The Role of Verbs and Adverbs in Structuring Fictive Motion in English and Slovene

Frančiška Lipovšek, University of Ljubljana, Slovenia

Abstract

Languages most naturally describe stationary scenes by means of constructions whose basic reference is motion (e.g., *High mountains plunge into glittering lakes*). The motion verb in a fictive motion (FM) sentence does not express actual motion but may refer to some physical property of the subject entity by virtue of its meaning. Similarly, an adverb of manner utilized by an FM sentence cannot express the manner of motion but necessarily refers to some correlated property of the subject entity. The paper studies the role of vertical and irregular motion verbs and manner adverbials in English and Slovene FM expressions. Their FM uses are examined and compared on the basis of sentences extracted from corpora. The results show that the two languages differ slightly in the mapping potential of verbs, which is due to the fact that Slovene verbs display less specific meanings than English ones. As for adverbs, the correlations between their manner-related meanings and the properties of stationary entities are equally represented in both languages.

Key words: fictive motion, manner of motion, manner adverbs, motion verbs, English-Slovene analysis

1   Introduction

When observing a visual scene, the observer may construe their thoughts in different ways. One such construal is perceiving immobile objects as if they were in motion. For example, when one looks out of the window of a moving train, the mountains in the distance appear to be travelling. The effect is observer-based and depends on what has been chosen as the frame of reference: relative to the observer, it is the outside objects that appear to be moving rather than the observer and the train. An even more interesting phenomenon is situations where no moving object is involved. For example, uttering the sentence *High mountains plunge into glittering lakes* does not depend on the mobility of the observer or any other object. However, the motion verb in the sentence signals that the scene has been construed in terms of motion. The verb is often accompanied by a manner-of-motion adverbial, a combination further supporting the type of construal known as "fictive motion".

The paper presents a corpus-based study on the use of motion verbs and manner adverbs in fictive motion expressions in English and Slovene. The study begins in section 3. Sections 1 and 2 focus on the theoretical aspects of fictive motion and its linguistic manifestation.

The sentences in (1) below express actual motion (AM): each describes a dynamic scene with a moving object that travels along its path in order to get from one point in space to another.

(1)[1]
a.   The roller coaster climbs 91 feet and reaches speeds of 45 miles an hour.
b.   The coach driver weaves his way through washed-out bits of road.

The verb *climb* encodes upward vertical motion and the verb *weave* irregular[2] motion, i.e., motion that involves many turns and changes of direction. The following example employs the same pair of motion verbs; nevertheless, no actual motion is involved: neither the path nor the highway moves in space-time.

(2)
a.   The path climbs high into the hills.
b.   The old highway weaved its way through Tucson.

---

1   Unless stated otherwise, the example sentences in sections 1 and 2 are taken from the following dictionaries: CALD (3a, 4a, 4c, 6a), LDCE (1a, 1b, 2a, 2b, 4b), MED (3c, 6b, 9a, 9b, 10a), OALD (3b, 5, 7a, 8a).

2   Following Waliński (2018), who speaks of "verbs of irregular motion".

The path and the highway above are likely to be occupied by actual travellers, but the verbs *climb* and *weave* do not apply to those either. Despite featuring a motion verb in the predicator, this type of sentence focuses largely on stationariness and the motion-independent properties of the subject entity. It *does* evoke an image of something in motion, but that motion is purely fictive.

The sentences in (2) are linguistic manifestations of fictive motion (FM) – a construal of a stationary scene in terms of motion. Talmy (2000, 100f) speaks of discrepancy between a "more veridical", "factive" representation involving stationariness and a "less veridical", "fictive" representation involving motion. An elegant explanation for the possibility of conveying stationariness and motion at the same time is offered by conceptual blending (cf. Fauconnier 1994, 1997; Fauconnier and Turner 2002): the immobility space and the motion space get conceptually integrated into a new space, with the stationary entity from the immobility space and the path from the motion space projected onto a single element in the blended space (e.g., the highway in (2b) emerges as the path of some fictively moving entity). Fictive motion is also interpreted as involving conceptual metaphor, whereby the stationary entity from a fictive motion event, the (more abstract) target domain, is conceptualized as the moving entity in an actual motion event, the (more concrete) source domain (cf. Jiménez Martínez–Losa 2007).

Fictive motion is experienced subjectively and involves "mentally simulated motion" (Matlock 2004a, 2004b). The conceptualizer mentally simulates travelling along the path or scans through the scene, tracing a "mental path" (Langacker 2000, 6) over the extent of the depicted object. Mental scanning is similar to visual scanning in this respect: in either case, some abstract entity (i.e., one's gaze or focus of attention) travels along the object's extent. A conceptualization in terms of travel along a path is essential not only to actual motion but also to fictive motion. Compare:

(3)

a. The balloon rose gently up into the air.
b. She rose to her feet.
c. The dark tower of the church rose above the bare trees.

In (3a), the conceptualizer (the same for the observer) traces the path travelled by the balloon moving from a lower to a higher position in the air. In (3b), the conceptualizer traces the path travelled by some point on the person's body

that moves from a lower to a higher position when the person rises. In FM sentence (3c), the conceptualizer traces the path of an imaginary entity moving from a lower to a higher position along the tower's extent. The conceptualization of the path in (3c) is in fact similar to that in (3b), in that the path runs along the extent of the subject entity itself.

Psycholinguistic experiments have shown that FM sentences activate the motor regions in the brain (Cacciari et al. 2011) and that the processing of fictive motion takes more time than that of actual motion, which serves as evidence for additional mental simulation (e.g., Matlock 2004a; Matlock and Richardson 2004; Tomczak and Ewert 2015). Such mental simulation may involve an imaginary traveller, sequential scanning or movement of the depicted entity itself. Which type is actually involved in the processing of a given sentence depends on several factors, for example on whether the entity representing (or coextending with) the mental path is travelable by humans or not (Rojo and Valenzuela 2010).

Blomberg and Zlatev (2014, 2015) reinterpret mentally simulated fictive motion as "non-actual" motion. They argue for experiential motivations for the use of non-actual motion constructions, namely enactive perception, visual scanning and imagination of motion. It is exactly such experiential motivations that account for the universality of FM expressions (cf. Stošić et al. (2015)).

The final observation to be made in this section is that mental simulation of motion does not necessarily depend on an actual motion verb. As pointed out by Ruppenhofer (2006, 310), not all FM expressions employ motion verbs; moreover, there are non-motion verbs that occur specifically in FM expressions (e.g., *jut*, *taper*). The sentences below each invite a conceptualization in terms of an abstract entity travelling along an imaginary path. The subject of the sentence represents the path itself in (4a), its starting point in (4b) and its endpoint in (4c):

(4)

a.   The cave tapered to a narrow passageway.
b.   The path led down to a small lake.
c.   The library is just across the road.

2   The structure of FM sentences

A typical FM expression represents a "coextension path", which is defined by Talmy (2000, 138) as a "depiction of form, orientation, or location of a spatially extended object in terms of a path over the object's extent".[3] The depicted entity is not necessarily linear or long, but must be at least conceptually extendable (Matlock 2004b, 7). It can be conceptualized in terms of linear and horizontal extension (e.g., roads) or vertical extension (e.g., mountains). As pointed out by Egorova et al. (2018, 14), there are also objects (e.g., mountain ridges) that allow both conceptualizations.

Syntactically, the spatially extended entity appears as the subject of the sentence. The predicator contains a motion verb and is usually followed by (an) adverbial adjunct(s) of direction or manner. For example:

(5) The path climbed steeply upwards.

The linguistic pattern of (5) equals that of an AM sentence, and it is exactly the pattern of a motion verb accompanied by manner and directional adverbials that is largely responsible for the construal in terms of motion. This accords with Bloomberg and Zlatev's (2015, 156) observation that the motivations for fictive motion interact with "language-specific conventions for expressing actual motion".

Nevertheless, the fictive representation supported by the AM pattern is inconsistent with the physical facts. As the verb in (5) does not (factively) express motion, the two adverbials cannot (factively) express the direction or manner of motion. The upward-motion components of *climb* and *upwards* apply to the path's orientation, and *steeply* expresses the manner in which the path is positioned on the slope, ultimately referring to its gradient. It follows that each component is mapped onto a motion-independent property of the subject entity.

If the role of directional adverbials is very straightforward (with direction and orientation representing dynamic–static counterparts), the role of manner adverbials in fictive motion is much more interesting to investigate. In fictive representations, they are *felt like* manner-of-motion adverbials although,

---

3   Talmy classifies FM expressions into "paths", a manifestation of the fact that the subject entity represents the path or a segment/point on the path undergoing mental scanning. For example, in an "access path" exemplified by sentence (4c) in section 1, the subject entity is identified as the path's endpoint.

paradoxically, many of them cannot express the manner of actual motion. Compare:

(6)

a.   The path descends *slowly* to the valley below.
b.   They began *slowly* ascending the rock face.

(7)

a.   The path climbed *steeply* upwards. (= 5)
b.   ??? The hikers climbed *steeply* upwards.[4]

(8)

a.   The road twists *tortuously* through the scenic coastal mountain range.
b.   ??? The car wound its way *tortuously* through the scenic coastal mountain range.

Moreover, these adverbials also do not relate to the process of mental tracing on the part of the conceptualizer. If it is, perhaps, possible to establish a connection between *slowly* in (6a) and the speed with which some imaginary entity travels along the path in a mentally simulated motion, no such explanation is applicable to (7a) and (8a): an imaginary traveller or one's focus of attention cannot move "steeply" or "tortuously".

Similarly, the motion verb utilized by an FM sentence may not be acceptable in an AM sentence whose subject refers to a concrete traveller. If (9b) below is perfectly fine in this respect, (10b) sounds weird because it yields a different interpretation: it creates the image of hikers "twisting and turning" in the way people twist and turn in their sleep, for example. Last but not least, an imaginary traveller or one's focus of attention cannot "twist and turn" up their path either.

(9)

a.   The path *wound* along the riverside.
b.   We *wound* through the narrow streets of the village.

(10)

a.   The path *twists and turns* up the mountainside.
b.   ??? The hikers *twisted and turned* up the hill.

---

4   (7b), (8b) and (10b) are the author's adaptations of the sentences under (a) for the sake of illustration.

A common denominator of motion verbs and manner adverbials in FM expressions is that their meanings contain components that are mappable onto the properties of stationary subject entities. Such mappings are perceived as metonymic: some aspect of the manner of motion *stands for* some aspect of the subject entity (cf. Matlock 2004b, 11ff.).

This is perfectly in line with the definition of coextension paths provided at the beginning of this section, as well as with the following two conditions proposed by Matsumoto (1996):

a. *The path condition:* Some property of the path of motion must be expressed.
b. *The manner condition:* No property of the manner of motion can be expressed unless it is used to represent some correlated property of the path.

<div align="right">(Matsumoto 1996, 194)</div>

Waliński (2015, 98) proposes a third condition, which precludes any instrument-of-motion component unless it correlates with some property of the path. Nevertheless, Waliński's instrument condition is already contained in Matsumoto's manner condition as it is possible to perceive instrument-of-motion as a dimension of manner.

The conditions are illustrated by (11) and (12) below (adapted from Matsumoto 1996, 194; Waliński 2015, 90). The verb *ascend* in (11a) relates to the road's vertical orientation and the verb *weave* in (12a) to its numerous curves and bends. Sentence (11b) is unacceptable since *run* does not relate to any property of the road whereas (11c) is saved by the adverbial *straight* relating to the road's shape. Both sentences represented by (12b) are unacceptable, since neither the manner-of-motion component of *walk* nor the instrument-of-motion component of *drive* is mappable onto a property of the road.

(11)

a. The road began to *ascend*.
b. *The road began to *run*.
c. The road began to *run straight*.

(12)

a. The road *wanders* through the park.
b. *The road *walks/drives* through the park.

It follows from the discussion that the conflation of motion and manner observed in FM sentences produces a twofold effect: it triggers a construal of a stationary scene in terms of motion and at the same time foregrounds some motion-independent property of the fictively moving entity.

Matsumoto's (1996) study on English and Japanese FM expressions shows that the path and manner conditions are equally applicable to both languages. The findings also present two major differences (Matsumoto 1996, 204–17). The first one precludes stative uses of motion verbs in Japanese FM expressions, although it is pointed out in the paper that the restriction is part of the general difference between the two languages and holds for actual motion as well. The second difference pertains to the types of subjects that can appear in FM sentences. In Japanese, in contrast to English, non-travelable entities like fences, wires, etc. do not readily appear in fictive motion. Those that can be found are used with much fewer verbs than travelable entities. It follows that structuring fictive motion in Japanese is largely restricted to subject entities that are compatible with "concreteness of motion".

Drawing upon Matsumoto's work, Rojo and Valenzuela (2003, 2010) analyse FM expressions in Spanish and identify the same similarities and differences between English and Spanish. They gather data on the basis of experimental tasks (2003, 2010) and translations from English into Spanish (2003). As for the latter, they report informational differences between translating actual motion and fictive motion. The question of translational equivalence is also addressed by Stošić and Sarda (2009), who argue that translating fictive motion changes the conceptualization of the scene.

Experimental crosslinguistic studies on fictive motion include Blomberg and Zlatev's (2015) study dealing with Swedish, Thai and French speakers, and Stošić et al.'s (2015) study on expressing static configurations in French, Italian, German and Serbian. Part of this study is corpus-based and includes English and Polish. It shows low frequencies of FM expressions across languages, but a higher frequency in translation for some types. A study by Tomczak and Ewert (2015) deals with representing fictive motion by Polish L2 users of English.

Based on the above observations, in particular those pertaining to the role of manner in fictive motion, a short contrastive study has been conducted on the FM uses of verbs and adverbs in English and Slovene. A conceptualization of stationariness in terms of motion is a universal phenomenon. Nevertheless, languages differ in the extent to which individual types of stationary scenes

invite this kind of conceptualization. Moreover, the linguistic realization of fictive motion varies across languages with regard to the forms and structures utilized by FM expressions.

3   The aim of the study and methodology

The aim of the study was to examine the use of motion verbs and manner adverbials in English and Slovene FM expressions from the point of view of their role in structuring fictive motion. The study was based on a qualitative analysis of FM expressions extracted from the British Web (ukWaC) and the Slovenian Reference Corpus (Gigafida 2.0) with the help of the Sketch Engine corpus tool. It was restricted to (i) verbs encoding vertical motion and irregular motion, and (ii) manner adverbials (i.e., adjuncts of manner) realized by adverbs (adverbial phrases). Vertical motion verbs were selected in order to be able to include entities of vertical extension in the study. It should be pointed out that the function of a single manner adverbial in FM may depend on whether the motion is horizontal or vertical, so it was vital to include both extensions. Irregular motion verbs were selected because their meanings largely refer to the geometric properties of subject entities in FM, so they were expected to combine with different types of manner adverbials in order to further describe these properties. As for the manner adverbials, adverbs were selected as the most straightforward carriers of manner-related meanings.

The first part of the analysis focused on verbs. The procedure was as follows:

1. As a starting point, the following land-feature terms were selected that are commonly found as subjects of FM sentences: *mountain/gora*, *hill/hrib*, *slope/pobočje* (conceptualized in terms of vertical extension), *road/cesta*, *path/pot*, *trail/steza* (conceptualized in terms of horizontal extension), and *ridge/greben* (allowing both conceptualizations).
2. The corpora were queried for verb collocates of the selected nouns.
3. The lists of collocates were examined manually in order to extract any verbs encoding vertical or irregular motion.
4. The extracted verbs were classified according to the type of motion they encode. The data are presented in the Results section.

The second part of the analysis focused on adverbs. The procedure was as follows:

1. The corpora were first queried for subject collocates of the vertical motion and irregular motion verbs generated above.
2. The lists of collocates were examined manually in order to extract any potential subjects of FM sentences. (This expanded the inventory of subject nouns from the first part.)
3. All corresponding FM sentences were searched manually for adverbs in the function of manner adverbials.
4. The extracted adverbs were classified according to the type of motion (vertical, irregular) and meaning. The data are presented in the Results section.

The obtained data were analysed with regard to the following question: Are there any differences in the ways verbs and adverbs in English and Slovene FM expressions contribute to the conceptualization of stationary entities?

4   Results

The data obtained from the corpora are presented in the tables below. The analysis and discussion follow in the next section.

TABLE 1. Vertical motion verbs and irregular motion verbs in fictive motion.

	ENGLISH	SLOVENE
UP	ascend, rise soar, climb	dvigati/dvigovati/dvigniti se vzpenjati/vzpeti se povzpeti se
DOWN	descend, fall dip, drop plunge, sink, tumble	spuščati/spustiti se padati
UP-DOWN	undulate	valoviti
Irregular Motion	meander, wind, weave snake, twist, zigzag	viti se, vijugati (se) cikcakati

Table 2. Adverbs in fictive motion occurring with vertical motion verbs.

	ENGLISH	SLOVENE
Speed and duration		
High speed	briskly, quickly, rapidly, smartly, swiftly	naglo, hitro
Low speed	slowly	počasi
Duration and frequency	briefly, continuously, repeatedly, once more, yet again	večinoma, nenehno, neprestano, ponovno, vseskozi
Suddenness	abruptly, immediately, instantly, precipitately, suddenly, unexpectedly	nenadoma, nepričakovano
Degree and intensity		
High	considerably, drastically, noticeably, significantly, relentlessly, resolutely	pretirano, preveč, vztrajno
Low	easily, gently, gradually, steadily, slightly, a little, a bit more, a little more	malo, malce, nekoliko, minimalno, polagoma, postopno, postopoma, zmerno, neopazno, rahlo, zlagoma, blago, enakomerno
Geometry		
Altitude	high, higher and higher, even higher, up and up	visoko
Gradient	sharply, steeply	strmo, položno
Shape	spirally, uniformly	stopničasto, polžasto, rogato, vijugasto, odrezano
Direction	diagonally, vertically	diagonalno, navpično, vodoravno, prečno, navpik
Style	dramatically, grandly, majestically, menacingly, aggressively	veličastno, ponosno, dramatično, mogočno, neizrazito, zlovešče, prelepo, izzivalno, divje

Table 3. Adverbs in fictive motion occurring with irregular motion verbs.

	ENGLISH	SLOVENE
Speed and duration		
High speed	--	--
Low speed	languidly, lazily, slowly	počasi
Duration and frequency	endlessly	večinoma, neprestano, nenehno
Degree and intensity		
High	increasingly, relentlessly, so much	pretirano, preveč, vztrajno
Low	slightly, gently, steadily, a bit, a little, somewhat	rahlo, blago, nežno, zlagoma, zložno
Geometry		
Shape	intricately, tightly, tortuously, widely	ovinkasto, vijugasto, zavito, cikcakasto, kačasto, drobno
Direction	up and down, up and up and up	vodoravno, navzgor in navzdol
Gradient	steeply	strmo, položno, pokončno
Style	delightfully, entertainingly, erratically, invitingly, pleasantly, seductively; aimlessly, endlessly, helplessly, uncertainly; precariously, remorselessly, viciously, wildly	zasanjano, atraktivno, prijetno, lagodno, drzno, spretno, lahkotno

5   Analysis and discussion

5.1   *Verbs*

The data show some differences in the number of verbs utilized by FM expressions in the two languages. The Slovene inventory is notably smaller for downward and irregular motion. This is largely due to the fact that many English verbs simply do not find distinct counterparts in Slovene and share an equivalent with a relatively general meaning. As for the upward motion, the Slovene inventory seems larger due to lexical aspectual variants of verbs.

When used as actual motion verbs, all these verbs express the direction of motion: up, down, alternately up and down (while at the same time moving forward), or in an "irregular" pattern that involves constant changes of direction. In fictive motion, the direction-of-motion component gets mapped onto a property of a stationary entity: the vertical-motion component correlates with its vertical orientation, height or elevation, and the irregular motion component with its shape.

Of more interest are those verbs whose lexical meanings contain an additional component pertaining to the manner of motion. The analysis has identified six verbs whose directional meanings are complemented by speed components. The vertical motion verbs *soar*, *plunge* and *tumble* display high speed components that can be mapped onto properties such as steepness, height and elevation. The irregular motion verb *weave*, together with its Slovene counterpart *vijugati*, also displays a high-speed component, but this component is now mapped onto the numerous sharp bends characterizing the shape of a linear feature such as a road, for example. Conversely, *meander* displays a low speed component correlating with wide bends.

A comparison between English and Slovene shows that Slovene FM sentences utilize verbs with more general meanings, largely lacking additional components that could play a role in the conceptualization of stationary scenes. It follows that properties correlating with speed must be expressed by other means in Slovene, in particular by adverbials.

A point that deserves some attention is the role of aspect in fictive motion. Only five occurrences of the progressive form were identified in the English FM sentences, which is perfectly in line with the fact that FM expressions, their fictive effect notwithstanding, depict stationary objects:

(13)[5]

a. We were picked up from the airport by the taxi sent by the school and in the darkness we began to realize the road *was ascending* steeply.
b. The path *is climbing* significantly now. The brooding north face of Great End looms at the head of the valley.
c. Highclere castle is on the horizon to your right and your road *is descending aggressively to the left*.
d. More boardwalk follows, then the path *is weaving and undulating* pleasantly close to the river itself.

---

5   All examples in section 5 are taken from the British Web and the Slovenian Reference Corpus.

The progressive forms above can be explained on the basis of a "local path/ frame" characterized by a moving observer with a local scope of attention (cf. Matsumoto 1996; Talmy 2000). Talmy identifies a set of conceptual features whose values determine the type of FM construal, the principal ones being the following: +/- factiveness of the fictively moving entity, +/- obligatoriness of factive motion and +/- observer-based fictive effect (Talmy 2000, 105). The fictive effect in (13) is likely to depend on the last-mentioned feature: it is possible to argue for a factively moving observer (a traveller) whose immediate field of view constantly changes. This triggers the observer's perception of the road/path as an object in motion, which accords with the use of the progressive form.

The analysis of the sentences extracted from the Slovene corpus has shown that besides the imperfective aspect as the default variant for expressing stationariness, the perfective aspect is found in fictive motion as well: perfective verbs of vertical motion are used to express a change in gradient or elevation at a specific point, which is further indicated in the sentence by a space or time adverbial (14a–c), a manner adverbial expressing suddenness (14d–e), or a superlative (14f).

(14)

a. <u>Od tam</u> *se* pot precej *spusti*.
    'From there, the path descends quite a bit.' (English translation)

b. <u>Mestoma</u> *se* cesta *spusti* vse do reke.
    'In places, the road descends all the way to the river.'

c. <u>Zdaj</u> *se* pot strmo *vzpne*.
    'Now the road climbs steeply.'

d. Cesta *se* je <u>nenadoma</u> *vzpela*.
    'The road suddenly climbed up the hill.'

e. Pokrajina *se* v tem delu <u>nepričakovano</u> *dvigne*.
    'The landscape rises unexpectedly in this part.'

f. <u>Najvišje</u> se to gorsko sleme *dvigne* na vrhu Storžiča.
    'This mountain ridge rises highest at the top of Storžič.'

5.2   *Adverbs*

The adverbs extracted from the corpora were classified into four categories: (i) speed and duration (comprising speed, duration, repetition and suddenness), (ii) degree and intensity, (iii) geometry (comprising gradient, shape, direction and elevation) and (iv) style.

The data presented in section 4 point at a few differences in the number of adverbs per category (degree and intensity adverbs with vertical motion, style adverbs, shape adverbs). The only one that is relevant to the discussion – in terms of affecting the category's potential of expressing certain properties – is style adverbs. With verbs encoding irregular motion, the English list of style adverbs is notably longer since it includes adverbs with rather negative meanings (e.g., *aimlessly*, *viciously*) whereas no such adverb can be found among the Slovene ones.

No high speed adverbs occur in the analysed sentences with verbs encoding irregular motion, so the correlated property of the path shape must be expressed by other means, most likely by prepositional phrases with complement noun phrases referring to the details of the shape (e.g., *in sharp curves*). As for shape adverbs, Slovene uses several adverbs derived from adjectives that are derived from nouns denoting shapes (e.g., *vijuga* 'curve', *polž* 'snail'), which explains the difference in number mentioned above. With adverbs pertaining to elevation, a few expressive coordination structures (cf. Quirk et al. 1985, 980f.) were found in the English FM sentences (e.g., *higher and higher*). They convey the idea of continuation and "endlessness", in which respect they are similar to degree and intensity adverbs.

The analysis of the data shows that English and Slovene rely on the same types of mappings when structuring fictive motion. The following correlations have been identified for the first three categories: speed → gradient, shape (e.g., the land rises *rapidly;* the road winds *slowly*); duration and repetition → endlessness (e.g., the road climbs *continuously*); suddenness → change in elevation, contrast in size or gradient (e.g., the track descends *suddenly;* the peaks rise *abruptly* from the water's edge); degree and intensity → gradient, shape, endlessness (e.g., the ground drops away *noticeably;* the path meanders *gently;* the road climbs *relentlessly*); geometry → gradient, shape, orientation (e.g., the hills rise *steeply;* the track zigzagged *tightly;* the path drops *diagonally*).

The above correlations are very straightforward and require no detailed discussion. Much more interesting in this respect are style adverbs, whose

interpretation in fictive motion is based on more complex correlations. This category represents the most varied group, with a number of adverbs extracted from the corpora, however only four were identified as English-Slovene counterparts: *dramatically/dramatično, grandly/mogočno, majestically/veličastno, pleasantly/prijetno*. The meanings of a few adverbs presented a problem for classification. Examples of such borderline cases are *gently/nežno, relentlessly, resolutely, vztrajno* ('persistently') and *blago* ('mildly'), which were put in the degree and intensity category.

Style adverbs in FM expressions vary from those whose meanings refer to the subject entity directly (e.g., the mountain peaks rise *majestically*) to those whose interpretation relies on less transparent correlations (e.g., the road winds *helplessly*). The following correlations have been identified as typical:

(i) Style → impressiveness, importance → size/height

(15)

a.   V daljavi se *veličastno* dvigajo vrhovi Alp.
     'In the distance, the Alpine peaks rise majestically.'

b.   Med vsemi vrhovi se je *ponosno* dvigal najvišji slovenski vrh Triglav.
     'Slovenia's highest peak Triglav rose proudly above the mountains.'

The adverb *grandly* evokes the image of impressiveness – a property that is typically associated with great size. *Proudly* in (b) evokes the idea of an achievement, which in turn evokes the idea of importance – a property that is easily associated with great size/height.

(ii) Style → violence, danger → size/height, gradient, shape

(16)

a.   Rumena stena se *zlovešče* dviga v podeče megle.
     The yellow wall rises ominously into the drifting mist.'
b.   Your road is descending *aggressively* to the left.
c.   The path zigzagged *viciously* up and down through some of the most dramatic and beautiful scenery I've seen for ages.

The meanings of the above adverbs evoke the idea of violence or danger – properties that are easily associated with great size/height, a sudden change in elevation or shape.

(iii) Style → general appearance → shape

(17)

a.   The lanes meandered *delightfully* between fields and hedgerows.

b.   Olimpijska kolesarska stezav Riu se *atraktivno* vije ob atlantski obali.
     'Rio's Olympic cycling track winds attractively along the Atlantic coast.'

Both adverbs refer to the attractive appearance of the lanes/the route. Because of the irregular motion verb in the predicator, the attractiveness has to be related to shape although the context suggests that the location also plays a role.

(iv) Style → difficulty of travel, orientation → shape, terrain

(18)

a.   Pot se večinoma *lagodno* vije prek odprtih travnatih planot.
     'The route meanders leisurely across open grassy plateaus.'

b.   The route meanders *aimlessly* for hours.

The adverb in (18a) evokes the idea of a leisurely hike and the adverb in (18b) lack of orientation. The path in (18a) is accordingly conceptualized in terms of easy terrain and wide bends, and the route in (18b) in terms of a fairly irregular shape with no general direction.

The list of above correspondences is far from exhaustive because many adverbs are used with metaphorical meanings, or personification is involved. For example:

(19)

a.   Smaller, picturesque roads also meander *invitingly* inland to extinct volcanoes.

d.   Majhna cesta se *zasanjano* vije skozi gozd.
     'A small road winds dreamily through the forest.'

c.   Ozka pot se *spretno* vije naprej.
     'A narrow path meanders deftly forward.'

A detailed analysis of such correlations is beyond the scope of this study. The common denominator of all these sentences is that the adverb's meaning evokes an idea that can *in some way* be mapped onto a property of the subject. The connection is made by contingency or mere association, which is typical

of metonymy (cf. Barcelona 2011, Langacker 2000, Panther and Thornburg 2005, Radden and Kövecses 1999).

6   Conclusion

English and Slovene display similar behaviours in the use of verbs and adverbs in FM expressions. The few differences that have been identified are due to the lexicon or some other differences between the two language systems, and do not depend on fictive motion. With regard to the verbs, the languages differ in that the Slovene verbs, in particular those encoding vertical motion, lack more specific manner components that could correlate with some property of the subject entity. As for the adverbs, no such differences have been identified. The same types of adverbs are used in both languages, and their role in structuring fictive motion is the same. The correlations between the individual aspects of manner and the individual properties of stationary entities are systematic and are equally represented in both languages. The study has some implications for future research, which could examine the role of aspect in fictive motion and the metonymic potential of style adverbs.

References

Barcelona, Antonio. 2011. "Reviewing the properties and prototype structure of metonymy." In *Defining Metonymy in Cognitive Linguistics: Towards a Consensus View*, edited by Réka Benczes, Antonio Barcelona and Francisco José Ruiz de Mendoza Ibáñez, 7–58. Amsterdam: John Benjamins.

Blomberg, Johan, and Jordan Zlatev. 2014. "Actual and non-actual motion: Why experientialist semantics needs phenomenology (and vice versa)." *Phenomenology and the Cognitive Sciences* 13 (3): 395–418. https://doi.org/10.1007/s11097-013-9299-x.

—. 2015. "Non-actual motion: phenomenological analysis and linguistic evidence." *Cognitive Processing* 16 (Suppl. 1): 153–57. https://doi.org/10.1007/s10339-015-0689-6.

Cacciari, Cristina, Nadia Bolognini, Irene Senna, Maria Concetta Pellicciari, Carlo Miniussi, and Costanza Papagno. 2011. "Literal, fictive and metaphorical motion sentences preserve the motion component of the verb: A TMS study." *Brain & Language* 119: 149–57. https://doi.org/10.1016/j.bandl.2011.05.004.

Egorova, Ekaterina, Ludovic Moncla, Mauro Gaio, Christophe Claramunt, and Ross Purves. 2018. "Fictive motion extraction and classification." *International Journal of Geographical Information Science* 32 (11): 2247–71. https://doi.org/10.1080/13658816.2018.1498503

Fauconnier, Gilles. 1994. *Mental Spaces: Aspects of Meaning Construction in Natural Language*. Cambridge: Cambridge University Press.

—. 1997. *Mappings in Thought and Language*. Cambridge: Cambridge University Press.

Fauconnier, Gilles, and Mark Turner. 2002. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities.* New York: Basic Books.

Jiménez Martínez–Losa, Noelia. 2007. "Towards a typology of fictive motion events: Review of existing proposals and presentation of new perspectives." *Interlinguistica* 17: 562–69.

Langacker, Ronald W. 2000. *Grammar and Conceptualization*. Berlin: Mouton de Gruyter.

Matlock, Teenie. 2004a. "Fictive motion as cognitive simulation." *Memory & Cognition* 32 (8): 1389–1400. https://doi.org/10.3758/BF03206329.

—. 2004b. "The conceptual motivation of fictive motion." In *Studies in Linguistic Motivation*, edited by Günter Radden and René Dirven, 221–48. Berlin: Mouton de Gruyter.

Matlock, Teenie, and Daniel C. Richardson. 2004. "Do eye movements go with fictive motion?" *Proceedings of the Annual Meeting of the Cognitive Science Society* 26: 908–14.

Matsumoto, Yo. 1996. "Subjective motion and English and Japanese verbs." *Cognitive Linguistics* 7 (2): 183–226. https://doi.org/10.1515/cogl.1996.7.2.183.

Panther, Klaus-Uwe, and Linda L. Thornburg. 2005. "The role of conceptual metonymy in meaning construction." In *Cognitive Linguistics: Internal Dynamics and Interdisciplinary Interaction*, edited by Francisco J. Ruiz de Mendoza Ibáñez and Sandra Peña Cervel, 353–86. Berlin: Mouton de Gruyter.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language.* London: Longman.

Radden, Günter, and Zoltán Kövecses. 1999. "Towards a theory of metonymy." In *Metonymy in Language and Thought*, edited by Klaus-Uwe Panther and Günter Radden, 17–60. Amsterdam: John Benjamins.

Rojo, Ana, and Javier Valenzuela. 2003. "Fictive motion in English and Spanish." *International Journal of English Studies* 3 (2): 123–50.

—. 2010. "Fictive motion in Spanish: Travellable, non-travellable and path-related manner information." In *Trends in Cognitive Linguistics: Theoretical and Applied Models*, edited by Javier Valenzuela, Ana Rojo and Cristina Soriano, 244–260. Frankfurt am Main: Peter Lang.

Ruppenhofer, Josef. 2006. "Fictive motion: Construction or construal?" *Proceedings of the Annual Meeting of the Berkeley Linguistic Society* 32 (1): 307–319. https://doi.org/10.3765/bls.v32i1.3470.

Stošić, Dejan, and Laure Sarda. 2009. "The many ways to be located in French and Serbian: The role of fictive motion in the expression of static location." *In Space and Time in Language and Literature,* edited by Marija Brala Vukanović and Lovorka Gruić Grmuša, 39–60. Newcastle upon Tyne: Cambridge Scholars Publishing.

Stošić, Dejan, Benjamin Fagard, Laure Sarda, and Camille Colin. 2015. "Does the road go up the mountain? Fictive motion between linguistic conventions and cognitive motivations." *Cognitive Processing* 16 (Suppl. 1): 221–25. https://doi.org/10.1007/s10339-015-0723-8.

Talmy, Leonard. 2000. *Toward a Cognitive Semantics*. Vol. 1. Cambridge, Mass.: The MIT Press.

Tomczak, Ewa, and Anna Ewert. 2015. "Real and fictive motion processing in Polish L2 users of English and monolinguals: Evidence for different conceptual representations." *The Modern Language Journal* 99 (Suppl.): 49–65. https://doi.org/10.1111/j.1540-4781.2015.12178.x.

Waliński, Jacek Tadeusz. 2015. "Instrumentality of fictive motion in coextension paths." *Kwartalnik Neofilologiczny* 62 (1): 87–101.

—. 2018. *Verbs in Fictive Motion.* Łódz: Łódz University Press. https://doi.org/10.18778/8142-382-3.

Corpora

British Web (ukWaC) <https://the.sketchengine.co.uk/>

Slovenian Reference Corpus (Gigafida 2.0) <https://the.sketchengine.co.uk/>

Dictionaries

Cambridge Dictionary (the Cambridge Advanced Learner's Dictionary (CALD))
    <https://dictionary.cambridge.org/>

Longman Dictionary of Contemporary English (LDCE)
    <https://www.ldoceonline.com/>

Macmillan English Dictionary for Advanced Learners (MED)
    <https://www.macmillandictionary.com/>

Oxford Learner's Dictionaries (the Oxford Advanced Learner's Dictionary (OALD))
    <https://www.oxfordlearnersdictionaries.com/>