

MOTION EVENTS IN FRENCH: TYPOLOGICAL INTRICACIES

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Abstract

In motion typology, French has been described as verb-framed, lexicalising Path – the core schema of motion – in verbs, and Manner in optional constituents. This paper challenges this description as representing the only means available in French to lexicalise motion. Via a usage-based approach, it documents four additional patterns attested in the language. Furthermore, this paper reports that typological predictability is not solely based on syntactic formulae, as pattern acceptability appears to be crucially dependent on semantic and pragmatic factors too. Overall, we consider several factors in the study of motion event representation, including pattern diversity in French, usage-based epistemologies, and the role of semantic and pragmatic factors.

Keywords: typology, motion events, activities, discourse, distributed spatial semantics, French.

1. Introduction

This paper addresses the question of the lexicalisation of motion events in French and explores the variety of patterns displayed in actual language use, offering a new exploration of its typological properties.

The background to this study is the typology proposed by Talmy (e.g. 1991, 2000). Talmy has identified the core schema of motion events as being the Path dimension of motion (Talmy 1991). On this schematic basis, his typology divides languages into two types, satellite- and verb-framed, depending on whether Path is expressed in a verb satellite or in the verb itself. Satellite-framing languages for Path include Finno-Ugric, Chinese, Ojibwa, Warlpiri, and Indo-European languages except Romance (ibid.: 486). The verb complex in these languages typically comprises Manner-of-motion information in the main verb and Path information in a verb satellite, such as a verb particle, prefix, or other. Verb-framed languages, on the other hand, include Romance, Semitic, Japanese, Tamil, Polynesian, Bantu, Mayan, Nez Perce, and Caddo languages (ibid.), and therefore French. In these languages, the main verb lexicalises Path-of-motion only and Manner information is then either expressed in an adjunct constituent or is left unsaid altogether.

Although greatly insightful, this important typology has recently been challenged by the growing availability of detailed cross-linguistic data and analyses (e.g. Aske 1989, Slobin 2004, Zlatev and Yangklang 2004, Ameka and Essegbey in press). Indeed, research on Romance languages has demonstrated the existence of constraints not accounted for in Talmy's typology (e.g. 1985), such that the satellite-framing pattern appears possible in typically verb-framing languages given the properties of the Path of motion (e.g. Aske 1989,

Slobin 1997). Besides, additional research on serialising and bi-partite-verb languages, such as Thai, Ewe, Akan, Algonquian, and Athabaskan, have shown the existence of a third unreported pattern, whereby the verb complex comprises both Manner and Path information in two (or more) obligatory main verbs or verb stems. In the light of these constraints and additional lexicalisation possibilities, Slobin (2004) has suggested that a structural typology may be too rigid an analytical framework, and may be better re-considered in terms of a discursive continuum along which languages would rank depending on the degree of Manner salience they express in the main verb of motion sentences. It appears therefore that cross-linguistic empirical research is required to assess the extent of the validity of Talmy's typology and Slobin's continuum, and to define the precise characteristics of motion expression in various languages. In other words, the current understanding of motion in language needs further exploration for linguistic formalisation.

This paper aims to fulfill these requirements with respect to the French language. For this purpose, the present study adopts an empirical usage-based approach to typological investigation through the collection of naturalistic data at the sentence and at the text levels. This paper reports five distinct patterns overall for the lexicalisation of motion events in French, including the typologically predicted verb-framed pattern. Our exploration of these various framing patterns leads us to argue that a structural description of typological characteristics alone is insufficient to fully reach an understanding of motion lexicalisation – at least in French. We suggest instead that semantic and pragmatic factors are central in motivating and constraining structural means and must therefore be taken into account in the linguistic description of motion expression (cf. Sinha and Kuteva 1995).

To address these issues, the present paper begins by addressing theoretical considerations in typological frameworks. These considerations include the discussion of Path-framing patterns and Path predicate constraints, as well as the important distinction between motion events and motion activities, the significance of usage-based research, and the distributed spatial semantics approach.

Following the identification of central theoretical points, the paper outlines its empirical contribution and presents the diversity of patterns found in modern French usage. Besides the well-known verb-framed pattern, this paper reports a juxtaposed pattern, a hybrid pattern, a satellite-framed pattern, and a reverse pattern; and it further offers evidence for the distribution of motion semantics at the sentence level.

Finally, the paper draws on yet more language data, namely acceptability judgements, to assess the reliability of the patterns reported thus far. The discussion of these final findings suggests that sentence structure is strongly motivated by semantic and pragmatic aspects, and that theoretical frameworks for motion expression need to be informed and contextualised by usage practices.

2. Typological frameworks for motion event expression

Motion is a dynamic domain of experience and entails the movement or displacement of an entity through space. Motion is composed of four basic conceptual components: a *Figure*, i.e. the moving entity, a *Ground*, i.e. the spatial reference, the fact of *motion*, which implies the change of location, and the *Path* followed by the moving Figure, including its point of

departure (or *source*), its actual trajectory (or *medium*) and its point of arrival (or *goal*).

Example (1) illustrates the syntactic distribution of these semantic components in English:

(1) *Oscar went out of the house across the field to the station.*

Figure Motion Path_{source} Ground₁ Path_{medium} Ground₂ Path_{goal} Ground₃

In addition to these basic components, motion events can be associated with a co-event which corresponds to the *Manner* and/or *Cause* of motion (Talmy 2000: 25-27). *Manner* denotes the expression of spontaneous motion performed by an agent [X moves], e.g. (2); whereas *Cause* denotes the expression of caused motion initiated by an external agent [X moves Y], e.g. (3).

(2) *The dog jumped over the fence.*

Figure Motion Path Ground
 + Manner

(3) *The dog pushed the bone into the hole.*

Agent Motion Figure Path Ground
 + Cause

This section introduces the domain of motion lexicalisation in language, with special attention to French. To this end, it presents Talmy's important distinction between verb- and satellite-framing in the lexicalisation of motion events, showing that French profiles the Path of motion in verb-framed constructions. Talmy's outline is useful in informing the discussion of the most pervasive lexicalisation pattern operating in French. However, Aske (1989) has

noted a number of constraints applying to Romance verbal predicates, which are relative to the type of motion Path. The discussion leads to further definitional points in understanding motion events. We introduce an important distinction between motion events and motion activities, which not only contributes to a more comprehensive understanding of motion, but also identifies lexicalisation distinctions between the two types. In a fourth sub-section, we elaborate on Slobin's usage-based continuum (Slobin 2004) as a way to introduce our epistemological approach to the study of motion events, that is, an empirically-informed approach drawing from lexical, syntactic and discursive levels of language. Finally, we review Sinha and Kuteva's contribution to the study of motion (1995) and summarise their notion of distributed spatial semantics.

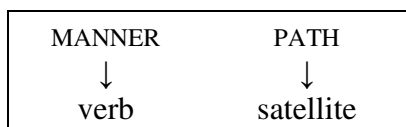
2.1. Path-framing patterns (Talmy 1985, 1991, 2000; Slobin 2004)

According to Talmy (e.g. 1991, 2000), Path is the defining conceptual element, or core schema, of motion, whilst Manner constitutes a subordinate, or supporting piece of information, i.e. a co-event:

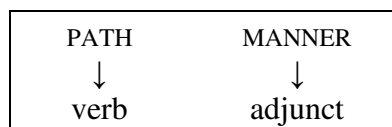
Since the figural entity of any particular framing event is generally set by context and since the activating process [the motion] generally has either of only two values, the portion of the framing event that most determines its particular character and distinguishes it from other framing events is the schematic pattern of association with selected ground elements into which the figural entity enters. Accordingly, either the relating function alone or this together with the particular selection of involved ground elements can be considered the schematic core of the framing event... the relating function that associates the figural entity with the ground elements among which the transition takes place constitutes the *path*. The core schema here will then be either the path alone or the path together with its ground locations (Talmy 1991: 483).

From this schematic understanding of motion as a Path-framing event, Talmy (1991, 2000) has suggested a dual typology for motion encoding in language, whereby languages preferentially frame Path in a verbal satellite (*satellite-framed languages* such as Germanic and Slavic), or in verbs (*verb-framed languages* such as Romance and Semitic). An ensuing difference between both types of languages concerns the encoding of Manner, since satellite-framed languages express Manner in the main verb, whereas verb-framed languages express Manner periphrastically in adjunctive constituents (e.g. gerunds, adverbs, PPs).

*Figure 1. Satellite-framed languages
e.g. Germanic, Slavic*



*Figure 2. Verb-framed languages
e.g. Romance, Semitic*



These typological differences are illustrated in (4) and (5) to show the preferential lexicalisation of Path and Manner of motion in these two types of language:

(4) Satellite-framed pattern, e.g. English

Subject [Figure]	Verb [Manner]	Satellite [Path]	Object [Ground]
<i>Julie</i> _F	<i>ran</i> _M	<i>across</i> _P	<i>the street</i> _G

(5) Verb-framed pattern, e.g. French

Subject [Figure]	Verb [Path]	Object [Ground]	Gerund [Manner]
<i>Julie_F</i>	<i>traversa_P</i>	<i>la rue_G</i>	<i>en courant_M</i>
Julie	crossed	the street	running

‘Julie ran across the street.’

Talmy’s typological framework offers an economical way of characterising motion lexicalisation patterns across a wide range of languages, including French. However, recent empirical studies have added a third option to Talmy’s dual model. Indeed, an important gap in the typology seems apparent when considering serialising languages, such as Thai (Zlatev and Yangklang 2004), or Ewe and Akan (Ameka and Essegbey in press). The specificity of these languages is to express both Path and Manner *equipollently* in a single verb clause containing two (or more) obligatory verbs, i.e. one verb expressing Path and one verb expressing Manner. In other words, Path and Manner receive equal semantic emphasis within the same verb complex, e.g.

(6) Thai (Zlatev & Yangklang 2004: 168)

<i>χηαε̃ν</i>	<i>δ<=><=>ν</i>	<i>κηα⊥αμ</i>	<i>τηανο&ν</i>	<i>κηα⊥ωπαφ</i>	<i>ναφ</i>	<i>σν&αν</i>
I	walk	cross	road	enter	go	in park

‘I walked across the road and into the park.’

(7) Ewe (Ameka and Essegbey, in press)

$\alpha\kappa\omega\alpha\delta\alpha\alpha$	$\nu\mathcal{O}$	$\omega\epsilon\alpha\cong$	$\kappa \cong$	$\delta\alpha\nu$	$\nu\mathcal{O}$	$\nu\nu$
child	DEF	crawl:HAB	go:HAB	room	DEF	contain_region

‘The child crawls into the room.’

Zlatev & Yangklang (2004) have argued that serialising languages share characteristics of both satellite- and verb-framing languages, and therefore do not clearly correspond to either of the patterns offered by Talmy’s typology. In order to better account for typological distinctions, Slobin (2004) therefore introduced a third pattern, namely the *equipollently-framed pattern* mainly representing languages with serial verbs (e.g. Thai, Ewe, Akan), and bi-partite verbs (e.g. Algonquian, Athabaskan) in which two (or more) verb stems are required to lexicalise motion events.

These examples suggest that Talmy’s *prima facie* convincing typology may need additional empirical cross-validation and ensuing expansion of permissible patterns. It is the aim of this paper to fulfill both needs with respects to French.

2.2. Path predicate constraints (Aske 1989, Slobin 1997)

French is the focus of investigation in the present article, and it is important to note that although the verb-framed pattern exemplified in (5) is pervasive in the language, additional characteristics have been offered to further define the constraints applying to the lexicalisation of motion events in Romance languages.

With reference to Spanish, Aske (1989), for instance, has noted that verb-framed languages can use sentence structures of the satellite-framing type, with a Manner verb and a Path satellite. Aske (ibid.) made a useful distinction to explain the variable use of the verb-framed and satellite-framed structural patterns in Romance languages, identifying two types of Path, i.e. atelic as in (8), and telic as in (9).

(8) a. *We walked along the beach.*

b. *He drove down the hill.*

(9) a. *We walked into the room.*

b. *She blew out the candle.*

Telic Path phrases are thus overtly directional and/or resultative, in that they specify the endpoint or endstate of the Path. Atelic Paths, on the other hand, do not specify the Path endpoint, but only the median Path trajectory.¹

Aske argues that the conceptual distinction between telic and atelic Paths generates different mappings onto semantic representations in verb-framed languages – here, at the structural level, e.g. (10) and (11). Indeed, verb-framed languages seem able to reproduce the satellite pattern with a Manner verb and Path predicate, e.g. (10), when expressing atelic

¹ Note that Aske calls atelic Paths ‘locative’ expressions, but we strongly disagree with this definition, as Paths and Locations differ fundamentally in both conceptual and linguistic terms. In brief, there is no trajectory inherent in Location, whereas Path necessitates a trajectory and therefore implies motion. We will elaborate further on this distinction in the following section.

events. On the other hand, they cannot conflate Manner in the main verb in the case of telic Paths in order to obtain a telic event reading, e.g. (11).

- (10) a. *Nous_F* *avons marché_M* *le long de_P* *la plage_G*
 we have walked along of the beach
 ‘We walked along the beach.’

- b. *Il_F* *a conduit_M* *en bas de_P* *la colline_G*
 he drove in bottom of the hill.
 ‘He drove down the hill.’

- (11) a. [?] *Nous_F* *marchons_M* *dans la pièce_{L+G}*
 we walk in the room
 ‘We are walking in the room.’

- b. [?] *Elle_F* *a soufflé_M* *sur la bougie_{L+G}*
 she blew on the candle
 ‘She blew on the candle.’

Indeed, the constructions in (11) do not profile Paths, but Locations instead. By failing to profile Paths, the sentences in (11) fail to encode motion events altogether. Note, nonetheless, that (11a) and (11b) are not ungrammatical, but that their semantics differ from those in (12a) and (12b) which illustrate the satellite-framing pattern in English mappings:

- (12) a. *We walked into the room.*
 b. *She blew out the candle.*

In order to convey the telic semantics in (12), French needs to use the verb-framed pattern instead, as predicted by Talmy, e.g.

- (13) a. *Nous sommes entrés dans la pièce.*
 we entered in the room
 ‘We entered the room.’
 b. *Elle a éteint la bougie.*
 she extinguished the candle
 ‘She put out the candle.’

In other words, it appears that French can be satellite-framed for atelic events, but not for telic events. Aske’s distinction between telic and atelic types of Path is thus useful in refining Talmy’s broad classification, and in presenting a conceptual dimension relevant to the structural mapping of motion components, namely telicity. This structural constraint in the semantic mapping of telic events has also been referred to as the *boundary-crossing constraint* in verb-framed languages (Slobin & Hoiting 1994, Slobin 1997):

It appears to be a universal characteristic of V-languages that crossing a boundary is conceived of as a change of state, and that state changes require an independent predicate in such languages... When a path crosses a boundary, then, it is no longer possible to accumulate a series of grounds to a single verb, because the state-change from one side of the boundary to the other will be expressed by a separate verb with its associated ground (e.g. Slobin 1997: 441).

The following sentences illustrate Slobin's point:

- (14) *Je_F marchais_M [le long de la plage]_{P+G} [vers le phare]_{P+G}*
I was walking along the beach toward the lighthouse
'I was walking along the beach towards the lighthouse.'

- (15) *Je_F franchis_P [le seuil]_G et pénétrai_P [dans la boutique]_G*
I crossed the threshold and penetrated in the shop
'I crossed the threshold and entered the shop.'

Boundary-crossing events thus also qualify as telic motion, together with Paths overtly expressing endpoints or resultative states in the case of caused motion.

2.3. Motion activities versus motion events (Pourcel 2005, Pourcel & Kopecka in press)

As mentioned above, Aske (1989) suggests that motion events framed by atelic Paths yield an activity, rather than an event, construal:

It seems that activity/ manner verbs [in Spanish] that strongly imply motion work best with the English pattern (ibid.: 3).

In other words, Aske suggests that Spanish follows a satellite-like pattern for activities, which is therefore different from the verb-framed pattern for motion events. The conceptual importance of distinguishing motion activities and motion events is crucial, especially as it

appears to be linguistically, as well as conceptually, motivated – at least with respect to verb-framed languages.

However, we disagree with Aske’s suggestion that atelic Paths yield activity readings as such. Instead, Locations following Manner verbs of motion do. In this section, we aim to provide a definitional outline of the two types of motion – events and activities – and to demonstrate the relevance of this distinction to typological concerns.

Essentially, an activity conveys Manner information. The Manner of motion receives emphasis and constitutes an end in itself, that is, the core schema of an activity is not Path, but Manner. Consider, for instance:

- (16) *Marc_F court_M (dans la rue)_{L+G}*
 Marc runs (in the street)
 ‘Marc is running (in the street).’

The semantic mapping characteristics of an activity therefore differ crucially from those of a motion event in verb-framed languages, such as French, so that:

- (i) Manner information is obligatorily encoded;
- (ii) Manner is typically lexicalised in the main verb of the sentence;
- (iii) Path information is absent;
- (iv) the optional PP conveys Location information;

- (v) Ground together with its Location constitutes optional information in linguistic expression;
- (vi) the sentence optionally provides a locational, rather than a directional, reading.

It is important to stress that a motion activity does not convey Path information, whether telic or atelic, that is, there is no directionality in activities.

In contrast, a motion event centres around Path, its core schema. Its expression therefore requires the elaboration of Path information consistently, whether the Path is telic or atelic.² This is true also in cases where Manner of motion is a relevant piece of information. The grammatical characteristics of motion event encoding in French are therefore different to those of activity encoding, so that

- (vii) Path information is obligatorily encoded;
- (viii) Path is typically lexicalised in the main verb of the sentence;
- (ix) Ground information is typically encoded in a verb object or in an optional constituent;
- (x) Manner information is optional and may be left unspecified altogether;
- (xi) The sentence obligatorily provides a directional reading, either telic as in (17) or atelic as in (18).

² Note that a motion event may indeed be either telic or atelic, and in this sense we disagree with Aske's position that atelic Paths convey motion activities.

(17) *Marc_F est entré_P dans le jardin_G*

Marc entered in the garden

‘Marc went into the garden.’

(18) *Marc_F longe_P les bords de rivière_G*

Marc goes along the river banks

‘Marc is going along the river banks.’

The conceptual distinction between *activity* and *event* is evident regardless of the language in which the two types of motion may be expressed. However, structurally speaking, the distinction may appear to be blurred in satellite-framed languages, such as English, as both types of motion – activity and event – are lexicalised conflating Manner in the main verb. Note nonetheless that English too morphosyntactically distinguishes the two types of motion, as an event requires Path to be encoded in a grammatical satellite as in (19), whereas an activity – no longer requiring a Path – optionally lexicalises Location in a PP instead, as in (20).³

(19) *John_F walked_M into_P the room_G.*

(20) *John_F is walking_M in the room_{L+G}.*

³ Note that English also marks the difference between activities and events via aspect, so that activities typically require progressives. We will not detail aspectual considerations in this paper (however see Pourcel 2005 for further discussion).

In verb-framed languages such as French, on the other hand, the grammatical characteristics of motion event encoding are more noticeably different from those of motion activity encoding, since in motion events, Path is obligatorily lexicalised (typically in verbs), whereas in motion activities, Manner is obligatorily lexicalised in main verbs. The distinction between motion event and activity therefore requires formalisation. Thus contradicting Talmy (1985: 60), we contend that we cannot simply “treat a situation containing movement or the maintenance of a stationary location alike as a ‘motion event’.”

2.4. Usage-based approach to typological characterisation (Slobin 2004)

Slobin (e.g. 2004) has made a number of inspirational contributions to the study of motion events from a wide-ranging cross-linguistic perspective. This sub-section aims to review a few of these contributions in the light of the understanding given above and of the empirical study to follow in sections 3 and 4.

Slobin’s crucial addition to motion typology has been to restore an empirical focus on usage-based epistemologies aimed at documenting patterns beyond the sentence level in terms of lexical resources, discursive patterns, rhetorical styles and habitual fashions of speaking. His point has been to integrate all levels of language in order to obtain a more holistic understanding of the dynamics of motion expression. In addition, his work illustrates a descriptive tradition concerned with the empirical data collection of language in use. In the present research, we aim to embrace this tradition and its epistemological tenets so as to ground our findings within usage-based linguistics as informed by speakers.

Besides, Slobin's research demonstrates that linguistic resources found at the sentence and text levels richly complement and motivate each other in ways intricate and complex enough to enable a more comprehensive understanding of motion expression and to possibly expand existing typological frameworks.

In particular, his empirical observations have led him to focus on the relative expression of Manner across language types, as it is the conceptual variable that is realised differently in linguistic expression. Overall, he notes that satellite-framed languages lead speakers to pay more attention to Manner of motion than do verb-framed languages, because Manner receives *habitual* expression in the main verb when Path is framed in a satellite. That is, in satellite-framed languages, Manner is easily codable and more accessible for linguistic expression, whereas in verb-framed languages, Manner is more commonly expressed in an optional constituent – if at all – meaning that it is less habitually encoded and thus less codable. Slobin notes that differential levels of attention to Manner reflect overall discursive tendencies that entail differentially dynamic accounts of events across the two language types. He indeed observes that English narratives convey more vivid and detailed action-based meanings than do Spanish narratives, for instance (e.g. Slobin 2000, Berman and Slobin 1994).

Taken together, these linguistic characteristics at the sentence and text levels concerning the expression of and the habitual attention to Manner offer a cohesive account for habitual fashions of speaking about motion in satellite- and verb-framing languages. Slobin (2004) developed an alternative, though complementary to Talmy's, typological description to account for the differentiated expression of Manner and to incorporate several levels of

language at which that expression is relevant. This alternative model offers to rank languages along a cline of relative Manner salience.

- (a) “high manner salient languages” (i.e. equipollently- and satellite-framing languages for Path) provide an accessible slot for Manner in elements such as main verbs (e.g. Germanic, Slavic languages), serial verbs (e.g. Mandarin, Thai), bipartite verbs (e.g. Algonquian, Athabaskan), preverbs (e.g. Jaminjungan languages), and ideophones (e.g. Basque, Japanese),
- (b) “low manner salient languages” (i.e. verb-framing languages for Path) require additional morphology to encode Manner information, e.g. gerunds, adverbs, PPs (e.g. Romance, Semitic languages).

In sum, whereas Talmy’s structural typology is based on the lexicalisation of Path of motion, Slobin’s discursive typology is based on the differential attention to Manner in language. Slobin’s typological cline provides a descriptive model, which is sensitive to language use and rhetorical style. His approach takes into account the discursive applications of typological distinctions. This entails that discourse patterns are the consequence of typological properties, and also that typological properties derive from the dynamic process of language use and its habitual patterns of expression. This discursive framework has therefore the advantage of considering each language’s resources and usage patterns, and is thus better empirically informed. Note nonetheless that the cline retains the language classification

based on structural patterns at the sentence level, i.e. equipollently-, satellite- and verb-framing.

2.5. Distributed spatial semantics (Sinha & Kuteva 1995)

Finally, consideration needs to be paid to extra aspects of semantic construal and pragmatic aspects of motion semantics.

Sinha and Kuteva (1995) have developed a functional approach of *Distributed Spatial Semantics* which makes a number of additional contributions besides the ones reported so far. These contributions will be particularly relevant to explaining the data reported in the following sections. According to Sinha and Kuteva (ibid.), spatial meaning is not merely encoded in individual linguistic items, e.g. Path of motion is not solely expressed in one sentence element – be it a satellite or a verb. Instead, spatial meaning is distributed across the different linguistic items found in morphosyntactic structure (see also Zlatev 2003). Consider for instance the following examples from Sinha and Kuteva (1995: 171):

(21) *The picture is on the wall.*

(22) *The book is on the table.*

The locational reading of the ‘on’ relation between Figure and Ground is indeed not solely realised via the prepositional semantics of ‘on,’ but instead by the scene construed by the Ground, and by the cogniser’s non-linguistic knowledge of the Grounds in (21) and (22). In short, spatial semantics are not contained in items in isolation, and their decoding also relies

on inferential processes. Likewise, spatial dimensions may be left unsaid altogether in discourse, yet they may be inferred still from other spatial elements overtly expressed.

Consider the following examples (ibid.: 183):

(23) *The boy jumped over the fence.*

(24) *The boy jumped the fence.*

The example in (24) does not encode Path, for instance, yet Path is unmistakably inferrable as being ‘over’, due to fundamental properties of the Ground (e.g. fences are vertical structures of limited height relative to human size), of the Manner (e.g. jumping involves upwards propulsion and enough force dynamics to incur an ‘over’ path rather than a ‘through’ path for instance), and of the Figure (e.g. humans are capable of jumping over fences). In other words, contextual knowledge offered by the explicit semantic elements found in a sentence helps construe a fuller conceptual representation of the motion event than might have been conveyed in linguistic expression. Sinha and Kuteva (1995) therefore suggest that we may understand spatial encoding in terms of the degree of explicitness of expression instead. In this perspective, some aspects of motion are lexicalised, whereas others are left unsaid yet available for inference. The differences between languages may therefore be approached in terms of *overt* versus *covert* expression of spatial elements. With respects to motion events, we may say at this stage that Manner is overt in satellite-framed languages, whereas it is often covert in verb-framed languages, such as French.

Concerning overt expression, the *Distributed Spatial Semantics* approach further points to the fact that languages can distribute overt spatial information *redundantly*, as in (25) where Path of motion is expressed by the verb and by the verb particle, or *differentially*, as in (26) where the verb and the particle supply different information about the event, with the verb encoding Manner and the satellite encoding Path (ibid.: 186).

(25) *Insert the plug in(to) the socket.*

(26) *The bottle floated out.*

In sum, the *Distributed Spatial Semantics* approach emphasises (i) the interaction between grammatical and lexical resources, (ii) the compositionality of meaning construction, and (iii) the contribution of semantic and pragmatic factors in the representation of motion, and space in general. In so doing, the theory thus constitutes a holistic outline of semantic construals, and offers a pertinent framework for the analysis of idiosyncratic representations of spatial meaning and for more comprehensive accounts of the typological properties of individual languages.

3. Typological complexity of French in elicited discourse

As stated previously, this paper aims to take an empirical, usage-based approach to investigate how the French language fits into motion typology as it has been described above. This section offers naturalistic language data and demonstrates that French displays greater

pattern variability than the existing motion typology outlines. This section aims to offer a presentation of all the patterns encountered in usage and available in the French language.

Prior to launching into data presentations and analyses, we wish to emphasise that our approach examines the lexicalisation of motion events only. In doing so, it does not seek to detail how Path alone – as the event core schema – may be framed, but rather, how all motion-event components are expressed in usage, including Figure, Ground, Path and Manner.⁴ Our choice for doing so rests upon the observation that the idiosyncratic framing of one component alters that of another, and therefore affects structural dynamics at the sentence level. Therefore, we seek to provide a descriptively rich account for the encoding of motion events as realised via its several conceptual components.

This section presents empirical data drawn from written and verbal elicitation tasks with French native speakers. Results are organised as per type of motion lexicalisation pattern identified in the data. So far, we report five such patterns, that is, four beyond the verb-framing pattern suggested by Talmy's typology.

3.1. *Methodology*

The data presented in the following sections was elicited via two formats, (1) written sentences and (2) oral narratives. The data is thus representative of motion expression by French native speakers (N=65) at the sentence and at the text levels.

40 native speakers performed the written elicitations (mean age = 20). This procedure used visual stimuli in a videoed format. 45 video clips were shown – one at a time – depicting

⁴ Note that Figures and Grounds tend to be consistently expressed in subject and object positions respectively. Therefore, the discussion of those components may appear limited in this section. However, we will discuss the semantic relevance of those elements to usage patterns in the following sections more extensively.

human motion scenes in real-life settings. Each scene lasted about 5 seconds. The video clips displayed a variety of Ground, Path and Manner types, as illustrated in Table 1. Overall, this task yielded 1800 sentences expressing motion events.

Table 1. Stimuli examples.

PATH	MANNER ⁵	GROUND
open	push	door
down	tiptoe	staircase
along	run	road
across	walk	street
across	cycle	road
down	scooter	road
up	walk	hill
out	run	house
towards	limp	person
shut	kick	door
in	dive	pool
under	push	sofa

An unrelated sample of French native speakers performed the narrative elicitation task (N=25, mean age = 26). For this task, a 4½ minute-long extract from Charlie Chaplin's *City Lights* was shown to each subject. The passage displayed a suicide attempt, taking place on a river bank, with two main characters, Charlie Chaplin and a drunken millionaire. The test attempted to contextualise motion scenes in a real-life story format. The scene comprised numerous motion events in a sequence with various Manner and Path types, e.g. *staggering down, swaying, hopping around, falling in, climbing out, strolling, walking, running, bending over, dunking, throwing over, splashing around, grabbing, kneeling down, sitting down,*

⁵ Note that the stimuli comprised a wide range of Manner types, including default Manner types of displacement (e.g. walk), 'forced' types (e.g. tiptoe, limp), and 'instrumental' types (e.g. cycle) (see Pourcel 2004a).

reaching out, picking up, flailing, pushing, pulling, shaking, clambering, scrambling. Subjects were instructed to perform an immediate free prose recall task. The process elicited 25 narratives averaging 3 minutes in speaking time, which yielded a total of 1037 sentences including 548 motion sentences (mean per speaker = 22 motion sentences).

3.2. *Diversity of patterns in usage*

The data collected revealed the range of constructions available in French to express motion events, including a number of patterns not accounted for in the literature and therefore in need of documenting. Indeed, the existing typological work records one main pattern in French, namely the verb-framing pattern discussed above, according to which sentence structure maps motion information as follows:

(27) Subject [Figure] Verb [Path] Object [Ground] Adjunct [Manner]

However, in the written elicitation task, only 65% of sentences encoded Path in the main verb of the sentence, as in (27). In fact, results show considerable variability in the syntactic choices made by native French speakers. Indeed, 33% of the written sentences conflated Manner in the main verb of the sentence.⁶ In this one third of the data, we note four

⁶ Note that 2% of the sentence data displayed nominalisations (c.f. Pourcel 2004a), e.g.

(α) Ouverture d'une porte.
 opening of a door.
 'Someone opens a door.'

These patterns will not be discussed because they do not represent a pervasive fashion of speaking about motion in French, and because they do not constitute actual sentences.

different construction types for the expression of motion events – in the following order of usage preference:

(28) *a juxtaposed pattern*

Subject [Figure] Verb [Manner] Adjunct [Ground] + Verb [Path] Object [Ground]

(29) *a hybrid pattern*

Subject [Figure] Verb [Manner + Path] Object [Ground]

(30) *a satellite-framing pattern*

a. Subject [Figure] Verb [Manner] Sat Particle [Path] Object [Ground]

b. Subject [Figure] Sat Prefix [Path] -Verb [Manner] Object [Ground]

(31) *a reverse pattern, or adjunct-framing pattern*

Subject [Figure] Verb [Manner] Adjunct [Path] Object [Ground]

The data from the written-sentence elicitation task demonstrates that French linguistic patterns for expressing motion only loosely conform to Talmy’s typology, which describes French as a predominantly verb-framing language for Path of motion. Nevertheless, we acknowledge that “as a general caveat, it should be remembered that typological characterisations often reflect tendencies rather than absolute differences between languages” (Berman & Slobin 1994: 118). However, the two-third preference for verb-framing displayed

in the written-sentence elicitation data seems a somewhat weak preference. As a result, we offer to examine more closely the pattern variability suggested by the written-sentence elicitation data, especially those patterns encoding Manner of motion in the main verb of the sentence. To this end, we draw on more data from the oral narratives. The following subsections classify these data – both the written sentences and the oral narratives – into the types of patterns suggested in (27)-(31), following a relative order of usage preference.

3.2.1. *Verb-framing pattern: Path verb + Manner adjunct*

The constructions in (32)-(35) conform to the typology of motion events, as seen in (27), according to which the verb encodes Path information in languages like French. Such constructions may dispense of Manner information altogether as in (32), or specify Manner in an adjunct, such as a PP as in (33), an adverb as in (34), or a gerund as in (35).

- (32) *il_F rentra_P chez lui_G*
 he returned to his
 ‘He returned home.’

- (33) *il_F rentra_P chez lui_G sur la pointe des pieds_M*
 he returned to his on tiptoes
 ‘He tiptoed back home.’

(34) *il_F rentra_P chez lui_G précipitamment_M*
 he returned to his hurriedly
 ‘He hurried back home.’

(35) *il_F rentra_P chez lui_G en courant_M*
 he returned to his running
 ‘He ran back home.’

These verb-framing constructions illustrate two thirds of the data obtained overall and as such represent the preferential typological pattern for expressing motion in French. We note also a further preference within these types of constructions for those encoding Manner in a PP or in an adverbial adjunct rather than in a gerund phrase. We suggest that the difference is one of construal (see Pourcel 2005). When using [V_{Path} + Gerund_{Manner}], the sentence profiles two construals characterising Figure motion, namely an event, e.g. *going back home*, and an activity, e.g. *running* (based on example (35)). This differs from [V_{Path} + PP/AdvP_{Manner}] where the PP/ AdvP does not characterise the Figure’s activity. Instead it qualifies the motion event, that is, it qualifies the Manner of displacement along the motion Path. In this case, e.g. (33)-(34), the sentence profiles only one construal profiling the motion event of a Figure. According to this analysis, a gerund construction adds one construal to the psycholinguistic processing load of the sentence, and this may provide an explanation for the more ready usage of PP/AdvP_{Manner} in the verb-framing pattern, though both types of adjunct constituents represent a motion co-event.

3.2.2. *Juxtaposed pattern: Manner verb + Path verb*

The data also indicated that it is common in French to use a ‘juxtaposed pattern’ in descriptions of motion events, which differs from verb-framing and satellite-framing constructions, and which, we suggest, is not merely the co-ordination of the patterns, but an autonomous pattern in and of itself. Crucially, in the juxtaposed pattern, two verb phrases co-exist in a mutually supportive relation in one sentence, that is, one verb phrase semantically informs the other, e.g.

- (36) *il_F court_M dans une rue_G puis rentre_P dans une maison_G*
he runs in a street then enters in a house
‘He runs in a street and into a house.’

Typically, the first verb phrase encodes a motion activity with a Manner verb and possibly a locative PP, and the second verb phrase encodes a motion event with a Path verb alone. The event part of the sentence is thus verb-framed but typically it is not followed by a Manner adjunct, as Manner is already specified in the first verb phrase. This pattern is commonly encountered to relate motion events and has the advantage of specifying both the Manner and the Path of motion in obligatory constituents. It may be argued that the motion semantics are thus rendered more dynamic in this construction, as Manner is expressed in a main verb (as opposed to an optional constituent). This pattern differs from the traditional verb-framed pattern on two accounts, (i) the sentence structure it requires involves two verb

phrases, and (ii) the pattern imposes different mapping constraints on the informational organisation of the verb phrases. Indeed, as mentioned above, the Path-loaded verb phrase does not follow the typical verb-framing construction, as it does not specify Manner in an optional adjunct.

It is important to note as well that there is a greater tendency to use the juxtaposed pattern when the Path of motion is telic, that is, when there is a physical endpoint to the trajectory, or a crossed boundary as in (36), or a resultative endstate from a caused motion, as in (37).

- (37) *Il_{Agent} tire_M Charlie_F par le pantalon_{means} pour le_F sortir_P de l'eau_G*
 he pulls Charlie by the trousers to him exit of the water
 ‘He pulls Charlie out of the water by his trousers.’

Example (37) illustrates a typical instance of juxtaposed pattern usage to express agent goals. Indeed, the coordination between the two verb phrases is often marked with *pour* ‘in order to’, indicating that the first verb phrase uses the expression of Manner as that of “means” to inform the completion of the motion event, as expressed in the second verb phrase. It is therefore typical to find that the first verb phrase relates Manner-loaded information, and the second verb phrase encodes Path-loaded information. This further demonstrates the interdependence of the two verb phrases and justifies the consideration of this juxtaposed construction as a separate pattern in itself.

3.2.3. Hybrid pattern: Manner + Path verb

The constructions in (38)-(40) display yet another type of pattern available for encoding motion events in French. Often taken as Manner verbs, the verbs in the following examples differ from typical Manner verbs (see further examples in following sections), in that their semantic value additionally includes Path information. In other words, the following sentences present verbs conflating both Path and Manner information into one lexical unit (c.f. Kopecka 2004, in press a). Loosely speaking, the following constructions therefore conform to the verb-framing pattern to some extent. However, by lexicalising Manner information together with Path in an obligatory constituent, these constructions differ from prototypical verb-framing as exemplified in (32)-(35) above, and constitute an independent hybrid conflation pattern, e.g.

(38) *Il_F plonge_{M+P}*

he [dives in]

‘He dives in.’

(39) *Il_F dévale_{M+P} les escaliers_G*

he [rushes down] the stairs

‘He is rushing down the stairs.’

- (40) *Charlot*_F *tombe*_{M+P} *à l'eau*_G
 Charlie [falls down] to the water
 ‘Charlie falls in the water.’

This hybrid pattern occurs with great frequency in the data and represents a typical lexicalisation pattern for motion events in French.

For descriptive purposes, it is interesting to note that the hybrid pattern reflects the hybrid nature of the lexical verb. Lexically, we encounter two types of hybrid verbs, (i) a compact lexical unit, e.g. *grimper* ‘climb up’, *plonger* ‘dive into’, and (ii) a fossilised form comprising a Path prefix and a Manner verb root, e.g. *dégringoler* ‘tumble down’, *dégouliner* ‘trickle down’, *dériver* ‘float away’. The latter type of lexical hybrid verbs can no longer be de-prefixed, e.g. **gringoler*, **gouliner*, **river*, and are no longer perceived as morphologically composite although they conflate both a Path and a Manner meaning (Kopecka in press a, b).

As just mentioned, the hybrid pattern reflects the hybrid nature of the lexical verb. In theory, because the hybrid verb comprises both Path and Manner information, no additional Path or Manner information is required in following constituents. However, the semantic nature of hybrid verbs is not uniform across items with respects to Manner specification. Indeed, we note that although most hybrid verbs express Manner types very specifically, e.g. *dégringoler* ‘tumble down’, *grimper* ‘climb up’, *claquer* ‘slam shut’, other hybrid verbs, e.g. *tomber* ‘fall down’, express Manner less specifically. In this case, extra Manner or Path information may be distributed across other constituents.

3.2.4. Satellite-framing pattern: Manner verb + Path satellite

This pattern is not reported in the literature as applying to French. However, it is an important one commonly encountered in the data. French satellites for Path can take two different forms, either a verb particle as in (41), or a prefix as in (42) (c.f. Kopecka 2004), e.g.

- (41) *Il* _{Agent} *tire* _M *Charlot* _F *hors* _P *de l'eau* _G
he pulls Charlie out of the water
‘He pulls Charlie out of the water.’

- (42) *Il* _{Agent} *en* _P-*lève* _M *ses chaussures* _F
he away-takes his shoes
‘He takes his shoes off.’

The pattern is common only insofar as satellites are available in French. Satellites of the verb particle type are fewer than prefixes and are no longer productive in French (Kopecka in press a, b). They include particles such as *dehors* ‘outside’, *dedans* ‘inside’, *(par-)dessus* ‘above’, *(par-)dessous* ‘beneath’, *à travers* ‘through’. Prefixes are prolific on the other hand, e.g. *a-* ‘towards’, *en-* (Lat. *inde*) ‘away’, *en-* (Lat. *in*), *dé-* ‘off’, *par-* ‘by, over’.

Finite verbs encoding both Manner and Path in one item call thus for two distinct types of constructions, (i) the hybrid pattern noted above, and (ii) the present satellite-framed pattern. Satellite-prefixed verbs such as *ac-courir* ‘towards-run’, *a-mener* ‘towards-lead’, *dé-*

vêtir ‘un-dress’, *en-voler* ‘away-fly’ may resemble some hybrid verbs, e.g. *dégringoler* ‘tumble down’, *dévaler* ‘rush down’. The difference between these satellite-prefixed verbs and hybrid verbs resides in the separability of the satellite prefix from its verb root. Satellite verbs retain an independent lexical root encoding Manner, e.g. *courir* ‘run’, *mener* ‘lead’, *vêtir* ‘dress’, *voler* ‘fly’, and take on a derivable meaning when the Path prefix is added, whereas hybrid verbs have become monomorphemic units. Note that these prefixes are typically no longer productive in contemporary French.

3.2.5. Reverse pattern, or Path adjunct-framing pattern: Manner verb + Path adjunct

The constructions in (43)-(45) present further ad hoc patterns, which do not conform to Talmy’s typology. They show Manner information conflated in the main verb of the motion event sentence and Path information encoded in an adjunct, such as a PP in (43), or a gerund in (44), or even both in (45).

- (43) a. *Il_F marche_M le long de_P la route_G*
 he walks along of the road
 ‘He is walking along the road.’

- b. *Il_F court_M dans_P le jardin_G*
 he runs into the garden
 ‘He ran into the garden.’

(44) *Il_F court_M en traversant_P la route_G*

he runs by crossing the road

‘He is running across the road.’

(45) *Il_F titube_M en allant vers_P le banc_G en arrière_P*

he staggers going towards the bench backwards

‘He is staggering backwards towards the bench.’

These patterns are neither satellite- nor verb-framing for Path. Instead, they upset the verb-framing pattern so that the prototypical syntactic slots for Path and Manner information are swapped round. The resulting grammatical organisation of these sentences may be described as a ‘reverse pattern’ (Pourcel 2004b), because it allocates Manner to the verb slot and Path to the adjunct phrase slot. In other words, it reverses the typical verb-framing pattern of allocation of conceptual information to grammatical slots, so that the gerund or PP adjunct no longer encodes Manner, but Path instead.

In addition, we note a distinction between the reverse constructions using a Path PP in (43) and the ones using a gerund adjunct in (44). Indeed, sentences using Path PP adjuncts are more commonly encountered in the data. This may be due to at least two preliminary reasons. First, Path PPs following a Manner verb mirror the motion activity syntactic pattern, which is widely acceptable in French (as illustrated previously). Besides, some of these constructions (e.g. (43b)) have the advantage of allowing two readings, either a motion activity reading or a motion event reading. Indeed, the core schematicity of Path remains semantically ambiguous

in this construction, and is therefore resolved by contextual cues. Secondly, gerunds add to the processing load, as discussed in 3.2.1. above, and result in syntactic atypicality. In short, gerunds do not represent habitual fashions of speaking in French usage. This is further demonstrated in Section 4 where acceptability judgements of reverse patterns reveal that speakers judge PP adjuncts more favourably than they do gerund adjuncts.

3.3. Semantic distribution of Manner and Path

The analysis presented so far has outlined the diversity of patterns displayed by French speakers in the description of motion events and has focused on the lexicalisation of Path and Manner components. However, in order to provide a more complete characterisation of linguistic aspects of motion event encoding in French narratives, we draw attention here to a further aspect of motion expression in language, namely the semantic distribution of Path and Manner information at the sentence level (cf. Sinha and Kuteva 1995).

As introduced in section 2.5, spatial semantics can be distributed in the syntagmatic chain *redundantly* as in (46) where the same spatial information, namely downward Path, is expressed in two different items, a verb and a particle. Alternatively, spatial semantics can be distributed *differentially* as in (47) where each item, the verb and the preposition, expresses a different component of Path, namely the downward motion and the median Path.

- (46) *Il_F est descendu_P en bas_P*
 he descended down
 ‘He went down the stairs.’

- (47) *Il_F est descendu_P par_P la vallée_G*
 he descended through the valley
 ‘He came down through the valley.’

Therefore, as illustrated in the above examples, French has the option of distributing motion information in a redundant or in a differentiated fashion, across a verb and a particle or across a verb and a preposition. However, French can also distribute Path information across two verbal constituents, namely a verb and a gerund, as in (48).

- (48) a. *Il_F est arrivé_P sur le bord du fleuve_G en descendant_P les escaliers_G*
 he arrived on the edge of the river descending the stairs
 ‘He arrived on the river banks by coming down the stairs.’
- b. *Ils_F repartent_P en montant_P l’escalier_G bras-dessus bras-dessous_M*
 they depart ascending the stairs arm in arm
 ‘They left by going up the stairs arm in arm.’

The type of semantic distribution illustrated in (48) represents an interesting example of differentially distributed spatial semantics. Indeed, note that although both the main verb and the gerund convey a Path segment, the sentence shows the accumulation (and therefore the differentiation) rather than redundancy of Path information. Indeed, the main verb

expresses change of location – arrival in (48a) and departure in (48b) – whereas the gerund expresses the directionality, namely the downward and upward Path.

The differentiated semantic distribution of motion information can also apply to Manner of motion, as in (49).

- (49) a. *Il_F recule_P en sautillant_M et en tournant_M sur place_G*
 he moves back hopping and spinning on the spot
 ‘He’s hopping backwards and spinning on the spot.’
- b. *Il_F descend_P l’escalier_G en marchant_M pattes en canard_M*
 he descends the stairs walking duck-legged
 ‘He shuffled down the stairs.’

Although both examples illustrate the differentiated distribution of Manner information, they reveal interesting differences. Whereas in example (49a), the two gerunds depict the combination of two different Manners of motion, namely *hopping* and *turning*, in example (49b), the nominal *pattes en canard* ‘duck-legged’ adds fine-grained information to the Manner of motion expressed in the gerund.

Semantic spatial distribution of a differentiated type thus constitutes a useful descriptive strategy for the expression of complex and fine-grained co-events in French, where other languages, e.g. satellite- and equipollently-framed languages, might have linguistic resources conflating such information in one lexical unit or, at least, in one verb clause.

In sum, the distribution of motion semantics – whether redundant or differentiated – is an option that applies to the patterns previously described in the French data review.

3.4. Summary

This data review has presented some novel findings with regards motion event typology in French. It has identified five patterns of usage overall. These patterns include the famous verb-framed pattern documented by Talmy’s typology, and also a juxtaposed pattern, a hybrid pattern, a reverse pattern and a satellite-framed pattern. These various patterns are particularly interesting with respects to the variability in syntactic distribution of Path and Manner information, as summarised in Table 2 illustrating their distribution as found in actual language usage – both written and verbal.

Table 2. Motion event patterns in French: Path and Manner distribution.

Pattern	Path	Manner
Verb-framed	Verb	Adjunct
Juxtaposed	Verb	Verb
Hybrid	Verb	Verb
Satellite-framed	Satellite	Verb
Reverse	Adjunct	Verb

The diversity of patterns found in actual language usage and presented in this section shows that French allows for much greater coding flexibility for Path and Manner than has

been initially stated by the typology of motion events, which has characterised the language as verb-framing only.

4. From structure to meaning

This paper has shown so far that although prototypical verb-framing may be the most widely used pattern for motion lexicalisation in French, other patterns are available to describe motion events in this language. Our ensuing aim is to evaluate the reliability of these novel structures, in order to gauge the need for a re-assessment and potential revision of existing linguistic frameworks for motion encoding in French, and possibly in other languages too. To this end, the section begins with a brief methodological outline of the acceptability judgement tests. This is followed by the presentation of statistical evidence for the validity of the patterns presented in the previous section. However, this presentation also reports controversial findings with respect to the verb-framing and the reverse patterns. As a result, greater attention is devoted to these two patterns. A closer look at the verb-framed and reverse patterns in the first sub-section reveals that semantic and pragmatic factors account for the variable acceptability of set structural patterns. The second sub-section elaborates a discussion of the semantics and pragmatics of French motion expression, based on the covert distribution of Manner information, and it suggests a typological cline to represent the dynamic and versatile framing of motion information in French expression.

4.1. Acceptability judgments of typological patterns

129 native speakers⁷ of French were asked to provide judgements for patterns found in discourse using a scale of acceptability ranging from 1 (- acceptable) to 5 (+ acceptable). Speakers were also given the chance to provide explanations concerning their judgments. 85 motion event sentences were tested for acceptability. They displayed various patterns including the prototypical verb-framing pattern as in (50), the reverse pattern as in (51), the satellite-framing pattern as in (52), and the hybrid pattern as in (53).

(50) *Marc_F monte_P les escaliers_G sur la pointe des pieds_M*

Marc goes up the stairs on the tip of toes

‘Marc is tiptoeing up the stairs.’

(51) *Anne_F court_M en passant_P par le parc_G*

Anne runs by passing through the park

‘Anne is running through the park.’

(52) *L’oiseau_F s’est en_P-volé_M du nid_G*

the bird REFL away-flew from the nest

‘The bird flew out of the nest.’

⁷ Subjects included both male and female adult speakers of various professional orientations. One half of the sample had a Northern Parisian linguistic background, and the other half had a Lyonnais linguistic background. A third of the subjects were aged 20-29, another third 30-39, and a final third 40 and over. The decision to include speakers whose age and professional categories differed from the above two tests was driven by a wish to establish whether the patterns reported were sociolinguistically idiosyncratic. None of these sociological variables, however, correlated with the variability in judgements, hence the variability illustrated in section 3.3.2 seems to be specifically linguistic, rather than sociological.

- (53) *Paul_F a grimpé_{M+P} dans l'arbre_G.*
 Paul climbed up in the tree.
 ‘Paul climbed up into the tree.’

Of all four patterns, the satellite-framed pattern lexicalising Manner in the verb stem and Path in the verb prefix (54), and the hybrid pattern conflating both Path and Manner into a monomorphemic verb (55), were the only ones to be consistently judged acceptable by native speakers of French.

				acceptability proportions ⁸				
				(-)				(+)
(54)	<i>Julien_F</i>	<i>s'est en_P-fui_M</i>	<i>de l'école_G</i>					
	Julien	REFL away-fled	from the school	1	2	3	4	5
	‘Julien fled from school.’			0%	0%	0%	0%	100%
(55)	<i>Marc_F</i>	<i>a plongé_{P+M}</i>	<i>dans le lac_G</i>					
	Marc	dived	in the lake	1	2	3	4	5
	‘Marc dived into the lake.’			5%	0%	0%	13%	82%

⁸ Recall that the [1] end of the acceptability grade indicates optimal unacceptability, and the [5] end illustrates optimal acceptability.

These examples clearly demonstrate that the satellite-framed and the hybrid patterns do exist in the French typology for motion event encoding, and that these two patterns are highly acceptable to native judgments. By contrast, the verb-framed and the reverse patterns yielded variable results. We propose therefore to illustrate and discuss the variability in acceptability judgments of these two patterns.

4.1.1. *Variation in acceptability of the verb-framing pattern*

The typologically predicted verb-framing pattern so far largely considered as characteristic of motion lexicalisation in French proved acceptable in some, yet not all, instances, as shown in examples (56) through to (61). All these sentences adopt the same structural organisation for the four central elements of motion. Indeed, the Figure is encoded in the subject constituent, the Path in the main verb, the Ground in an object constituent, and the Manner in an optional gerund. However, we can observe differences in acceptability rating, with sentences (56) and (57) as clearly acceptable by native speakers, (58) as ambiguous, and (59) to (61) as mostly unacceptable.

		acceptability proportions				
		(-)				(+)
(56)	<i>L'oiseau_F est sorti_P du nid_G en sautillant_M</i>					
	the bird exited from the nest hopping					
	‘The bird hopped out of the nest.’					
		1	2	3	4	5
		0%	0%	5%	5%	90%

(57)	<i>Christelle</i> _F	<i>traverse</i> _P	<i>la cour</i> _G	<i>en gambadant</i> _M					
	Christelle	crosses	the playground	skipping					
	‘Christelle is skipping across the playground.’				1	2	3	4	5
					8%	4.5%	9.5%	17%	61%

(58)	<i>Titi</i> _F	<i>sort</i> _P	<i>de la cage</i> _G	<i>en volant</i> _M					
	Tweetie	exits	from the cage	flying					
	‘Tweetie flew out of its cage.’				1	2	3	4	5
					17%	8%	13%	14%	48%

(59)	<i>Les abeilles</i> _F	<i>sont sorties</i> _P	<i>de la ruche</i> _G	<i>en volant</i> _M					
	the bees	exited	from the beehive	flying					
	‘The bees flew out of the beehive.’				1	2	3	4	5
					5%	35%	25%	20%	15%

(60)	<i>Julie</i> _F	<i>est montée</i> _P	<i>dans l’arbre</i> _G	<i>en grimpant</i> _M					
	Julie	ascended	into the tree	climbing up					
	‘Julie climbed up (into) the tree.’				1	2	3	4	5
					5%	40%	20%	20%	15%

(59), where (59) clearly constitutes a poorly acceptable French sentence, whereas (58) is only ambiguous. In (59), the Figure (i.e. bees) is explicitly a flying animate, whereas in (58), one has to know the Figure (i.e. Tweetie) to know that it is a bird, hence possibly the latent ambiguity in judging this sentence.

4.1.2. Variation in acceptability of the reverse pattern

The unexpected pattern lexicalising Manner in the main verb of the sentence and Path in an adjunct phrase – typically a gerund – in a reverse pattern, has also yielded variability in acceptability ratings, as illustrated in sentences (62) to (66) below. Notice that these sentences display the same morphosyntactic distribution of the semantic components of motion. The Figure is expressed in the subject noun phrase, the Manner in the main verb, the Path in a gerund, and the Ground in the object of the gerund. Nonetheless, we observe variability in the judgments for these sentences, with sentences (62) and (63) as acceptable, sentence (64) as highly ambiguous, and sentences (65) and (66) as unacceptable.

					acceptability proportions				
					(-)	(+)			
(62)	<i>L'enfant_F</i>	<i>sautille_M</i>	<i>en allant_P</i>	<i>à l'école_G</i>					
	the child	skips	going	to school	1	2	3	4	5
	'The child is skipping to school.'				3%	5%	11%	14%	67%

(63)	<i>Anne</i> _F	<i>court</i> _M	<i>en passant</i> _P	<i>dans le parc</i> _G					
	Anne	runs	passing	in the park		1	2	3	4
	‘Anne is running through the park.’					19%	14%	12%	19%
						5			36%

(64)	<i>La barque</i> _F	<i>flotte</i> _M	<i>en s’approchant</i> _P	<i>de la rive</i> _G					
	the boat	floats	approaching	the bank		1	2	3	4
	‘The boat is floating towards the bank.’					33%	22%	16%	6%
						23%			

(65)	<i>Philippe</i> _F	<i>nage</i> _P	<i>en traversant</i> _P	<i>le fleuve</i> _G						
	Philippe	swims	crossing	the river						
	‘Philippe is swimming across the river.’									
						1	2	3	4	5
						50%	23.5%	12.5%	14%	6%

(66)	<i>Le cheval</i> _F	<i>galope</i> _P	<i>en venant</i> _P	<i>vers la prairie</i> _G						
	the horse	gallops	coming	towards the meadow						
	‘The horse is galloping towards the meadow.’					1	2	3	4	5
						52%	22%	17%	6%	3%

Again, as shown in the above examples, the structural organisation alone of motion information does not suffice to determine sentence acceptability.

Overall, these sentences all display ambivalent judgements. It appears, upon closer examination, that they encode both a motion event and a motion activity. Indeed, we observe

an activity construction with a Manner verb, but also an event with a Path gerund – in the same sentence. In other words, the sentences above seem to encode ‘directed activities’. We suggest that these sentences are possibly ad hoc because motion events and activities are usually framed independently. But in the present case, what we have dubbed the reverse pattern can be acceptable, if ambiguous, because (a) it resembles the activity sentence structure with a Manner verb, and it does frame activity semantics, and (b) it also resembles the verb-framed pattern for motion events with a motion verb and a motion adjunct, and it does frame event semantics as well. The reverse pattern remains ad hoc and ambiguous in native judgements, nonetheless, because the syntax-semantics relation is reversed, in that Path is in the motion adjunct and Manner is in the motion verb. In other words, it is possible that the reverse pattern does occur and is acceptable because it so closely resembles typical motion lexicalisation patterns. However, the reverse pattern appears to be a ‘slippage’ in usage, as it were, and thus only yields ambiguity in judgements.

Finally, it is important to recall that gerunds are not language forms favoured in French usage to convey spatial information, as mentioned in section 3. This is true for Manner information, but perhaps more importantly for Paths, and especially telic Paths, since gerunds are not their typical loci in syntactic distribution. While distribution in gerunds might occur spontaneously in discourse for Path, it is judged ambiguous or unacceptable in more controlled tasks such as acceptability judgments where speakers are asked to reflect upon the structure of their language and where they are likely to become more prescriptive judges.

4.2. Contextualised typology

Clearly, the morphosyntactic structure of sentences displaying the verb-framed examples above and that of sentences displaying the reverse examples is the same within each pattern type; nonetheless, their acceptability varies. That is, neither the typical verb-framed pattern nor the atypical reverse pattern were consistently judged acceptable. We suggested therefore that the poorly rated sentences in the examples illustrated in 4.1.1 and 4.1.2 are not structurally, but semantically and pragmatically unacceptable instead.

We propose hence to contextualise the typology of motion events within a wider understanding of semantics and pragmatics by discussing the inferential nature of the French language and by showing that the cross-linguistic and intra-linguistic differences, as attested in French, rely also on the degree of explicitness of spatial information.

4.2.1. Covert distribution of Manner

Ambiguous and poorly rated sentences point to semantic redundancy showing that French relies heavily on inference in linguistic expression and comprehension. This is an important point to take into account in a usage-based framework, as it shows that typological patterns that are only structurally informed do not accurately predict the discursive reality of a language as it is produced and comprehend by its speakers.

Specifically, although the *overt* expression of spatial information is important for its representation, it is not the only strategy used in French to convey spatial meaning. In particular, Manner of motion is often *covertly* distributed across sentence constituents, and its representation then relies on contextual inferencing. Inferencing Manner information might rely, for instance, on general knowledge pertaining to the Figure and its habitual Manner of

motion as in (67), or it might rely on general knowledge pertaining to the Ground and its common function or spatial configuration as in (68).

(67) *Le skieur_F a descendu_P la piste_G*

the skier descended the slope

‘The skier went down the slope.’

(68) *Il_F a descendu_P la piste de ski_G*

he descended the slope for ski

‘He went down the ski slope.’

Overall, taking into account the inferential nature of the French language and its ensuing lack of grammatical tolerance for semantic redundancy, we may now predict that sentences (69) to (71) below are therefore semantically ungrammatical.

(69) **Le skieur_F a descendu_P la piste de ski_G*

the skier descended the slope for ski

‘The skier went down the ski slope.’

(70) **Le skieur_F a descendu_P la piste_G en skiant_M*

the skier descended the slope skiing

‘The skier went down the slope skiing.’

- (71) **Il*_F *a descendu*_P *la piste de ski*_G *en skiant*_M
 he descended the slope for ski skiing
 ‘He went down the ski slope skiing.’

It is likely that the inferentiality observed in French is also characteristic of other – if not all – languages displaying a verb-framing preference to express motion events, with Path in verbs, and Manners in optional constituents. Papafragou *et al.* (in press), for instance, provide evidence for similar inferential strategies in Greek, a verb-framed language, concluding as follows:

Typically, Greek presupposes manner details, which English asserts – but where the presupposition is not obvious, then both languages express manner overtly. This suggests that such surface differences in the informational content of utterances as do exist cross-linguistically are heavily mitigated by inferential structure. (Papafragou *et al.*, in press).

This suggests that verb-framed languages distribute spatial semantics – and especially Manner semantics – in a more covert fashion than do satellite-framed languages, such as Slavic or Germanic languages for instance, in which the expression of Manner is expressed overtly in main verbs. We may thus expect verb-framed languages to rely on contextual inferencing to a greater extent.

To illustrate the phenomenon underlying semantic redundancy, consider the two following French examples both depicting exactly the same motion event, but using two

different coding strategies, namely the verb-framed pattern in (72), and the satellite-framed pattern in (73).

- (72) *L'oiseau_F est sorti_P du nid_G 'en volant_M*
the bird exited of the nest flying
'The bird flew out of the nest.'

- (73) *L'oiseau_F s'est en_P-volé_M du nid_G*
the bird REFL away-flew of the nest
'The bird flew out of the nest.'

These two sentences convey the same Manner semantics. However, relative to the construction type – verb-framed or satellite-framed – the overt expression of Manner may be judged redundant and thus ambiguous or unacceptable in (72) where Manner is expressed covertly in the subject and overtly in the gerund; or it may be judged relevant and thus acceptable in (73) where the same Manner is expressed covertly in the subject and overtly in the main verb. These examples clearly show that in contrast to finite verbs backgrounding Manner information, gerunds foreground such information (cf. Talmy 2000) and hence its overt expression might be perceived as superfluous when it can be inferred from the context.

4.2.2. Intra-linguistic cline of Manner semantic salience

In the light of these findings, the different patterns recorded for French seem to fit along a continuum akin to Slobin's (2004), ranking from high degrees of Path salience to high degrees of Manner salience, as illustrated in Figure 3. Thus, to the left of the continuum, the verb-framed pattern illustrates high Path and low Manner salience, and to the right of the continuum, the reverse pattern illustrates low Path and high Manner salience, whilst in between the hybrid and satellite patterns illustrate both high Path and high Manner salience. In other words, the whole continuum proposed by Slobin for different languages is represented here in one language.

Figure 3. Cline of Manner semantic salience in French motion events constructions.

Verb-framed pattern	Hybrid pattern Satellite-framed pattern	Reverse pattern
Verb _{PATH} (+ Adjunct _{MANNER})	Verb _{PATH+MANNER}	Verb _{MANNER} (+ Adjunct _{PATH})
←		→
[+ Path / – Manner]	[+ Path / + Manner]	[– Path / + Manner]
<i>descendre</i> ‘go down’	<i>envoler</i> ‘fly away’	<i>courir</i> ‘run’
<i>monter</i> ‘go up’	<i>plonger</i> ‘dive in’	<i>voler</i> ‘fly’
<i>entrer</i> ‘go in’	<i>grimper</i> ‘climb up’	<i>nager</i> ‘swim’
<i>sortir</i> ‘go out’	<i>escalader</i> ‘rock-climb up’	<i>marcher</i> ‘walk’

Such a continuum relates verbal semantics to structural patterns and enables predictions to be made regarding pattern acceptability. At the [+Path / -Manner] end of the continuum, it is therefore possible to envisage Manner information encoded in an optional constituent, typically in the form of a PP or a gerund. At the [-Path / +Manner] end of the continuum, such Manner encoding in an extra constituent would become superfluous, unless it specifies the Manner with added semantic fine-graining (see section 3.3).

5. Conclusion

It has been a central aim of this paper to provide a usage-based survey of empirical language findings on the intricacies of motion expression in French and to discuss these findings in the light of existing motion event typologies as proposed by Talmy (1985, 1991, 2000) and Slobin (2004), together with insights from distributed spatial semantics (Sinha and Kuteva 1995). A preliminary contribution has been to draw an initial distinction between motion types, namely activities and events. This distinction has proved relevant in conceptual terms, showing that Manner is the core schema of activities, whereas Path is the core schema of events; and in linguistic terms, showing that differential core schematicity engenders differing typological dynamics. Given this understanding, this paper has concentrated on typological issues in the expression of motion events, as addressed by Talmy and Slobin.

Based on elicited data drawn from written descriptions and oral narratives, as well as acceptability judgements, this study has demonstrated that French can and does use five typological patterns in total to express motion, together with the option to distribute spatial

motion semantics differentially and redundantly across these patterns. In other words, this study has suggested that French uses four patterns unaccounted by current typological predictions classifying the language as verb-framed only, i.e. Path in the main verb and Manner in an adjunct. Importantly, French speakers display lexicalisation patterns encoding either the Path or the Manner of motion in the main verb of the sentence. Table 3 summarises the five lexicalisation patterns found in the data, in preferred order of usage frequency:

Table 3. Summary of discourse patterns for motion expression in French.

Patterns	Figure	Ground	Path	Manner
Verb-framed	Subject	Object	Verb	Adjunct
Juxtaposed	Subject	Object	Verb ₂	Verb ₁
Hybrid	Subject	Object	Verb ₁	Verb ₁
Satellite-framed	Subject	Object	Prefix / Particle	Verb
Reverse	Subject	Object	Adjunct	Verb

An important contribution made in this paper thus consists of the documentation of the quantitative means available in French for the expression of motion events. An equally important contribution has been the discussion of the qualitative dynamics in encoding, with special consideration to the inferential dimension of typological characteristics for the expression of Manner. Indeed, although the optional encoding of Manner in verb-framed languages is well-known, the present study has provided evidence that the representation of Manner in French relies on the contextual distribution of motion information, and in particular on general knowledge pertaining to Figures and their habitual Manners of motion or

pertaining to Grounds and their corresponding spatial configurations. Overall, this study has therefore shown that French is much more complex in its treatment of motion encoding than has been assumed so far. This complexity is due to the quantitative variability of means available to lexicalise motion events, but also, to the qualitative variability of those means in terms of pragmatic and semantic sensitivity to inferential information and redundancy.

In light of these data, we can conclude that neither the structural typology proposed by Talmy (1991, 2000) nor the typological cline proposed by Slobin (2004) make accurate predictions for the intricacies found in this language for the expression of motion. The typological intricacies found in French show that morphosyntactic criteria alone cannot fully account for its coding strategies and that the typological properties of the language should be understood in a broader context of actual language usage rather than in terms of structural factors alone. That is, we need to build a more comprehensive framework for motion event grammar, which emphasises the interaction between the semantic (i.e. the conventionalized meaning of grammatical and lexical resources) and the pragmatic (i.e. inferred) aspects of meaning.

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