directions. This movement is characteristic of human subjects and not acceptable to nonhuman subjects. For the example in (14-b), it also defies the use of a manner description because the subject NP is not capable of motion opposite to the train, for instance.

The previous analysis shows that only the general path of motion verbs can be used to express abstract motion in English and Arabic. Any manner of motion information is repressed except for a few cases in English, which Matsumoto explained as descriptions of the path itself and not of the movement.

**3) Duration of Motion**

The examples in (15) represent types I and II of coextension paths. In order to examine how the duration of motion is expressed in both types, a phrase showing time is added to the sentence to prove whether or not such expressions are able to specify the duration of the motion expressed by the verb.

(15) a. *The mountain range extends along the coast for some time.

**( *تمتد سلسلة الجبال على طول الساحل لفترة من الزمن)**

b. The highway runs along the coast for some time.

**(*يمتد الطريق السريع على طول الساحل لفترة من الزمن)**

The contrast between (15-a) and (15-b) in both languages shows that the duration of motion can be specified according to the type of motion involved. Coextension path expressions involving mental tracing, such as (15-a), do not support the duration of motion to be identified in both languages, while expressions involving hypothetical motion do accept duration to be conveyed in English. This fact is proven in English by our ability to ask questions such as "How long does highway run along the coast?" as confirmed by Matsumoto (1996). This is not the case in Arabic. The Arabic sentences in (15), on the other hand, do not sound natural. The acceptability of such sentences is questionable and may be restricted to highly contextual clues, such as being part of a longer description of the highway that includes other sections also described as relevant to a speaker/addressee.

The fact is that including duration of motion information is not grounded in cognition. As evidence of this fact, in English, is the restriction found on the precise expression of motion duration in coextension paths, as the following examples illustrate.

(16) a.? The highway runs along the coast for an hour.

**(*يمتد الطريق السريع على طول الساحل لمدة ساعة)**

b.? The trail goes along the coast for 10 minutes.

**(*يمتد الاثرعلى طول الساحل لمدة 10 دقائق)**

c. The highway goes along the coast for 4 miles.

**(يمتد الطريق السريع على طول الساحل لمسافة 4 أميال)**

The acceptability of the English sentences in (16-a and b) is questionable by English native speakers, as Matsumoto explained (1996), and may depend on some contextual clues. Their Arabic counterparts sound somewhat odd and need more investigation to decide on their acceptability by native speakers of Arabic. This indicates that precise information about duration is not permissible with expressions involving hypothetical motion. The sentences in (16-c), in contrast, include precise information about the distance, and it seems that they are totally acceptable in both languages.

The sentences in (16-a and b) can be rendered acceptable by inserting the perspective phrase (while I was driving). This will add some contextual clues to the sentence by changing the perspective view from mental tracing (the observer) to the first person view (the speaker), and the result is as follows.

(17) a. The highway **(I was driving on) went** along the coast for an hour.

**(امتد الطريق السريع (الذي كنت أقود فيه) على طول الساحل لمدة ساعة)**

b. The trail **(I was walking on) went** along the coast for 10 minutes.

**(امتد الممر (الذي كنت أسير فيه) على طول الساحل لمدة 10 دقائق)**

The sentences in (17) are more acceptable, and they provide evidence that Type II expressions can sometimes admit accurate duration details. Arabic sentences behave in the same way as their English counterparts. In effect, it is clear that motion in Type II expressions is similar to actual/physical motion in relation to temporality. While essentially sentences (16-a and b) were completely unacceptable in Arabic, Type II expressions, much like in English, do a much smoother job at conveying the duration of motion depicted in the sentences.

**4) The Mover**

In both types of coextension paths, it becomes clear that the actual mover is not overtly expressed, whether it is the individual speaker or her focus of attention as in (18-a) or the individual observer from the third person perspective as (18-b) (Matsumoto 1996, Talmy 2000). It is not possible to linguistically express the moving entity, and this will result in an ungrammatical sentence in both languages.

(18) a. *The road ran from California to Washington **by drivers**.

**(*يمتد الطريق من لوس أنجلوس إلى نيويورك أمام السائقين)**

b. *The mountain range goes from Dakota to New Orleans **in front of us**.

**( *تمتد سلسلة الجبال من داكوتا الى نيواورليز أمامنا)**

c. The mountain range extends along the coast **in front of us**.

**(تمتد سلسلة الجبال على طول الساحل أمامنا)**

Similar to English, Arabic sentences behave in the same way linguistically. The moving entity in Type I expressions represented by (18-a) is not necessarily conceptualized as a specific human being or any other entity. It could be a person's focus of attention. In Type II, however, represented by (18-b), the motion is imagined, and therefore, the moving entity is a hypothetical, arbitrary entity. The sentences in (18-c) include the observer as an adjunct showing the location of the observed, and are perfectly grammatical in both languages. This might be explained by considering that the path of motion is just one section of the whole path and represents the trajectory of motion relative to the speaker's position, which might be overlooking the whole spatial scene.

In conclusion, coextension paths conceptually involve a speaker or an observer performing a process of mental scanning or a process of imagined (hypothetical) motion, respectively. This applies to both languages under consideration. Both coextension path types vary in relation to the specific linguistic lexicalization of motion aspects. In both languages, it is not permissible to specify manner or duration in Type I. In Type II, however, manner is to some extent specifiable when it comes to describing a feature related to the path, contrary to Arabic, which does not allow manner to be lexicalized in fictive descriptions. Duration is unspecifiable in both languages in Type I constructions. But in Type II, the duration can be identified only to describe a path-related feature. The moving entity cannot be expressed in Type I in both languages, while it can sometimes be expressed in Type II in both languages, as in (18-c).

**Table 1 Differences between English and Arabic Coextension path Lexicalization**

| | Path of Motion | | Manner of Motion | | Duration of Motion | | The Mover | |
|---|---|---|---|---|---|---|---|---|
| Language | English | Arabic | English | Arabic | English | Arabic | English | Arabic |
| Type I | Obligatory | Obligatory | Unspecifiable | Unspecifiable | Unspecifiable | Unspecifiable | Inexpressible focus of attention | Inexpressible focus of attention |
| Type II | Obligatory | Obligatory | Specifiable sometimes (to describe a path feature) | Unspecifiable | Specifiable sometimes (to describe a path feature) | Specifiable sometimes (to describe a path feature) | Hypothetical arbitrary | Hypothetical arbitrary |

Table 1 above reveals the existence of a connection between the different properties of fictive motion for each type of coextension paths constructions. It is evident that the manner of motion is unspecified because the mover in both types is not a person. Talmy (2000b) explained that manner is a feature of the mover or the figure and not of the movement. Consequently, the lack of manner expression in fictive motion is directly linked to the absence of an expressed mover. The only case in which manner is specified is when it is a property of the path itself and not of the mover. The same thing can be said about the duration of motion. It is possible to specify duration information only when it is connected to the presence of a mover.

### *3.2 Access Path Expressions*

Access path expressions involve a stationary object in the NP subject position exemplified above and repeated here for ease.

(19) a. The car is across the street.

**(*السيارة عبر الشارع)**

b. There is a cabin through the forest.

**(*هناك كوخ عبر الغابة)**

c. His house is down this street.

**(بيته في نهاية الشارع)**

d. The mountain peak is 3000 meters up above the ground.

**(تقع قمة الجبل على ارتفاع 3000 م من سطح الارض)**

The sentences in (19) show that there is a stationary entity being spatially located with reference to the speaker or to some other entity. They represent access path expressions that are based on an imaginary motion of the speaker or hearer. Such expressions describe how an entity can get to the located object from the perspective of a mover. The path of motion is represented by a PP leading directly to the location of the entity being located. It might be a process of mental tracking like type II coextension path expressions, but the moving entity is either an imagined speaker or an imagined listener. Access path expressions involve positioning a static object in relation to other static objects. The starting point of the motion is not identified. The same type of fictive motion also exists in Arabic. But the sentences in (19-a and b), in particular, are unacceptable and ungrammatical, while (19-c and d) are normal sentences in Arabic. Further discussion will be given later. The proposed conceptualization of access paths in English and Arabic is illustrated in figure 2 below:

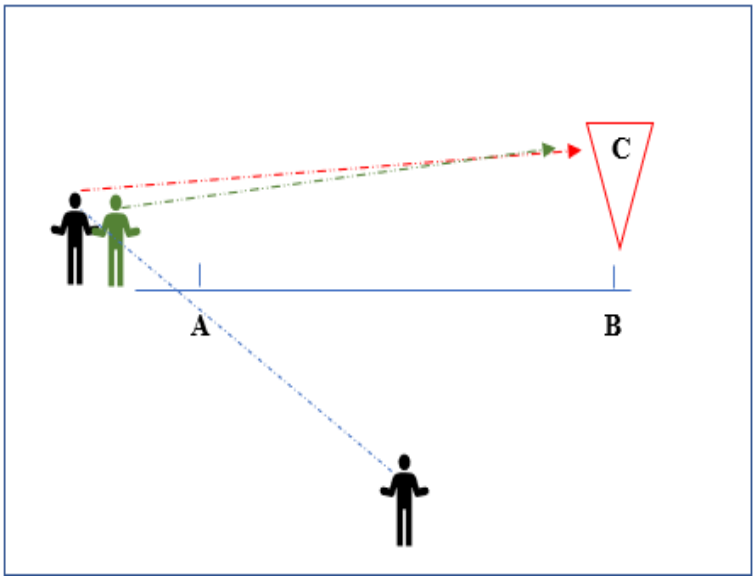



Figure 2: Abstract Motion Conceptualization in Access Paths

The following lines will be a discussion of this type of fictive motion. As done with coextension path expressions, the discussion will present a survey of the specific components of motion existing in this type of abstract motion in both languages.

**1) Path of Motion**

Evidence presented so far shows that path is obligatorily expressed in sentences containing coextension path expressions. The case is also true for access path expressions as well. The location of a specific stationary entity is characterized in terms of a fictive path that ends at that location. Therefore, the path is part of the conceptualization. It follows that the presence of motion is also part of this conceptualization, even if it is an imagined or hypothetical kind of motion or what Talmy calls "semantic evocation of motion" (2000a). Matsumoto (1996) refuted the view that the path prepositions in English sentences are merely locative expressions indicating the endpoint of the path represented by these prepositions in their normal use (see Brugman 1983, Lakoff 1987, Taylor 1993, Dewell 1994). He did this by bringing in two pieces of evidence. The first evidence is the possibility of indicating a mid-point in the overall path represented by the preposition, as demonstrated by the sentences in (20). The second piece of evidence is the possibility of indicating two or three points along the path of that motion, as demonstrated by the sentences in (22) below.

(20) a. There is a lake {halfway / twenty miles} across the desert. (Matsumoto, 1996)

b. **(هناك بحيرة {على بعد عشرين ميلا/ في منتصف الطريق} عبر الصحراء**

It is clear from sentences in (20) that (a lake) is located at a point in the middle of the path depicted by the PP (across the desert). The same idea is expressed in Arabic with the same characterization. The path is conceptualized as a line, and in the middle of this line or after a 20-mile distance, a lake can be found.

However, the Arabic example behaves in a strange manner. When the path is a traversal from one side to the other as represented by the English preposition across, Arabic does not allow such a construction to be used as exemplified by (19-a and b) opposite to the Arabic sentence in (20) where the spatial configuration is an unbounded extent, and the motion is not necessarily traversal.

In (19-a and b), it is possible that the PPs in the English sentences are simply locative, but in (19-c and d), they are not; The addition of a distance phrase to the (19-a and b) sentences will prove this point (Matsumoto, 1996, P. 365).

(21) a. The car is 10 meters across the street.

**(السيارة على بعد 10 أمتار عبر الشارع)**

b. There is a cabin about 3 kilometers through the forest.

**(هناك كوخ على بعد 3 كيلومترات عبر الغابة)**

The meaning of the English sentences in (21) is far from being locative. The Arabic sentences, on the other hand, are rendered acceptable by this addition. The reason might be two-fold. First, the English preposition "across" has no equivalent in Arabic. The Arabic preposition (**عبر**) does not exist in Classical Arabic and is basically a lexicalized form from the motion verb ( **عبر**) to cross that gained widespread popularity and became standardized. With the addition of the distance phrase, the meaning of the verb (**عبر**), i.e., to pass from one side of the street to the other side, is fulfilled since it denotes the crossing of a spatial boundary. The second reason is more salient and has to do with the fact that access paths in Arabic need the starting point to be specified and not only the endpoint, as illustrated by the grammaticality of the sentences above after the addition of distance. The phrase specifying distance is only possible to be used in this construction because the starting point is the speaker herself or her perspective looking straight ahead (see figure 2 above).

The second piece of evidence to prove the existence of the fact of motion in such expressions is the possibility of indicating two or three points along a continuous spatial path using a sequence of PPs, as illustrated in (22). This series of PPs suggests movement along the path specified by these PPs.

(22) a. There is a helipad across the river, through the meadow, and (then) over the hill.

b. (**يوجد مهبط للطائرات المروحية عبر(هذا) النهر مرورا بالمرج ومن ثم فوق التل)**

In sentence (22-b), Arabic seems to admit the same kind of specification of distinct portions of a continuous path just like English does. Yet, it sounds more natural in Arabic to have a sequence of two PPs only. However, the use of the deictic word (**هذا**) ***this*** proves the view that the starting point is the speaker herself.

It is stated above that Arabic requires the starting or the initial point of a path to be specified. So, while it is a possibility in English, it is a must in Arabic. This is illustrated below in (23).

(23) a. The school is across the street from here/ where we stand.

b. **(المدرسة في الجهة المقابلة من الشارع من مكاننا/ حيث نقف)**

If the sentence does not include the PP (**من مكاننا/ حيث نقف**) ***from here/ where we stand***, it will be interpreted as location and not as fictive motion. The hypothetical motion in access path constructions assumes the speaker as the reference point of the motion or the ground (the landmark).

**2) Duration of Motion**

Motion is an event that takes place over a period of time. So, a form of the temporal specification is expected to appear in access path construction. But Matsumoto (1996) states that motion English access path expressions do not show any form of temporality. The closest thing to temporal specification is the sequential ordering of PPs in a sentence like (22-a) which also includes a time expression, ***then***, added to the last PP in a sequence. Similarly, temporality can be noticed in (24) quoted from Matsumoto (1996).

(24) a. His house is halfway through the <u>increasingly dense</u> forest.

**(منزله في منتصف الطريق عبر (هذه) الغابة المتزايدة الكثافة)**

b.? His house is somewhere in the <u>increasingly dense</u> forest.

(*)**منزله في مكان ما في (هذه) الغابة <u>المتزايدة الكثافة</u>**

The addition of the underlined adjective phrase suggests a gradual change of density over time during motion along the road. This is expressed in Arabic by an equivalent adjectival phrase. The sentences in (24-a) are acceptable in both languages. The underlined phrase gives a temporal sense of movement. The construction is that of an access path. Conversely, the sentences in (24-b) are unacceptable. The English sentence sounds odd, and the Arabic equivalent is ungrammatical and unnatural. The reason is the contrast between the intended locative meaning and the structure, which suggests motion through the use of the adjective

phrase ***increasingly dense*** **(المتزايدة الكثافة)**.

Consequently, the duration of motion can be tacitly conveyed in access path expressions in English and in Arabic. This is the third evidence that access path expressions are not locative in English. Arabic access paths, on the other hand, fluctuate between the two readings. This might be an intermediate stage in the language development process towards more motion-like constructions, or Arabic allows both interpretations. The question becomes, which reading has a higher frequency in language use? And under what linguistic circumstances? These two questions will be left open until further data is acquired.

Moreover, it is possible to specify duration by adding a distance phrase as a specifier to a spatial preposition, as in (25-a) but not by adding a time phrase, as in (25-b). This applies to both languages.

(25) a. His village lies many miles across the sea.

**(تقع قريته على بعد عدة أميال عبر البحر)**

b. His village lies many hours across the sea.

**(تقع قريته على بعد عدة ساعات عبر البحر)**

The sentences in (25-a and b) are acceptable in a similar way. This suggests that spatial prepositions do admit specification by the addition of a time phrase instead of a distance phrase. Arabic behaves in the same way by allowing time to be expressed with spatial prepositions. Yet, it seems unacceptable to ask about time while it is acceptable to ask about distance, as illustrated below:

(26) a. How far across the sea does his village lie?

**(كم تبعد قريته عبر البحر؟)**

b. *How long across the sea does village lie?

**(*ماهي المدة التي تبعدها قريته عبر البحر؟)**

This means it is adequate to ask about the distance using ***How far?*** But the question ***How long***? seems to be semantically ungrammatical. The two languages are similar in relation to this idea. It can be explained by saying that time specification is meant to be a specification of location and not a specification of time. Consequently, a precise value of time can be added to access paths in English and Arabic, as exemplified in (27).

(27) a. There is a village 25 minutes through the forest.

**(هنالك قرية بعد ٢٥ دقيقة على الطريق خلال الغابة)**

b. The bank is only five minutes down the road.

**(يبعد المصرف خمس دقائق في نهاية {هذا} الطريق)**

c. There is an intersection 15 minutes down the alley.

**(يوجد تقاطع على بعد خمسة عشر دقيقة في نهاية الممشى)**

Based on what has been said above, a distinction can be made between access path expressions and coextension path expressions which involve hypothetical motion. Both types allow duration to be expressed in the form of a distance phrase, regardless of the speed details with which the imagined mover traverses the path. Yet, they differ in the ability to specify the exact time or duration. A time period can be expressed in access path expressions in both languages, while this is not feasible with coextension paths.

**3) Manner of Motion**

Manner of motion can be expressed either in the form of PP, as illustrated in (28a), or as part of a specifier, as in (28b), to denote the location of a located entity.

(28) a. The bank is 20 minutes down the road {by car / on foot }.

**(يبعد الفندق خمسة عشر دقيقة { بالسيارة /سيرآعلى الأقدام } من هذا الطريق)**

b. The bank is a 20-minute {drive / walk / run} down the road.

**(يبعد الفندق مسافة عشرين دقيقة { بالسيارة / سيرا على الأقدام} من هذا الطريق)**

The difference between (28-a) and (28-b) is that the PP is part of the VP in the first case while it is part of the NP in the second. Matsumoto (1996) confirmed that manner exists in abstract motion sentences because it helps to specify the location of a located entity. But when it does not offer this kind of specification, i.e., the location of a located entity, it becomes ungrammatical when expressed as shown below:

(29) a. The gas station is a 15-minute {fast/slow} drive down the road.

b. The gas station is a 15-minute {??careful / *careless} drive down the road.

Sentence (29-a) is grammatical and acceptable, according to him, while sentence (29-b) is ungrammatical or unacceptable. In (29-a), the adjectives ***fast*** and ***slow*** are used together with a temporal specification 15-minute to indicate the location of the located entity. Contrastingly, the adjectives ***careful*** and ***careless*** in (29-b) indicate properties of the unexpressed mover and do not help to identify the location of the gas station. The difference between both types of adjectives is semantic, i.e., what is being described? The movement or the mover. The same examples in (29) are repeated below with their Arabic equivalents.

(29)' a. The gas station is a 15-minute {fast/slow} drive down the road.

**(يوجد محطة محروقات على الطريق على بعد خمسة عشر دقيقة من القيادة السريعة / البطيئة)**

b. The gas station is a 15-minute {??careful / *careless} drive down the road.

**(يوجد محطة محروقات على الطريق على بعد خمسة عشر دقيقة من القيادة المتأنية/ المتهورة)**

The Arabic sentences show that manner can be identified in abstract motion expressions as part of a PP describing this movement. There is no difference in acceptability between the adjectives ***fast*** and ***slow*** on the one hand and the adjectives ***careful*** and ***careless*** on the other hand. This is due to the fact that mover and movement become one in Arabic in these sentences from a semantic stand.

The properties of the access path can also be revealed in English in the examples that follow quoted from Matsumoto (1996, p. 368).

(30) a. The hotel is a 15-minute {dangerous / zigzagged} drive down the road.

b. Richmond is a scenic and interesting two-hour ride along the shore.

The specifier position in the manner phrase can be occupied by a number of adjectives related to the properties of the access path implicit in the phrase. This type of modification is possible in English and Arabic but with a slight difference in the position of the specifier. Arabic sentences equivalent to the previous group of examples place the specifier of access path in the NP rather than in the manner phrase.

(30) a. **يوجد فندق على بعد خمسة عشر دقيقة على هذا الطريق المتعرج / الملئ بالمخاطر.**

The hotel is a 15-minute drive down the {dangerous / zigzagged}road.

b. **تقع ريتشموند على بعد ساعتين من القيادة الممتعة المليئة بالمشاهد الخلابة طوال الشاطئ.**

Richmond is a two-hour ride full of a scenic and interesting scenery along the

shore.

The English translation of the Arabic equivalent examples in (30) will illustrate the difference in the structure. English and Arabic are able to properly describe the properties of access paths. The difference between them is in the grammatical structure itself.

**4) The Mover**

The sentences discussed so far show that the moving entity is not expressed in access path constructions. In addition, it is evident

that the implicit moving entity is understood to be a person. The purpose of access path expressions is to trace the position of a stationary object from the point of view of a person who wants to get to that stationary object, and therefore they represent the movement of the person (speaker/hearer) and not a movement of the focus of attention.

To illustrate this point, consider the English examples in (31) based on Brugman (1981), Dewell (1994), and Matsumoto (1996).

(31) a. *The city is over that mountain.

b. The manager's office is across/ through the hall.

c. *The manager's office is across /through the wall.

They asserted that the unacceptability of (31-a and c) is not due to the preposition or the landmark but to the mover itself. The access path in (31-a) is not possible to be traversed by a human being because, as Brugman (1981) pointed out, a mover would not be able to actually take the route represented by the preposition ***over*** to get to the located entity. This is more evident in (31-c), which contrasts directly with (31-b) and proves that it is the mover's point of view and not the path or the located entity that causes this dilemma. In (31-b), the mover can traverse the path to the located entity, but in (31-c), this traversal is not possible. The hall can be easily crossed, while a wall separating offices cannot. Similarly, Arabic access paths require the mover to be a person and not just merely a movement of attention. The sentences that follow will make this point clear.

(32) a. **(يوجد محطة محروقات على يمين الطريق عبر النفق)**

A gas station is across the tunnel on the right. (Access path)

b. ***(يوجد محطة محروقات على يمين الطريق عبر الجبل)**

*A gas station is across the mountain on the right. (Access path)

By comparing the sentences in (32), it becomes evident that access paths in Arabic also require the mover to be a person, i.e., a concrete entity. It is easy to contrast the acceptability of (32-a and b). The reason that sentence (32-b) is unacceptable is that the mountain is an entity that cannot be physically traversed. So, this proves the fact that concreteness is a feature that has to be present in the mover in access paths, even in Arabic.

In the following lines, the comparison between English and Arabic access path expressions is summarized in table 2, after which general comments and considerations are given.

**Table 2 A Comparison between English and Arabic Access path Lexicalization**

| | **Path of Motion** | | **Manner of Motion** | | **Duration of Motion** | | **The moving Entity** | |
|---|---|---|---|---|---|---|---|---|
| Access Path expressions | **English** | **Arabic** | **English** | **Arabic** | **English** | **Arabic** | **English** | **Arabic** |
| | Obligatory | Obligatory | expressible | expressible | expressible | expressible | Inexpressible concrete | Inexpressible concrete |

Table 2 above shows that Arabic and English are identical as far as access path expressions are concerned. The path is a necessary component of access paths in both languages. Manner and duration, on the other hand, are less salient in the expression of access paths in both languages, but they can be articulated. The moving entity is not expressed obligatorily in the two languages. Moreover, the moving entity is understood in the two languages to be a person (a concrete entity).

It is also obvious from the previous discussion that access path expressions are similar to Type II coextension paths in being abstract though they seem less abstract by comparison to Type I coextension paths which involve actual motion verbs.

### 3.3 *Differences and similarities between Coextension paths and access paths in English and Arabic*

The discussion of the two types of abstract motion has yielded a number of similarities between English and Arabic in how abstract motion constructions work. In this section, the differences and similarities between the two types in both languages are summarized in a number of points:

1. The mover in coextension path expressions is either the focus of attention or a hypothetical mover, in which case it is a non-concrete entity opposite to access path expressions in which the mover must be a concrete entity (a person). This applies to both languages.
2. The cognitive process reflected in abstract motion realizations is either mental scanning or hypothetical motion. This is found to be the case in the two languages as well.
3. The possibility and saliency of expressing duration in English and Arabic are related to the type of abstract motion and to the implicit mover. The two languages are similar in this respect. In coextension path expressions, If the mover is the speaker, it is expressible. But when the mover is a hypothetical entity, it is inexpressible. This does not happen in access path expressions in which duration can be realized without being linked to the mover.
4. Manner is specifiable in English access path expressions because it helps to define a location, while in coextension path expressions, it is only specifiable when it is a description of a path feature. In Arabic, manner is not articulated coextension paths at all. But it can be specifiable in access path expressions when it is a feature of the path in the form of an adjectival phrase describing the path.
5. The duration phrase differs in the two types of abstract motion. In access path expressions, the duration phrase is spatial in nature even when it contains temporal information. This is true of both languages. In coextension path expressions, the duration phrase is temporal. But there is a clear bias towards distance specification in abstract motion description more than duration specification in both languages.

In summary, access and coextension path expressions exist in both English and Arabic in parallel ways, except for some slight differences. Coextension paths and access paths show some dissimilarities on the grammatical level. The most important one is the fact that coextension paths are expressed through motion verbs, while access paths rely on prepositions. Based on this distinction in grammar, a distinction in conceptualization emerges. Langacker called this phenomenon sequential scanning vs. summary scanning (1987, 1990, 1992). The verb describes a process (unfolding over time), while prepositions describe an imagined sequence of separate states in a process, like a summary. Prepositions in access path expressions convey duration in this way. Matsumoto (1996) refers to duration in access paths as being "spatialized or de-temporalized," which means that they indicate space-time stages along the path described (P. 370). The same distinction is referred to as ***perspective*** (see Talmy 2000a, P.68 for more details). Roughly, perspective pertains to whether the speaker's attention is on the starting point of movement or the end point, or both. Coextension paths assume the starting point perspective, while access paths assume the end point perspective. Along with this difference in perspective, a difference in perspectival mode is linked in which the attention shift from a local scope of attention in coextension paths to a global scope of attention in access paths.

In addition, the differences in the specificity of the manner and duration of information are triggered by semantics. The meaning of access path expressions and the need to define a location spatially require a somewhat more specific manner and duration account than in coextension paths.

The differences between the two types of abstract motion expressions as regards the concreteness of the mover highlight an underlying cognitive basis. Mental scanning in coextension paths indicates that the mover is not concrete, and even if it is, there is no way of imagining the specific duration of motion accompanied by the process.

Moreover, the purpose of coextension path expressions is to scan the length of an extended entity spatially to recognize its extent and shape. As such, they center around the path along which motion may occur. Therefore, the path is the essential component of coextension path expressions. Other aspects of motion are given only when needed to designate a path. Access path expressions center around depicting the location of an object with respect to a path that one can be followed to the location of that object ( Matsumoto 1996, Talmy 2000b, Fan 2014). So, the unexpressed mover is necessarily a concrete entity. When the location of the located entity needs more specification, manner and duration are given. Also, the fact that manner and duration of motion are scarcely expressed in access and coextension paths in both languages is considered strong evidence of the abstractness of these expressions

It remains to say that verbs denoting abstract motion in Arabic are different from those used to convey abstract motion in English.

Based on the examples discussed throughout the paper, the verbs used to express abstract motion in English are no different from those used to express physical/actual motion, such as go, run, ramble, wander, and enter. In Arabic, this is not the case. Verbs denoting abstract motion are spatial verbs if it is allowed to call them that. They convey a spatial meaning and are subjugated from words related to spatial configurations such as (يمتد) **extends**, (يبعد) **away**, (يتجه) **heads towards**, (يمر) **passes**, and lastly (يستمر) **continue**. In addition, they are limited in number if not restricted to these mentioned in the study. The verbs that denote physical/actual motion are not used in the expression of abstract motion in Arabic. This represents a big difference between the two languages in how abstract motion is realized.

Coextension path expressions and access path expressions are only two of the several different kinds of abstract motion expressions. Comparing other different types of abstract motion expressions may reveal other points of divergence or convergence between English and Arabic in the expression of abstract motion. The two types of abstract motion under consideration differ in how they express the four components of motion, namely, path, manner, duration, and mover. Moreover, they differ in the degree of specificity of each component.

## 5. Conclusion

This paper focused on the different ways English and Arabic express coextension and access paths as two types of abstract motion. A comparison between the two languages in the way they express abstract motion proved that they behave in similar ways. The two types of abstract motion differ in how they express the four components of motion, namely, path, manner, duration, and mover. Moreover, they differ in the degree of specificity of each component. The Mover is usually an imagined person or one's attention, and it is either inexpressible in both languages or hypothetical. The path is an obligatory component for the realization of motion. Manner is either expressible in type I coextension paths and access path expressions or inexpressible in type II coextension path expressions. Duration is inexpressible in coextension paths except in some cases, while it is expressible in access paths.

The study also proved that the grammatical forms used to realize abstract motion are different in each of these types (i.e., verbs vs. prepositions). Moreover, this paper attempted to draw a comparison between English and Arabic expression of abstract motion and found out that abstract motion represented by access paths and coextension paths exist in both English and Arabic in parallel ways, except for some slight differences in the grammatical and semantic levels. It is discovered that access paths and coextension paths share a cognitive bias towards path and distance, and at the same time, the major distinction between them is perspective. This applies similarly to both English and Arabic. The number of verbs used to realize abstract motion in English is limited, but the types are the same as those used for actual motion. In Arabic, on the other hand, the number of such verbs is limited, and the types are not the same as those used for actual motion. Finally, the study is hoped to be beneficial in the characterization of abstract motion in Arabic and in understanding the differences between access paths and extension paths. It is also hoped to have contributed to understanding the relationship between language and cognition.

### *5.1 Limitations*

This paper is limited to studying two types of abstract motion only. Future research in other types may reveal similar or different results. The variety of languages selected for conducting this study is Modern Standard Arabic. Therefore, investigating this topic in other varieties of Arabic is a promising field of investigation.

### *5. 2 Suggestions for further research*

This study is limited to providing secondary data about abstract motion in Arabic. The data consisted of English sentences and their equivalents in Arabic. The researcher recommends that future research can focus on analyzing spontaneous descriptions of abstract motion used in real life situations. It is also recommended to investigate other types of abstract motion in Arabic. The field of abstract motion in Arabic is so vast, and other aspects of the conceptual structure of abstract motion can be studied in future research.

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**References**


[1] Abdulkareem, M. A., & Al-Jashamy, D. Z. (2021). The Constructional Analysis of Emanation Fictive Motion in Arabic: A Cognitive Semantic-Syntactic Study. *Journal of University of Babylon for Humanities*, 29(6), 257-270.

[2] Abdulrahim, D. (2013). *A corpus study of basic motion verbs in Modern Standard Arabic*. University of Alberta (Canada).

[3] Amagawa, T. (1997). Subjective motion in English and Japanese: A case study of run and hashiru. *Tsukuba English studies*, (16), 33-50.

[4] Dewell, R. B. (1994). Over again: Image-schema transformations in semantic analysis. https://www.degruyter.com/document/doi/10.1515/cogl.1994.5.4.351/html

[5] Fan, N. (2014). The study of motion event model and cognitive mechanism of English fictive motion expressions of access paths. *Theory and Practice in Language Studies*, 4(11), 2258.

[6] Férez, P. C. (2008). Motion in English and Spanish: A Perspective from Cognitive Linguistics, typology and psycholinguistics. (Unpublished Ph.D. Dissertation). Universidad de Murcia. Retrieved from https://digitum. um. es/xmlui/bitstream/10201/2118/1/CifuentesFerez. pdf.

[7] Gibbs, R. W. & T. Matlock. 2008. Metaphor, imagination, and simulation: Psycholinguistic

[8] evidence. In R. W. Gibbs (ed.). *Cambridge handbook of metaphor and thought*, 161–176.

[9] New York: Cambridge University Press.

[10] Langacker, R. W. (1986). Abstract motion. In Annual Meeting of the Berkeley Linguistics

[11] Society (Vol. 12, pp. 455-471). https://doi.org/10.3765/bls.v12i0.3317

[12] Matlock, T. (2001). *How real is fictive motion?* University of California, Santa Cruz.

[13] Matlock, T. (2004). Fictive motion as cognitive simulation. *Memory & Cognition*, 32(8), 1389-1400.

[14] Matlock, T., 2010. Abstract motion is no longer abstract. *Language and Cognition*,

[15] 2(2), pp.243-260.

[16] Matsumoto, Y. (1996). How abstract is subjective motion? A comparison of coverage path

*[17]* expressions and access path expressions. In Adele Goldberg (ed.), *Conceptual Structure,*

[18] *Discourse and Language*. Stanford: CSLI Publications. 359-373.

[19] Nassar, M. M. B., Al-Ashqar, A. I. M., & Shatanawi, M. A. A. (2020). A Comparative Study

*[20]* of Arabic Motion Verbs to their English Counterparts. *International Journal of Linguistics,*

[21] *Literature and Translation*, 3(9), 215-228.

[22] Rojo, A., & Valenzuela, J. (2003). Fictive motion in English and Spanish. *International journal of English studies*, 3(2), 123-150.

[23] Rojo, A., & Valenzuela, J. (2009). Fictive Motion in Spanish: travellable, non-travellable, and path-related manner information. *Trends in cognitive linguistics: Theoretical and applied models*, 221-239.

[24] Stosic, D., Fagard, B., Sarda, L., & Colin, C. (2015). Does the road go up the mountain? Fictive motion between linguistic conventions and cognitive motivations. *Cognitive processing*, 16(1), 221-225.

[25] Talmy, L. (2000a). Toward a cognitive semantics: Volume 1: Concept structuring systems. MIT Press.

[26] Talmy, L. (2000b). Toward a cognitive semantics (Vol. 2). MIT Press.

[27] Von Stutterheim, C., Bouhaous, A., & Carroll, M. (2017). From time to space: The impact of aspectual categories on the construal of motion events: The case of Tunisian Arabic and Modern Standard Arabic. *Linguistics*, 55(1), 207-249.

[28] Waliński, J. T. (2018). Verbs in fictive motion. Wydawnictwo Uniwersytetu Łódzkiego.