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MANNER OF MOTION, EVALUATIVE AND PLURACTIONAL MORPHOLOGY

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ABSTRACT

Several works inspired by Talmy's typology provided a very complete survey and description of various kinds of linguistic elements and strategies across languages for expressing two basic components of motion events: path and manner. This research has mainly focused on lexical and syntactic means of expressing path and manner and how these elements are combined in a single clause. Morphological means are mentioned when talking about encoding the path of motion but hardly ever when studying the expression of manner. This article shows that some languages widely use many affixational and non-affixational processes of "evaluative" and "pluractional" morphology to express manner (e.g., Serbian *leteti* 'to fly' > *letuckati* 'to flutter', Zoque *wit* 'to walk' > *witwitnay* 'to walk aimlessly'). This research mainly focuses on data from Serbian, but also offers a comparative perspective to highlight the widespread use of such morphological means in encoding manner. It pays particular attention to the role of morphology in the linguistic expression of manner in the semantic domain of motion.

[1] INTRODUCTION

Many theoretical and experimental studies have been carried out in recent decades on the expression of motion events across languages. The main impulse that motivated these studies came from the well-known Talmy's typology contrasting "Satellite framed" and "Verb framed languages"; see (Talmy 1975, 1983, 1985, 2000). By distinguishing a very small set of lexicalization patterns in the domain of motion verbs, this typology provides very powerful tools for exploring the relationship between language and cognition. It particularly brought to the fore various kinds of elements involved in expressing some basic components of motion events (e.g., path, manner, figure, ground, etc.) at both the syntactic and lexical levels. This article shows the importance of the morphological encoding of manner in the verbal domain from a cross-linguistic perspective.

The article is structured as follows: Section [2] briefly recalls the main assumptions of Talmy's typology. Section [3] presents various kinds of elements available across languages for expressing manner, with an emphasis on morphological elements. The fourth section is about "evaluative morphology" and "plu-

ractionality”, which are currently the two main approaches to the study of verbs constructing the meaning of manner at the morphological level. The fifth section is a case study of Serbian derivative verbs involved in the morphological marking of manner. This section also presents some contrastive and more general typological considerations on manner, motion, and evaluative morphology. The last part concludes the study by summing up the main theoretical and analytical results, and suggests some open questions and directions for further research.

[2] TALMY’S TYPOLOGY: AN OVERVIEW

Talmy’s typology, which contrasts Verb framed and Satellite framed languages, is based on how two crucial semantic components of motion/location descriptions—path and manner—are encoded across languages. In Verb framed languages (VfLs; e.g., French, (1), Turkish, Japanese, Basque, and Hebrew), the “path of motion” is characteristically encoded by the verb so that the manner generally appears as optional information expressed by marginal adverbial elements. In Satellite framed languages (SfLs; e.g., English, (2), Slavic, Dutch, Finnish, and Hungarian), the path component is preferably encoded by various particles or “satellites” associated with the verb, such as prepositions, prefixes, postpositions, and so on, which makes it possible to express manner in the verb itself:

- (1) Jean **est entré** dans la maison en courant. (French, VfL)
 ‘John entered the house running.’
- (2) John ran **into** the house. (English, SfL)

Scholars inspired by this typology have pointed to a wide variety of options for encoding each major semantic component of directed motion events. If path is encoded in the verb, and depending on more general language-specific lexical, syntactic, and morphological devices, manner may be expressed by:

- Adverbs (e.g., English)
- PPs (e.g., French)
- Gerunds (e.g., Spanish)
- Subordinate clauses (e.g., French)
- Ideophones¹ (e.g., Japanese; cf. (Wienold 1995))
- Verbs, if the language has serial verbs or compound verbs (e.g., Thai), and so on.

[1] Ideophones could be defined as onomatopoeic adverb formations that imitate sound or shape. These expressions are widely used in many African and Australian languages, as well as in, for example, Japanese, Korean, and Thai.

If manner is encoded in the verb, and depending on more general language-specific lexical, syntactic, and morphological markers, path can be expressed by:

- Adpositions (prepositions, postpositions, particles, etc.; e.g., English)
- Affixes (e.g., Slavic)
- Applicatives (e.g., Tswana)
- Semantic cases (e.g., Finnish)
- *Until*-markers (e.g., Japanese)
- Verbs, if the language has serial verbs or compound verbs (e.g., Thai), and so on.

This diversity of devices for encoding path and manner, as well as the fact that many languages present mixed typological profiles, call Talmy's two-way typology into question, but I do not address this issue here; see (Talmy 2000); (Slobin 1987, 1996, 2004); (Strömquist & Verhoevent 2004); (Beavers et al. 2010); (Filipovic 2007); (Zlatev & Yangklang 2004). Most of that research has focused on lexical and syntactic elements and how they are combined in a single clause. Interestingly, morphological means are mentioned when talking about encoding the path but hardly ever when talking about expressing the manner of motion; see, however, (Foley & Valin 1984); (Comrie 1985); (Levin 2009); (Eberhard 2009). Regardless of the descriptive or theoretical benefits of Talmy's typology, it does not take these kinds of linguistic elements into account. In more general terms, no studies have systematically investigated the morphological encoding of either manner of motion or manner in general.

I argue that many affixational and non-affixational processes of "evaluative" and "pluractional" morphology must be taken into account when studying cross-linguistic diversity in the expression of manner, as shown in (3):

- (3) *trčati* 'to run' / *trčkarati* 'to run around, to run slowly'
skakati 'to jump' / *skakutati* 'to hop (around)'
skitati 'to wander' / *proskitati* 'to wander around a bit' (Serbian)
marcher 'to walk' / *marchotter* 'to walk with difficulty, to walk
taking small steps, to walk unsteadily'
sauter 'to jump' / *sautiller* 'to hop (around)' (French)
wit 'to walk' / *witwitnay* 'to walk aimlessly' (reduplication) (Zoque²)

[2] The Zoque languages are spoken in Southern Mexico.

As seen in these examples, *trčkarati* refers to a very specific way of running, *marčotter* a very specific way of walking, and so on. These kinds of means can play a very important role in expressing manner of motion, particularly in languages with rich evaluative morphology. Moreover, if “the wide variation in motion event encoding falls out from general constraints on how manner and path may be encoded in language” (Beavers et al. 2010, 370), in some languages morphology may considerably contribute to the expression of manner in all semantic domains.

[3] MANNER BEYOND LEXICON AND SYNTAX (STOSIC 2011)

Stosic (2011) showed that the study of manner must be based on a multilevel approach because it can be expressed by at least five means: syntactic, lexical, morphological, grammatical, and suprasegmental. Accordingly, the term “syntactic manner” is used for expression at the syntactic level, “lexical manner” for expression at the lexical level, and so on. The following subsections briefly present all five types of encoding manner.

[3.1] *Syntactic Manner*

Languages use many kinds of syntactic units and constructions to express manner. In most languages, different types of syntactic constituents “manner adjuncts” or “manner adverbials”) are combined with verbs, adjectives, or other adverbs to indicate a specific way that a process, state, or quality is realized; for example, in Serbian:

- | | | |
|-----|--|---------------------------------|
| (4) | Hodao je veoma brzo .
'He was walking very quickly.' | (Adverbs) |
| (5) | Bila je nekako čudno mirna.
'She was somehow strangely quiet.' | |
| (6) | Trčao je s neverovatnom lakoćom .
'He was running with unbelievable ease.' | (Prepositional phrases) |
| (7) | Ptice su letele kao slepi miševi .
'The birds were flying like bats.' | (Subordinate clauses) |
| (8) | Sve vreme je govorio zamuckujući .
'He talked stuttering all the time.' | (Gerunds / present participles) |
| (9) | Odgovorio je pognute glave .
'He answered with his head bowed down.' | (Genitive constructions) |

This list is not exhaustive: there are many other types of manner adjuncts and structures across languages. These manner expressions have been extensively studied over the last few decades; see (Hasselgård 2010); (Molinier & Lévrier 2000); (Lang et al. 2003), among many others.

[3.2] *Lexical Manner*

In addition to syntactic means of expressing manner, all languages have a very large lexicon of verbs, simple adverbs, nouns, ideophones, and so on whose meaning involves a manner component.

- (10) *to fly, to walk, to run, to sneak, to hop, to jump, to limp, etc.* (English verbs)
fast, hard, well, etc. (adverbs)
manner, way, method, style, approach, etc. (nouns)

Lexicalization of manner has been studied from many different approaches in lexical semantics, particularly in the verbal domain.

First, there is very extensive research on “Lexical Conceptual Structure” and similar notions (see (Levin & Hovav 2005; Levin 2009); (Levin & Hovav 2011); (Hovav & Levin 1998); (Jackendoff 1983, 1990); (Hale & Keyser 2002)) that all involve some type of predicate decomposition and are designed to capture facets of meaning that determine the grammatical behavior of the verb. In these lexical decomposition approaches, manner is one of basic semantic components that structures both linguistic knowledge and cognition (for an overview, see (Levin & Hovav 2011)).

Second, several linguistic and psycholinguistic studies based on Talmy’s typology (see (Talmy 2000); (Berman & Slobin 1994); (Slobin 1987, 1996, 2004); (Bowerman 1996); (Hickmann & Robert 2006); (Strömquist & Verhoevent 2004); (Beavers et al. 2010); (Filipovic 2002); (Zlatev & Yangklang 2004)) have led scholars to make and compare inventories of manner of motion verbs in many languages. This has shown that Sfls (Serbian, English, German) generally have a very large vocabulary of manner of motion verbs. Given the availability of the verb for encoding manner (path being expressed by satellites), manner is linguistically and cognitively much more salient in Sfls than in Vfls; see (Slobin 2003, 2006).

Finally, Miller and Fellbaum, who developed the *WordNet* lexical database (Fellbaum 1998), proposed a third approach to the lexicalization of manner in verbs (Fellbaum & Miller 1990); (Miller & Fellbaum 1992); (Fellbaum 2002). The objective is to establish lexical relations that structure the lexicon by carving it up into semantically coherent sub-wholes. English verbs are mainly organized in terms of troponymy, which is a hierarchical “manner” relation: “most lexicalized verb concepts refer to an action or event that constitutes a manner elaboration of another activity or event” (Miller & Fellbaum 1992, 217). Thus, troponymy links verbs like *to walk, to run, to jump, to fly* to the basic motion verb *to move*. According to Fellbaum (2002, 24), “the subordinate concept contains the superordinate, but adds some additional semantic specification of its own”:

- (11) *to move*: ← T → *to walk* ← T → *to stumble* (English)
to walk: ‘move at a regular pace by lifting and setting down each foot in

turn'
to stumble: 'walk unsteadily' (*WordReference*)

The originality of this approach is that it is not limited to the motion domain and it shows the widespread lexicalization of manner in all semantic domains.

These various studies in lexical semantics have shown the importance of lexical encoding of manner across languages.

[3.3] *Morphological Manner (MM)*

In many languages different morphological processes form manner adverbs, as shown in (12)–(13):

- (12) *brief-ly, wrong-ly, slow-ly, frog-wise, prayer-wise, etc.* (English)
- (13) *tim-e-tim-e* 'secretly, in hiding', *jem'-jem* 'regularly, repeatedly, often', *guring-ga-rang* 'aimlessly, of roaming about', (Burling 2003, 264–265) (Garo³)

Regarding the verbal domain, although morphological means of expressing manner are rarely discussed in the literature, there are a few mentions of such means. Thus, Foley & Valin (1984, 39–47) report some data from Lakhota⁴ with many prefixes (e.g., *ya-*, *na-*) that describe the way some actions happen; combined with verb stems, these prefixes form verbs expressing manner:

- (14) *ya-* 'with the mouth'
na- 'with the foot or leg'
ka- 'by a sudden impact', etc. (Lakhota)
- (15) *ya-blečha* 'break or cut with the teeth'
na-blečha 'break by kicking or stepping on', etc. (Lakhota)
(cf. also Levin 2009)

Further, Comrie (1985, 344) explicitly claims that: "derivative verbs exist in many languages to indicate the manner in which an event occurs". He gives some examples from Zulu⁵, in which manner verbs formed with the suffix *-isisa* indicate "that an action is carried out with force, with greater than expected intensity":

- (16) *buza* 'to ask' > *buz-isisa* 'to ask insistently'
thanda 'to love' > *thand-isisa* 'to love exceedingly' (Zulu)

[3] Garo is spoken in Bangladesh.

[4] Lakhota is spoken in North Dakota, South Dakota, North Nebraska, South Minnesota, Northeast Montana, and in Canada.

[5] Zulu (about ten million speakers) is spoken in South Africa.

Comrie (1985) also mentions that such manner derivatives may indicate attenuative meaning. In Russian, for example, this meaning arises with the prefix *pri-*, and in Zulu through reduplication, as shown in (17):

- (17) *nažat'* 'to press' > *pri-nažat'* 'to press lightly' (Russian)
ndiza 'to fly' > *ndizandiza* 'to fly a little' (Zulu)

Furthermore, Comrie includes in manner derivatives many aspectuals expressing actions that occur very quickly, for a short time, or for a long time, which are repeated at intervals or iterated, and so on. Such meanings can be expressed by either affixation or reduplication, as in the following Russian examples:

- (18) *stojat'* 'to stand' > *po-stojat'* 'to stand for a short time'
kašljat' 'to cough' > *kašlj-anu-t'* 'to give a cough' (a momentary event)
 (Russian)

Finally, (Amiot & Stosic 2011) and (Stosic & Amiot 2011) showed that French verbal derivatives such as *sautiller* 'to hop (around)' (< *sauter* 'to jump'), *boitiller* 'to limp slightly' (< *boiter* 'to limp'), *voleter* 'to flutter' (< *voler* 'to fly'), and *marchotter* 'to walk with difficulty / taking small steps / unsteadily' (< *marcher* 'to walk') all express a specific way of performing the action indicated by the verb stem. All of them are formed by a particular kind of suffixation belonging to "evaluative morphology" (see Section [4.1] below).

Even though these types of manner expressions are scarcely ever mentioned in the literature on motion, the meanings that they construct are regularly taken into account when languages code them at the lexical or syntactic level. In the following examples, there is no plausible reason to consider only the expressions that occur in a) as encoding manner but not those in b), which all convey a specific manner of motion:

- (19) a. English *to hop (around)*
 b. Serbian *skakutati*; French *sautiller*; Italian *balzellare* 'to hop (around)'
 (20) a. English *to flutter (about)*
 b. Serbian *letuckati*; French *voleter*; Italian *volacchiare* 'to flutter (about)'
 (21) a. English *to trudge (along)*; Japanese *tobotobo aruku*; French *marcher péniblement/d'un pas lourd*
 b. Hebrew *dišdeš*; Serbian *hoduckati* 'to trudge (along)'

The same conceptual content is rendered by different kinds of linguistic elements: lexical or syntactic ones in a) and morphological ones in b) (by reduplication in Hebrew, and by affixation in French, Italian, and Serbian). Definitions in monolingual dictionaries are also very explicit about the presence of the manner 'com-

ponent' in such derivatives; the French verb *marchotter* (< *marcher* 'to walk') is defined as 'to walk with difficulty, to walk taking small steps, to walk unsteadily' (TLFi). Thus, in the verbal domain, a number of manner concepts are widely expressed by different morphological means.

[3.4] Grammatical Manner

Languages generally possess a small set of grammatical items referring to a few basic conceptual categories such as PERSON, OBJECT, ACTIVITY, SPACE, TIME, QUALITY, and MANNER. Manner is one of the few basic domains of conceptualization that are crucial for structuring experience, cf. (Jackendoff 1983); (Heine et al. 1991); (Haspelmath 1997). In the majority of languages it may also be expressed by interrogative and indefinite adverbs or pronouns. Very often, these expressions are monomorphemic, but not always.

- (22) *how?, anyway, anyhow, somehow, no way* (English)
kako? 'how?', nekako 'somehow', nikako 'in no way', ikako 'in any way', onako 'in that way', ovako 'in this way', svakako 'anyhow', tako 'this way'
 (Serbian)

[3.5] Suprasegmental Manner

The use of pitch and prosodic phenomena to encode manner is very frequent in some languages, in which the kind and position of the pitch distinguish meaning. In such languages, manner adverbials can be marked by a change in quality or quantity. For example, in Serbian, which has four "pitch accents" involving rising or falling pitch on long or short vowels, in some cases two different accents distinguish adjectives from cognate manner adverbs, as in (23)–(24):

- (23) *Mâlō se pomerilo.* (long falling tone = adjective) = *Nešto mâlō se pomerilo.*
 'Something little moved'
- (24) *Màlo se pomerilo.* (short falling tone = adverb) = *Nešto se màlo pomerilo.*
 '(Something) moved a little'

This opposition is not a systematic one in Serbian.

According to Patri (1998, 153), in Diyari, spoken in Australia, inserting a prosodic break after an adjective integrated in the subject NP turns it into a manner adverb:

- (25) *nawu-ja ŋanti tuŋka pani-ji*
 Pr-3p.sg N-meat Adj-rotten V-smell-3p.sg.pres
 'this rotten meat smells'
- (26) *nawu-ja ŋanti | tuŋka pani-ji*
 Pr-3p.sg N-meat Adv-MAN.rotten V-smell-3p.sg.pres

‘this meat smells rotten’

In both Serbian and Diyari, elaboration of the manner component in discourse is obtained by using prosodic elements in speech.

To sum up, an onomasiological approach to the linguistic expression of manner is needed because of its considerable complexity and the variability of encoding strategies across languages. Languages differ greatly in how they make use of each of the five types of manner pointed out in this section. English, for instance, is known for its ability to encode a large variety of manner meanings at the lexical level, cf. (Fellbaum 1998). For example, English verbs expressing crying distinguish among *cry*, *weep*, *sob*, *blubber*, *whimper*, *pule*, and *mewl*, whereas Japanese simply has *naku* ‘to cry’. In order to express the same distinctions, Japanese must combine at the syntactic level its only neutral verb for crying with ideophones obtained by partial or complete reduplication (see (Wienold 1995, 319–323):

Table 7. Japanese ideophones for ‘crying’ (Kindaichi 1988 I, 191)

cry	waawaa	naku
weep	mesomeso	naku
sob	kusunkusun	naku
blubber	oioi	naku
whimper	shikushiku	naku
pule	hiihii	naku
mewl	yowayowashiku	naku

FIGURE 1: From (Wienold 1995, 320)

English is not without evaluative suffixation or reduplication (e.g., *to zigzag*), but it only infrequently uses these to express manner of motion.

Regarding the expression of manner at the morphological level, many works mention this possibility but no systematic study has been conducted on this topic; see, however, (Stosic & Amiot 2011).

[4] FROM EVALUATIVE MORPHOLOGY AND PLURACTIONALITY TO MANNER

This section assesses the possible role of morphological manner in the expression of motion. The study mainly includes relevant data from Serbian, but I also offer a comparative view to highlight the widespread use of such morphological means in encoding manner. Two main research directions have focused on this type of linguistic element: evaluative morphology and a broad field of research on pluractionality.

[4.1] *Evaluative morphology*

Evaluative morphology is a subfield of derivational morphology that forms lexemes expressing some deviation from the “norm” or “standard” fixed by the base. More precisely, lexical items and constructions are traditionally considered to be evaluative if they carry values such as *BIG*, *SMALL*, *GOOD*, and *BAD*, that is diminution, augmentation, endearment, contempt, and so on: *booklet*, *aunty*, *doggy*, *sweetie*, *weakling*; see (Scalise 1986); (Stump 1993); (Dressler & Merlini-Barbaresi 1994); (Mel’čuk 1994); (Grandi 2002, 2009); (Fradin 2003); (Grandi & Montermini 2005); (Fradin & Montermini 2009). Grandi defines evaluation in the following way:

In short, a construction can be defined as evaluative if it satisfies two conditions, one relating to semantics and the other to the formal level. The first condition indicates that a linguistic construction can be defined as evaluative if it has the function of assigning a value, which is different from that of the “standard” (within the semantic scale which it is part of), to a concept. This value is assigned without resorting to any parameters of reference external to the concept itself. The second condition indicates that an evaluative construction must include at least the explicit expression of the standard (by means of a linguistic form which is lexically autonomous and is recognised by the speakers of the language as an actual word) and an evaluative mark (a linguistic element that expresses at least one of the semantic values traditionally classed as evaluative: *BIG*, *SMALL*, *GOOD*, *BAD*). (Grandi 2009, 46)

Commonly called diminutives, these expressions are often considered as belonging to expressive language because their use is always based on the speaker’s qualitative or quantitative appreciation of what he is talking about. As such, evaluative morphology (or subjective morphology) is usually opposed to conceptual morphology, which is much more objective/realistic (e.g., *run* > *runner*, *form* > *formation*, *bad* > *badly*, etc.). Across languages, several morphological processes are used in forming evaluatives: affixation, reduplication, apophony, and so on, as observable in (27):

- (27) *pevati* ‘to sing’ / *pevušiti* ‘to hum’ (Serbian affixation)
nam ‘to sleep’ / *nimnem* ‘to dose, to take a nap’ (Hebrew reduplication)
loqu ‘to play/sing’ / *loequ* ‘to play/sing repeatedly’ (Chechen apophony)

Note that some (less inflecting and/or more analytic) languages construct evaluative meanings at the syntactic level:

- (28) a little boy (English)
 Donne-moi ta petite main!

'Give me your little hand'	(French)
oioi naku	(Japanese)
'to blubber'	

Evaluative morphology rules are characterized by several properties, which have been the topic of many discussions in the literature; see (Scalise 1986, 132 ff.); (Stump 1993); (Dressler & Merlini-Barbaresi 1994); (Bauer 1997); (Grandi 2009); (Fradin & Montermini 2009). The most important of these rules are:

a) They express some deviation from the "norm" or "standard" fixed by the semantics of the base:

(29) *pevati* 'to sing' vs. *pevušiti* 'to hum, to sing *sotto voce*' (Serbian)

In some cases, this deviation can be purely pragmatic because nothing really changes in the event processing at the referential level (e.g., when talking about infants or in the presence of babies and children). This is what (Bauer 1997, 560) calls "strong 'expressive' pragmatic effect" and what leads Savickiene et al. (2007, 85) to argue that diminutives have two basic meanings, the semantic meaning of smallness and a pragmatic meaning indicating endearment, sympathy, empathy, pleasure, and irony.

b) They allow consecutive application:

(30) *inja* 'dog', *injana* 'little dog', *injanyana* 'very little dog' (Zulu)
(Stump 1993, 4)
soba 'room', *sobica* 'little/small room', *sobičak* 'very small room' (Serbian)

c) They do not change the syntactic category of the base (homocategoriality):

(31) V > V: *raditi* > *raduckati* 'to work half-heartedly' (Serbian)

d) They form paradigms so that in many cases they are substitutable:

(32) *pevati* 'to sing' > *pevušiti*, *pevuckati*, *pevkati*, *pevuškati* (Serbian)

e) The same evaluative morpheme can take as input more than one category of the base:

(33) (-et) N > N: *sac* 'bag' > *sachet* 'little bag'
Adj > Adj: *gentil* 'kind' > *gentillet* 'sweetie, pleasant enough'
V > V: *voler* 'to fly' > *voleter* 'to flutter' (French)

Most works dealing with evaluation have focused on nominal and adjectival evaluatives, whereas the verbal domain has not been sufficiently explored across languages; see (Greenberg 2010); (Grandi 2009); (Tovena & Kihm 2008); (Amiot & Stosic 2011, forthcoming); (Stosic & Amiot 2011). According to Grandi (2009), the

main reason for this lack is the relatively small cross-linguistic diffusion of verbal evaluatives compared to nominal ones. It is not excluded, however, that both formal and semantic complexities of verbal evaluatives act as a deterrent.

Although the term “evaluation”, as already indicated, allows the recognition of a particular type of morphology, in the verbal domain it does not plausibly explain what the deviation from the norm is actually due to. Where does the non-conformity in the realization of a process really come from? Which change in event processing can make one use evaluative verbs instead of their bases? Diminution in itself is not a satisfactory explanation because in many cases it is very difficult to determine which dimension of the action is reduced. Thus, traditional semantic values such as diminution or augmentation seem to be much more suitable for the nominal domain. For this reason, the complementary notion of pluractionality must be taken into account when describing these kinds of morphologically complex verbs.

[4.2] *Pluractionality*

Many works deal with the same type of phenomena without using the idea of evaluation.⁶ This research, which explores the notion of pluractionality, draws a very interesting parallel between nominal and verbal plurality by making the hypothesis that certain verbs are capable of denoting sets of events in the same way that some nouns designate sets of objects (cf. (Newman 1980, 2012); (Laca 2006); (Cabredo & Laca 2012)). The term “pluractionality” thus indicates that “the event denoted by the verb is, in some sense, pluralized: repeated in time, distributed in various locations, holds of many participants, etc.” (Greenberg 2010, 119). Pluractionality has been widely studied in morphology, semantics, and typology, as well as in various works describing individual languages; see (Newman 1980, 1990); (Cusic 1981); (Yu 2003); (van Geenhoven 2005); (Laca 2004); (Wood 2007); (Greenberg 2010); (Tovena & Kihm 2008). From a semantic point of view, Cusic’s dissertation (Cusic 1981) provides one of the most systematic explanations of the wide range of readings associated with pluractional markers. I therefore follow that analysis in this article.

First of all, it is important to distinguish between *event-internal pluractionality* and *event-external pluractionality*. The former is observed “when a single event on a single occasion consists of internal phases” (e.g., *to nibble*), and the latter “when a single bounded event (internally plural or not) is repeated on a single occasion” or “when a single bounded event is repeated on different occasions” (e.g., *to nibble again, to call again and again*; (Cusic 1981, 67)). The following discussion only concerns *event-internal pluractionality*, which can lead to a large variety of semantic

[6] Tovena’s statement is very revealing of this fact: “A situation described by an event-internal pluractional verb is presented as modified with respect to a canonical one, which can be viewed as setting the standard or constituting the prototype.” (Tovena 2011, 51)

effects according to Cusic. Some of them, such as diminutive and augmentative readings, are shared among many works dealing with evaluative morphology and others are specific to the domain of pluractionality, such as “tentative,” “incassative,” and “conative” readings. A brief definition of these values will provide a better understanding of how they can be subsumed into a more general concept of manner.

Diminutive reading is observed when the event is reduced in some of its dimensions. Diminution can apply to the entire event, some of its subparts, any entity involved in the process, and so on. According to Cusic (1981, 81–82), “the repetition decreases the size or importance of the units of the action, as if to keep a constant overall quantity while increasing the number of parts.” Augmentative reading appears when “the amount of activity increases and possibly also the amount of ‘substance’ implied as being acted upon” ((Cusic 1981, 85); e.g., Serbian *trajati* ‘to last’ > *potrajati* ‘to take a while, longer than expected’). Tentative reading is available when “the action is performed half-heartedly or with less effort than expected” ((Cusic 1981, 82–83); e.g., Serbian *raditi* ‘to work’ > *raduckati* ‘to work without much enthusiasm, to work half-heartedly’). Incassative reading is assigned to situations with “a kind of repetitive plurality in which there is no attempt to do anything in particular, merely an aimless or undirected activity” ((Cusic 1981, 83–84); e.g., Serbian *trčati* ‘to run’ > *trčkarati* ‘to run around, to run here and there’). Finally, conative reading is obtained when a verb describes an action that “falls short of producing some desired result” ((Greenberg 2010); e.g., Serbian *hodati* ‘to walk’ > *hoduckati* ‘to walk with difficulty, to walk taking small steps, to walk unsteadily’).

Note that evaluation and pluractionality are two distinct phenomena that are not mutually exclusive and that only partially overlap. Although the same set of means or elements is often used to express both of them across languages (affixes, apophony, reduplication, etc.), each is quite autonomous. This means that there is evaluation without pluractionality (34) and that there exists pluractionality without evaluation (35)–(36):

- (34) *pomaziti* ‘to stroke’, *propržiti* ‘to fry a little’, *pevušiti* ‘to hum’ (Serbian)
- (35) *Poskakali su u vodu.* (plural subject obligatory)
‘They jumped into the water one after the other.’ (Serbian)
- (36) *Poispremeštao je stolove/burad.* (plural or collective object obligatory)
‘He moved all the tables/barrels.’ (Serbian)

There is overlap between evaluation and pluractionality in Serbian when derivatives obtained by some evaluative affixes express event internal pluractionality; see (Amiot & Stosic forthcoming). Thus, the verb *letuckati* ‘to flutter’ (< *leteti* ‘to fly’) conveys both the evaluative and pluractional meaning: the representation of

the action of flying does not match its canonical representation because there is “increase in frequency and decrease of one or more other dimensions” (Tovena 2011, 43). This irregularity or deviation from the norm, due to fragmentation (i.e., internal pluralization) of the action, is what semantically justifies the use of evaluative morphology to describe such situations in many languages. Henceforth, I use the term “evaluative-pluractional (E-P) verb/marker” to refer to elements at the intersection of the two sets of derivatives:

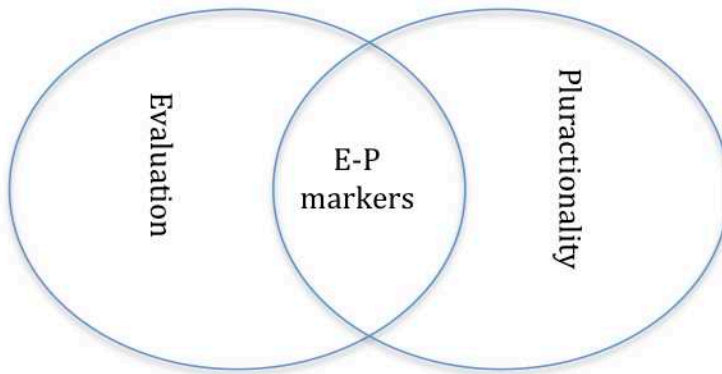


FIGURE 2: Evaluation and Pluractionality as partly overlapping phenomena

Thus evaluative and pluractional markers very often (but not always) suggest a substantial modification in the realization of events described by verb stems, especially in their internal structure; see, among others, (Cusic 1981); (Newman 1990); (van Geenhoven 2005); (Grandi 2009); (Greenberg 2010); (Tovena 2010, 2011); (Amiot & Stosic 2011). This is why a connection is regularly made with aspect; see (Cusic 1981); (Shluinsky 2009); (Cabredo & Laca 2012); (Amiot & Stosic 2011, forthcoming). Interestingly, even though some evaluative and pluractional verbs clearly encode a particular way in which the action described by the base happens, the phenomena that they express have never been related to manner. In (37), all of the Serbian derived motion verbs highlight some deviation from a prototypical way of running, jumping, hopping, and trotting:

- (37) *ska-kut-ati* ‘to hop (around), to skip along’
trč-kara-ti ‘to run around, to run here and there’
hram-uck-ati ‘to limp slightly’
kas-k-ati ‘to trot around, to jog’

Example (37) suggests that the derived verb expresses a process of the same type as the process denoted by the base verb, albeit not totally identical (its intensity is weaker, the motion is “broken” or faltering, the object it bears upon is more limited, etc.). Because of this modification, signaled by the morphological marking, the action is conceived as being taken in a specific way, and hence as not being in conformity with its prototypical representation. As argued in (Stosic & Amiot 2011), this deviation from the norm—whatever values it is based on—is what generates the manner interpretation of morphologically complex verbs at issue.

What emerges from this survey of research on evaluation and pluractionality is, first, that a valuable description of these kinds of linguistic phenomena needs to combine the two approaches⁷ and, second, that some evaluative and pluractional verbs must be considered as a possible strategy for expressing manner. The case study of Serbian in the following section further illustrates this descriptive and theoretical necessity.

[5] MORPHOLOGICAL ENCODING OF MANNER IN SERBIAN

Even though there is no explicit theoretical or methodological link between the approaches to manner discussed in the three previous sections, each of them contributed to inventorying various linguistic means for expressing manner and made it possible to study how morphology plays a role in its expression. In line with our previous research, whose originality lies in establishing a direct connection between evaluative and/or pluractional morphology and manner in the verbal domain (cf. (Stosic 2011); (Amiot & Stosic 2011); (Stosic & Amiot 2011)), this section addresses the extent to which morphological means of expressing manner can be used in languages and how much languages can differ from one another in their use of this encoding strategy. I first present a case study of Serbian data. I then introduce some contrastive considerations.

[5.1] *Evaluative verbs in Serbian*

Evaluative verbs in Serbian have been discussed in many works dealing with “diminutives”; see (Grickat 1955, 1995); (Žibreg 1982); (Babić 1986); (Ristić 1997); (Klajn 2003); (Veljković-Stanković 2007).⁸ Some grammarians have also attempted to provide a consistent account of their formation and semantics; see (Stanojčić et al. 1989); (Barić et al. 1997); (Silić & Pranjković 2005). These studies have shown that evaluative verbs are mainly formed by means of suffixes, but that there are also a few prefixes capable of constructing evaluative and/or pluractional meanings.

[7] For more details about this methodological necessity, see (Stosic & Amiot 2010).

[8] Even though some of these studies deal with Serbo-Croatian or Croatian, they are highly relevant for describing evaluatives in Serbian.

Note that in Serbian, unlike most Indo-European languages, suffixes forming evaluative verbs are different from those used to form evaluative nouns or adjectives:⁹

TABLE 1: Evaluative suffixes in Serbian

PARTS OF SPEECH	SUFFIX
Noun	<i>-ac, -ak, -arak, -erak, -eljak, -uljak, -ičak, -etak, -ce, -ance, -ašce, -ence, ešce, če, -inče, -iče, -ica, -čica, -ić, -čić, -ka, -ca, -ić-ak, -ič-ak, -ič-ica</i>
Adjective	<i>-kast, -ičast, -cki, -ešan, -ušan, -ašan, -ahan, -ačak, -unjav, -uškast, -uljast</i>
Verb	<i>-k-ati, -nu-ti, -uc-ati, -ck-ati, -uck-ati, -uk-ati, -ut-ati, -kara-ti, -ucnu-ti, -kari-ti, ak-ati, -uši-ti, -šk-ati, -ulji-ti, -ta-ti, -uš-ati, -ik-ati, -as-ati, -at-ati, -ek-ati, -et-ati, -uknu-ti, -ket-ati, -olji-ti, -cnu-ti, -lji-ti, -ra-ti, -a-ti, -ota-ti</i>

As seen in Table 1, there are about thirty verbal evaluative suffixes in Serbian. Some of them have many allomorphs and some can be analyzed into two morphemes, but that is not the issue here; see (Grickat 1955); (Klajn 2003).

Regarding prefixes, much less numerous than suffixes, Serbian uses the same units to form evaluative/pluractional verbs, and evaluative adjectives and adverbs. Table 2 shows this parallelism:¹⁰

TABLE 2: Evaluative prefixes in Serbian

PREFIX	VERB	ADJECTIVE	ADVERB
<i>po-</i>	<i>poigrati se</i> 'to play for a while'	<i>podebeo</i> 'rather stout'	<i>pomalo</i> 'a little bit, now and then'
<i>na-</i>	<i>načuti</i> 'to hear of vaguely'	<i>nagluv</i> 'hard-of-hearing'	
<i>pri-</i>	<i>pridržati</i> 'to hold for a while'	<i>priglup</i> 'rather stupid'	
<i>pro-</i>	<i>prolutati</i> 'to roam for a while'	<i>prohladan</i> 'rather cool'	

Previous research on evaluative verbs in Serbian has not measured how widespread they are in the lexicon. The most complete inventory can be found in (Žibreg 1982), who lists about 330 derivatives of this kind; see also (Klajn 2003).

[9] However, according to Grickat (1955), nominal and verbal evaluative suffixes are historically related:

N: *devojka* 'girl' / *devoju-ra-k* 'little girl'

V: *trčati* 'to run' / *trč-ka-ra-ti* 'to run around'.

[10] In this analysis, I do not take into account the prefixes *pre-* 'over, hyper' *nad-* 'over, super', and *pod-* 'under', expressing such evaluative meanings as TOO, TOO MUCH / NOT ENOUGH, e.g., *preceniti* 'overestimate', *preosetljiv* 'hypersensitive', *potceniti* 'underestimate', *pothranjen* 'underfed', *nadjačati* 'to overcome'; see (Amiot & Stosic forthcoming).

In order to establish how productive verbal evaluative morphology is, I took an inventory of verbs from the *Serbian Electronic Dictionary*, which has about 300,000 entries; see (Simić 2005). I extracted and analyzed 20,000 potential candidates formed by one of these suffixes or prefixes. This method, based on a large sample of lexicographic data, allowed me to identify around 1,570 evaluative verbs from all semantic domains. Some of them are exclusively formed by suffixation (about 600), some exclusively by prefixation (about 610), and the others combine suffixation and prefixation (about 360). As shown in Figure 3, all suffixes are not equally productive: in my sample, the suffixes *-k* and *-nu* are the most frequent and they form half of my corpus:

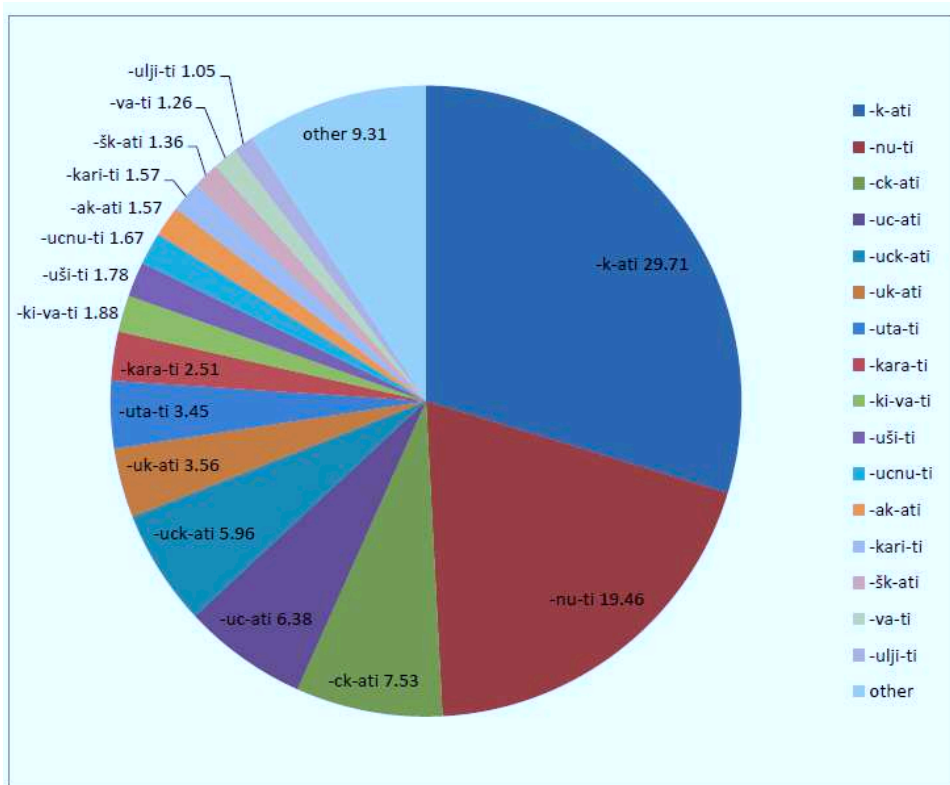


FIGURE 3: Productivity of Serbian evaluative suffixes (%)

The distribution of prefixes in the corpus is given in Figure 4 on the next page.

These prefixes deserve an in-depth study because of the variety of evaluative values that they can construct; some of them mostly convey diminution (such as *pro-*), others mainly express augmentation (e.g., *na-*), and many prefixes inextricably combine evaluation and pluractionality (e.g., *po-*). Because my primary objective is to inventory evaluative verbal derivatives in Serbian, this article does

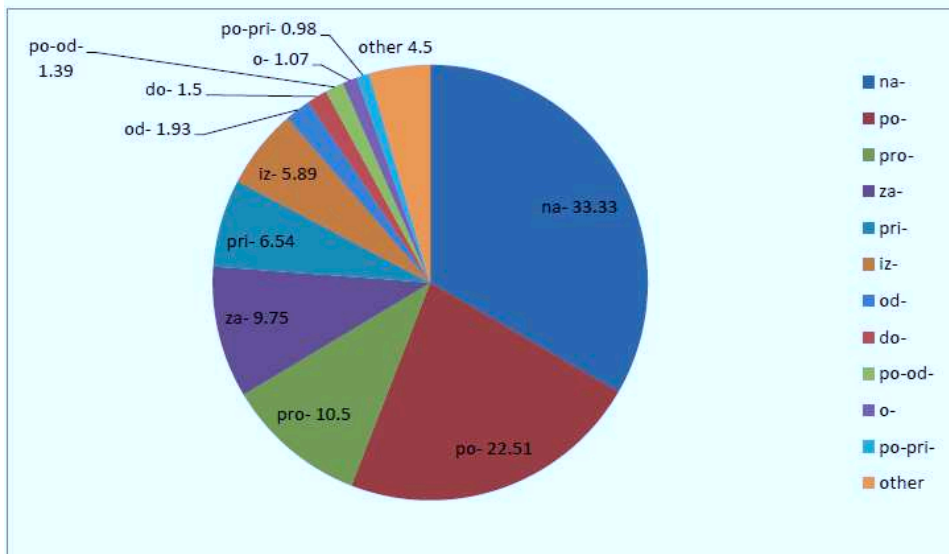


FIGURE 4: Prefixes forming evaluative verbs in Serbian (%)

not address possible semantic distinctions. It should be noted that in the verbal domain, among all these prefixes, only *na-*, *po-*, *pro-*, and *pri-* can convey evaluative meanings independently of suffixation.

Even though this inventory must be completed and refined (see footnote 10), it is clear that Serbian greatly exploits the morphological device for expressing manner, mainly through the formation of a large number of evaluative verbs, including those that convey event-internal pluractionality. The cross-linguistic evidence below further emphasizes the importance of this manner of encoding strategy in Serbian.

[5.2] *Contrastive considerations*

To better evaluate the potential role of morphological means in expressing manner, I first compare Serbian data, presented in the previous section, with French and Italian data. This choice is guided first by the fact that French and especially Italian are known for their very rich evaluative morphology (see (Grandi 2009, 61)), and second by the availability of studies collecting and presenting comparable data from these two languages (see (Grandi 2009) for Italian, (Amiot & Stosic 2011) for French). Moreover, as is the case with this analysis, those dealing with French and Italian are based on lexicographic material.

As shown in Table 3 on the facing page, compared to French and Italian, Serbian has a very high capacity to form and use evaluative affixation in the verbal domain.

TABLE 3: Evaluative derived verbs in French, Italian, and Serbian

LANGUAGE	VERBS #	SOURCE	CORPUS #	REFERENCE STUDY
Serbian	1,550	SED ¹	300,000	
Italian	300	GRADIT	270,000	Grandi (2009)
		DISC	185,000	
French	180	TLFi	100,000	Amiot & Stosic (2011)

¹ Serbian Electronic Dictionary

This table confirms that languages differ in their richness in evaluatives (cf. Savickiene et al. 2007) and it shows that a direct correlation can be established between the degree of inflectionality and the number of evaluatives found. Thus, Serbian as a strongly inflecting language has many more evaluative verbs than Italian and French, considered weakly inflecting languages, cf. (Dressler 2007). Moreover, according to Dressler et al. (2012, 240), French morphology is less inflecting than Italian morphology, which matches exactly with their respective richness in evaluative verbs. Although confirmation of this correlation requires a larger sample of languages, the results suggest that there are languages, such as Serbian, that make very extensive use of evaluative verbs for describing actions that are performed in a non-canonical way. The case study of Serbian thus provides a strong argument for why morphological devices should not be ruled out when trying to capture the options available to languages for encoding manner.

[5.3] *Morphological expression of manner of motion in Serbian*

In the semantic domain of motion, I examine the extent to which morphological encoding of manner component is exploited in the lexicon of Serbian motion verbs. The data indicate that there is a relatively small set of motion verbs that can construct additional manner senses by using evaluative suffixation and/or prefixation:

- (38) Thirty motion verbs used as base for morphologically encoding manner in Serbian:

bazati 'to roam about', *bežati* 'to flee', *cunjati* 'to wander', *ćopati* 'to limp', *gegati (se)* 'to waddle', *gmizati* 'to crawl', *hodati* 'to walk', *hramati* 'to limp', *jezditi* 'to ride', *juriti* 'to race', *kasati* 'to trot, to run', *klizati (se)* 'to skid, to slip', *krstariti* 'to cruise', *leteti* 'to fly', *lunjati* 'to wander', *lutati* 'to wander', *ploviti* 'to sail', *puzati* 'to crawl', *šepati* 'to limp', *šetati (se)* 'to go for a walk', *skakati* 'to jump (imp)', *skitati* 'to wander', *skočiti* 'to jump (perf)', *švrljati* 'to roam', *teturati se* 'to stagger', *trčati* 'to run', *tumarati* 'to roam', *voziti (se)* 'to drive', *vrzmati se* 'to move around', *vući se* 'to hang around'

It thus seems that motion verbs are not fertile bases for evaluative morphology: they represent about 5% (30/600) of all the base verbs from which the evaluative verbs examined are derived. These bases form about one hundred evaluative motion verbs, which represent around 6% of all evaluative verbs in my corpus. Figure 5 shows which motion verbs give the greatest number of evaluatives as output (e.g., *leteti* 'to fly' > *letuckati*, *letkariti*, *letkarati*, *letnuti*, *leteškati*, *letkati*, *letucati*, *letati*, *doletnuti*, *poletnuti*):

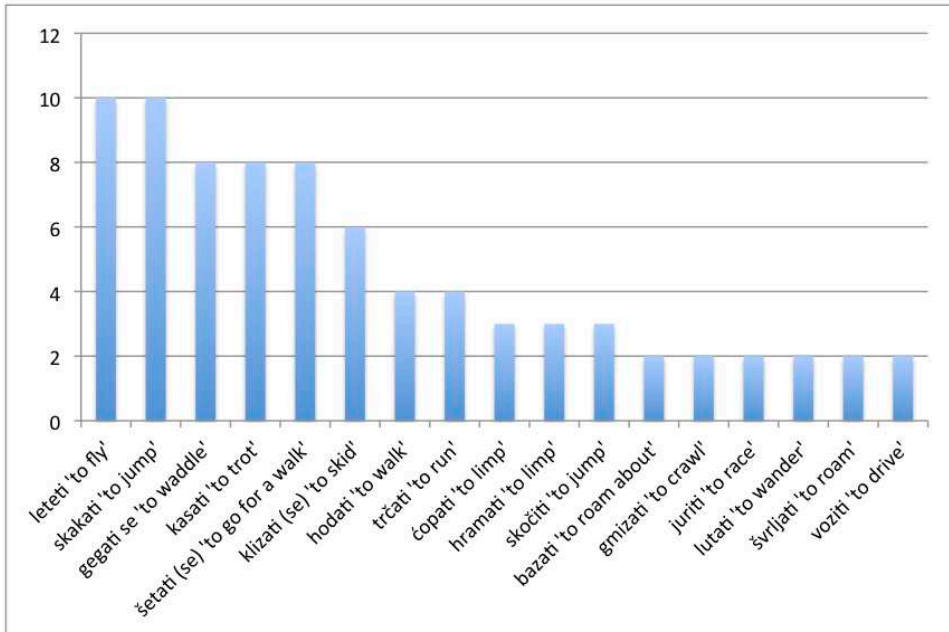


FIGURE 5: The most productive Serbian motion verbs as base for forming evaluatives

Essentially the same phenomenon can be observed in French and in Italian, as shown in the lists in (39) and (40), respectively, extracted from (Amiot & Stosic 2011) and (Grandi 2009):

- (39) Fifteen motion verbs used as base for morphologically encoding manner in French:
bouger 'to move', *courir* 'to run', *danser* 'to dance', *flâner* 'to stroll', *galloper* 'to gallop', *glander* 'to loaf about', *lambiner* 'to dilly-dally', *marcher* 'to walk', *nager* 'to swim', *promener* 'to go for a walk', *rôder* 'to roam around', *sauter* 'to jump', *traîner* 'to hang around', *trotter* 'to trot', *voler* 'to fly', *voyager* 'to travel'

- (40) Seven motion verbs used as base for morphologically encoding manner in Italian:
balzare ‘to jump’, *girare* ‘to ramble, to wander’, *guidare* ‘to drive’, *inciampare* ‘to trip’, *saltare* ‘to jump’, *trottare* ‘to trot’, *volare* ‘to fly’

Even though our lists are based on sample data, and are hence incomplete, the same pattern works for the three languages: one usually finds items that [Wienold \(1995, 314\)](#) called “basic manner of motion verbs” such as *to jump*, *to trot*, *to fly*, *to walk* but not any pure path verb. The low compatibility between motion and evaluation can probably partly explain (but not justify) the omission of morphological encoding of manner in typological studies dealing with motion descriptions. However, further investigations are required to explain both this relative reluctance of the motion domain to use evaluative morphology and why (at least in Serbian, French, and Italian) path verbs cannot be modified by evaluative morphemes.

Although there are not too many motion verbs that allow manner modification at the morphological level, in languages with rich verbal evaluative morphology this way of expressing manner is all the more important because it directly operates on the verb, which is the only “clause-obligatory category” in most motion descriptions across languages (see [Beavers et al. 2010](#)). Yet, the manner component is not lexicalized in the verb root, but it remains conveyed by the verb predicate, as being constructed at the morphological level. This is one of the major factors contributing to the importance of morphological encoding of manner in languages like Serbian.

[6] CONCLUSION

This study is a preliminary empirical investigation of the importance of morphologically encoding manner in the verbal domain, with particular emphasis on manner of motion, from a cross-linguistic perspective. My starting point was Talmy’s typology as well as many other works inspired by it because this research offers the most comprehensive survey of strategies for encoding manner of motion across languages. [Beavers et al. \(2010\)](#) further proposed that expressing manner of motion is dependent on more general morphological, lexical, and syntactic devices that languages make available for encoding manner. Missing from all of these studies is any reference to morphological means of expressing manner. This article examined the role of morphology in the expression of manner by showing that in the verbal domain many evaluative and/or pluractional morphological markers do express a non-canonical way of performing an action described by the base verb.

The following conclusions may be drawn. First, at the theoretical level, I have shown how evaluative (including evaluative-pluractional) morphology meets man-

ner and why taking this encoding strategy into consideration is crucial for a comprehensive analysis of the linguistic expression of manner, especially in languages with rich evaluative morphology. Second, at the descriptive level, I have provided an extensive account of evaluative verbs in Serbian, showing at the same time that they are very numerous in the lexicon (over 1,500) and that they play a very important role in expressing a great number of manner meanings that, in many well-documented languages such as English, Spanish, and French, are either lexicalized or syntactically encoded. The widespread use of verbal evaluative/ pluractional morphology in some languages thus appears to be an essential manner-encoding option.

Concerning the motion domain, morphologically encoding manner is rather limited to a small group of motion verbs, all of which involve manner in their lexical meaning, but never path. This suggests that motion is rather reluctant to evaluative morphology, which would only affect the “basic manner of motion verbs.” Further research is needed to determine the accuracy of these observations; first by comparing the semantic domain of motion to other ones, and second by extending comparison to a greater number of typologically different languages.

These results point to an important area of inquiry for future research. Thus, in light of my findings on the role of Serbian evaluative verbs in language structure, it would be interesting to explore the extent to which there is widespread adoption of morphological encoding of manner by speakers in language use: how does the productivity of the evaluative morphological pattern relate to its frequency in speech?

Another natural research direction that this work calls for is applying these results to more general cross-linguistic and typological purposes. Going back to Talmy’s opposition between Satellite-framed and Verb-framed languages, the issue is the possible typological implications of taking into account morphological means for encoding manner across languages. In this regard, [Slobin \(2004, 2006\)](#) has argued that, as a consequence of the availability of the verb for expressing manner in Sfls, the concept of manner is linguistically and cognitively much more salient in Sfls (e.g., English, Slavic) than in VfLs (e.g., French). Therefore, one can ask whether the more extended use of verbal evaluative morphology can make manner of motion more salient and what its impact could be on the distinction between “high-manner-salient” and “low-manner-salient” languages. Admittedly, English codes a great number of manner meanings at the lexical level, but Serbian obviously carries out some of these meanings and many others by morphological means. The questions to be asked are whether the lexical encoding of some manner meanings such as *to flutter* in English makes it linguistically and cognitively more salient than its morphological encoding for Serbian *let-uck-ati* ‘to flutter’ and whether or not their conceptualization and their cognitive processing are signif-

icantly different depending on the encoding strategy used. These issues will be addressed in future research.

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