Motion events in English textbooks: a cross-linguistic analysis of *Path*

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Understanding how motion events are encoded and retrieved across languages has significant implications for language teaching, learning, and cognitive linguistics. However, there is hardly any research in this area comparing the motion-related lexical patterning of English textbooks. To this end, this research was conducted to fill this gap. Primarily, we investigated the motion-related patterns in three textbooks taught in countries with different language classes according to motion typology. They were verb-framed (Turkish), satellite-framed (Australian English), and equipollently-framed (Persian). Three novels in each source language were analyzed to discover the effect of these languages on the development of teaching materials. This provided the research with deep insights into Talmy's categorization. The results from the corpus displayed a weak modification of English in EFL textbooks in Iran and Turkey that might have stemmed from their source language cognitive styles. The results also indicated that the degree of emphasis on *Path* was close in these three languages, which demands a revisit of Talmy's classification.

KEYWORDS

motion events, *Figure*, *Path*, cognitive linguistics, EFL textbooks, language teaching

Introduction

Motion events are omnipresent in every bit of language. Cognitive linguistics has recently discussed this conceptual aspect of language as motions are intertwined with space and time (Khatin-Zadeh et al., 2017). As people from different cultures treat spatiotemporal events differently, they are likely to conceptualize dissimilar motion events (Eskandari and Khatin-Zadeh, 2021). Supporting Talmy's (1985) classification, scholars have suggested that verbs expressing motions are decomposable into primary conceptual elements (for example, Aske, 1989; Jackendoff, 1990; Levin and Rappaport Hovav, 1992; Slobin, 1996). They typically include *Path*, *Figure,* and *Manner*. Based on Talmy's (1985) view, *Manner*s of motion are encoded using prepositional phrases as *Path* indicators in English and Germanic languages, yet *Path* of motion is encoded using adverbial expressions to represent *Manner* alternatively (optionally) in Romance languages, like Spanish. Gennari et al. (2002) claimed that Spanish and English speakers vary in the way they depict similar observed changes in location. Would Persian and Turkish differ too? The need to study the issue cross-linguistically is intense. Slobin (1996, 1998) argued that speakers of different languages are predisposed to pay attention to various experience aspects because of linguistic differences in language processing and production.

The investigation on whether languages merely represent underlying universal concepts widely opens in the same way, as broad as the investigation on whether linguistic

variations have cognitive consequences in some or any circumstances. The current dominant view suggests the existence of numerous differences between second-language learning and first-language acquisition. Therefore, designers of L2 textbooks must be very careful in preparing the texts. L2 learners will not develop the necessary skills if texts and their structures are too simple to describe particular events, such as motion events. In this regard, motion events, how they are encoded, and their lexical patterns in textbooks need significant attention to develop proficient language skills. Motion events are highly concrete and imageable. They allow the hearers to comprehend several components simultaneously (Khatin-Zadeh et al., 2019). We investigated whether motion-related lexical patterning varies across English textbooks designed for high schoolers in Iran, Turkey, and Australia. Moreover, we researched the effects of encoding motion events on the material development of textbooks. If the effects are present, to what extent does the encoding of motion verbs in the target language affect the material development of textbooks in various languages?

Review of the related literature

Description of motion events varies in different sentences across languages. This was the first building block of Talmy's (1985) typology. According to Talmy (2000), every motion event includes *Figure*, *Ground*, *Path*, and Motion. He proposed that the main verb of a motion event always lexicalizes the motion component, and every motion event consists of several components, such as *Figure*, *Ground*, *Path*, and *Motion*. Depicting a daily chore: you wake up (the *movement* "up"), get out of the bed (the movement "out", from a *Source* "the bed"), put on your clothes (the movement "on"), get in your car and drive fast to work (the movement "in" the *Manner* "fast" the *Goal* "to work"), crash into a tree (the *Manner* "crash" the *place* "into" the *Goal* "tree"), and your whole day goes wrong (the *Manner* "wrong"). As explained in the depiction above, it is unimaginable to live without motions and consequently impossible to have a language without motion events (Slobin and Hoiting, 1994; Slobin, 1996). This suggests that motion events are an inextricable part of human life which indicate that every second of our life, hence language use, is accompanied by motion events.

Japanese, Turkish, Romance, Basque, and Semitic language classes are verb-framed languages. On the opposite pole, Germanic, Finno-Urgic, and Slavic language classes are classified as satellite-framed (Slobin, 2005). The *Path,* in a verb-framed language, is typically encoded in the main verb (e.g., exit and enter). However, an affix or a verb particle accompanies the motion verb to signify the *Path* in a satellite-framed language (Özcalıskan, 2004). Different lexicalizations of *Path* information in each category of languages lead to different conflation patterns. Indeed, every language has its way of "distributing features of the same spatial information into linguistic units" (Allen, 2007, p. 17).

The universal approach to conceptual structures proposes that linguistic variations (but not conceptual variations) are reflected through cross-linguistic variations in syntactic constructions and verbal categories. Several scholars investigated this (e.g., Greenberg, 1966; Comrie, 1981; Jackendoff, 1986, 1990). From a different view,

several scholars argued that conceptual representations were not universal (e.g., Brown and Lenneberg, 1954; Whorf, 1956; Lucy, 1993; Slobin, 1998). Nevertheless, language-specific categories are argued as the conceptualizations of a speaker's experience (Levinson, 1994; Lucy, 1996; Slobin, 1996). Two versions of strong and weak views demonstrate this language and conceptualization relation. Based on this strong view, linguistic patterns affect people's conceptualizations of individuals while learning a language (e.g., see Lenneberg, 1953; Whorf, 1956; Pinker, 1994; Deutscher, 2010). This view suggests that the schemata employed for the representation of the environment were shaped after the conceptualization of the experience (for detailed discussion, refer to Pinker, 1994). As a result, non-linguistic cognitive processes were highly linked to the content and form of the spoken language. On the other hand, the weak version suggests that the thought effects of linguistic patterns take place under particular circumstances (e.g., Lucy, 2016). As an example, linguistic patterns influenced by thought may occur under certain circumstances. Some of this research has asked whether these variations in semantic patterns lead to differences in non-linguistic cognition. The results obtained in these studies have not been very consistent. Some researchers have found evidence for Whorfian effects or linguistic relativity (Billman and Krych, 1998; Oh, 2003).

Slobin (1996) claimed that language might influence the conceptualization of experience only when this experience is linguistically mediated. Some scholars (e.g., Lenneberg and Roberts, 1956; Lantz and Stefflre, 1964) proposed that linguistic patterns are assets to codify and recover the information held in memory. In this respect, Hermer-Vazquez et al. (1999) asserted that linguistic patterns are the means to integrate information that cannot be integrated into other representational systems. Another language-based version is called language-as-strategy. This approach argues that speakers should be affected by linguistic attributes when performing particular tasks where language would reasonably act as a performance mediator (Slobin and Hoiting, 1994). They also suggested that language users rely on their linguistic classification to retrieve information regarding complicated judgments. We investigated how the lexicalization patterns of authors affect the development of teaching materials for English language learners.

Method and design

This research was done in two sections. Initially, we aimed to investigate whether motion-related lexical patterning varies in English textbooks taught in Iran, Turkey, and Australia. Secondly, we investigated the effects of patterns of encoding motion events in the native languages of these three countries (Turkish, Persian, and Australian English) on the material development of textbooks. The components of motion events in native languages and the EFL textbooks taught in these three contexts were compared using a contrastive content analysis approach. Using the qualitative classification of sentences in the textbooks and novels, the researchers categorized the motion verbs according to their patterns. The sentences that contained motion verbs were disassembled into all possible parts and the components of the motion event structures were analyzed. The qualitative data were counted numerically so that the data could also be compared from a quantitative approach.

Materials and instruments

In the first section of the study, three English textbooks for students in the 11th grade from three different countries, namely, Iran, Turkey, and Australia, comprised the corpus of the study. We discovered motion-related lexical patterning in English textbooks taught in Iran, Turkey, and Australia. The investigated materials were: (1) *English 3* (Birjandi et al., 2013) taught in Iran. The textbook materials were organized based on the Audio-lingual teaching method, yet the tasks were based on the Grammar Translation approach. The reading sections of this book comprised a part of the corpus used in this study. (2) *Yes You Can B.2.2* (Pire Şahin et al., 2017) taught in Turkey. The textbook materials were developed with a Communicative Language Teaching approach. The corpus was taken from the Time to Read sections. Reading was the primary source of comprehensible input where the language learners focus on words, model sentences, and the message. (3) *English for Australian Curriculum Book 2* (van Haren, 2011) taught in Australia. The textbook materials were developed to build robust pedagogies with a post-method approach. The corpus was taken from the Read, Write, and Create section. In the second section of the study, to find answers to whether the encoding of motion verbs in the target language affects the material development of textbooks in various languages, three novels in these languages were analyzed. These materials consisted of (1) *Bitterness as Love* (Bazari, 2017) in Persian, (2) *My name is Red* (Pamuk, 2011) in Turkish, and (3) *Paradise Possessed* (National Library of Australia, 1998) in Australian English.

Data collection and analysis procedure

In the first stage, all the sentences that included a motion-related pattern across the selected textbooks at high schools in Iran, Turkey, and Australia were excavated from the texts. These analyses were based on Talmy's (1985) model. We used a framework that included all possible motion components in a motion event, including *Figure*, *Manner*, *Path*, *Cause*, *Ground*, *Source*, and *Goal*. Each component was calculated numerically; however, only *Figure* and *Path* were discussed in the current study.
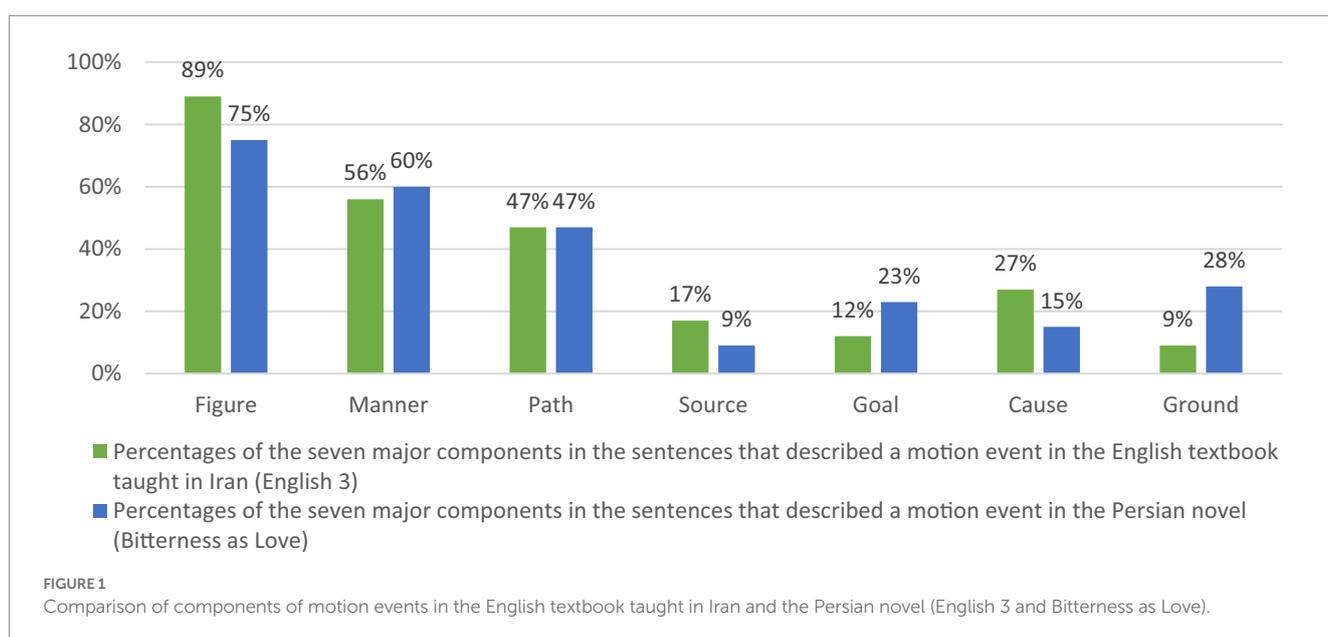
Secondly, to discover the effects of target languages on the development of the EFL textbooks in Iran and Turkey, it was crucial to provide rich corpora in these two contexts (the Australian context was also under analysis, yet not as an EFL context). Hence, the effects of encoding motion events on the material development of textbooks and the extent to which the encoding of motion verbs in the target language affected the material development of textbooks in Persian, Turkish, and Australian languages were investigated qualitatively. Hence, a corpus of sentences from novels in native languages was collected, and their motion-related lexical patterning was investigated. Seven main motion components of *Figure*, *Manner*, *Path*, *Cause*, *Ground*, *Source*, and *Goal* were analyzed in the sentences and calculated numerically.
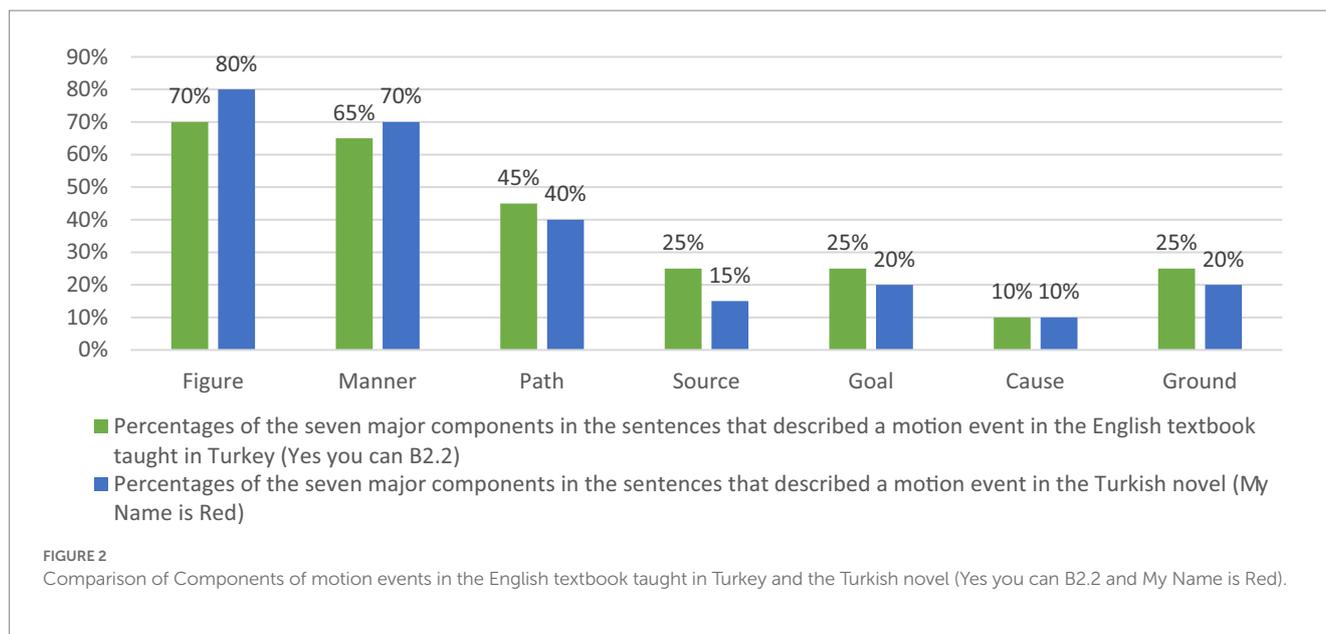
Results

Motion components in the context of Iran

Most of the sentences in the EFL textbook taught in Iran described a single motion event even though some included no motion event. Besides, some cases included more than one motion event.

Figure 1 illustrates that the number of motion components and the percentages are close in both texts. Some distinctive differences are between the percentages of *Figure* (14%) in these two sets of data. This can be due to the nature of these novels, as in almost all sentences *Figure* seems to be a ubiquitous component of sentences. Yet, as the sentences get longer in the novels according to the novel's genre and the author's writing style, fewer *Figure*s might be used in comparison to educational textbooks.

FIGURE 1
Comparison of components of motion events in the English textbook taught in Iran and the Persian novel (English 3 and Bitterness as Love).

FIGURE 2
Comparison of Components of motion events in the English textbook taught in Turkey and the Turkish novel (Yes you can B2.2 and My Name is Red).

Motion components in the context of Turkey

Turkey was the second context in which the provided corpora were analyzed. Sentences were collected from the EFL textbook *Yes you can B2.2* taught at Turkish high schools, and a list of motion-event sentences was used for the analysis.

As Figure 2 illustrates, the number of motion components and the percentages are not very close in both texts, which is in contrast with the results obtained from the context in Iran. Some distinctive percentages existed between the percentages of *Figure* (10%) in these two data sets, where the number of *Figure* components used in the English textbook taught in Turkey is fewer than in the Turkish novel. More statistically significant is the distinction between the percentages of *Path* and *Manner* (10% and 20%, respectively). In other words, fewer *Path* and more *Manner* verbs are used in the Turkish novel compared with the percentage of components used in the EFL textbook taught in Turkey. Such findings reveal that the English textbook taught in Turkey does not follow the Turkish language cognitive system based on Talmy's categorization. However, previous research argues for the existence of various linguistic and motion patterns that are represented in English and Turkish learners' thinking styles (Talmy, 1985; Özcalıskan, 2004). As observable, the language has been adjusted for usage outside the Turkish context.

Motion components in the context of Australia

Figure 3 shows the percentages of cases that the seven major components of a motion event (*Figure, Manner, Path, Source, Cause, Ground,* and *Goal*) that have been mentioned in the sentences in the context of Australia.

As Figure 3 shows, the percentages of motion components in the context of Australia are significantly close in both corpora, which is in contrast with the results obtained from the context of Iran and Turkey. The similarity of the percentages in all motion-related components is

statistically significant. *Path* and *Manner* are all used in both texts with approximately the same percentages. Such findings reveal that the English textbook taught in Australia follows the English language cognitive system based on Talmy's categorization to a great extent. Clearly, the students deal with the same language as the country's national language. This is confirmed by evidence from the Australian macro-curriculum material development, which permits students and schools to select their optimal English book from various books recommended by the Ministry of Education. Curricular components are crucial in establishing a cogent learning context in EFL classrooms (Zare-Behtash and Banaruee, 2017).

The next section provides detailed explanations for the obtained results in the investigated languages. As indicated in the previous section, sentences in English textbooks taught in Iranian and Turkish high schools are modified versions of English. Every motion event might be affected by an infinite set of factors. In this investigation, *Figure* and *Path* were studied. If such factors can be encoded within language systems, the speakers of a language can give a more comprehensive description of motion events.

Motion components in detail

In this section, all components of motion events have been discussed in detail. This could be so effective as a cross-linguistic comparison. Cross-linguistic comparisons could effectively contribute to investigating the content of EFL textbooks and their appropriateness and efficacy for teaching language to the target EFL learners.

Figure

As the results in Table 1 indicate, the percentage of *Figure* stood higher than all other six components of *Manner, Path, Cause, Ground, Source,* and *Goal* in all of the investigated contents. It suggests that *Figure* is an inseparable component of motion event sentences. In most of the sentences where *Figure* was not physically present, it could be understood from the context with a little investigation. In some cases, the investigations and inferences
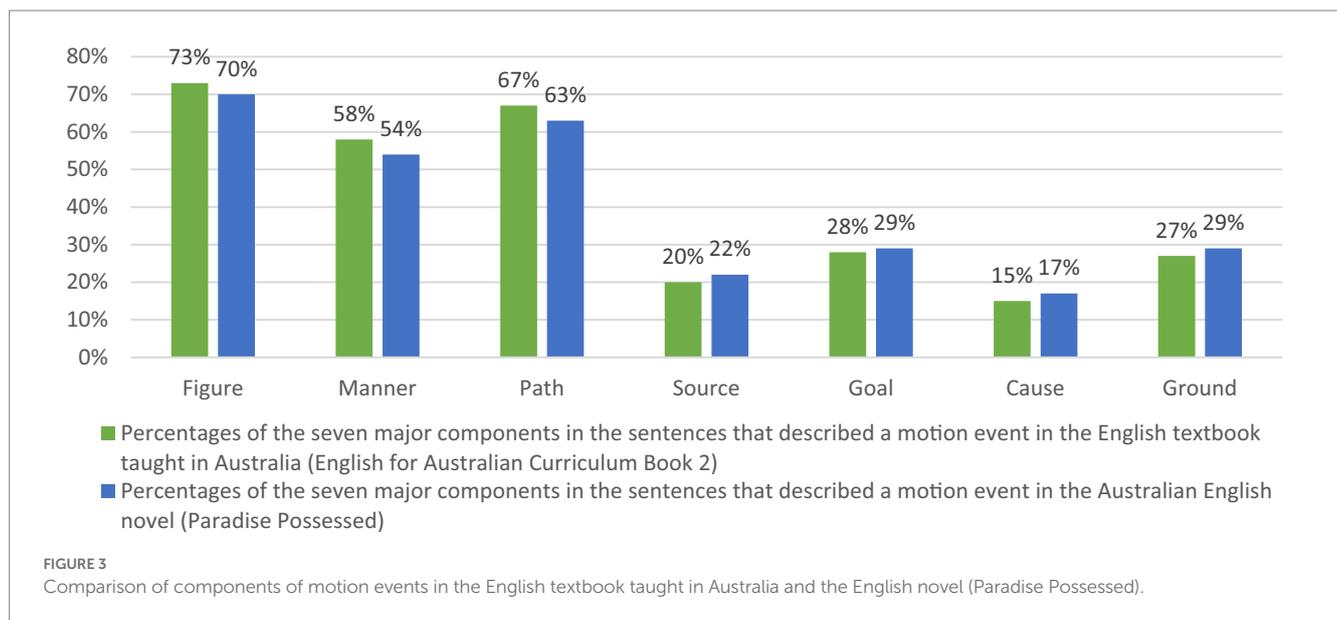
FIGURE 3
Comparison of components of motion events in the English textbook taught in Australia and the English novel (Paradise Possessed).

TABLE 1 Percentages of the *Path* component of motion events in all contents.

Country	Content	Percentage of *Path*
Iran	*English 3*	47%
	Bitterness as Love	47%
Turkey	*Yes you can B2.2*	45%
	My Name is Red	40%
Australia	*English for Australian Curriculum Book 2*	67%
	Paradise Possessed	63%

needed detailed and repeated analyses of the sentences in the surrounding context. Hence, where a component is not clear in a text or its right place, the reader needs to struggle and analyze more than a single sentence and chain some sentences together to identify the *Figure*. This would probably create a much longer process of understanding. Students with lower proficiency levels seem to encounter more difficulties in this process of understanding. The component *Figure* is found in the sentences by the name of the component itself, a pronoun, or nothing. If the *Figure* is physically absent in the sentence, it is called zero-mentioning. This is the most difficult type of recognizing the existence of this component in a motion event sentence. Examples of *Figure* in a motion event are provided with explanations.

- *They injected pain-killer into her arm.*
- *Athletes lift weights to build muscles; this depends on how they do aerobics.*
- *They could see Liz who had slipped down the slide abruptly and broken her arm.*
- *That injection gave him a second life.*
- *When she ran there, she saw he was lying on the ground.*
- *They entered the hall and Hassan asked Omid how the accident occurred.*

The *Figure* (pain-killer) and the motion verb (inject) (in the first example) are attached in the context, having the *Figure* placed after the motion verb. "*They*," the subject of this sentence, is known as the agent in motion-event analysis. It is clearly comprehended that the *Figure* is the moving object in a motion event. An interesting piece of information in this sentence is that the verb is a conflated motion + *Path* and the *Path* satellite. In other words, *Path* is represented in two different elements in this sentence. Inject as a verb is a *Path* verb *per se*. Besides, the satellite (*into*) shows the motion event's *Path* and direction. As a result, there is a conflation of a motion verb and a satellite to express the *Path* of the event. The motion verb (lift), in the second example, precedes two *Figure*s (*weights* and *this*). Though the first one is a content word (noun), the second one is a function word (pronoun). In the third statement, Liz is the *Figure*, and had slipped down is the motion verb which is separated by the relative adverb. This is one of those cases where *Figure* precedes the motion verb. An interesting point in this sentence, on the opposite pole to the first sentence, is the existence of two *Manner* components. The motion verb is conflated with *Manner per se* and through an adverb (abruptly). The *Path* is mentioned by a satellite (down) in this sentence. The last sentence "*They entered the room*" is different from the first three ones in a way that there is a motion event without a motion verb. Moreover, the sentence does not have a *Figure*; in fact, the *Figure* is not physically present in the sentence. From the motion event of injection, it could be comprehended that something was injected. The thing which was injected (which could be identified by analyzing the context; here, the pain-killer) into the body is the *Figure*. The presence and observation of *Figure* in the surface structure is unfeasible. However, a comprehender must be able to distinguish its existence from the deep structure or the mentioned *Figure* in another sentence in the context.

In some cases, there is more than one *Figure* in a sentence. These *Figure*s could also be called *Causes*. Hence, an unpredictable number of *Figure*s and *Cause*s could describe a motion event, as provided in the following example.

- *A sparrow carries with it some food to feed its chicks.*

There are three *Figure*s: "*sparrow*", "*it*", and "*food.*" The first *Figure* is the "*sparrow*" which is the moving object. The second *Figure* is the

pronoun "*it*", which refers to the sparrow. The third *Figure* is "*food*" which is being carried by the "*sparrow*." This is one of those problematic statements for Persian EFL learners. To formulate it into Persian, the learner may typically use a reflexive pronoun as an object. Similar to English, the Persian sentence has three *Figure*s too. The only difference is the existence of a reflexive pronoun in Persian in this sentence:

- *Gonjishk ba khod-æsh tæ'am mibæræd ta jooje-ha-yæsh ra sir-konæd.*
- *Sparrow with own-her food takes to chick-s-her ra full-make-LCV.*

Path

As the results from three languages and the English textbooks at their high schools indicate, *Path* is one of the crucial components of motion events that ignited the first flame of Talmy's typology. The percentages of *Path* in motion-event sentences in the explored contents varied widely. To this end, Table 1 represents these *Path* percentages in all textbooks.

As Table 1 shows, the *Path* component was used highly in all textbooks. This usage is at a maximum (above 60%) in the context of Australia. The main reason for such supremacy in frequency could be the nature of the language, which is a satellite-framed one. Needless to note, every motion event is conflated or accompanied by a *Path* or *Manner* component.

Path in the context of Iran and Persian

As is represented in Table 1, the percentages of *Path* in all of the contents in Iran's context are significantly high and precisely the same. This may suggest that the English book in Iran and the Persian novel have been written in the same styles and structures, or probably the contents have been the same. The latter assumption is already rejected as the novel and the EFL textbook are thoroughly two different materials. What remains? Probably the main reason is that the same thinking styles dominated the writers. Suppose this assumption leads to the truth about EFL textbooks at Iranian high schools, it could be easily inferred that the curriculum and the syllabus are also designed with the same thinking styles. Having the curriculum, syllabus, and materials in the Persian language, cognitive styles may not aid Iranian EFL learners to succeed in enhancing their level of comprehension and conceptual development.

Moreover, the Persian language has been researched to be a verb-framed or, in some studies, an equipollent language. This means that *Path* is mostly present in the conflation of the motion verb or other linguistic elements apart from satellites. In the following section, some sentences from both the Persian novel and the EFL textbook (*English 3*) which enjoy the *Path* component have been mentioned to illustrate the way the *Path* component has been used in this language.

- فاطمه با پاهایی سست و خسته قامت راست کرد
- *Fatemeh ba pahaee sost va khasteh ghamat raast kard*
- *Fatemeh with legs weak and tired stature unbent-LCV*
- *Fatemeh with tired and weak legs unbent her stature* (*Fatemeh stood upright on her tired weak legs*)

- یک پنجاه هزار تومانی از کیفش بیرون آورد
- *Yek panjah hezar toomani az kifesh dar avord*
- *One fifty thousand Tomans from bag-her out took*
- *She took a fifty-thousand tomans note out of her bag.*
- کار بهتری برایش به نظر میرسید
- *Kaar-e behtari baray-ash be nazar miresid*
- *Work-a better for-her to look reached*
- *It seemed a better job for her*
- چگونه با مادر ارشام روبرو شود
- *Chegooneh ba maadar-e Arsham ashena shaved*
- *How with mother-of Arsham familiar become-LCV*
- *How she could face Arsham's mother*
- *Some of the information which goes into the brain is forgotten.*
- *The Olympics attract a lot of people every year.*
- *Hundreds of millions of viewers follow their countries' fortunes on television*

In the first Persian example, the verb '*ghamat raast kard*' consists of three words: "*raast*" (up) expresses the *Path*, and "*kard*" is used to change "*ghamat raast*" into a verb. This is a specific feature that is present in many Persian verbs. This linguistic phenomenon is called light verb construction (LVC). All of the four Persian examples mentioned above include such verbs. In all of these sentences, the conflation of *Motion + Path* is evident. These examples indicate that Persian is a verb-framed language.

In the first English example, the word "*into*" acts as the *Path* component of the sentence, which is the satellite for the verb "*goes.*" In the second sentence, *Path* is encoded in the verb "*attract.*" This encoding happens cognitively at first, as the verb means pull near. The interesting point in such verbs is that there is a combination of an affix [at (ad)] and a root (tract). English is replete with such verbs besides being a satellite-framed language. However, the investigation of motion verbs through word formation and etymology is not the focus of this study. In the last sentence, both the conflation of *Motion + Path* and the satellite indicating *Path* are present. The verb "follow" contains *Path* as it means to come or go after and proceed behind, so the direction of after or behind is encoded in the verb. In addition, the particle "*on*" directs the attention toward the television in this sentence. English is categorized as V-framed for being made of such phrasal verbs in the construction of motion-event sentences.

Path in the context of Turkey and Turkish

Table 1 shows that the percentages of *Path* in all of the contents in Turkey's context are significantly high, yet they are not the same in the two contents (*Yes you can B2.2* 45% and *My Name is Red* 35%). It could be inferred from this result that the EFL textbook has been designed to fulfill a high percentage of *Path* components in the motion event sentences. That springs from the reason that learners need to get English styles, and in English (a satellite-framed language), the number of *Path* components in a motion-related expression is abundant. While in the Turkish novel, *My Name is Red*, the author was free to move on with his writing style and structures. Assuming that Turkish EFL textbooks have been targeted at utilizing material development, it could be inferred that the curriculum and the syllabus have been designed and developed to push learners toward natural English usage. This is what has been widely recommended in EFL

pedagogy. The more the learners are exposed to natural English and the English thinking styles, the sounder cognitive and conceptual representation would occur and lead to higher levels of comprehension.

Moreover, Turkish has been considered a verb-framed language. This means that the *Manner* of the motion event is mostly present in the conflation of the motion verb. In the following section, some sentences from the Turkish novel and the EFL textbook (*Yes you can B2.2*) containing the *Path* component have been mentioned.

- İstanbul'a, doğup büyüdüğüm şehre, on iki yıl sonra bir uyurgezer gibi girdim.
- After an absence of twelve years, I entered Istanbul like a sleepwalker.
- Haliç'e bakan mezarlığa gittim, annem ve yokluğumda ölen amcalarım için dua ettim.
- I visited the cemetery overlooking the Golden Horn and prayed for the uncles who'd passed away in my absence.
- İstanbul'u terk ettikten yalnızca dört yıl sonra, sonsuz adımlarla seyahat ederken.
- Four years after I first left Istanbul, while traveling through the endless steps.
- Yokuştan aşağı indim. Kalabalıkların içine girdim.
- I began to walk down the hill and melded into the crowds.
- Joe and his classmates decided to go to the hospital to visit Liz.
- When they arrived at the hospital, they asked the guard how they could see Liz.
- He showed the way to the information desk.

In the first Turkish example, *Path* is conflated with *Motion* in the verb "*girdim*." This is precisely the same as its English equivalent, "*enter*." In the second sentence, the verb "*ölen*" plays the same role in a motion-event structure. However, its English equivalent "*passed away*" differs in that it includes a satellite "*away*." The next example in Turkish also shows a conflation of *Motion + Path* through the verb "*seyahat*," while the English equivalent here is the verb "*traveling through*," which contains a satellite "*through*." The motion verbs "*indim*" and "*girdim*" are also conflated with the *Path* component, "*girdim*" is even conflated with the *Manner* component. This highly reveals that Turkish is a verb-framed language.

Path in the context of Australia and English

English is a satellite-framed language; the *Path* is mostly presented as a satellite in a motion-event sentence. The results in Table 1 present a great percentage of *Path* in both contents (*English for Australian Curriculum Book 2* 57% and *Paradise Possessed* 58%). This was the expected percentage based on Talmy's categorization. This suggests that almost 60 percent of motion-event sentences have at least a *Path* component. It could be inferred from this result that ideal EFL textbooks must enjoy a good usage of motion verbs, specifically with a *Path* satellite. The more materials are developed in line with cognitive styles in English, the higher cognitive abilities and comprehension will occur among EFL learners. However, there were also sentences where the *Path* was conflated with the motion verb. In the

following section, some sentences from the English novel and the EFL textbook (*English for Australian Curriculum Book 2*), which contain the *Path* component, have been mentioned.

- *The speech delivered by Menzies to mark the official opening of one of the first Australian viewings*
- *The collection which Nan Kivell had accumulated was likely to be an acquisition of importance*
- *The Library's case could be taken up personally with the Prime Minister of the day*
- *I think I walked down a few stairs*
- *You know I do not need to go into that*
- *He has chosen to become the most remarkable collector that is going right back*

In these examples, the *Path* component is present in two forms: conflation and satellite. The motion verb "delivered" shows the direction of forward as the *Path*; additionally, it has been accompanied by a satellite "to." This type of conflation (+satellite) is abundant in English. The verb, *per se*, can be divided into "de" and "liver," where "de" could act as a particle back in the history of its word formation. This confirms that English is a satellite-framed language. The abovementioned samples and discussions (regarding Turkey and Iran context) indicate that sentences in EFL textbooks are not what actual English beyond the classroom is in use. The EFL textbooks are the modified version of contents learners need to comprehend English naturally. These textbooks have been simplified at all levels. This will harm learners' cognitive development and communicative skills. Such textbooks lack detailed information for *Path* of motion events as standard English texts do.

Discussion and conclusion

Our findings reaffirm results that claim Turkish and English speakers employ different cognitive patterns when they form motion-related expressions (e.g., see Özcalıskan, 2004). As previously discussed, in Turkish, the *Path* of a motion is encoded in the main verb (mainly). By contrast, English speakers tend to express the *Path* using a satellite (adverbs or prepositions). Nevertheless, the accessible language-to-language learners' texts have been adjusted for usage outside the Turkish context. On the contrary, Spanish and Turkish languages lack a set of words to distinguish between them. Such a result supports linguistic relativity as it assumes that the conceptualization of motion events varies depending on the components used in a lexical pattern within a specific language. Our study concludes that sentences in English textbooks taught in Iranian and Turkish high schools use a modified version of English. *English 3,* the book taught in Iran, includes simplified sentences to express motion-related expressions compared to authentic English sentences. The weak modification of this book was significantly observable where the percentage of metaphorical expression used in case of motion events was only 7% in this book. Every motion event might be affected by an infinite set of factors. In this study, *Path* received considerable attention. If such factors were to be encoded within the language system, the language speakers could give a more

comprehensive description of motion events. These findings are in line with the studies (e.g., see Talmy, 1985, 1991; Slobin, 1996; McNeill and Duncan, 2000) that argue that languages are typologically different regarding how they encode *Path* in a motion event. However, there were instances observed in English statements where an adverb particle or a preposition did not follow the motion verb. It is assumable that the inconsistent frequency of adverb particles to express *Path* in the EFL textbook for Turkish native speakers may affect the way they develop their language production in the real context. In this respect, the participants may not acquire L2 cognitive styles competently for speaking and writing patterns in English. Presumably, they implement their first language thinking styles to produce speaking and writing patterns in the target language when a satellite or preposition is absent. Learning a foreign or a second language differs greatly from acquiring a native language. Hence, material developers of EFL textbooks and syllabus designers need care and expertise in preparing the texts. It is concluded that efficient learning contexts may not be provided in contexts where the materials are weaker in structures and styles for describing particular subjects, such as motion-related expressions. As a result of such underdeveloped learning contexts, we may not expect effective development in the learners' language skills as the actual conceptual structures will not occur. In this regard, motion events and the ways that they are encoded in English textbooks are highly important for students. Future research can investigate what tasks and language input can develop practical knowledge of English in EFL learners across cultures.

Suggestions for further research

In the process of conducting this study, the research was restricted to cognitive aspects of lexical patterning and metaphorical descriptions. This study had some limitations which were: only one book from each country was investigated, and only textbooks from three countries were under examination. Based on the findings of this study, some lines of investigation are recommended. As was mentioned, the scope of this study was limited in several ways. This study aimed to investigate the motion-related lexical patterning in textbooks taught in three different countries which are categorized in different classes of languages based on Talmy (1985). These languages were Turkish (verb-framed), Australian English (satellite-framed), and Persian (equipollently-framed). Further research could be aimed at several languages with the same category. As an example, the investigation of Turkish, Arabic, and Spanish which are verb-framed would be a great confirmatory study. Moreover, texts with different genres, styles, and subjects may have different motion components. Hence, the analyses of different texts in one language would provide great information. We suggest that the place of motion events in a sentence and their effect on the comprehension of texts should be analyzed as well. In future research projects, a larger set of books can be examined to find how motion events are encoded and described in textbooks. There is no doubt that studies conducted on larger corpora can produce more reliable results. We suggest that further research should focus on more factors. It will be interesting to follow the motion components in words

etymologically. This could also provide information regarding the cognitive and conceptual processes and changes through history.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

Ethical review and approval were not required for the study involving human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was not required from the participants in accordance with the national legislation and institutional requirements.

Author contributions

HB: conception or design of the work. DF, HB, and OK-Z: data collection and drafting the article. HB and DF: data analysis and interpretation and final approval of the version to be published. OK-Z: critical revision of the article. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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