

LINGUISTICS AND VIETNAMESE LINGUISTICS

**THE SEMANTICS OF THE VIETNAMESE MOTION VERBS
FROM THE COGNITIVE LINGUISTIC PERSPECTIVE****HOANG TUYET MINH***

ABSTRACT: The present study aims to provide insights into the semantics of the Vietnamese motion verbs, with the starting point being Talmy's (1985, 2000) general semantic components for Motion and the emphasis being the subtle details of Path and Manner encoded in Vietnamese motion verbs. The major methods of the study are descriptive analysis and contrastive analysis; data were collected from Vietnamese monolingual dictionaries and analyzed with the help of the software Microsoft Excel. The results of the present study show that the Vietnamese motion verbs are rich in lexicalization patterns. There are 12 lexicalization patterns, apart from the lexicalization pattern that encodes only the component Motion, in the Vietnamese motion verbs within the scope of the present study. The results of this study can be used in learning and teaching English and Vietnamese, in Vietnamese-English translation and English-Vietnamese translation, and also can be used as a reference source for further studies on Vietnamese motion verbs.

KEY WORDS: lexicalization pattern; motion verbs; semantics; Vietnamese; path and manner verbs.

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1. Introduction

Despite the vast literature on motion verbs in various languages worldwide, hardly any work has been devoted to the semantics of motion verbs in the Vietnamese language. In that context, the present study aims to provide insights into the semantics of the Vietnamese motion verb lexicon, with the starting point being Talmy's (1985, 2000) general semantic components for Motion and the emphasis being the subtle details of Path and Manner encoded in Vietnamese motion verbs.

On the whole, the present study seeks answers to the following questions: 1) Which general semantic notions are conflated in Vietnamese motion verbs?; 2) Which Manner details are encoded in Vietnamese motion verbs? ; 3) Which Path notions are encoded in Vietnamese motion verbs?

The present study deals with only self-agentive and non-agentive translational motion verbs. The motion verbs under the scope of the study include general motion verbs, path verbs and manner verbs. Each motion verb was analyzed in terms of both the general and the specific semantic information which seems to be encoded in the verb. When looking at the semantic components conflated in the verbs, the decisions were mostly based on dictionary definitions, though the knowledge of the author as a native speaker of the Vietnamese language was also taken into account.

2. Literature review**2.1. Talmy's theory of Motion events****2.1.1. Definition of the Motion event**

Talmy (1985, 2000) defines a Motion event as a situation containing Motion and the continuation of a stationary location alike. The basic Motion event has four components: Figure, Ground, Path and Motion. The Figure is a moving or conceptually movable entity whose path or site is at issue. 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. The Path is the path followed or site occupied by the Figure with respect to the Ground. 'Motion' refers to the presence of motion or locatedness in the event. In addition, a Motion event can be associated with an external Co-event that most often bears the relation of Manner or of Cause to it (Talmy, 2000: 25-26).

This basic understanding about the Motion event may be illustrated with the following simple Vietnamese sentence: *Tôi đi vào nhà* (I walked into the house). In this sentence, *tôi* (I) is the Figure,

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nhà (the house) is the Ground, *vào* (into) is the Path, and the verb *đi* (walk) expresses at the same time the fact of Motion and the Manner of motion.

2.1.2. *The two-way typology of Motion events*

Talmy (1985, 2000) distinguishes two different types of languages: satellite-frame languages and verb-framed languages, according to the way the different semantic and linguistic elements of a Motion event are mapped. A satellite-framed language expresses the Path or trajectory of motion in satellites or in prepositional phrases, leaving the verb slot free to encode Manner-of-motion. A verb-framed language typically expresses Path in the main verb while expressing the Manner in adjuncts. A satellite is defined as ‘the grammatical category of any constituent that is in a sister relation to the verb root’ (Talmy 2000: 102). Satellites can be either bound affixes or free words and encompass English verb particles, German separable and inseparable verb prefixes, Latin or Russian verb prefixes, Chinese verb complements, Lahu nonhead ‘versatile verbs’, Caddo incorporated nouns, and Atsugewi polysynthetic affixes around the verb root. Satellites can encode not only Path of motion but also Ground, Manner and Cause.

Thus, Path appears in the verb root in verb-framed languages such as Spanish and it is lexicalised in the satellite in satellite-framed languages such as English, as illustrated with the following examples (Talmy 2000: 49):

Spanish expression: *La botella salió de la cueva* (English equivalent: The bottle MOVED-out from the cave).

English expression: The bottle floated out of the cave.

2.1.3. *The three-way typology of Motion events*

While the two-way topology of motion events as discussed above results from looking at the morphosyntactic constituents that characteristically encode the Path component of a Motion event, the three-way typology results from looking at which semantic components are characteristically lexicalised in verb roots. Seen from this topology, Talmy (2000) identifies three major lexicalization patterns of motion verbs as follow:

a) *Lexicalization pattern: Motion + Co-event*

In this pattern for the expression of Motion, the verb typically at the same time expresses the Motion and a Co-event, usually either the Manner or the Cause of the Motion. English is considered the prototypical example of this pattern.

At this point, the terms “non-agentive motion”, “agentive motion” and “self-agentive motion” need to be defined. Non-agentive motion refers to a motion event in which an entity that is incapable of motion on its own performs some motion. Agentive motion refers to a motion event in which the Figure is moved by an agent; the verb can express either the Cause of the motion or the Manner in which the Figure moves. Self-agentive motion refers to a motion event in which the Figure is able to move by itself.

b) *Lexicalization pattern: Motion + Path*

In this pattern for the expression of Motion, the verb conflates both the fact of Motion and Path. Spanish is considered the prototypical example of this pattern. The following are some Spanish expressions of Motion which conflate Path (Talmy 2000: 49-51):

c) *Lexicalization pattern: Motion + Figure*

In this pattern for the expression of Motion, the verb root conflates Motion and Figure. Navajo and Hoka languages are considered the prototypical examples of this pattern. The following are some English examples of Motion which conflate Figure (Talmy 2000: 57):

d) *Other minor patterns*

Besides the above three major typological patterns for the expression of motion, Talmy (2000: 62) notes other lexicalization patterns as well. For example, he identifies some minor systems of agentive verbs which conflate two semantic components. However, these patterns do not seem to form a characteristic lexicalization pattern for expressing Motion in languages. According to Talmy (2000: 62),

the reason is such combinations would require an enormous verb lexicon with fine-grained semantic combinations. As said above, the present study takes Talmy's (1985, 2000) general semantic components for Motion as the starting point. It then explores the three-way typology of Motion events for the analysis of subtle details of Path and Manner encoded in Vietnamese motion verbs.

2.2. *Classifications of motion verbs*

2.2.1. *Translational motion and self-contained motion*

Talmy (2000) broadly classifies motions into two groups, translational motion and self-contained motion, according to the relative movement of the Figure in the reference frame. In Talmy's (2000: 35) words, 'in translational motion, an object's basic location shifts from one point to another in space. In self-contained Motion, an object keeps its same, or "average," location.' The present study focuses only on translational motion, leaving self-contained motion aside. The main reason for this selection is translational motion seems to be more "prototypical" of motion, as in translational motion, the verb seems to show the Path of motion more clearly with a larger variety of Path notions. The following sections will provide more insights into the classification of motion verbs, "translational" motion verbs as well as "self-contained" motion verbs, which were of help in building up a motion verb corpus for the present study.

2.2.2. *Classifications of motion verbs with the Syntax-Semantics Interface approach*

The fact that verbs with similar meanings show characteristic argument realization patterns suggests that these patterns can be attributed to the semantic properties of each class. Theories or approaches that are concerned with the close relation between syntax and semantics and aim to identify the relevant components of meaning as well as to explicate their connection to the range of argument realization options are often grouped under the label "The Syntax-Semantics Interface" (Levin & Rappaport Hovav 2005: 3).

Levin & Rappaport Hovav (1992: 252-253) suggested that motion verbs would be better characterized in terms of which components of meaning are lexicalised in the verb itself, and they proposed three main groups of intransitive motion verbs as (i) arrive class: *arrive, come, go*, etc; (ii) Roll class: *roll, slide, move*, etc; (iii) Run class: *run, walk, gallop*, etc. Levin (1993: 263-270) classified motion verbs into 9 groups, with regard to transitive as well as intransitive motion verbs, as (i) Inherently directed motion; (ii) Leave verbs; (iii) Roll verbs; (iv) Run verbs; (v) Verbs that are Vehicle names; (vi) Verbs that are not vehicle names; (vii) Waltz verbs: *boogie, bop, cancan*, etc. These verbs mean roughly 'perform the dance'. This verb class also does not imply direction of motion; (viii) Accompany verbs; (ix) Chase verbs.

The heterogeneous syntactic nature of the motion verb lexicon has posed problems to scholars concerned with the close relation between syntax and semantics, leading them to propose different motion verb classes. Even though some of the classifications are much more granular than others, all scholars agree that each motion verb class is defined by both syntactic and semantic properties.

2.2.3. *Classifications of motion verbs with the Functional-Lexematic model*

The Functional-Lexematic Model was proposed by Martín Mingorance (1998). It integrates semantic and syntactic aspects of verb lexemes within a framework in which both paradigmatic relations (i.e., relations to other verbs) and syntagmatic relations (i.e., relations to other elements in the sentence) find their place. aber & Mairal-Usón (1999) and Rodríguez-García (1997) followed the Functional-Lexematic model and offer an account of the English verbal lexicon which shows not only the semantics of verbs in a hierarchical fashion (i.e., domains and subdomains), but also the relations between verb meanings and syntactic argument realizations, on the one hand, and their close connection with conceptualization in the human mind on the other. These authors claim that argument structure is motivated semantically, and thus do not take syntax as starting point for the classification of the lexicon—in contrast with approaches working on the syntax-semantics interface. In the Functional-Lexematic model, the organization of the verb lexicon is primarily guided by semantics, though it also reflects syntactic properties. Faber & Mairal-Usón (1999: 55) divided the verb lexicon into thirteen

major lexical domains. They partitioned the lexical domain of Movement into 4 major categories as (i) General Movement; (ii) Liquid movement; (iii) Atmosphere; (iv) Land. Rodríguez-García (1997: 75-79) focused only on English transitive motion verbs and distinguished three subdomains for Motion: (1) Positional (Existence and Change), (2) Positional and Directional Motion, and (3) Directional Motion. On the whole, Faber & Mairal-Usón and Rodríguez-García took into consideration the semantic notions of Path and Manner of motion in their analyses of motion verbs. Faber & Mairal-Usón's classification mixed both path and manner verbs within the same domain. On the other hand, Rodríguez-García's analysis of motion verbs separated path verbs from manner verbs. More recently, Aurnague, M. (2011), in an attempt to better characterize what language (using French as an example) considers as a motion process/eventuality, proposes a categorization which provides a preliminary bridge between the purely spatial characterization of motion predicates and their aspectual properties. He groups motion verbs into 8 groups as (i) Independent initial change of relation; (ii) Extended initial change of relation; (iii) Double change of relation with initial saliency; (iv) Double change of relation with final saliency; (v) Final change of relation with integrated prior motion; (vi) Inclusion/containment-type initial change of relation; (vii) Final change of relation with presupposed prior motion; (viii) Inclusion/containment-type final change of relation.

The classifications of motion verbs discussed above, together with the understandings of the semantics of motion verbs as discussed below, were used in the present study for building up a Vietnamese motion verb corpus for the purpose of the study.

2.3. The semantics of motion verbs

Although the classifications of motion verbs discussed above have in one way or another taken the semantics of motion verbs into consideration, the semantic information encoded in motion verbs needs to be further explored and categorized into more specific details for the purpose of the present study, and this section will review the semantic details related to Manner and Path that have been identified in the literature so far.

2.3.1. Manner verbs

Snell-Hornby (1983)'s analysis of 483 German and 617 English verbs was among the first to propose specific Manner details encoded in motion verbs. In her study, Snell-Hornby proposed 4 major groups: Human Behaviour, Movement and Position, Sounds, and Facial Expression and Light. The group "Movement and Position" was subdivided into 3 subgroups: (1) Walking and Running, (2) Movement in air and water, and (3) Static and Negative; these subgroups were further subdivided (Snell-Hornby, 1983: 80, 133, 142). For the purpose of the present study, the divisions of (1) and (2) are adopted. Ibarretxe-Antuñano (2006) provided a summary list of fine-grained manner categories which have been proposed for the analysis of motion verbs as (i) Motor pattern: basic locomotive abilities; (ii) Energy: stamina required for performing motion; (iii) Forced motion: motion requires an effort to be performed;

(iv) Furtive motion: hidden purpose or secretive motion; (v) Obstructed motion: there is some impediment or obstacle for motion; (vi) Smooth motion: motion flows, there is no obstacle (vii) Leisurely motion: motion for pleasure; (viii) No aim in motion: no special purpose; (ix) Violent motion; (x) Unsteady motion: unbalanced motion; (xi) Rate: speed of motion (fast or slow rate; increasing or decreasing speed); and (xii) State of Figure: physical or psychological state.

Férez (2008) added the following categories for the analysis of motion verbs: Contact between the Figure and the Ground: Body close to ground: *crawl, creep*; Smooth Motion: *glide, slide*; Slight contact: *skim, skitter*; Characteristic use of lower body: Length of Steps: information about the steps/jumps the Figure takes; e.g. *stride* (long steps), *scurry* (small short steps); Shape of Legs: information about the Figure's legs; e.g. *goosestep* (legs lifted high and straight); Gradual stages/steps: *edge, inch*; Use of one's Hands/Legs: whether the Figure's hands are also involved in the motion; e.g., *climb, crawl*; Motion in file: *march, parade*; Motion in sports: *dribble*; Joyful, playful motion: *scamper*;

frolic; Uncontrolled motion: motion without control; e.g., *careen*, *skid*; Awkward motion: *shamble*; Noisy motion: noisy way of moving; e.g., *roar*, *shuffle*.

More recently, Lestrade and Reshöft (2012), in an attempt to find out which additional dimensions can be identified in motion verbs in a more systematic way, added three more following manner details to the literature: (i) Time: temporal specification of motion event, such as pattern, duration, frequency; (ii) Sound: sound caused by motion event; (iii) Context: specification of context in which the motion event takes place. The manner categories or parameters are not mutually exclusive; a verb can encode more than one fine-grained Manner detail. Furthermore, it is important to remark that Manner might be conflated together with Path in the verb root.

2.3.2. Path verbs

According to Talmy (2000:53-56), the three main components of Path are the Vector, the Conformation, and the Deictic, which can co-occur. The Vector refers to the direction of motion of the Figure with respect to the Ground, which can be a source, a milestone or a goal; the Conformation is related to the geometry of Grounds, which can be conceptualized as containers, surfaces, points, etc.; and the Deictic component is defined by Talmy (2000: 56) as follows: '[t]he Deictic component of Path typically has only the two member notions toward the speaker and in direction other than toward the speaker'.

Slobin (2008) proposed a fourth component, Earth-grid Displacement. This component relates direction of motion to earth-based geometry: north-south-east-west, up-down, and other absolute coordinates (upstream, downstream). Narasimhan (2003: 136) identified the following Path components: a) Complex endpoint, such as *enter*; b) Complex source-point, such as *exit*; c) Simple endpoint, such as *reach*; d) Simple potential endpoint, such as *approach*; e) Simple source-point, such as *leave*; f) Midpoint, such as *pass*; g) Direction, such as *ascend*; and h) Deixis, such as *come*.

In general, Vector, Conformation, Deixis and Earth-grid Displacement should be seen as Path components which are useful for exploring cross-linguistic differences in the type of path information expressed in path verbs. Besides these, scholars have proposed other ways to further analyze path verbs, which may equally serve the same purposes.

Wälchli (2001) proposed 6 types of paths or in his terminology "cardinal kinds of displacement": a) AD = the Figure goes to the Ground; b) IN = the Figure goes into the Ground; c) SUPER = the Figure goes onto the Ground; d) AB = the Figure comes away from the Ground; e) EX = the Figure comes out of the Ground; and f) DE = the Figure comes down from the Ground.

Berthele (2004) used Wälchli's types of paths with some modifications. Berthele proposed that paths be categorized without specifying the source or goal in the vertical dimension. He also decided to use the verb "displace" to avoid reference to an unnecessary deictic center. He then reformed Wälchli's types of paths into: a) AD = the Figure displaces to the Ground; b) IN = the Figure displaces into the Ground; c) SUPER = the Figure displaces up; d) AB = the Figure displaces away from the Ground; e) EX = the Figure displaces out of the Ground; and f) DE = the Figure displaces down.

Ferez (2008), drawing on the works of Talmy (2000), Wälchli (2001), Narasimhan (2003), Berthele (2004), Slobin (2008) and other scholars, proposed the following types of paths for analysis of motion verbs: a) To/towards G (arrival, endpoint), such as *arrive*; b) Away from G (departure, source), such as *abandon*; c) Into G (container), such as *enter*; d) Out of G (container), such as *exit*; e) Up/onto G - Upwards, such as *ascend*; f) Down/down from G - Downwards, such as *descend*; g) Pass/cross G (traversal, milestone), such as *pass*; h) Closer to G, such as *approach*; i) Forwards, such as *advance*; j) Back to G/ Backwards, such as *retreat*; k) Change direction, such as *divert*; l) Multiple directions from a unique start, such as *scatter*; and m) After G, such as *chase*.

As stated above, despite the vast literature on motion verbs in various languages worldwide, hardly any work has been devoted to the semantics of motion verbs in the Vietnamese language. Among the first attempts to get insights into Vietnamese motion verb lexicon is the study titled "The typology of motion verbs in Northern Vietnamese" by Pace (2009). She focused on a specific group of words and

attempted to categorize these words as functioning as verbs or functioning as prepositions, and concluded that the question of whether Northern Vietnamese motion verbs are best generally characterized as verb-framed or satellite-framed remains unsolved. More recently, Han (2011), in an article titled “*Verbs of motion and their lexicalization patterns in English and Vietnamese - A perspective from cognitive semantics*” provided a comparison of lexicalization patterns of motion verbs across two languages: English and Vietnamese. However, she only provided some examples in both languages for the purpose of comparison, and concluded that the two languages have similar lexicalization patterns of motion verbs. These two “pioneer” studies on Vietnamese motion verbs were completely based on Talmy’s theory of Motion events.

The above discussion on the semantics of motion verbs was of help in building up the corpus of Vietnamese motion verbs as well as the selection of manner and path details for the analysis of Vietnamese motion verbs in the present study.

3. Methodology

The present study focuses on self-agentive and non-agentive translational motion verbs. The motion verbs under the scope of the present study include general motion verbs, path verbs as well as manner verbs. Drawing from dictionary definitions, each motion verb is analyzed in terms of both the general and the more specific semantic information which seems to be conveyed by the verb.

In order to compile a corpus of Vietnamese motion verbs for the purposes of the study, given the non-existence of any Vietnamese motion verbs corpus, the Vietnamese mono-lingual dictionary *Đại Từ điển tiếng Việt* (The Great Vietnamese Dictionary) (Nguyen, 2013), which seems to be the most comprehensive and most popular Vietnamese mono-lingual dictionary so far, was scrutinized, and totally 573 verbs were found to fall in the scope of the study.

The verbs found within the scope of the study were included in an Excel sheet. The first column listed the verbs in alphabetical order. The second column provided English translation for each verb. The next columns coded the general semantic components – Motion, Manner, Path, Ground and Figure with each column for each component respectively; then each Manner detail and Path notion that was taken into account was coded in a separate column for convenience in the calculation of the Manner details and Path notions coded in the verbs.

The following Manner details were taken into account: a) Path-shape; b) Motor pattern; c) Rate; d) Forced motion; e) Furtive motion; f) Obstructed motion; g) Smooth motion; h) Leisurely motion; i) No aim in motion; j) Unsteady motion; k) State of Figure; l) Dance; m) Vehicle/Instrument; n) Contact between the Figure and the Ground; o) Characteristic use of lower body; p) Use of one’s Hands/Legs; q) Motion in file; r) Motion in sports; s) Joyful; playful motion; t) Uncontrolled motion; u) Awkward motion; and v) Noisy motion. The manner categories from ‘Path-shape’ to ‘State of the Figure’ were drawn from Ibarretxe-Antuñano (2006), Özçaliskan (2004) and Slobin (2000). The remaining categories, from ‘Dance’ to ‘Noisy motion’, were drawn from Ferez (2008).

The following Path notions were taken into account: a) To/towards G; b) Away from G; c) Into G; d) Out of G; e) Up/onto G - Upwards; f) Down/down from G - Downwards; g) Pass/cross G; h) Closer to G; i) Forwards; j) Back to G/ Backwards; k) Change direction; l) Multiple directions from a unique start; and m) After G. As can be seen, these Path notions, which seem to be the most inclusive in the literature so far, were drawn from Ferez (2008).

When looking for general semantic components as well as Manner details and Path notions conflated in the verbs, the decisions were mostly based on dictionary definitions, though the understandings of the author as a native speaker of the Vietnamese language were also taken into account.

4. Findings and discussion

4.1. Distribution of general semantic notions in Vietnamese motion verbs

This section gives answers to the first research question: Which general semantic notions are conflated in Vietnamese motion verbs?

Data show that of the 573 verbs which fall in the scope of the study, there are 14 verbs that encode only the semantic component Motion; they do not encode any semantic details related to Manner, Path, Ground or Figure, for example: *Chuyển, Chuyển đi, Đi, Đi lại, Di chuyển Du, Lưu động*.... The dictionary definitions of these verbs all mean “move to other places”.

Of the 573 verbs in the corpus, beside the 14 verbs that encode only the semantic component Motion, 461 verbs encode the semantic component Manner, 368 encode the semantic component Path, 154 encode the semantic component Ground, and 217 encode the semantic component Figure (Table 1). It is necessary to note again that these semantic components are not mutually exclusive.

Table 1. Distribution of general semantic notions in Vietnamese motion verb lexicon

Semantic Notion	Number	Frequency (%)
Manner	461	80.45
Path	368	64.22
Ground	154	26.88
Figure	217	37.87

With the most prevalent semantic notion being Manner (80.45% of the verbs encode this notion), it can be said that the Vietnamese language is a satellite-framed language – a language that expresses Path in satellites, leaving the verb slot free to encode the semantic component Manner. However, with 64.22% of the verbs encoding the semantic component Path, it may also be said that the Vietnamese language is a verb-framed language – a language that typically expresses Path in the main verb. This only helps to show that Vietnamese motion verbs are rich in general semantic notions, as whether the Vietnamese language is a satellite-framed language or a verb-framed language is not the concern of the present study.

At a deeper level, data show that the Vietnamese motion verb lexicon is also rich in lexicalization patterns of the general semantic notions, as shown in Table 2 below.

Table 2. Lexicalization patterns of Vietnamese motion verbs

Group	Number	Frequency (%)
One semantic notions	114	19.90
Manner	68	11.87
Path	46	8.03
Ground	0	0.00
Figure	0	0.00
Two semantic notions	272	47.47
Manner + Path	155	27.05
Manner + Ground	33	5.76
Manner + Figure	65	11.34
Path + Ground	8	1.40
Path + Figure	11	1.92
Three semantic notions	136	23.73
Manner + Path + Ground	32	5.58
Manner + Path + Figure	60	10.47
Manner + Ground + Figure	25	4.36
Path + Ground + Figure	19	3.32
Four semantic notions	37	
Manner + Path + Ground + Figure	37	6.46

As shown in Table 2, of the total 573 verbs in the corpus, there are 114 verbs that encode one semantic notion (Manner, Path, Ground or Figure), 272 verbs that encode two semantic notions, 136 verbs that encode three semantic notions and 37 verbs that encode all the four semantic notions, beside the component Motion. Totally, there are 12 lexicalization patterns in the Vietnamese motion verbs lexicon (beside the pattern that encodes only the component Motion). They are: a) Motion + Manner; b) Motion + Path; c) Motion + Manner + Path; d) Motion + Manner + Ground; e) Motion + Manner + Figure; f) Motion + Path + Ground; g) Motion + Path + Figure; h) Motion + Manner + Path + Ground; i) Motion + Manner + Path + Figure; j) Motion + Manner + Ground + Figure; k) Motion + Path + Ground + Figure; and l) Motion + Manner + Path + Ground + Figure.

The following are more details of these lexicalization patterns:

a) Motion + Manner

In this lexicalization pattern, there are 68 verbs, accounting for 11.87% of the total 573 verbs in the corpus, for instance: *Bách bộ*, *Cất bước*, *Chạy gằn*, *Đạo*, *Đáp*, *Đạp*, *Đi*, *Leo trèo*, *Nhảy*, *Nhúc nhích*, *Thơ thẩn*, *Tung hoành*, *Vi vu*, ... The dictionary definitions of these verbs clearly show the Manner detail(s) encoded in these verbs: for example: *Bách bộ*: walk slowly in a leisurely way; *Bon*: go in a fast way without obstruction

b) Motion + Path

In this lexicalization pattern, there are 46 verbs, accounting for 8.03% of the total 573 verbs in the corpus, for example: *Đến*, *Dời*, *Lên*, *Lùi*, *Mép*, *Qua*, *Rời*, *Tháo lui*, *Thụt lùi*, *Tiếp cận*, *Tối*, *Xuống* ... The dictionary definitions of these verbs clearly show the Path notion(s) encoded in these verbs, for example: *Đặt chân*: go to a place; *Dời*: go away from a place

c) Motion + Manner + Path

In this lexicalization pattern, there are 155 verbs, accounting for 27.5% of the total 573 verbs in the corpus, for example: *Ào*, *Bật*, *Bỏ nhào*, *Cất bước*, *Chạy*, *Chuồn*, *Đâm bổ*, *Đột nhập*, *Lẩn trốn*, *Lao*, *Lượn*, *Men*, *Nhảy cao*, *Roi*, *Vèo vèo*, *Xuất hành* ... The dictionary definitions of these verbs clearly show the Manner detail(s) and the Path notion(s) encoded in these verbs, for example: *Ào*: come to a place at a high speed; *Bỏ nhào* (2): go down at a high speed.

d) Motion + Manner + Ground

In this lexicalization pattern, there are 33 verbs, accounting for 5.76% of the total 573 verbs in the corpus, for example: *Bay*, *Boi*, *Chạy việt dã*, *Chui lủi*, *Chuyển*, *Đánh võng*, *Đạo mát*, *Lội*, *Long*, *Lượn*, *Ngụp lặn*, *Trôi*, *Trôi nổi*, *Trượt băng*, *Trượt tuyết* ... The dictionary definitions of these verbs clearly show the Manner detail(s) and the Ground encoded in these verbs, for example: *Bay* la: fly near the surface of the ground.

e) Motion + Manner + Figure

In this lexicalization pattern, there are 65 verbs, accounting for 11.34% of the total 573 verbs in the corpus, for example: *Chu du*, *Dò dẫm*, *Lãng xãng*, *Lơi chơi*, *Nhảy nhót*, *Quờ quẩn*, *Sánh bước*, *Sánh vai*, *Tung tăng*, *Vùng vẫy* ... The dictionary definitions of these verbs clearly show the Manner detail(s) and the Figure encoded in these verbs, for example: *Bồn*: (buffaloes) suddenly start running at a very high speed; *Cuốn vó*: (horses) run with full legs at a very high speed.

f) Motion + Path + Ground

In this lexicalization pattern, there are 8 verbs, accounting for 1.40% of the total 573 verbs in the corpus, for example: *Di cư*, *Di trú*, *Nổi*, *Quá cảnh*, *Trốn nắng* ... The dictionary definitions of these verbs clearly show the Path notion(s) and the Ground encoded in these verbs, for example: *Trốn nắng*: go to a shady spot so as to escape from the sunlight

g) Motion + Path + Figure

In this lexicalization pattern, there are 11 verbs, accounting for 1.92% of the total 573 verbs in the corpus, for example: *Dâng*, *Ló đầu*, *Lưu tán*, *Mọc*, *Múm*, *Nhú*, *Phiêu tán*, *Ròng*, *Tràng*, and *Trẩy*. The dictionary definitions of these verbs clearly show the Path notion(s) and the Figure encoded in these verbs, for example: *Dâng*: (water levels) go up; *Ló đầu*: (the Sun) go out from clouds at dawn.

h) Motion + Manner + Path + Ground

In this lexicalization pattern, there are 32 verbs, accounting for 5.58% of the total 573 verbs in the corpus, for example: *băng ngàn*, *Di tản*, *Luồn lách*, *Tản cư*, *Trôi dạt*, *Trốn*,... The dictionary definitions of these verbs clearly show the Manner detail(s), the Path notion(s) and the Ground encoded in these verbs, for example: *Băng ngàn*: cross forests and mountains with great efforts.

i) Motion + Manner + Path + Figure

In this lexicalization pattern, there are 60 verbs, accounting for 10.47% of the total 573 verbs in the corpus, for example: *Băng*, *Bay nhảy*, *Du hành*, *La đà*, *Lò dò*, *Nảy*, *Ngược xuôi*, *Nhao*, *Nhào*, *Nhoai*, *Tung tóe*, *Tuôn*, *Ùa*, *Ục*, *Xóc*, *Xộc*, *Xông*... The dictionary definitions of these verbs clearly show the Manner detail(s), the Path notion(s) and the Figure encoded in these verbs, for example: *Nhảy cẫng*: (children) jump up happily.

j) Motion + Manner + Ground + Figure

In this lexicalization pattern, there are 25 verbs, accounting for 4.36% of the total 573 verbs in the corpus, for example: *Bát phố*, *Bay chuyên*, *Chấp chơi*, *Lênh đênh*, *Lêu lổng*, *Phát phơ*, *Phát phời*, *Rong ruổi*, *Trảy hội*, *Tuần tiễu*, *Tuần tra*, *Vận động*... The dictionary definitions of these verbs clearly show the Manner detail(s), the Ground and the Figure encoded in these verbs, for example: *Bát phố*: go about leisurely through streets; *Bay chuyên*: (young birds) fly short distances from tree to tree to learn how to fly.

k) Motion + Path + Ground + Figure

In this lexicalization pattern, there are 19 verbs, accounting for 3.32% of the total 573 verbs in the corpus, for example: *Di cư*, *Đổ bộ*, *Du học*, *Hồi cư*, *Viễn chinh*, *Viếng thăm*, *Xuất dương*, *Xuất gia*, *Xuất giá*, *Xuất ngoại*, *Xuất quân*, *Xuất thế*... The dictionary definitions of these verbs clearly show the Path notion(s), the Ground and the Figure encoded in these verbs, for example: *Đổ bộ*: (soldiers) go ashore from the sea to attack the enemy.

l) Motion + Manner + Path + Ground + Figure

In this lexicalization pattern, there are 37 verbs, accounting for 6.46% of the total 573 verbs in the corpus, for example: *Bôn ba*, *Chạy trạm*, *Đắm*, *Diễu*, *Du lịch*, *Lùa*, *Ngoi*, *Ngóp*, *Nhảy dù*, *Nhổ neo*, *Quá bộ*, *Sơ tán*, *Trốn nợ*, *Trốn phu*, *Trốn thuế*, *Truy kích*, *Truy lùng*, *Truy quét*, *Truy tìm*, *Xống*, *Xống pha*, ... The dictionary definitions of these verbs clearly show the Manner detail(s), the Path notion(s), the Ground as well as the Figure encoded in these verbs, for example: *Bôn ba*: go with hardship to a number of far-away places to find solutions to their business; *Diễu binh*: blocks of armed men sequentially march past in front of a ceremony platform.

In sum, data show that the Vietnamese motion verb lexicon is rich in lexicalization patterns, with 12 lexicalization patterns appearing in the corpus, apart from the lexicalization that encodes only the component Motion. The general semantic components encoded in these verbs are not limited to Motion, Manner and Path; some of the verbs encode all the 5 components, namely Motion, Manner, Path, Ground and Figure. Data also show that Manner and Path are the prevalent general semantic components encoded in the Vietnamese motion verb lexicon, and the most prevalent lexicalization pattern is the one that encode both Manner and Path at the same time, with the lexicalization pattern “Motion + Manner + Path” being of the highest frequency, accounting for 27.5% of the total verbs in the corpus. Another remark is Vietnamese motion verbs do not tend to encode Motion with Ground or with Figure alone, with the absence of the lexicalization pattern Motion + Ground and the lexicalization pattern Motion + Figure, although Ground and Figure can appear beside Motion in some other lexicalization patterns.

4.2. Distribution of Manner details in Vietnamese motion verbs

This section gives answers to the second research question: Which Manner details are encoded in Vietnamese motion verbs? Data show that all Manner details identified above for the study appear in the Vietnamese motion verb lexicon, with different frequencies. The detail that is most frequently exploited is “Rate” and the detail that is exploited the least is “Dance” (Table 3).

Table 3. Distribution of manner details in Vietnamese motion verb lexicon

Manner details	Number	Frequency (%)	Manner details	Number	Frequency (%)
Path shape	35	6.11	No aim in motion	48	8.38
Motor pattern	97	16.93	Unsteady motion	13	2.27
Rate	244	42.58	State of Figure	70	12.22
Forced motion	92	16.06	Dance	4	0.70
Furtive motion	38	6.63	Vehicle/Instrument	8	1.40
Obstructed motion	16		Contact between the Figure and the Ground	50	
		2.79			8.73
Smooth motion	10	1.75	Characteristic use of lower body	41	7.16
Leisurely motion	23	4.01			

The following are more details on the Manner details that are encoded in the Vietnamese motion verb lexicon:

a) Path shape

Of the 573 verbs in the corpus, 35 verbs encode this Manner detail, for instance: *Bôn ba, Chòn vòn, Chông vòng, Đánh vòng, Lăn xăn, Lãng xăng lịch xích, Lê la, Loanh quanh, Lớn vớn, Lượn, Rập rình,...* This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Lượn* (1): go round; *Vòng*: go up in the shape of a parabol.

b) Motor pattern

Of the 573 verbs in the corpus, 97 verbs encode this Manner detail, for example: *Bay, Bơi, Cà nhắc, Chạy đua, Chạy gần, Chạy re, Diều hành, Loì chơi, Ngup lặn, Nhào, Nhảy cõn, Phi, Thả, Thả bộ, Thor thần, Vèo vèo,...* This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: Way of flying: *Bay chuyên*: (young birds) fly short distances from tree to tree to learn how to fly; Way of swimming: *Bơi bướm*: swim in a way that looks like a flying butterfly; Way of walking: *Dạo*: walk about leisurely; Way of running: *Cuốn vó*: (horses) run with full legs at a very high speed; Way of jumping: *Nhảy cẫng*: (children) jump up happily.

c) Rate

Of the 573 verbs in the corpus, 244 verbs encode this Manner detail, for instance: *Áo, Bách bộ, Bỏ nhào, Cà nhắc, Chạy đà, Cuốc bộ, Quanh quẩn, Rập rình, Rạt, Roi, Sấn, Truy lùng, Truy quét, ...* This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Áo*: come to a place at a high speed; *Cuốn vó*: (horses) run with full legs at a very high speed.

d) Forced motion

Of the 573 verbs in the corpus, 92 verbs encode this Manner detail, for example: *Ào, Bỏ, Cát bước, Chìm, Cuốc bộ, Đắm, Nhào, Nhổ neo, Sụt, Thốc, Thụt, Tông, Ục, Vằn, Xô,...* This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Băng ngàn*: cross forests and mountains with great efforts; *Luồn*: get into a small, narrow place with efforts.

e) Furtive motion

Of the 573 verbs in the corpus, 38 verbs encode this Manner detail, for instance: *Bỏ ngũ, Chạy trốn, Chui lủi, Lẩn, Lẩn trốn, Lảng lảng, Lánh, Lủi, Tẩu thoát, Trốn, Tuồn,...* This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Vượt ngục*: (prisoners) run away from the prison.

f) Obstructed motion

Of the 573 verbs in the corpus, 16 verbs encode this Manner detail, for instance: *Len lỏi, Loai nhoai, Lội, Lội ngoi, Luồn lách, Luồn lỏi, Ngoi, Ngóp, Ngup lặn, Nhoai, Rúc,...* This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Len lỏi*: try to make a way into or

through something (often through a crowd or into a small, narrow place); *Loi ngoi*: try to go out of the surface of water in a weak and fragmentary way

g) Smooth motion

Of the 573 verbs in the corpus, 10 verbs encode this Manner detail, for example: *Bon*, *Lênh đênh*, *Lưu thông*, *Nổi*, *Trôi dạt*, and *Trôi nổi*... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Bon*: go in a fast way without obstruction; *Lênh đênh*: float on a large surface of water without attaching to anything.

h) Leisurely motion

Of the 573 verbs in the corpus, 23 verbs encode this Manner detail, for instance: *Bách bộ*, *Dạo*, *Du lịch*, *Du ngoạn*, *Phiêu du*, *Tản bộ*, *Thả*, *Thả bộ*, *Tham quan*, *Vãng cảnh*, *Vi vu*, *Viễn du*... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Bách bộ*: walk slowly in a leisurely way; *Bát phố*: go about leisurely through streets

i) No aim in motion

Of the 573 verbs in the corpus, 48 verbs encode this Manner detail, for example: *Bay lượn*, *Chờn vờn*, *Lần quần*, *Lênh đênh*, *Lớ xớ*, *Lờn vờn*, *Phập phềnh*, *Quanh quần*, *Thơ thân*, *Tung tẩy*, ... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Bay lượn*: fly about; *Lênh đênh*: float on a large surface of water without attaching to anything.

j) Unsteady motion

Of the 573 verbs in the corpus, 13 verbs encode this Manner detail, for instance: *Cà nhấc*, *Chấp chới*, *La lét*, *Lật lờ*, *Loi ngoi*, *Lóp ngóp*, *Ngoi*, *Ngóp*, *Phật phờ*, *Vật vờ*... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Cà nhấc*: walk with one leg that does not operate normally; *Loi ngoi*: try to go out of the surface of water in a weak and fragmentary way.

k) State of Figure

Of the 573 verbs in the corpus, 70 verbs encode this Manner detail, for example: *Băng*, *Bát phố*, *Bay lượn*, *Chấp chới*, *Cuốc bộ*, *Ngóp*, *Nhảy bổ*, *Nhoai*, *Nồ*, *Phiêu du*, *Rong ruổi*, *Tung tăng*, *Xà lét*, ... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Loi ngoi*: try to go out of the surface of water in a weak and fragmentary way; *Nhảy cẫng*: (children) jump up happily.

l) Dance

Of the 573 verbs in the corpus, 4 verbs encode this Manner detail, for example: *Ban*, *Nhảy đầm*, *Nhảy múa*, and *Nhảy nhót*... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Nhảy đầm*: dance; *Nhảy nhót*: dance (colloquial, often negative).

m) Vehicle/Instrument

Of the 573 verbs in the corpus, 8 verbs encode this Manner detail, for example: *Nhảy dù*, *Nhỏ neo*, *Quá giang*, *Trượt băng*, *Trượt tuyết*, ... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Quá giang* (1): cross a body of water with a boat or the like.

n) Contact between the Figure and the Ground

Of the 573 verbs in the corpus, 50 verbs encode this Manner detail, for instance: *Bê*, *Bết*, *Chui rúc*, *Đắm*, *Là*, *Leo trèo*, *Luồn*, *Luớt*, *Men*, *Nổi nênh*, *Rượt*, *Trôi*, *Tụt*, *Xê*, *Xê dịch*, ... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Lênh đênh*: float on a large surface of water without attaching to anything.

o) Characteristic use of lower body

Of the 573 verbs in the corpus, 41 verbs encode this Manner detail, for instance: *Cà nhấc*, *Chạy gần*, *Lê*, *Lê lét*, *Mon men*, *Nhúc nhấc*, *Tản bộ*, *Thả*, *Thả bộ*, ... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Cà nhấc*: walk with one leg that does not operate normally; *Cuốn vó*: (horses) run with full legs at a very high speed.

p) Use of one's Hands/Legs

Of the 573 verbs in the corpus, 8 verbs encode this Manner detail. They are: *Bơi bướm*, *Bơi chó*, *Bơi ếch*, *Bơi sải*, *Lê*, *Leo*, *Leo trèo*, and *Trèo*. This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Bơi bướm*: swim in a way that looks like a flying butterfly; *Trèo*: move upward on the surface of something (with hands and legs).

q) Motion in file

Of the 573 verbs in the corpus, 6 verbs encode this Manner detail. They are: *Diễu binh*, *Diễu hành*, *Hành tiến*, *Nối đuôi*, *Sánh bước*, and *Tuần hành*. This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Diễu binh*: blocks of armed men sequently march past in front of a ceremony platform; *Diễu hành*: blocks of people march past a ceremony platform or along streets with magnanimous air to show strength.

r) Motion in sports

Of the 573 verbs in the corpus, 6 verbs encode this Manner detail. They are: *Nhảy cao*, *Nhảy cầu*, *Nhảy dây*, *Nhảy sào*, *Trượt băng*, and *Trượt tuyết*. This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Nhảy cao*: jump up over a bar in line with regulations for the sport "high jumping"; *Nhảy cầu*: jump in line with regulations for the sport "ball jumping".

s) Joyful, playful motion

Of the 573 verbs in the corpus, 6 verbs encode this Manner detail, for instance: *Nhảy cẫng*, *Tung tăng*, *Tung tấy*... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Nhảy cẫng*: (children) jump up happily.

t) Uncontrolled motion: motion without control

Of the 573 verbs in the corpus, 36 verbs encode this Manner detail, for example: *Chấp chới*, *Chìm*, *Đắm*, *Lãng đãng*, *Nhào*, *Phật phờ*, *Roi*, *Tẩu tán*, *Trìm*, *Trôi*, *Trượt*, *Tung tóe*, *Tuôn*, ... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Chấp chới*: fly sometimes up, sometimes down, sometimes right, and sometimes left; *Lênh đênh*: float on a large surface of water without attaching to anything.

u) Awkward motion

Of the 573 verbs in the corpus, 19 verbs encode this Manner detail, for example: *Cà nhích*, *Lần mò*, *Lò dò*, *Lọ mọ*, *Lóp ngóp*, *Ngóp*, *loi ngoi*... This Manner detail is clearly expressed in the dictionary definitions of these verbs, for example: *Loi ngoi*: try to go out of the surface of water in a weak and fragmentary way; *Loai nhoai*: move in a weak and awkward way.

v) Noisy motion

Of the 573 verbs in the corpus, only verb, *đâm sầm*, encodes this Manner detail. This Manner detail is clearly expressed in the dictionary definitions of this verb, as shown below: *Đâm sầm*: run abruptly into something or somebody at a high speed with a great force (and make a big noise thereby).

In sum, data show that the Vietnamese manner motion verb lexicon is rich in Manner details with all Manner details that were taken into account for the study appearing in the corpus with different frequencies. Also, data show that a Vietnamese manner motion verb may encode various Manner details at the same time. For examples, the verb *Loi ngoi* (try to go out of the surface of water in a weak and fragmentary way) encodes at the same time 7 Manner details: "Motor", "Rate", "Force", "Obstruction", "Unsteadiness", "State of the Figure" and "Awkwardness".

It seems that the Vietnamese manner motion verb lexicon encode other Manner details that have not been identified in the literature. For examples, the verbs *Ngóp* (go up to the surface of water to breathe), *Viễn chinh* (go to fight against enemies in far-away places outside the border of one's country) or *Theo bỏi* (go after man-eaters such as big cats to take back the bodies of victims) seem to encode "Purpose"; the verbs *Ghé* (go to a place alongside the way and stop there for a short time while one is on the way to another place) or *Rong ruổi* (go continuously for a long time in a long distance for some purpose) seem to encode "Time"; the verbs *Viễn chinh* (go to fight against enemies in far-away places outside the border of one's country) or *Bôn ba* (go with hardship to a number of far-away places to find solutions to

their business) seem to encode “Space”; and the verb *Cuốn gói* (pack all belongings and run away quickly because one is forced to do so) seem to encode “Process”.

It is also remarkable that the Vietnamese motion verb lexicon is very poor in the Manner detail “Dance” and the Manner detail “Vehicle/Instrument”. Unlike some languages such as English, it is very unusual to use “Dance” nouns such as “samba” or “tango” and “Vehicle” nouns such as “bicycle” or “motorcycle” as verbs in Vietnamese.

4.3. Distribution of Path notions in Vietnamese motion verbs

This section gives answers to the third research question: Which Path notions are encoded in Vietnamese motion verbs?

Data show that all Path notions identified above for the study appear in the Vietnamese motion verb lexicon, with different frequencies. The notion that is most frequently exploited is “Away from G” and the notion that is exploited the least is “Forwards” (Table 4).

Table 4. Distribution of path details in Vietnamese motion verb lexicon

Path notions	Number	Frequency (%)	Path notions	Number	Frequency (%)
To/towards G	49	8.55	Closer to G	32	5.58
Away from G	107	18.67	Forwards	5	0.87
Into G	19	3.32	Back to G/ Backwards	12	2.09
Out of G	15	2.62	Change direction	14	2.44
Up/onto G – Upwards	26	4.54	Multiple directions from a unique start	14	2.44
Down /down from G – Downwards	32	5.58	After G	19	3.32
Pass/cross G	24	4.19			

The following are more details on the Path notions that are encoded in the Vietnamese motion verb lexicon:

a) To/towards G

Of the 573 verbs in the corpus, 49 verbs encode this Path notion, for example: *Bổ, Đâm sầm, Dạt, Đặt chân, Đến, Đổ bộ, Hôi cu, Lò dò, Lui tới, Nhào, Nhảy bổ, Nhảy xổ, Tấp, Thốc, Tràn, Trở lại, Tùng chinh, Tuồng, Úa, Ủa, Up, Về, Xịch, Xô, Xổ, Xốc, Xộc, Xông, Xông pha, Xuồng phà...* This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Đâm sầm*: run abruptly into something or somebody at high speed with great force (and make a big noise thereby); *Đổ bộ*: (Soldiers) go ashore from the sea to attack the enemy.

b) Away from G

Of the 573 verbs in the corpus, 107 verbs encode this Path notion, for example: *Bật, Bỏ ngũ, Bỏ rơi, Bôn ba, Cát bước, Cuốn gói, Đào thoát, Di tản, Du học, Du lịch, Lẩn khuất, Lẩn lút, Lẩn tránh, Lánh, Phiêu du, Trốn phu, Xê dịch, Xuất quân...* This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Trốn nắng*: go to a shady spot so as to escape from the sunlight.

c) Into G

Of the 573 verbs in the corpus, 19 verbs encode this Path notion, for example: *Chui rúc, Đột, Đột nhập, Len lỏi, Lủi, Luồn, Nhập cu, Rúc, Trốn, Vào...* This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Đột nhập*: secretly get into the camp of the enemy.

d) Out of G

Of the 573 verbs in the corpus, 15 verbs encode this Path notion, for example: *Lóc góc, Ra, Tòng, Tràn, Trổ, Trỗi, Tuồn, Vượt ngục, Xổng...* This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Vượt ngục*: (prisoners) try to escape from the prison.

e) Up/onto G - Upwards

Of the 573 verbs in the corpus, 26 verbs encode this Path notion, for example: *Lội nhoi, Lóp ngóp, Mọc, Ngược, Nhao, Nhảy căng, Nhú, Nổi, Trèo, Vòng*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *trèo*: go up the tree; *Vòng*: go up in the shape of a parabol.

f) Down /down from G - Downwards

Of the 573 verbs in the corpus, 32 verbs encode this Path notion, for example: *Bỏ nhào, Chìm, Đắm, Đâm bổ, Lặn, Nhào, Rơi, Trìm chìm, Tụt, Xuống*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Bỏ nhào* (2): go down at a high speed; *Xuống*: go down.

g) Pass/cross G

Of the 573 verbs in the corpus, 24 verbs encode this Path notion, for example: *Băng, Chạy trạm, Diễu binh, Luồn, Ngược xuôi, Quá cảnh, Văng, Vèo vèo, Vượt biên, Xuyên*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Băng ngàn*: cross forests and mountains with great efforts; *Diễu binh*: blocks of armed men sequently pass in front of a ceremony platform.

h) Closer to G

Of the 573 verbs in the corpus, 32 verbs encode this Path notion, for example: *Áo, Áp, Lăn xăn, Lãng vãng, Loanh quanh, Luẩn quẩn, Lượn lờ, Mon men, Tiếp cận*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Mon men*: get closer little by little with caution; *Tiếp cận*: approach.

i) Forwards

Of the 573 verbs in the corpus, 5 verbs encode this Path notion, for example: *Hành tiến, Nhoai, Thẳng xông*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Hành tiến*: (groups of people, often used for soldiers) go forward; *Thẳng xông*: go straight forward at high speed.

J) Back to G/ Backwards

Of the 573 verbs in the corpus, 12 verbs encode this Path notion. They are: *Giật lùi, Lùi, Rút, Rút lui, Sút lùi, Tháo lui, Thoái, Thoái lui, Thụt, Thụt lùi, Tụt, and Về*. This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Giật lùi*: go backwards little by little; *Về*: come back.

k) Change direction

Of the 573 verbs in the corpus, 14 verbs encode this Path notion, for example: *Lộn, Ngoặt, Ngoẹo, Quặt, Quẹo, Rẽ, Tạt*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Ngoặt*: turn abruptly to another direction.

l) Multiple directions from a unique start

Of the 573 verbs in the corpus, 14 verbs encode this Path notion, for example: *Bành trướng, Bay nhây, Lưu tán, Phiêu tán, Tăn, Tẩu tán, Tóe*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Tẩu tán*: (group of people) run away to all directions in a chaotic manner.

m) After G

Of the 573 verbs in the corpus, 19 verbs encode this Path notion, for example: *Bết, Đuối, Men, Lon ton, Ruợt, Theo, Theo sau, Truy kích, Truy lùng, Truy quét, Truy tìm*... This Path notion is clearly expressed in the dictionary definitions of these verbs, for example: *Lon ton*: (children) go with happiness and good behaviors for a long time after somebody and try to keep up with him/her.

In sum, data show that the Vietnamese motion verb lexicon is rich in Path notions, with all the Path notions identified for the study appearing in the corpus with different frequencies.

It is also remarkable that some Vietnamese motion verbs may encode several Path notions at the same time. For examples, the verbs *Xuất ngoại* (go away from home to foreign countries), *Xuất gia* (leave home to be a monk or a nun), or *Lui tới* (frequently come to a place and go away from that place) seem

to encode both the Path notion “Away from G” and the Path notion “To/towards G”. This may also lead to a conclusion that some Vietnamese motion verbs may encode more than one Ground.

5. Conclusion

The results of the present study show that the Vietnamese motion verb lexicon is rich in lexicalization patterns. There are 12 lexicalization patterns, apart from the lexicalization pattern that encodes only the component Motion, in the Vietnamese motion verbs lexicon within the scope of the present study. Manner and Path are the prevalent general semantic components encoded in the Vietnamese motion verb lexicon, and Vietnamese motion verbs do not tend to encode Motion with Ground or with Figure alone.

The Vietnamese motion verb lexicon is also rich in Manner details, with all the 22 Manner details identified from the literature so far for the purpose of the present study appearing in the corpus. Some of the Vietnamese motion verbs may encode various Manner details at the same time. The Vietnamese motion verb lexicon is very poor in the Manner detail “Dance” and the Manner detail “Vehicle/Instrument”. It seems that the Vietnamese motion verb lexicon also encode other Manner details that have not been identified in the literature.

The results of the present study also show that the Vietnamese motion verb lexicon is rich in Path notions, with all the 13 Path notions identified from the literature so far for the purpose of the present study appearing in the corpus. Some Vietnamese Path motion verbs seem to encode several Path notions at the same time.

The present study, among the first attempts to give insights into the Vietnamese motion verb lexicon, still has a number of limitations. The first limitation is it focuses only on self-agentive and non-agentive translational motion verbs, and due to this limitation the results might not reflect the true nature of the Vietnamese motion verb lexicon. The second limitation is the corpus of the Vietnamese motion verb lexicon for the present study was built on only one dictionary, and this means some of the motion verbs in real daily use might be excluded from the study even though they are satisfactory to the selection criteria to be included in the corpus. The third limitation is it is difficult to distinguish between what a motion verb encodes and what a motion verb just implies, and this may lead to some wrong assumptions in the author’s analysis of the semantic information encoded in the verbs. The fourth limitation is the typical native Vietnamese speaker’s cognition of the semantic information encoded in the verbs may be different from dictionary definitions and also different from the author’s cognition of the verbs. Then, this preliminary study calls for and may pave way to further studies at deeper levels and on larger scales on the Vietnamese motion verb lexicon.

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Ngữ nghĩa của động từ chuyển động tiếng Việt dưới góc nhìn Ngôn ngữ học tri nhận

Tóm tắt: Nghiên cứu này nhằm cung cấp tổng thể về ngữ nghĩa của động từ chuyển động tiếng Việt, dựa trên lý thuyết các thành phần ngữ nghĩa tổng quát của Talmy (1985, 2000) cho Chuyển động, và nhấn mạnh vào phân tích chi tiết đặc điểm của Đường đi và Cách thức được mã hóa trong các động từ chuyển động tiếng Việt. Phương pháp chính của nghiên cứu này là phân tích mô tả và phân tích đối chiếu; dữ liệu được thu thập từ các từ điển đơn ngữ tiếng Việt và được phân tích với sự trợ giúp của phần mềm Microsoft Excel. Kết quả của nghiên cứu cho thấy ngữ nghĩa của động từ chuyển động tiếng Việt rất phong phú về mô hình từ vựng. Có 12 mô hình từ vựng hoá bên cạnh các mô hình mã hóa thành phần Chuyển động trong động từ chuyển động tiếng Việt trong phạm vi của nghiên cứu này. Kết quả của nghiên cứu có thể được áp dụng trong việc dạy-học tiếng Anh và tiếng Việt, trong dịch thuật tiếng Việt-Anh và tiếng Anh-Việt, và cũng có thể được sử dụng như một nguồn tham khảo cho các nghiên cứu tiếp theo về động từ chuyển động trong tiếng Việt.

Từ khoá: mô hình từ vựng hoá; động từ chuyển động; ngữ nghĩa; tiếng Việt; động từ chỉ cách thức và đường đi.