

Typologies of Lexicalization Patterns and Event Integration: Clarifications and Reformulations

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One of the most influential works in semantics in recent years is Leonard Talmy's crosslinguistic typologies of lexicalization patterns (Talmy (1975, 1985)) and event integration (Talmy (1991)), especially as they relate to the description of a motion event. Talmy's work, however, has been interpreted in a few different ways. The purpose of this paper is to clarify the differences in such interpretations and argue that the different interpretations in fact point to distinct phenomena. A modification of Talmy's typology is also proposed.

1. Talmy's Typologies

1.1. Lexicalization Patterns

Talmy (1985) deals with the relationship between meaning and surface expression: how semantic elements can be expressed in surface elements. He considers, among other things, the semantics of motion verbs in this respect. His notion of motion includes both movement as in (1a) and location as in (1b).

- (1) a. The bottle floated into the cave.
- b. The pencil lay on the table.

This paper will discuss only movement cases.

A motion event, according to Talmy (1985), consists of several elements: Motion, Figure, Ground, Path and Manner/Cause. Motion refers to the fact that some entity changes its location. The moving entity is called Figure, which changes its location with respect to another object called Ground. The Path is the course followed by the Figure. Manner and Cause are events related to Motion, describing the ways in which Figure moves and the Cause due to which the Figure moves. Talmy considers how these elements are realized in surface elements. The surface elements that he treats are the verb and the "satellite". The satellite is Talmy's cover term for "certain immediate constituents of a verb root other than inflections, auxiliaries, or nominal arguments" (p.102). In Talmy (2000:102) it is slightly rephrased as "the grammatical category of any constituent other than a noun-phrase or prepositional-phrase complement that is in a sister relation to the verb root. It relates to the verb root as a dependent to a head." These include English particles (e.g., *run out*), German and Russian verb prefixes (e.g., Russian *vy-bez&eal* 'ran out'), Chinese directional verbal complements (*piào guò* 'float past') and Atsugewi directional suffixes.

The relationship between semantic elements and surface form can be one-to-

one, many-to-one, or one-to-many. Talmy pays a special attention to the cases where more than one semantic element is realized (or lexicalized) in a single morpheme, the case he calls *conflation*.² He further identifies three major ways in which different elements of motion are conflated in the meaning of a verb in language.

The first type is one in which Manner or Cause is conflated with Motion in the meaning of a verb. A language that has this conflation pattern as a dominant one is English. Examples are given in (2) and (3).

(2) Motion + Manner

- a. non-agentive
The rock slid/rolled down the hill.
- b. self-agentive
I ran/jumped down the stairs.
- c. causative (Talmy's agentive)
I slid/rolled the keg into the storeroom.

(3) Motion + Cause

- a. non-agentive
The napkin blew off the table.
- b. causative (Talmy's agentive)
I pushed /threw the keg into the storeroom.

Talmy (1985:62) notes that language of this type has a whole series of verbs in common use that express motion occurring in various manners or various causes.

The second type is one in which the verb root at once expresses both Motion and Path. Romance languages are of this type. Talmy's examples from Spanish include those in (4) and (5). Note that Manner and Cause may be expressed as a participial adjunct, as in (4) and (5a) for Manner, and (5b) for Cause, respectively.

(4) Motion + Path (nonagentive and self-agentive)

- a. La botella entró a la cueva flotando.
The bottle moved.in to the cave floating
"The bottle floated into the cave."
- b. El globo subió por la chimenea flotando.
The balloon moved.up through the chimney floating
"The balloon floated up the chimney."

(5) Motion + Path (causative)

- a. Metí el barril a la bodega rodándolo.
I.moved.in the keg to the storeroom rolling.it
"I rolled the keg into the storeroom."
- b. Tumbé el árbol serruchándolo.
I.felled the tree sawing.it
"I sawed the tree down."

Note that Japanese presents a similar pattern. Note that Manner is expressed in a participle (see Matsumoto (1996, 1997) for extensive descriptions of lexicalization patterns in Japanese).

(6) Taro wa kawa o aruite watat-ta.

Taro Top river Acc walk cross-Pst
“Taro walked across the river.”

Talmy notes that languages of this type have a “whole series of surface verbs that express motion along various paths” (p. 69).

The third type is the conflation of the fact of Motion and Figure. Such conflation can be seen in an English example like (7).

(7) It rained in through the bedroom window.

One language in which this pattern is characteristic is the Hokan language Atsugewi (Talmy (1972)), which has an extensive set of verb roots like those given in (8).

(8) -lup- ‘for a small shiny spherical object (e.g., a round candy, an eyeball, a hailstone) to move.’
-caq- ‘for a slimy lumpish object (e.g., a toad, a cow dropping) to move/be located’

Such verb roots are prefixed by an “instrumental prefix” which represents Cause and suffixed by a “directional suffix” (which encodes Path and Ground) and a deictic suffix.

Talmy also discusses how different elements are lexicalized in satellites. The patterns are partially correlated with verb lexicalization patterns. For example, those languages that have the predominant Manner + Motion conflation pattern in verbs tend to have Path lexicalized in satellites, as can be seen in the English examples (2) and (3).

Talmy (1985) does recognize cases where more than one pattern coexists in a language. English, for example, does have verbs like *enter* and *ascend*, used as in Spanish. However, he claims that a language has one pattern as its *dominant* type, and this dominancy can be judged by frequency and colloquiality of expressions.

Although Talmy originally proposed this three-way distinction of Manner/Cause, Path, and Figure conflation patterns, the subsequent literature has often talked of two major types of conflation: Manner conflation and Path conflation. This appears to be because of two reasons. First, the third type—the conflation of Figure and Motion—is restricted to relatively unfamiliar languages, and it is often left out of discussion. In addition, the case of Cause conflation is rare in noncausative motion expressions in languages in which they are supposed to be predominant (e.g., English), and in this respect irrelevant to the discussion on noncausative motion expressions. The languages that have the dominant Manner + Motion pattern and the Path + Motion pattern are sometimes called manner languages and path languages, respectively (cf. Wienold (1995)).³

1.2. Different Interpretations of Lexicalization Patterns

This typology of lexicalization has been interpreted in a few different ways, and different criteria are used to identify manner languages and path languages.

First, some have interpreted Talmy’s typology as pointing to the difference in the richness of different types of motion verbs: manner languages are those which have a relatively rich set of manner-of-motion verbs; path languages are those

which have a relatively rich set of path verbs. In this view, “the verb” in which various semantic elements are conflated is the verb as a lexical category. This interpretation is consistent with the term *lexicalization*, since it talks about how different semantic elements are conflated or lexicalized in a certain kind of lexical item. This interpretation is based crucially on Talmy’s observation that a language that has a particular conflation pattern has a whole series of verbs exhibiting that pattern, as quoted above. This position is taken by Wienold (1995), among others. I will call this view the verb repertoire view.

Another interpretation is that Talmy’s typology refers to what is encoded in the verb as *the head of a sentence*: Manner languages are those in which Manner is encoded in the verb as the head of a sentence, while path languages are those in which path information is encoded in the verb as the head. In this view, “the verb” refers to the specific syntactic position verbs normally take, i.e., the head of a sentence. According to this interpretation, Talmy’s typology is not so much a matter of the lexical items as of how a sentence is semantically organized. The term lexicalization pattern would then be slightly misleading.

This interpretation is consistent with Talmy’s use of the term “the verb” as opposed to “the satellite”. As pointed out above, the satellite is defined as a certain item which is in a sister relation to the verb root and modifies it. It can be of any syntactic category (e.g., particle, verb, affix, etc.). Here, the satellite is defined in terms of its syntactic position in a clause (or its syntactic function) rather than its syntactic category. The notion of the verb which contrasts with the satellite can then be similarly understood. I will call this position the sentence structure view.

The third interpretation, which is based on a perspective different from the previous two, focuses on one particular observation of Talmy (1985): the difference in the nature of manner-of-motion verbs. In reference to examples like (2) and (3) above, Talmy (1985:63) states that “[e]ven a language as seemingly kindred as Spanish *can express virtually none* of the above sentences in the way that English does.” Some seem to have taken this observation to mean that Spanish does not lexicalize Motion with Manner,⁴ and takes this difference to be the most crucial aspect of lexicalization typology. On this view, manner languages are those in which manner-of-motion verbs can occur with a variety of path prepositional phrases, while path languages are those in which this is not possible. This appears to be the interpretation of Levin & Rappaport Hovav (1995:183, footnote 1, 2 of Chapter 5), and Kageyama & Yumoto (1997). I will call this position the manner verb difference view.

The phenomenon highlighted in this view is the fact that manner-of-motion verbs in Romance languages are not compatible with a (certain) goal phrase, as shown in (9).⁵

- (9) a. *Paul a marché à la gare. (French; Jones (1996:395))
 Paul walked to the station
 b. *La botella flotó a la cueva. (Spanish)
 the bottle floated to the cave

The same phenomenon has been noted in Japanese (Ikegami (1981), Miyajima (1984), Yoneyama (1986)).⁶

- (10) ??Taro wa eki ni arui-ta.
 Taro Top station to walk-Pst
 “Taro walked to the station.”

Often related to this is Carter’s (1988:173-175) observation about the sentences in (11).

- (11)a. The bottle will float under the bridge.
 b. La bouteille flottera sous le pont. (French)
 the bottle will.float sunder the bridge
 “The bottle will float under the bridge.”

The English sentence (11a) is ambiguous: *under the bridge* can be the location at which the bottle’s floating takes place, or the goal to which the bottle moves. The French sentence, on the other hand, does not have the second reading. This phenomenon in French has often been linked to the incompatibility of a goal phrase with manner-of-motion verbs. (Both (11a) and (11b) in fact has another reading not noted by Carter: ‘under the bridge’ is a part of the path along which the bottle moves on the way to some goal. The existence of this reading is not relevant to the discussion here.)

In this view, what is crucial is whether manner language pattern is possible or not. Whether the path language pattern (the conflation of Path and Motion in the verb) is possible or not, or which pattern is dominant, is not considered.

1.3. Talmy’s Position and the Typology of Event Integration

Talmy’s own position has been, according to him, what I have called the sentence structure view (Talmy (p.c.)). (The verb repertoire difference is presumably only one characteristic that manner and path languages tend to exhibit.) This is clear in his formulation of the typology of event integration.

Talmy’s (1991) typology of event integration is different from the “lexicalization” typology in a few respects. Most importantly, rather than looking at which semantic notions are encoded by particular constituents, this typology of event integration looks at which constituent encodes a particular semantic notion (Talmy (2000:117)). The particular semantic notion examined is Path in the description of motion events. This typology is also much broader than lexicalization typology in terms of its scope since it tries to capture parallel differences in resultative and other expressions in language. I will confine my discussion to motion expressions.

This typology is based on how an event complex is integrated into one clause. Talmy argues that the sentence like *The bottle floated into the cave* integrates two events: the event of the bottle moving into a cave and the event of the bottle’s floating. In the two events, the motion event is the *framing event*, which plays a primary role in the event complex. The floating event, on the other hand, is a *coevent*, which holds a particular supplementary relation to the framing event—in this case, the relation of manner. The framing event has a core schema, which describes the relationship between Figure and Ground. The core schema in a motion event is Path.

This typology recognizes two major types of language: *verb-framed languages* and *satellite-framed languages*. The verb-framed languages are those languages in which the core schema of Path is encoded by the verb as the head of a clause (cf. path language). The satellite-framed languages are those in which Path is encoded

by a satellite. Note that in this typology, how manner and figure are lexicalized does not matter. What is important in satellite-framed languages like English is that Path is encoded in satellites, not that Manner is conflated with Motion. Figure-conflating languages like Atsugewi are regarded as satellite-framed since Path is encoded by suffixes.

2. Reformulations

Talmy's framing typology, however, leaves room for revision. In addition, the verb repertoire view and manner verb difference view can be understood as pointing to distinct phenomena.

2.1 Head- vs. Nonhead-framed Languages: Typology of Clause Structuring

Talmy's typology of motion verbs can be slightly reformulated to capture his intention. Talmy's typology of verb vs. satellite-framed languages suffers from the misleading use of the term "verb". What is meant by the term verb is in fact the head of a clause. Satellites can also be a verb, as is true of the Spanish and Japanese sentences in (4) through (6). For this reason, a better name for verb-framed languages is *head-framed languages*. Satellite-framed languages, on the other hand, can be termed as *nonhead-framed languages*. Note that satellites and nonheads are slightly different notions: all satellites are nonheads by definition (see above), but not all nonheads are satellites. Satellites as defined above do not include prepositions, since they are not a sister of a verb. Therefore, sentences like (12) are not technically satellite-framed. Under the distinction of the head- vs. nonhead-framed patterns, it is clearly nonhead framed.

(12) John walked through the building.

Another divergence is observed when Path is indicated by case on a nominal argument, as is true of Finnish. (13) is an example in which the goal of a motion verb is indicated by an illative-marked nominal.

(13) Elina käveli koti-in. (Nikanne (1990:77))
Elina walked home-III
"Elina walked home."

Since case markers on nominals are not sisters of the verb, sentences like (13) are not satellite-framed, though they are nonhead framed. (Talmy (2000:222) states that Finno-Ugric languages are generally satellite-framed.)

Thus, the proposed distinction between the head- vs. nonhead-framed languages captures what Talmy has intended to capture in a more accurate way. It avoids the misleading use of the term verb and the relatively unfamiliar notion satellite, in favor of the notions head and nonhead. It also covers the cases which the distinction of verb vs. satellite frame does not in fact cover.

2.2. Reconsidering the Verb Repertoire View

Now the question that we ask is how the verb repertoire view and manner verb difference view should be understood in connection to the framing typology we have reformulated. First let us look at the verb repertoire view.

2.2.1. Independence of Verb Repertoire and Framing Typology

As has been pointed out, languages differ in the richness of manner-of-motion verbs or path verbs. Some languages, such as English and German, have an

enormous number of manner-of-motion verbs. Levin (1993), for example, lists more than 100 manner-of-motion verbs, and German appears to have as many (Snell-Hornby (1983)). (14) is only a partial list of English manner-of-motion verbs (cf. Levin's (1993) *run*-class and *roll*-class).

- (14) amble, bounce, bowl, canter, charge, clamber, crawl, creep, dart, dash, dodder, drift, flit, float, fly, gallop, gambol, glide, hasten, hike, hobble, hop, hurry, inch, jog, jump, leap, limp, lumber, march, mosey, pad, parade, plod, prance, prowl, race, roam, roll, run, rush, saunter, scramble, scurry, shamble, shuffle, skip, skulk, slide, slither, sneak, speed, stagger, streak, stride, stroll, strut, wager, sweep, swim, toddle, totter, tramp, trot, waddle, wade, walk, wander

In contrast, Japanese, which Wienold claims to be one of the purest path languages, has much fewer manner-of-motion verbs: Matsumoto (1997) lists 13 monomorphemic manner-of-motion verbs. As Wienold (1995) and Slobin (1997) note, basic manner-of-motion verbs such as 'walk', 'run', 'fly', and 'swim', appear to exist in most languages. A "rich" manner of motion verb system is characterized by finer distinctions, like different kinds of walking (e.g., striding, swaggering).

The number of path verbs in a language also vary, though at a relatively smaller number level. Matsumoto (1997) counts 33 path verbs in Japanese, while German has "practically no monomorphemic path verbs" (Wienold 1995). (English has 20 (Levin 1993), most of which are borrowed from Romance.) Obviously, there are fewer path distinctions made in a language than manner distinctions. A system of a dozen path verbs, with commonly used verbs such as 'go up', 'go out' and 'go across', would be a relatively rich system of path verbs in a language.

The typology of languages by verb repertoire difference is independent of the head vs. nonhead framing typology (at least to some degree). First, some verb-framed languages do have a relatively rich manner of motion verb system, though perhaps not as rich as Germanic languages. (Such verbs can be used as a participial adjunct as well as the head verb.). One example is French. Fong & Poulin (ms) list as many as 71 manner-of-motion verbs in this language (though they include some morphologically derived verbs), some of which are listed in (15).

- (15) bondir 'leap', bouler 'roll', courir 'run', s'élancer 'dash', foncer 'charge', glisser 'glide', marcher 'walk', se précipiter 'dash', rouler 'roll', se ruer 'dash, hurl, rush', sauter 'jump', se traîner 'creep', trotter 'trot', trotter 'trot', trotter 'trot', scurry, voler 'fly', se balader 'stroll', barboter 'dabble, wade', batifoler 'romp', boîter 'limp', chanceler 'stagger', clopiner 'hobble', couler 'flow, run', déambuler 'wander', dériver 'drift', flotter 'float', se frayer 'scramble', galoper 'gallop', gambader 'gambol', se hâter 'hurry', nager 'swim', parader 'parade', planer 'glide, hover', rôder 'prowl', tituber 'stagger', vaguer 'wander', voleter 'flit', voltiger 'flutter, fly'

Note that some (e.g., *trotter*, *galoper*) are sources for corresponding English manner-of-motion verbs.

Hindi might be another case in point (Narasimhan (1998)). Given sentences like (16), one can conclude that Hindi is a head-framed language.

- (16) a. laD.kaa langaD.aatee huee kamree-mee ghusaa.
boy-Nom hobble-Msc.Hab while room-Loc enter-Sg.Msc.Prp
"The boy came into the room, hobbling."

b. laD.kaa langaD.aakar kamree-mee aayaa.
 boy-Nom hobble-by room-Loc come-Sg.Msc.Prf.

“The boy came into the room, hobbling.”

However, Hindi has a relatively rich set of manner-of-motion verbs. Narasimhan (1998) has noted that Hindi has 23 manner-of-motion verbs, which include *bhachaknaa* ‘hobble’, *iThlaanaa* ‘swagger’, *saraknaa* ‘sneak’, *dabaknaa* ‘skulk’, *la.Dkha.Daanaa* ‘dodder’, and *Tahalnaa* ‘amble’. (In contrast, Narasimhan counts 13 path verbs).

Another verb-framed language that appears to have a relatively rich set of manner of motion verbs is the Bantu language Tswana. In this language, a variety of path notions are encoded by the head verb, with manner indicated by an optional participial clause, whose subordinated nature is marked by the agreement marker *a-* (Schaefer (1985:69-70)) as shown in (17).

- (17) a. mò-símàné ó-pálám-à thàbà a-tábóg-à.
 Cl.1.boy he-move.up-Imp mountain he-run-Imp
 “The boy is running down the mountain.”
- b. mò-símàné ó-tshél-à lè-sàkà a-tábóg-à.
 Cl.1.boy he-move.across-Imp Cl.5-kraal he-run-Imp
 “The boy is running across the kraal.”

The participial position can be filled by a number of manner-of-motion verbs. Schaefer (1985) points out that at least 19 that he lists function in this way. Some are given in (18).

- (18) -kíbitl- ‘run with heavy footfall’
 -gágáb- ‘crawl’
 -kókóróg- ‘walk in a proud fashion’
 -tótób- ‘walk in a tottering fashion’
 -kgópóg- ‘walk quickly’

Another kind of discrepancy is found in Chinese and Thai. Wienold (1985) takes the repertoire interpretation of lexicalization typology, and claims that Thai is a path language, and that Chinese probably is as well, although Talmy (1985, 1991, 2000) and Ohori, Kimbara, Takubo & Kessakul (2000) respectively claim Chinese and Thai to be satellite- (or nonhead-) framed languages (see also Takahashi (1997) and Kessakul (1998) on Thai).

Thai and Chinese do have a relatively rich set of path verbs; Wienold list 19 path verbs, and Chinese has at least 13 (Li & Thompson (1981:59, 363, 398)). In addition, they are in frequent use, given the lack or poverty of adpositions representing path notions. However, these verbs are not used as the head when they cooccur with manner-of-motion verbs. Chinese motion verbs are classified into three categories in terms of how they participate in directional compound verbs (Li & Thompson (1981), Lu (1973, 1977), Zou (1994), etc.): a) “displacement verbs” (which include manner-of-motion verbs), b) “directional verbs” and c) “deictic verbs”. When they are compounded, the possible patterns are (a) + (b), (a) + (c), (b) + (c), or (a) + (b) + (c). An example with all three verbs is given in (19).

- (19) Tā pǎo-chū-lái le.
 he run-exit-come Asp
 “He came running in.”

There are a few pieces of evidence suggesting that the first verb of the compound is the head (see Li (1995)). One evidence comes from argument structure.

Causative motion verbs such as *rēng* ‘throw’ also participate in directional compounding in the “displacement verb” slot, allowing compounding like (20). In this case it is the first verb of the compound that determines the transitivity of the whole. Note that verbs like *chū* ‘exit’ or *lái* ‘come’ do not have a causative use.

- (20) Tā rēng-chū-lái le yī ge píngzi. (Zou (1994:445))
 he throw-exit-come Asp one Cl bottle.
 “He threw out a bottle (toward the speaker).”

Thus, when a manner of motion verb and a path verb cooccur, it is the former that heads a sentence. Directional verbs and deictic verbs used in (19) and (20) are often called directional complements.

A similar point can be made in Thai. Different kinds of motion verbs participate in a directional serial verb construction in Thai (Filbeck (1975), Thepkanjana (1986), Muansuwan (2000), etc.). In this case, a manner verb always occurs as the first verb, and a deictic verb as the last, with nondeictic path verbs in between, as exemplified in (21).

- (21) dǎn khāw pay nay hōng.
 walk enter go in room
 “walk into the room”

The question is which one of these verbs is the head of the sentence. This is somewhat a difficult issue, but some have claimed that the first verb is the semantic core (Filbeck (1975)), and that path verbs have some grammaticalized status (Bisang (1991), Iwasaki (to appear)). There are a few pieces of evidence supporting this view. One comes from argument structure: the first verb in serial verbs determines the argument structure of the whole sentence. In (22), for example, the transitivity of the clause is determined by the first verb *khwaang* ‘throw’. Note that path verbs such as *phāan* and *long* do not have a causative use.

- (22) khwaang lūukbɔn phāan nāataàng long pay nay sàp.
 throw ball pass window descend go in pond
 “throw a ball out the window down into the pond” (Thepkanjana, (p.c.))

Thus, these two languages can be said to be nonhead-framed languages in spite of their relatively rich path verb lexicons.

2.2.2. Manner and Syntactic Categories

These observations show that the issue of the lexical repertoire is at least partially independent of the head vs. nonhead framing typology. It is natural to expect that head-framed languages have a rich set of path verbs; otherwise, path distinctions cannot be made in the language. However, nonhead-framed languages may or may not have a rich set of path verbs; a rich set of path verbs can be used in a nonhead position, as is the case with Chinese and Thai.

The relationship between the framing typology and the richness of manner-of-motion verbs is less clear. Head-framed languages can use manner verbs as their nonhead element, and such manner of motion verb repertoires can be relatively large, as is the case with French and Tswana. Nonhead-framed languages also do not have to have a rich set of manner-of-motion verbs: it is conceivable for a nonhead-framed language to have a few general manner-of-motion verbs, with finer distinctions made in adverbials.⁷

There is another reason to think the richness of manner-of-motion verbs can be independent of framing typology. The abundance of manner-of-motion verbs in

English and other Germanic languages is a part of their abundance of manner verbs in general (Snell-Hornby (1983), Wienold (1995)). English and other Germanic languages have a rich set of verbs representing manners of speaking, manners of light emission, manners of the causation of motion, etc. English manner of speaking verbs are given in (23). Note that some of them have onomatopoeic flavors.

- (23) babble, bark, bawl, bellow, bleat, boom, bray, burble, cackle, call, carol, chant, chatter, chirp, cluck, coo, croak, croon, crow, cry, drawl, drone, gabble, gibber, growl, grumble, grunt, hiss, holler, hoot, howl, jabber, lilt, lisp, moan, mumble, murmur, mutter, purr, rage, rasp, roar, rumble, scream, screech, shout, shriek, sing, snap, snarl, snuffle, splutter, squall, squawk, squeak, squeal, stammer, stutter, thunder, tick, trill, trumpet, twitter, wail, warble, wheeze, whimper, whine, whisper, whistle, whoop, yammer, yap, yell, yelp, yodel (Levin (1993))

Other languages, such as Japanese, tend to have a small set of manner verbs and to make such finer manner distinctions in adverbials, especially in onomatopoeic or semi-onomatopoeic terms. (24) is a list of manner of speaking verbs in Japanese. (25) provides partial lists of manners of motion and manners of speaking in (semi-)onomatopoeic adverbs, most of which are optionally marked with *-to*.

- (24) sakebu 'shout', sasayaku 'whisper', naku 'cry', donaru 'yell', domoru 'stutter', hoeru 'bark', utau 'sing', tsubuyaku 'murmur'
- (25) a. bura-bura 'leisurely', choko-choko 'with short rapid movements', noro-noro 'slowly', noshi-noshi 'in heavy steps', pyon-pyon 'with repeated hops', tobo-tobo 'wearily', uro-uro 'aimlessly', yochi-yochi 'with unsteady short steps', yoro-yoro 'unsteadily'
- b. gami-gami 'complaining noisily', hiso-hiso 'whispering secretly', kyaa-kyaa 'in long high-pitched screams', mogo-mogo 'indistinctly', pecha-kucha 'chattering', pera-pera 'in a jabber, fluently', uda-uda 'incoherently at length'

This kind of difference in the syntactic categorization of manner has been noted in studies on the (semi-)onomatopoeias and ideophones. Tamori & Scourup (1999), for example, observe that almost all onomatopoeic words in Japanese function as manner adverbs, while only some function as verbs. In contrast, they observe, English onomatopoeias can be nouns, verbs, and interjections, but not frequently as manner adverbs; furthermore, all which have noun uses also have verbal uses. (See also Childs (1994) for a discussion of syntactic categorization of ideophones in African languages.)

It is meaningful to talk of such a distinction as a parameter in human language, which I will call the manner categorization parameter. Some languages such as English are manner-in-verb languages, in which verbs tend to make rich manner distinctions, while languages like Japanese are manner-in-adverb languages, in which manner distinctions are primarily made by adverbials. Note that this parameterization concerns the *lexical categories* in which manner is coded. It does not specify where in a sentence they are used. This parameter may well be a matter of degree, without a clear-cut line between the two types. Manner-in-verb languages seem to include French, although French is perhaps not as extreme a case as German or English.

Noting a possible balance between the richness of manner-of-motion verbs and

that of (semi-)onomatopoeic manner adverbs, Wienold (1995:317) hypothesizes that “if a language has a specific word class lexicalizing adverbs of a manner type, such a language will always be poor in motion verbs of manner”. He claims that Japanese and Korean are languages that support this hypothesis. One difficulty with this hypothesis concerns the notion of “a specific word class” of (semi-)onomatopoeic adverbs (see also Childs (1994)). Japanese (semi-)onomatopoeic adverbs do have special phonological properties. However, they are not morphologically or syntactically different from other kinds of manner adverbs: deadjectival manner adverbs such as *huka-buka* ‘deeply’ and Sino-Japanese manner adverbs such as *yuu-yuu* ‘with an air of composure’ have optional *-to* ending and participate in a clause in the same way as semi-onomatopoeic manner of motion adverbs above. What is important, it appears to me, is that those languages which categorize manner primarily in adverbs tend not to have a rich set of manner verbs, whether or not (semi-)onomatopoeic manner adverbs form an independent word class or not.

2.3. Reconsidering the Manner Verb Difference View

Finally, I would like to discuss the manner verb difference view of lexicalization typology in the light of the reformulated framing typology. The manner verb difference view considers only a part of lexicalization or framing typology. The definitive feature of head-framed languages is the conflation of Path and Motion in the head verb as their *dominant* pattern, rather than the lack of the expressions typical of nonhead-framed languages. Examination of whether or not the nonhead-framed pattern is possible without considering how dominant the head-framed pattern is does not do full justice to lexicalization or framing typology. This is especially true when only the expression of a goal is considered for compatibility with a manner-of-motion verb, rather than a full range of path relations.

A relevant example is found in the treatment of Tswana (Schaefer (1985)). In this language, the phrase that is usually interpreted as a locative is interpreted as a goal when a manner of motion verb is extended by an applicative morpheme *-ël*. This is exemplified in (26).

- (26) a. mò-símàné ó-tábóg-à fá-tẹ̀ng gá-kàgó
 Cl.1.boy he-run-Imp Nearby-inside Loc-building
 “The boy is running inside the building.”
- b. mò-símàné ó-tábóg-ël-à fá-tẹ̀ng gá-kàgó
 Cl.1.boy he-run-to-Imp Nearby-inside Loc-building
 “The boy is running to the inside of the building.”

If one takes the manner verb difference view and just looks at (26), one might conclude that Tswana is an intermediate type between English-type and Spanish-type, as Levin & Rappaport Hovav (1995) have concluded, since a manner of motion verb is compatible with a goal with the addition of a morpheme. However, this possibility is restricted to the expression of a goal. In the expression of other Path notions Tswana uses a typical head-framed pattern, as shown in (17) above. The nonhead-framed nature of Tswana is also seen in (26b), in which the goal indicating function is borne not by the verb root but by a nonhead suffix.

One complication here is the fact that a language sometimes allows alternating framing possibilities. It has been pointed out that head-framed languages often

allow nonhead-framed pattern under certain circumstances. For example, French, Spanish and Japanese allow some types of path phrases to cooccur with manner-of-motion verbs, as in (27), in contrast to their incompatibility with a goal phrase used in (9) and (10) (Aske (1989), Bouchard (1995), Fong & Poulin (1998, ms), Slobin (1996, 1997), Talmy (2000)).

- (27) a. La botella flotó hacia la cueva. (Spanish: Aske (1989:3))
 the bottle floated toward the cave
 “The bottle floated toward the cave.”
- b. Ophélie a flotté vers Hamlet. (French: Bouchard (1995:191))
 Ophelia floated toward Hamlet
 “Ophelia floated toward Hamlet.”
- c. Jon wa eki no hoo e hashit-ta. (Japanese)
 John Top station Gen direction Dir run-Pst
 “John ran toward the station.”

In general, a direction phrase (e.g., *toward*) is compatible with manner-of-motion verbs in any language. This kind of situation raises the question of under what circumstances different patterns are used. (See Slobin (1996, 1997, 2000) for one hypothesis involving the notion of boundary crossing.)

Having established the danger of looking at the compatibility of manner-of-motion verbs with a goal phrase as pointing to framing typology, we are still left with the question of why (certain) manner-of-motion verbs in French, Spanish and Japanese are not compatible with goal phrases of the type used in (9) and (10). This issue deserves a full treatment in an independent paper. However, I would like to briefly discuss one plausible suggestion made in the literature. The goal markers that are not compatible with manner-of-motion verbs in Romance languages and Japanese have an alternative use as a locative marker. The “goal” phrase with such a marker is in fact more like a locative phrase, and cannot be interpreted as a goal unless the verb entails translational motion, which many manner-of-motion verbs do not (e.g., Cummins (1998), Jones (1983, 1996), Levin (p.c.), Matsumoto (1997)). On this view the difference between the Spanish, French and English sentences in (9) and (10) and their English counterpart comes from the different nature of the particular prepositions involved rather than the different nature of manner-of-motion verbs. If this is indeed the case, then, this particular difference is not directly related to the issue of framing typology. In fact, Romance-like phenomenon is found in some nonhead-framed languages. Basilectal varieties of Jamaican and Guyanese Creoles examined by Winford (1993) can be regarded as nonhead-framed, given that they employ, to indicate Path, 1) directional serial verbs such as *go* ‘go’, *kom* ‘come’ and *komout* ‘come out’ together with manner of motion verbs (e.g., *waak* ‘walk’) and causative motion verbs (e.g., *sen* ‘send’), and 2) particles such as *aut* ‘out’, *dong* ‘down’ and *awee* ‘away’ in caused motion descriptions. In these languages a locative phrase is interpreted as a goal with directional verbs, but not with manner-of-motion verbs (Winford 1993: 191, 194), as shown in (28).

- (28) a. Dem a waak a di striit
 they walk Loc the street
 “They are walking in the street.”
- b. Dem {go/kom} a maakit.
 they go/come Loc market

“They {went/came} to a market.”

Furthermore, it is not a surprise that some head-framed languages allow manner-of-motion verbs to be compatible with a (non-locative-like) goal phrase. Modern Hebrew might be a case in point. In this language which Berman and Neeman (1997), Slobin (1997, 2000), and Talmy (1991, 2000) classify as a verb-framed language, manner-of-motion verbs occur with a goal phrase. A relevant example is (29) (Levin & Rappaport Hovav (1995:183)).

(29) Hu rakad el mixuts la-xeder.
he danced to outside to.the-room
“He danced out of the room.”

NOTES

¹ In writing this paper I would like to thank Leonard Talmy and Wesley Leonard for valuable comments.

² There is also the case in which the same semantic notion is realized in two different surface elements. For this kind of case, see Sinha and Kuteva (1995).

³ Talmy’s lexicalization typology is foreshadowed by the works of those who have noted Germanic vs. Romance (or Japanese) difference in motion expressions (Bergh (1948), Vinay & Darbelnet (1958), Tesnière (1959), Wandruszka (1971), Miyajima (1984)).

⁴ It is not clear to me whether Talmy intends this. The statement quoted above might be interpreted as referring to the specific Spanish counterparts to the English examples used.

⁵ Levin & Rappaport Hovav (1995) use the term “directional phrase” to refer to goal phrases used in (9) and (10). This use is unfortunate, since phrases that indicate direction in its narrow sense (e.g., *toward* ...) behave differently from a goal phrase, as will be mentioned later.

⁶ There is some dialectal variation in the goal marking in Japanese. Some have used the postposition *e* as a goal marker in sentences like (10) and mark it as unacceptable. However, the primary sense of this postposition is a direction sense in many speakers including myself, and the postposition is acceptable when used in place of *ni* in (10).

⁷ Chinese might be a language like this, many manners indicated by *-de* adverbs.

REFERENCES

- Aske, J. (1989) “Path Predicates in English and Spanish: A Closer Look,” *BLS* 15, 1–14.
- Bergh, L. (1948) *Moyens d’Exprimer en Français l’Idée de Direction: Étude Fondée sur une Comparaison avec les Langues Germaniques, en Particulier le Suédois*. Ph. D. diss., Univ. of Gotheburg.
- Berman, R. A., and Y. Neeman (1994) “Development of Linguistic Forms: Hebrew,” *Relating Events in Narrative: A Crosslinguistic Developmental Study*, ed. by R. A. Berman and D. I. Slobin, 285–328, Erlbaum.
- Bisang, W. (1991) “Verb Serialization, Grammaticalization and Attractor Positions in Chinese, Hmong, Vietnamese, Thai and Khmer,” *Participation: Das sprachliche Erfassen von Sachverhalten*, ed. by H.-J. Seiler and W. Premper, 509–562, Gunter Narr.
- Bouchard, D. (1995) *The Semantics of Syntax: A Minimalist Approach to Grammar*, Univ. of Chicago Pr.

- Carter, D. (1988) "Compositionality and Polysemy," *On Linking: Papers by Richard Carter*, ed. by B. Levin and C. Tenny, LPWP 25, MIT.
- Childs, G. T. (1994) "African Ideophones," *Sound Symbolism*, ed. by L. Hinton, J. Nichols, and J. J. Ohala, 178–204, Cambridge Univ. Pr.
- Cummins, S. (1998) "Le Mouvement Directionnel dans une Perspective D'analyse Monosemique," *Langues et Linguistique* 24, 47–66.
- Filbeck, D. (1975) "A Grammar of Verb Serialization," *Studies in Tai Linguistics: In Honor of William J. Gedney*, ed. by J. G. Harris and J. R. Chamberlain, 112–129, Central Institute of English Language, Office of State Universities, Bangkok.
- Fong, V., and C. Poulin (1998) "Locating Linguistic Variation in Semantic Templates," *Discourse and Cognition: Bridging the Gap*, ed. by J.-P. Koenig, 29–39, CSLI Publications.
- Fong, V., and C. Poulin (ms) "Verb Classes and Aspect Shift," Unpublished paper, Stanford Univ.
- Jones, M. A. (1983) "Speculations on the Expression of Movement in French," *Univ. of Essex Language Centre Occasional Papers* 27, 165–194.
- Jones, M. A. (1996) *Foundations of French Syntax*. Cambridge Univ. Pr.
- Ikegami, Y. (1981) 'Suru' to 'Naru' no Gengogaku (The Linguistics of 'Do' and 'Become'). Taishukan.
- Iwasaki, S. (To appear) "Structural Reanalysis in Thai discourse," *Papers from the 10th Annual Meeting of Southeast Asian Linguistics Society*.
- Kageyama, T., and Y. Yumoto (1997) *Gokeisei to Gainenkoozoo* (Word Formation and Conceptual Structure), Kenkyusha.
- Kessakul, R. (1998) "Nichi-tai-go no Ido o Arawasu Yootai-jutugo no Saikoosatsu (Rethinking the Manner Predicates of Motion Verbs in Thai and Japanese)," *Gengo-joohoo-gaku Kenkyu* 3, 81–98, Univ. of Tokyo.
- Levin, B. (1993) *English Verb Classes and Alternations*. Univ. of Chicago Pr.
- Levin, B., and M. Rappaport Hovav (1995) *Unaccusativity: At the Syntax-Lexical Semantics Interface*. MIT Pr.
- Li, Y. (1995) "The Thematic Hierarchy and Causativity," *NLLT* 13, 255–282.
- Li, C. N., and S. A. Thompson (1981) *Mandarin Chinese: A Functional Reference Grammar*. Univ. of California Pr.
- Lu, J. H. T. (1973) "The Verb-verb Construction with a Directional Complement in Mandarin," *Journal of Chinese Linguistics* 1, 239–255.
- Lu, J. H. T. (1977) "Resultative Verb Compounds vs. Directional verb Compounds in Mandarin," *Journal of Chinese Linguistics* 5, 276–313.
- Matsumoto, Y. (1996) *Complex Predicates in Japanese: A Syntactic and Semantic Study of the Notion 'Word'*. CSLI Publications. and Kurosio.
- Matsumoto, Y. (1997) "Kuukan-idoo no Gengo-hyoogen to Sono Kakuchoo (Linguistic Expressions of Spatial Motion and their Extensions)," *Kuukan to Ido no Hyoogen*, S. Tanaka and Y. Matsumoto, 126–229, Kenkyusha.
- Miyajima, T. (1984) "Nihongo to Yooroppago no Idoodooshi (Verbs of Motion in Japanese and European Languages)," *Kindaichi Haruhiko Hakushi Kokikinen Ronbunshuu* (A Festschrift for Dr. Haruhiko Kindaichi on His 70th Birthday). Sanseido.
- Muansuwan, N. (2000) "Directional Serial Verb Constructions in Thai," *Proceedings of the 7th International HPSG Conference*, ed. by D. Flickenger and A. Kathol, CSLI Publications. Available at <http://csli-publications.stanford.edu/HPSG/1/hpsg00muansuwan.pdf>.
- Narasimhan, B. (1998) *The Encoding of Complex Events in Hindi and English*, Ph. D. diss., Boston Univ.
- Nikanne, U. (1990) *Zones and Tiers: A Study of Thematic Structure*, Suomalaisen Kirjallisuuden Seura.
- Ohuri, T., I. Kimbara, K. Takubo, and R. Kessakul (2000) "Idoo-hyoogen no Ruikee to Danwa Fureemu—Ways to travel in East Asia (Typology of Motion Events and Discourse Frame—Ways to travel in East Asia)," *KLS* 20, 186–195.

- Schaefer, R. P. (1985) "Motion in Tswana and its Characteristic Lexicalization," *Studies in African Linguistics* 16, 56–87.
- Sinha, C., and T. Kuteva (1995) "Distributed Spatial Semantics," *Nordic Journal of Linguistics* 18, 167–99.
- Slobin, D. I. (1996) "Two Ways to Travel: Verbs of Motion in English and Spanish," *Grammatical Constructions: Their Form and Meaning*, ed. by M. Shibatani and S. A. Thompson, 195–219, Clarendon Pr.
- Slobin, D. I. (1997) "Mind, Code, and Text," *Essays on Language Function and Language Type: Dedicated to T. Givon*, ed. by J. Bybee, J. Haiman and S. A. Thompson, 437–67, John Benjamins.
- Slobin, D. I. (2000) "Verbalized events: A Dynamic Approach to Linguistic Relativity and Determinism," *Evidence for Linguistic Relativity*, ed. by S. Niemeier and R. Dirven, 107–38, John Benjamins.
- Snell-Hornby, M. (1983) *Verb-descriptivity in German and English: A Contrastive Study in Semantic Fields*, Winter.
- Takahashi, K. (1997) "Verbs for Global Locomotory Body Motion in Thai," *The Proceedings of the 16th International Congress of Linguistics, Paris, 20-25 July 1997*.
- Talmy, L. (1972) *Semantic Structures in English and Atsugewi*, Ph. D. diss., University of California, Berkeley.
- Talmy, L. (1975) "Semantics and Syntax of Motion," *Syntax and semantics* 4, ed. by J. Kimball, 181–238, Academic Pr.
- Talmy, L. (1985) "Lexicalization patterns: Semantic Structure in Lexical Forms," *Language typology and Syntactic Description III: Grammatical Categories and the Lexicon*, ed. by T. Shopen, 57–149, Cambridge Univ. Pr.
- Talmy, L. (1991) "Path to Realization," *BLS* 17, 480–519.
- Talmy, L. (2000) *Toward a Cognitive Semantics*. MIT Pr.
- Tamori, I., and L. Scourup (1999) *Onomatopoe: Keitai to Imi* [Onomatopoeia: Form and Meaning], Kurosio.
- Tesnière, L. (1959) *Elements de Syntaxe Structurale*. Klincksieck.
- Thepkanjana, K. (1986) *Serial Verb Construction in Thai*, Ph. D. diss., Univ. of Michigan, Ann Arbor.
- Vinay, J.-P., and J. Darbelnet. (1958) *Stylistique Comparée du Français et de l'anglais*. Didier.
- Wandruszka, M. W. (1971) *Interlinguistik*, Piper and Co Verlag.
- Wienold, G. (1995) "Lexical and Conceptual Structures in Expressions for Movement and Space: with Reference to Japanese, Korean, Thai, and Indonesian as Compared to English and German," *Lexical Knowledge in the Organization of Language*, ed. by U. Egli, P. Pause, C. Schwarze, A. Von Stechow, and G. Wienold, 301–40, John Benjamins.
- Winford, D. (1993) "Directional Serial Verb Constructions in Caribbean English Creoles," *Atlantic Meets Pacific: A Global View of Pidginization and Creolization*, ed. by F. Byrne and J. Holm, 183–203, John Benjamins.
- Yoneyama, M. (1986) "Motion Verbs in Conceptual Semantics," *Bulletin of the Faculty of Humanities* 22, 1–15, Seikei Univ., Tokyo.
- Zou, K. (1994) "Directional Verb-compounds in Chinese," *CLS* 30, 443–57.