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Fieldwork Methodology

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Foreword

This monograph contains a number of the talks given at the 41st Annual Meeting of the Berkeley Linguistics Society, held in Berkeley, California, February 7-8, 2015. The conference included a General Session and the Special Session *Fieldwork Methodology*. The 41st Annual Meeting was planned and run by the second-year graduate students of the Department of Linguistics at the University of California, Berkeley: Kenny Baclawski, Anna Jurgensen, Spencer Lamoureux, Hannah Sande, and Alison Zerbe.

The original submissions of the papers in this volume were reviewed for style by Anna Jurgensen and Hannah Sande. Resubmitted papers were edited as necessary by Anna Jurgensen and Kenny Baclawski, and then compiled into the final monograph by Anna Jurgensen. The final monograph was reviewed by Spencer Lamoureux. The endeavor was supported by Alison Zerbe's management of the Berkeley Linguistic Society's funds for publications.

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A Field Method to Describe Spontaneous Motion Events in Japanese[∗]

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1. Introduction

Studies of spatial expression have much developed through investigation from the cross-linguistic perspective. These studies have demonstrated that languages vary both in their inventory of morphosyntactic elements which structure the spatial expression and in the way in which they organize spatial information. Despite such cross-linguistic diversity, Talmy (1985, 2000) noticed that languages exhibit some similarities in their organization of spatial information at the verb level. This led him to develop a typology, classifying languages into a small set of typological types.

In cross-linguistic studies, the comparability of data (or corpora) across languages is crucial; therefore, methods used for constructing an appropriate cross-linguistic database ought to be a priority for researchers. To this end, the use of a new method of data elicitation, a **field method** consisting of the use of visual stimuli, has been on the increase. There have been, for instance, the *topological relations picture series* (Bowerman and Pederson 1992) for the cross-linguistic study of static locations, and the *Put and Take* video stimulus (Bowerman *et al.* 2004) for the cross-linguistic study of caused motion events (*infra*). The stimulus-based method is more advantageous than traditional methods, such as relying on **introspective examples** produced by linguists themselves (Vinay and Darbelnet 1977[1958], Talmy 1985, 2000, *inter alia*) or on sentences extracted from **parallel texts** (Slobin 1997, *inter alia*), in that it excludes interference from other languages (Lehmann 2004, Majid 2012). Moreover, while these traditional methods which are limited to the study of standardized languages and/or languages with a written tradition, a stimulus-based method allows for consideration of under-described languages, which are generally oral tradition languages.

The expression of motion events in Japanese has been investigated by native Japanese-speaking linguists, using mainly the traditional methods mentioned above (Miyajima 1984, Matsumoto 1996a, 1997, *inter alia*), where data collection through fieldwork, which is costlier in time, is not considered necessary. The present study, however, is based on a field method eliciting spoken data with a new video stimulus. This video stimulus, which is known as the *Trajectoire* video, was developed for a cross-linguistic project of the same name, and was used here to investigate current spatial

expression in the Japanese language in a more elaborate way than previous studies, specifically regarding the **use** of the available spatial elements.

This paper is organized as follows: Section 2 reviews previous studies inspired by Talmy's typological model of motion events, including those of Japanese. Section 3 presents the *Trajectoire* video stimulus, with a brief description of the fieldwork performed with it and the data collected for Japanese. Section 4 presents the findings obtained with the *Trajectoire* data in this language, and shows in particular the use of deictic verbs revealed by the use of the video stimulus.

2. Spontaneous Motion Events: Studies Inspired by the Typological Model

This section outlines previous studies of motion events (§2.1.) including those of Japanese (§2.2.) and raises the limitations of the current typological model (§2.3.).

2.1. Overview of the Expression of Motion Events

Spontaneous motion events refer to a kind of event in which an (in)animate entity (**Figure**) moves by itself with respect to reference objects (**Ground**). These events are all involved in a change of location[1], and they naturally imply a **Path** (the route travelled by a Figure) which logically consists of three spatio-temporal portions (Lakoff 1987): a starting point (**Source**), intermediate points (**Medians**), and an endpoint (**Goal**). Other dimensions of motion, such as a **Manner-of-motion** (henceforth Manner), may also be concerned (Tesnière 1969).

Linguistically, however, these spatial concepts are organized differently between and throughout languages. For instance, examples (1a-1b), which describe the same event in English and French, show that the verb in these languages conveys different spatial information (Vinay and Darbelnet 1977[1958]): in the English version, the verb expresses **Manner** (e.g., *ride*), as in example (1a), while in the French version it expresses **Path** (e.g., *entrer* 'move.in'), as in example (1b). Moreover, unlike English which expresses Manner **overtly**, French does it **covertly** (i.e., linguistically unrealized) when this information can be inferred from another element (or elements) of the sentence, such as *the horsemen* for *riding* in example (1b) (Braun 1976, see also Papafragou *et al.* 2006 for a similar case in Modern Greek).

(1) a. English
     The horsemen **rode**   into   the yard.
     [FIGURE]   [MANNER] [PATH] [GROUND]

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[1] In this study, the expression of movement without a change of location (e.g., *walking in the park*, *dancing on the beach*) are not considered.

b. French

Les cavaliers   sont **entrés**   dans   la cour.
the horsemen   moved.in   in(to)   the yard
[FIGURE]   [PATH]   [PATH]   [GROUND]
'The horsemen moved into the yard.' (Vinay and Darbelnet 1977[1958]: 106)

Talmy's insightful investigations (1985, 2000) revealed that linguistic contrasts such as these could be observed in a broad range of languages, and he proposed a classification of these languages according to two major types of typological strategy (see Table 1); some languages prefer a 'Manner verb strategy' (as in English), while other languages prefer a 'Path verb strategy' (as in French).

Table 1. Typology of motion events (Talmy 2000: 60)[2]

Typological Strategy	Languages
Manner verb (e.g., *ride*)	Germanic, Slavic, Finno-Ugric, Chinese, Ojibwa, Warlpiri
Path verb (e.g., *entrer* 'move.in')	Romance, Semitic, Polynesian, Nez Perce, Caddo, Korean, Japanese

This typological model was adopted by many researchers, and many languages were described from this typological perspective. A closer look at each language, however, raised some issues with this model. For instance, Aske (1989) reported that both typological strategies coexist in Spanish, and their distribution would depend on the **telicity** of the event description: the 'Path verb strategy' is required when a scene is regarded as **telic** (e.g., *moving out*), as in example (2a), whereas the 'Manner verb strategy' is also possible, when a scene is regarded as **atelic** (e.g., *moving towards*), as in example (2b)[3].

(2) Spanish

a. Path verb strategy (= telic)

Juan   **salió**   de la habitación   flotando.
Juan   moved.out   from the room   floating
'Juan exited the room floating.' (Aske 1989: 2)

b. Manner verb strategy (= atelic)

La botella   **flotó**   hacia   la cueva.
the bottle   floated   toward   the cave
'The bottle floated towards the cave.' (Aske 1989: 3)

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[2] Talmy also mentioned a third type of language ('Figure verb strategy'), but there are few languages which use this strategy (e.g., Atsugewi, Navaho).
[3] For further discussion, see Slobin (1997).

Another issue with Talmy's model was reported in studies dealing with languages which have **complex verbs** (Tai 2003, Zlatev and Peerapat 2004, Ameka and Essegbey 2013, *inter alia*). Complex verbs typically consist of two (or more) verbal stems, and they can express both Manner and Path in a verb (e.g., *fei guo* 'fly-pass'), as in example (3).

(3) Chinese
     John **fei guo** Yingjili Haixia.
     John   fly   pass   English Channel
     'John passes the English Channel by flying.' (Tai 2003: 309)

These 'complex verb' languages are typologically characterized only with respect to the nature of the main verb: for instance, if the main verb corresponds to a Path verb, the language is considered as a 'Path verb language'. However, the model cannot fully satisfy the characterization of these languages because of possible disagreement in the identification of the main verb. For example, Chinese is treated as a 'Manner verb language' by Talmy (2000) who assumes that the first constituent (V1), denoting a Manner, is the main verb. Conversely, Tai (2003) argued that this language behaves as a 'Path verb language', because the argument structure of the sentence with a complex verb is inherited from the Path verb, as in example (4a), but not from the Manner verb, as in example (4b).

(4) a. John **guo** le   Yingjili Haixia.
       John   pass   ASP   English Channel
       'John passed the English Channel.' (Tai 2003: 310)[4]

    b. *John **fei** le   Yingjili Haixia.
       John   fly   ASP   English Channel
       'John flew (over) the English Channel.' (Tai 2003: *ibid*.)

These examples raised a major problem with the current typological model: its partiality to characterize a language. The next section presents the case of Japanese, a language which exhibits issues similar to those observed in both Spanish and Chinese.

2.2. The Case of Japanese

Japanese is a canonical SOV language, and the syntactic (or discursive) function of each noun is marked by a case particle (e.g., *ga* for the nominative, *ni* for the dative), as in example (5), or other types of particle (e.g., *wa* for the topic). Japanese verbal morphology is characteristically agglutinative, including morphemes related to TAM (e.g., *ta* for past tense), voice, politeness, and so on.

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[4] Abbreviations: ABL: ablative; ACC: accusative; ASP: aspect; CONN: connective; DAT: dative; DIR: directional; GEN: genitive; NOM: nominative; NUM.CL: numeral classifier; POLI: politeness; PROG: progressive; PST: past; RES: resultative; TOP: topic

(5) Japanese

> Bin-ga   (tadayoi-nagara)   dookutu-ni   **hait**-ta.
> bottle-NOM (floating)   cave-DAT   move.in-PST
> [FIGURE]   [MANNER]   [GROUND]-[PATH] [PATH]
> 'lit. The bottle moved into the cave (floating).' (adapted from Inagaki 2002: 189)

Example (5) is a 'typical' expression of motion events in Japanese, as considered in previous studies. By characteristically expressing Path information in the verb (e.g., *hait-* 'move.in') Japanese is classified among 'Path verb languages', as with Romance languages (Talmy 2000, Miyajima 1984, Matsumoto 1996a, 1997, *inter alia*). Manner information can be optionally specified but outside of the main verb: for example, in a subordinate clause (e.g., *tadayoi-nagara* 'floating'). These expressions, representing a telic feature of an event, require the 'Path verb strategy', while the 'Manner verb strategy' is also allowed in describing an atelic feature of an event (e.g., *moving down*), as in example (6). The choice of a typological strategy according to telicity is quite similar to the case of Spanish (and other Romance languages). Example (6) also illustrates that Manner information can be expressed in an ideophone (e.g., *gorogoro* '(roll) rumblingly').

(6) Manner verb strategy (= atelic)

> Taru-wa   gorogoro-to   saka-o   **korogat**-ta.
> keg-TOP   rumblingly   slope-ACC   roll-PST
> [FIGURE]   [MANNER]   [GROUND]-[PATH]   [MANNER]
> 'The keg rumblingly rolled (down) the slope.' (Ueno and Kageyama 2001: 59)

Unlike Romance languages, however, Japanese has complex verbs (as with Chinese). Morphologically, three types of complex verbs are identifiable (*infra*), and two of these are formed by combining two (or more) verbal stems. The first is a **compound verb**, which directly combines two constituents, as in example (7a), and the second is here called a **verb-te verb construction** (henceforth V-te V), which combines at most three constituents by using the connective *-te*, as in example (7b).

(7) a. Compound verb

> Yasinomi-ga   hamabe-ni   **nagare-tui**-ta.
> coconut-NOM   beach-DAT   float-arrive-PST
> 'lit. A coconut arrived at the beach floating.' (Kageyama 1996: 112)

    b. V-te V

> Kare-wa   ie-ni   **hasit-te**   **hait**-ta.
> he-TOP   house-DAT run-CONN   move.in-PST
> 'lit. He moved into the house running.' (adapted from Sugiyama 2005: 300)

These complex verbs, combining a Manner and a Path verb, are commonly recognized as falling under the 'Path verb strategy' following a criterion for determinating the main verb (Matsumoto 1996b): for instance, in the V-te V of example (7b), the Path verb (V2) is the main verb because the argument structure of V-te V is inherited from it (e.g., *hait-* 'move.in'), as illustrated in example (8a), and not from the Manner verb (e.g., *hasit-* 'run'), as shown in example (8b).

(8) a. Kare-wa   ie-ni   **hait**-ta.
         he-TOP   house-DAT   move.in-PST
         'He moved into the house.'

     b. *Kare-wa   ie-ni   **hasit**-ta.
          he-TOP   house-DAT   run-PST
         '(intended) He ran to the house.'

Although the 'Path verb strategy' is not actually consistent, the classification of Japanese as a 'Path verb language' has been adopted by many native Japanese-speaking linguists. At the same time, some authors consider Japanese as an **atypical** Path verb language because of its readily available possibilities for expressing Manner, by using complex verbs (e.g. *nagare-tui* 'arrive floating'), subordinate clauses (e.g., *tadayoi-nagara* 'floating'), or ideophones (e.g., *gorogoro* '(roll) rumblingly') (Sugiyama 2005).

2.3. Limitations of the Current Typological Model

These 'post-Talmian' observations on different languages suggest that the current typological model is restrictive. Although this model could account for the general cross-linguistic contrast at the verb level ('Manner verb strategy' *vs.* 'Path verb strategy'), it appears insufficient to fully apprehend the ways in which a language organizes spatial information; several typological strategies can coexist within a language, as in Romance languages or Japanese[5], and the typological characterization demands accommodation for languages having complex verbs, as in Chinese.

Moreover, these studies only focused on the semantic organization of the (main) verb, while spatial expressions are constructed around and beyond the verb. Indeed, different spatial elements (e.g., adpositions, cases, ideophones) also participate in the elaboration of spatial expression, and these non-verbal elements ought to be taken into consideration for a more accurate analysis.

Furthermore, the current typological studies were mainly interested in the organization of the expression of Manner and/or Path, while other spatial information, such as spatial **Deixis**, can participate in marking the speaker's perspective of a scene[6] (Fillmore 1975, Wilkins and Hill 1995, Grinevald 2011, *inter alia*). Regarding this topic,

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[5] See Fortis and Vittrant (2011) for further discussion on this topic.

[6] In typological studies, the Deictic verbs were often treated as **a kind of Path verb** without further discussion (Matsumoto 1997, Talmy 2000, Zlatev and Peerapat 2004, *inter alia*). Their status is not discussed here, but I intend to investigate this topic further in a separate article.

Miyajima's (1984) study of biblical texts in five languages that all have elements to mark spatial Deixis (e.g., verbs, verbal prefixes) has shown how the languages varied in the frequency of deictic elements in the texts: the occurrence of deictic elements being much more frequent in three of the languages (English, German and Japanese) than in the others (French and Russian). Shibatani (2003) also noted that in colloquial spoken Japanese the use of Deictic verbs is highly frequent. These remarks suggest that Japanese would also be sensitive to the speaker's subjective perspective, although this finding relied only on the author's intuition. In contrast to these earlier studies, this study will explore this topic from an empirical perspective, namely considering data of Japanese elicited through fieldwork.

3. A New Method for Describing Motion Events in Japanese

Previous studies of Japanese were based on traditional methods: **introspective examples** (Matsumoto 1996a, 1997, Kageyama 1996, Inagaki 2002, *inter alia*), or sentences taken from **written texts** (Miyajima 1984, Ohara 2002, Sugiyama 2005, *inter alia*). The examples used are characterized by their being independent of discourse context (or decontextualized), and therefore did not integrate the expression of the speaker's perspective into the discussion [7]. In contrast, this study is based on contextualized spoken data of Japanese, elicited with a video stimulus called *Trajectoire*. This section will describe first the elicitation stimulus used for this language (§3.1.), and then how data was collected in the field in Japan using the video stimulus (§3.2.).

3.1. The *Trajectoire* Video Stimulus

The *Trajectoire* video was developed by Ishibashi, Kopecka and Vuillermet (2006) for the *Trajectoire* project (*Fédération de Recherche en Typologie et Universaux Linguistiques*, CRNS, France)[8]. The project aimed to investigate the cross-linguistic diversity found in the expression of spontaneous motion events, using fieldwork data of over 30 languages, including written tradition, oral tradition and signed languages.

Our stimulus was directly inspired by elicitation methods developed at the Max Planck Institute of Nijmegen, in particular the *Put and Take* video stimulus, which was developed by Bowerman *et al.* in 2004 for exploring the cross-linguistic expression of caused motion events (e.g., *putting cup on table*, *taking orange out of box*)[9], in which both Kopecka and Ishibashi (two of the developers of the *Trajectoire* video) had participated. Another elicitation tool, the pioneering *Pear stories* designed by Chafe in 1975 at the

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[7] Examples taken from written texts can include sentences with a deictic verb, as in example (i), but the authors had not discussed it.

    (i)   (...) yuuyuu-to kuboti-o   nuke-te   oka-o   nobot-te   **iku**-no de aru.
              placidly   hollow-ACC move.beyond-CONN hill-ACC move.up-CONN **go**-it is that
        'It is that (he) placidly moves beyond the hollow and moves up climbing up the hill (**away from me**).' (adapted from Ohara 2002: 133)

[8] http://www.ddl.ish-lyon.cnrs.fr/trajectoire/ProjetGP.html

[9] See Kopecka & Narashimhan eds. (2012).

University of California at Berkeley (Chafe ed. 1980)[10], was also a source of inspiration, particularly in its care to vary the camera angle so as to give the scenes different speaker perspectives (e.g. *going down pear tree towards camera*, *leaving pear tree away from camera*).

As with the *Put and Take* video, our *Trajectoire* stimulus includes a series of video clips (76 clips total) of which 55 are target clips representing various events of spontaneous motion (e.g. *walk into bush*, *run away from tree*), 19 are filler clips (e.g. *feed ducks*), and 2 are training clips. Target clips were created for controlling five types of variables, presented in Table 2 below.

Table 2. Variables controlled in the *Trajectoire* video

Concepts		Variables
Figure	[F]	man; woman; child; group of people
Manner	[M]	walking; running; jumping
Path	[P]	Source (e.g., *from*); Median (e.g., *along*); Goal (e.g., *to*) [with ± Boundary-crossing]
Ground	[G]	place (e.g., *cave*); object (e.g., *tree*); human (e.g., *boy*)
Deixis	[D]	centripetal direction (=*toward*) or centrifugal direction (=*away from*) with regard to the camera-observer

As the focus of this project was specifically to explore the expression of the Path, the type of Manner is less varied, including only 3 types: *walking*, *running* and *jumping*. On the other hand, Ground information, more closely related to Path, is present in more diverse situations; contrary to previous studies, which mainly considered motions taking place with respect to functional places (e.g., *station*, *school*, *house*), our stimulus includes natural sites (e.g., *forest*, *cave*), objects (e.g., *tree*, *rock*), and humans. In addition, some Grounds are bounded (e.g., *bush*, *cave*) and the rest unbounded (e.g., *tree*, *rock*). To elicit Deictic information, some scenes were deliberately conceived from a speaker perspective (e.g., Figures 1 and 2), while others were neutral with respect to the speaker perspective (e.g., Figure 3).

Figure 1: traj026

man[F] walks[M] into[P] bush[G] away from me[D]
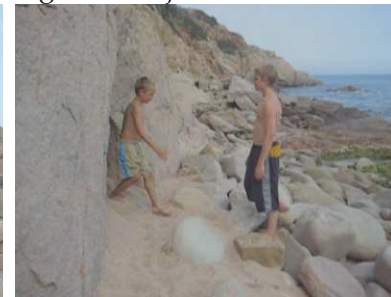
Figure 2: traj076

boy[F] walks[M] down[P] rock[G] towards me[D]

Figure 3: traj030

boy[F] walks[M] out of[P] cave[G] towards[P] boy[G]

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[10] Initially, this stimulus was not designed to explore the expression of motion events. The stimulus, however, included many scenes related to motions, and can be used to investigate the spatial domain (see Ishibashi 2010).

The description of each scene (e.g., *walking into forest away from me*) corresponds to the type of sentence that we initially expected to elicit. In practice, a subject can freely interpret any given scene. As has been noted in previous studies, scenes understood as telic (e.g., Figure 1) are consistently described using the 'Path verb strategy', as in example (9), whereas, those understood as atelic (e.g., Figure 2) can be depicted using either the 'Path verb strategy' or 'Manner verb strategy', as in examples (10a-10b).

(9)   Sigemi-ni   **hait**-ta.
        bush-DAT   move.in-PST
        '(He) went into a bush.' (traj026_jp11)

(10) a. Path verb strategy
        Etto hadaka-no   syoonen-ga iwaba-o   **ori**-te-i-masu.
        uh   nakedness-GEN boy-NOM   rocky spot-ACC move.down-CONN-PROG-POLI
        'Uh a naked boy is moving down a rocky spot.' (traj076_jp10)

      b. Manner verb strategy
        Iwaba-o   otokonoko-ga **arui**-te-i-masu.
        rocky spot-ACC boy-NOM   walk-CONN-PROG-POLI
        'A boy is walking (along) a rocky spot.' (traj076_jp06)

Moreover, traj030 (Figure 3) for instance can be interpreted and described as a Source-oriented motion (e.g., *out of cave*), as in example (11a), or as a Goal-oriented one (e.g., *towards boy*), as in example (11b).

(11) a. Scene interpreted as a Source-oriented motion
        Otokonoko-ga iwa-no   sukima-kara de-te   ki-masi-ta.
        boy-NOM   rock-GEN gap-ABL   move.out-CONN come-POLI-PST
        'A boy moved out of the gap in the rock.' (traj030_jp04)

      b. Scene interpreted as a Goal-oriented motion
        Ee okkii otokonoko-no tokoro-e iki-masi-ta.
        uh big   boy-GEN   place-DIR go-POLI-PST
        'Uh (he) went to the place of the boy.' (traj030_jp08)

The *Trajectoire* video was used to elicit spoken data from 15 languages, and data from the project (and other resources) have been the subject of descriptive chapters on the expression of Path in five Ph.D. dissertations from the Dynamique du Langage Laboratory of Lyon (Cáceres 2011, Vuillermet 2012, Kondic 2012, Bon 2014, Ishibashi in prep.), as well as three collective publications (Fortis *et al.* eds. 2011, and two others in preparation).

3.2. Field Work in Japan and Data

Data elicitation was carried out in 2007 with twenty students of Kobe University (Kobe, Japan). They were all native speakers of Japanese, including ten males and ten females aged between 19 and 39 (average age = 23). The data were individually elicited: after having watched each clip, subjects were asked to describe what the person (or the group of people) did. Their responses were audio recorded and then transcribed by myself in one of the conventional romanization systems of Japanese (called the *kunrei* system).

     After having transcribed all twenty versions of these 55 target clips, 1254 clauses[11] were extracted for this study. These clauses describe spontaneous motion events, as in example (12a), as well as relative clauses denoting static locations for the initial location of the Figure (= Source), as indicated in bold in example (12b).

(12)   a. Spontaneous motion
       Ee onnanohito-ga dookutu-no naka-kara de-te   iki-masi-ta.
       uh woman-NOM   cave-GEN   inside-ABL move.out-CONN go-POLI-PST
       'Uh a woman moved out the inside of the cave away from me.' (traj025_jp10)

    b. Static location (=Source)
       [**Ki-no tokoro-ni i-ta**] zyosei-ga   kotira-ni   arui-te   ki-masi-ta.
       tree-GEN place-DAT be-PST woman-NOM towards.here-DAT walk-CONN come-POLI-PST
       'A woman [**(who) was at the place of the tree**] came towards here walking.' (traj032_jp07)

This set of spatial clauses is called here the *Trajectoire data*, and each of them can be identified thanks to a unique code (e.g., *traj025_jp10*), which includes first information about the scene number (e.g., *traj025*) followed by subject identification (e.g., *jp10*).

As the examples (9-12) illustrate, the *Trajectoire* data appear more elaborate than the examples considered in previous studies (e.g., examples 5-7). They include a **richer array** of spatial elements (e.g., relational noun, such as *naka* 'inside' in example (12a); demonstratives, such as *kotira* 'towards.here' in example (12b)), and **more complex** structures (e.g., relative clause, as in example (12b)). Moreover, the description of a scene is much more **variable** from one speaker to another, reflecting the speaker's construal: for instance, a scene could be interpreted as a Source-oriented motion, as in example (11a), or as a Goal-oriented motion, as in example (11b). The intra-linguistic variation is also observable at the morphosyntactic level: for example, the literature has habitually described the Source as being marked by the ablative case particle *kara*, as in example (12a), while the new data show that this information can be also expressed by a relative clause (as a location before motion), as in example (12b).

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[11] According to Berman and Slobin (1994: 660), the term 'clause' refers to a predicate including a finite (e.g., *he **goes** in the water*) or nonfinite matrix verb (e.g., ***taken** by surprise*).

As for the verb, the *Trajectoire* data include four different types: the **simplex verb** consisting of a single verbal stem, as in example (13a); the **compound verb** typically combining two verbs, as in example (13b); the **verb-te verb construction** combining two (or more) verbs by using the connective *-te*, as in example (13c); and the **light verb construction** consisting of a noun and a light verb *si-* (< *suru*) 'do', as in example (13d).

(13) a. Simplex verb (simplex V)
    Sigemi-ni **hait**-ta.
    bush-DAT   move.in-PST
    '(He) went into a bush.' (traj026_jp11) [= 9]

  b. Compound verb (V-V)
    Syoonen-ga umi-ni **tobi-kon**-da.
    boy-NOM   sea-DAT jump-move.in-PST
    'A boy moved into the sea jumping.' (traj031_jp11)

  c. Verb-te verb construction (V-te V)
    Ee zyosei-ga   ookii ki-no   soba-made **arui-te**   **iki**-masi-ta.
    uh woman-NOM big   tree-GEN side-up.to   walk-CONN go-POLI-PST
    'Uh a woman went up to the side of the big tree walking.' (traj061_jp08)

  d. Light verb construction (N *suru*)
    Nnn go-nin-no   danzyo-ga   **sanpo** **si**-te-iru.
    uh   five-NUM.CL-GEN man and woman-NOM stroll   do-CONN-PROG
    'Uh five men and women are taking a stroll.' (traj066_jp18)

The token distribution of these four types of verbs in the data is presented in Table 3. The table shows that the use of complex verbs (V-V, V-te V and N *suru*) is by far the most frequent, representing a total of 77.8% of the clauses, demonstrating therefore how the new data exhibit common morphosyntactic complexity at the verb level.

Table 3. Token distribution of the four types of verbs in the *Trajectoire* data

Simplex V	Complex V 77.8% (976)			Total
	V-V	V-te V	N *suru*	
22.2% (278)	10.3% (129)	65.6% (823)	1.9% (24)	100% (1254)

Among these four types of verb, the use of the V-te V is the most prominent, representing 65.6% of the clauses in the data. Moreover, in the majority of cases (97.5%; 802 out of 823 V-te V examples), these V-te V complex verbs are formed with a Deictic verb, as shown in example (14a), while others lacking Deictic verbs, as in example (14b) are rare in the data, corresponding to only 2.5% (21 examples) of the data. In the data collected, therefore, the use of the V-te V seems strongly related to the expression of Deictic relation.

(14) a. V-te V with a Deictic verb (97.5% of V-te V examples)

Ee zyosei-ga   ookii ki-no   soba-made [arui-te   **iki**-masi-ta].
uh woman-NOM big   tree-GEN side-up.to walk-CONN go-POLI-PST
'Uh a woman went up to the side of the big tree walking.' (traj061_jp08) [=13c]

b. V-te V without a Deictic verb (2.5%)

Zyosei-ga   [hasit-te] ki-no   soba-o   [hanare-ta].
woman-NOM run-CONN tree-GEN side-ACC leave-PST
'A woman, running, left the side of the tree.' (traj033_jp17)

3.3. Summary: Characteristics of the *Trajectoire* Data

The *Trajectoire* data, elicited from 20 subjects who were native speakers of Japanese, appear richer than previous datasets in the variety of non verbal spatial elements used (e.g., case particles, relational nouns, demonstratives, ideophones) and in the greater complexity of the morphosyntactic structure (e.g., from complex verbs to various types of complex phrases, such as relative clauses and subordinate clauses). Moreover, the data attest the presence of further information, i.e. that of the Deixis. This information, which has been little explored in previous studies, is actually widely attested in the data. Deictic elements occur in more than 60% of the clauses, mainly using V-te V complex verbs. The use of non-verbal elements will be described in Ishibashi (in prep.), while the present paper focuses specifically on the use of Deictic verbs.

4. Deictic Verbs in Japanese: Overview and their Use in the *Trajectoire* Data

Section 3.2. demonstrated that the use of the Deictic verb is prominent in the data. This section describes in more detail the Deictic verbs in Japanese: their semantic, pragmatic and morphosyntactic features (§4.1.), before going into detail about their distribution in the *Trajectoire* data (§4.2.).

4.1. Overview of Deictic Verbs in Japanese

It is commonly assumed that the Deictic verbs of Japanese, *kuru* 'come' and *iku* 'go', denote a motion oriented with respect to the camera-observer: *kuru* is characterized as motion towards the camera, while *iku* as motion oriented away from the camera (Shibatani 2003)[12].

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[12] The *Trajectoire* data also attest two more deictic verbs: the first is *yatteki-* 'come', as in example (i), which is formed with the verb *kuru* (> *ki-*) 'come', and the second is *yuku* 'go', as in example (ii), which is a literal variant of *iku* 'go'.

(i) Tto danzyo   san-nin-ga   mukoo-kara   **yatteki**-masi-ta.
uh man and woman three-NUM.CL-NOM over.there-ABL come-POLI-PST
'Uh three men and women came from over there.' (traj041_jp13)

(ii) Onnanohito-ga ki-no   tikaku-o   kake-te   **yuku**.
woman-NOM   tree-GEN proximity-ACC sprint-CONN go
'A woman goes (by) the proximity of the tree sprinting.' (traj044_jp19)

As for their use, the *Trajectoire* data show that these verbs occur in larger contexts, not only for motions involved in the **centripetal** or **centrifugal direction**, as in the left column of Table 4 below, but also for motions **neutral with respect to the speaker's perspective**, as in the right column of Table 4. In the latter case, the verb *kuru* 'come' expresses a Figure's appearance onto the scene and the verb *iku* 'go' a Figure's disappearance out of the scene[13]. For the first type of motion (with centripetal or centrifugal direction), the use of verbs *kuru* 'come' or *iku* 'go' is obviously deictic. On the other hand, with the second type of motion (neutral in speaker perspective), the use of these verbs is not deictic. The **deictic** or **non deictic uses** of these verbs are illustrated in examples (15-16).

Table 4. Examples of scenes which can be described with Deictic verbs

	Deictic use		Non deictic use	
coming verb	**centripetal orientation**		**appearance**	
	traj055: out of woods	traj076: down rock	traj030: out of cave to boy	
going verb	**centrifugal orientation**		**disappearance**	
	traj053: into cave	traj061: to tree	traj069: into field	traj039: pass behind tree

(15) Deictic use
    a. Ee otokonoko-ga ee... iwaba-o kotira-ni **ki**-masi-ta.
       uh boy-NOM uh rocky spot-ACC towards.here-DAT come-POLI-PST
       'Uh a boy came towards here uh... (along) a rocky spot.' (traj076_jp08)

    b. Zyosei-ga dookutu-kara de-te **iki**-masi-ta.
       woman-NOM cave-ABL move.out-CONN go-POLI-PST
       'A woman moved out of the cave away from me.' (traj025_jp03)

(16) Non deictic use
    a. Otokonoko-ga iwa-no sukima-kara de-te **ki**-masi-ta.
       boy-NOM rock-GEN gap-ABL move.out-CONN come-POLI-PST
       'A boy moved out of the gap in the rock.' (traj030_jp04) [= 11a]

    b. Otokonohito-ga ki-no usiro-o toot-te **iki**-masi-ta.
       man-NOM tree-GEN behind-ACC pass-CONN go-POLI-PST
       'A man passed the behind the tree.' (traj039_jp01)

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[13] Interestingly, non deictic uses of an element denoting 'going' have also been reported by Wilkins and Hill (1995) in Mparntwe Arrernte (Arandic language spoken in Australia) and Longgu (Austronesian language spoken in Solomon Islands).

The Deictic verb can occur alone, as in (15a), but its use as a simplex verb is rare in the data (*infra*). Table 5 represents three types of V-te V with a Deictic verb according to their semantic structure.

Table 5. Semantic schemas of V-te V complex verbs

	Type	Slot 1 (Manner)	Slot 2 (Path)	Slot 3 (Deixis)	Meaning
2 constituents	I	*hasit-te* 'run'		*iku* 'go'	'go running'
	II		*de-te* 'move.out'	*iku* 'go'	'move out (away from me)'
3 constituents	III	*hasit-te* 'run'	*de-te* 'move.out'	*iku* 'go'	'move out running (away from me)'

In these V-te V constructions, the Deictic verb is consistently assigned to the final position (= Slot 3). Except for type I, which lacks a Path verb, types II and III exhibit a 'Path verb strategy', according to the regular criterion for identifying a Path verb (= Slot 2) as the main verb. For instance, the argument structure of these complex verbs, as in example (17a), is inherited from that of the Path verb (e.g., *de-* 'move.out'), as in example (17b), but not from that of the Deictic verb (e.g. *iki-* 'go'), as in example (17c).

(17) a. Zyosei-ga   dookutu-kara **de-te**   **iki**-masi-ta.
        woman-NOM   cave-ABL   move.out-CONN go-POLI-PST
        'A woman moved out of the cave away from me.' (traj025_jp03) [=15b]

    b. Zyosei-ga   dookutu-kara **de**-masi-ta.
        woman-NOM   cave-ABL   move.out-POLI-PST
        'A woman moved out of the cave.'

    c. *Zyosei-ga   dookutu-kara **iki**-masi-ta.
        woman-NOM   cave-ABL   go-POLI-PST
        '(intended) A woman went from the cave.'

Notice that the order of the verb constituents (Manner-Path-Deixis) is crucial for the V-te V to be interpreted as a complex verb (Nakatani 2001). When realized in other order combinations, such as Path-Manner-Deixis as in example (18a), the V-te V construction is habitually interpreted as a coordination of two (or more) clauses. Moreover, a small set of verbs, occurring in the final position of V-te V constructions, can be grammaticalized to mark aspects. For instance, the V2 *i-* 'be' in example (18b) is interpreted here as the progressive aspect (*infra*).

(18) a. Coordination of two clauses
[Onnanohito-ga horaana-kara **de**-te]   [kotira-ni   **arui-te**
woman-NOM   cave-ABL   move.out-CONN towards.here-DAT   walk-CONN
ki-masi-ta].
come-POLI-PST
'[A woman moved out of the cave] and [(she) came towards here walking].'
(traj023_jp02)

b. Simplex verb with grammaticalized V2
Kodomo-ga   yamamiti-o   arui-te-**i**-masu.
child-NOM   mountain trail-ACC   walk-CONN-**PROG**(< 'be')-POLI
'A child is walking (along) a mountain trail.' (traj065_jp01)

4.2. Use of Deictic Verbs in the *Trajectoire* Data

As was noted by Miyajima (1984) and Shibatani (2003) in their research, the use of Deictic verbs is highly frequent in the *Trajectoire* data in Japanese, occurring in **68%** of clauses (853 out of 1254). Table 6 shows that the Deictic verbs in the data are much more frequently realized as V-te V combining with another verb denoting Manner and/or Path (94%; 802 out of 853 examples including a Deictic verb), rather than a simplex verb (6%; 51 examples).

Table 6. Token distribution of Deictic verbs between simplex and complex verb constructions[14]

Simplex V	V-te V	Total
6%	94%	100%
(51)	(802)	(853)

A closer look at the data shows that the distribution of the Deictic verbs is actually **heterogeneous**. For instance, as shown in Table 7 below, which combines eight selected scenes, three relevant to a particular speaker's perspective (traj055, traj061, traj076) and five neutral with respect to the speaker's perspective (traj030, traj039, traj064, traj065, traj075). Although all of these scenes could potentially be described using Deictic verbs (see §4.1.), its use actually decreases for the last four scenes (0% ~ 45%), without regard to the orientation (deictic or not) of motion.

One might suppose that such a pattern of distribution would be accidental, depending on an arbitrary choice made by a speaker to encode (or not) Deictic information (see du Bois 2003). However, if one takes characteristics of each scene into account, one can identify several possible factors that might underlie the use (or lack of use) of a Deictic verb, such as the orientation of the motion, the distance travelled, and the verb telicity.

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[14] The deictic verbs, having been quite commonly used in Classical Japanese (Inoue 1962, Suzuki 1999, *inter alia*), no longer participate in V-V compounding as motion verbs (Matsumoto 1997: 146).

The first two factors, the **orientation** and the **distance travelled**, are concerned in cases in which none of their descriptions include Deictic verbs. For the scene traj064 (*jumping from cliff into water*), characterized as a **vertical motion without deictic orientation**, the use of the Deictic verbs is presumably irrelevant. For the scene traj075 (*jumping from rock to rock*), representing a **motion of a short-distance**, the use of these verbs is irrelevant as well, because of the incompatibility of the type of motion with the Deictic verbs which naturally imply a long-distance motion (Matsumoto 1997).

Table 7. Use of Deictic verbs in the description of eight scenes

Scene		Deictic verb
traj055	walk out of forest (towards camera)	**100 %** (20/20)
traj030	walk out of cave towards boy	**90 %** (18/20)
traj061	walk to tree (away from camera)	**85 %** (17/20)
traj039	walk behind tree	**70 %** (14/20)
traj076	walk down rock (towards camera)	**45 %** (9/20)
traj065	walk up path	**30 %** (6/20)
traj064	jump from cliff into water	**0 %** (0/20)
traj075	jump from rock to rock	**0 %** (0/20)

Now looking at the first six cases in Table 7 which exhibit variation in the Token frequency of the Deictic verb. Their use is highly frequent for the first three scenes (traj055, traj030 and traj061) constructed to elicit a **telic** phase of motion (*moving out*, *moving to*), while it decreases for the three next scenes (traj039, traj076 and traj065) constructed to elicit an **atelic** one (*passing behind*, *moving down*, *moving up*). For instance, two scenes, traj055 and traj076 (see Table 4 for their pictures), illustrate an obvious example: these scenes, both representing centripetal motions, would be expected to be similar in the distribution pattern of the Deictic verb. However, their Token distribution greatly differs: 100% of descriptions for the former are involved with a telic phase of motion (*moving out*), and, conversely, only 45% for the latter are involved with an atelic motion (*moving down*).

This would suggest, at first sight, that the telicity related to the scene plays an important role in the distribution of the Deictic verbs. However, scene traj039 representing an atelic phase of motion (*passing behind tree*), seems to be a counter example as 70% of its descriptions include a Deictic verb. Looking at these descriptions more closely, however, it seems that this scene is preferentially structured according to a 'Path verb strategy', as illustrated in example (19). This example includes a V-te V

complex verb in which the main verb *sugi-* 'move.past' is a Path verb (see Table 5). This Path verb is assumed to be telic in the literature (Yoshikawa 1976[1971]). This makes us think that its use would eventually be correlated with the nature of main verb, namely its **lexical telicity**: the use of a Deictic verb increases when the main verb is itself telic, and conversely decreases when the main verb is atelic.

(19) Ookina ki-no   mukoo-gawa-o   dansei-ga   toori-**sugi**-te
      big   tree-GEN over.there-side-ACC man-NOM   move.through-**move.past**-CONN
      iki-masi-ta.
      go-POLI-PST
      'A man moved past the other side of a big tree.' (traj039_jp03)

In Japanese, the identification of the lexical telicity of verbs can be carried out by using linguistic tests, namely the ***V-te-iru* construction** test (Fujii 1976[1966], Yoshikawa 1976[1971], Matsumoto 1997, Mihara 1997, *inter alia*). As shown in section 4.1., this construction is a particular case of V-te V construction in which the V2 (e.g. *iru* 'be') is grammaticalized, and the authors have assumed that it is the telicity of the V1 that triggers different aspectual interpretation of the *V-te-iru* construction: a **resultative** interpretation with a telic V1 (e.g., *ki-* 'come'), as in example (20a), *vs.* a **progressive** interpretation with an atelic V1 (e.g., *arui-* 'walk'), as in example (20b). Table 8 below lists several telic and atelic motion verbs as accounted for in these previous studies.

(20) a. Resultative interpretation (V1 = telic verb)
         Takusii-ga   **ki-te-iru**.
         Taxi-NOM   **come-CONN-RES**
         The taxi has arrived.' (Mihara 1997: 110)

      b. Progressive interpretation (V1 = atelic verb)
         Kodomo-ga yamamiti-o   **arui-te-i**-masu.
         child-NOM   mountain trail-ACC **walk-CONN-PROG**-POLI
         'A child is walking (along) a mountain trail.' (traj065_jp01) [=18b]

Table 8. List of telic and atelic motion verbs in Japanese (non exhaustive)

Telic motion verbs		Atelic motion verbs	
hairu	'move.in'	*aruku*	'walk'
deru	'move.out'	*hasiru*	'run'
sugiru	'move.past'	*oyogu*	'swim'
koeru	'move.over'	*tooru*	'move.through'
kuru	'come'	*oriru*	'move.down' (+ ACC)
iku	'go' (+ DAT)[15]	*noboru*	'move.up' (+ ACC)

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[15] As Comrie (1976: 45) has stated the telicity can be marked by non verbal elements as well. Indeed, Matsumoto (1997) noted that in Japanese the interpretation of the *it-te-iru* (i.e., with the V1 *it-* (< *iku*) 'go') varies according to the nature of the Path in the Ground expression (e.g., Goal ground *vs.* Median ground): the construction is interpreted as the **resultative** aspect with a Goal ground (marked by the dative *ni*), as in example (i), but as the **progressive** aspect with a Median ground (marked by the accusative *o*), as in example (ii).

In the *Trajectoire* data, the *V-te-iru construction* is mainly attested as the marker of progressive aspect in describing the atelic phase of motions (e.g., traj076, traj065), as illustrated in Table 9.

Table 9. Distribution of the progressive aspect (and the Deictic verbs)

	Scene	Deictic verb	Progressive
traj055	walk out of forest (towards camera)	**100 %** (20/20)	**0%** (0/20)
traj030	walk out of cave towards boy	**90 %** (18/20)	**0%** (0/20)
traj061	walk to tree (away from camera)	**85 %** (17/20)	**0%** (0/20)
traj039	walk behind tree	**70 %** (14/20)	**15%** (3/20)
traj076	walk down rock (towards camera)	**45 %** (9/20)	**50%** (10/20)
traj065	walk up path	**30 %** (6/20)	**70%** (14/20)

As shown in Table 9, the progressive marker hardly co-occurs with the Deictic verbs. Indeed, as examples (21a-21b) demonstrate, these two types of morphosyntactic elements exhibit a somewhat complementary distribution: for instance, the scene traj076 (*moving down*) is described either with the progressive *V-te-iru* construction, when the focus is on the ongoing action, as in example (21a), or with the Deictic verb, specifying the speaker's perspective, as in example (21b), but not both.

(21) a. Progressive (ongoing action)

Etto hadaka-no syoonen-ga iwaba-o **ori-te-i**-masu.
uh nakedness-GEN boy-NOM rocky spot-ACC **move.down-CONN-PROG**-POLI
'Uh a naked boy **is moving down** a rocky spot.' (traj076_jp10) [=10a]

b. Deictic verb (speaker perspective)

Otokonoko-ga iwaba-o yotiyoti **ori-te** **ki**-masi-ta.
boy-NOM rocky spot-ACC totteringly **move.down-CONN** **come**-POLI-PST
'A boy **moved** totteringly **down** a rocky spot **towards me**.' (traj076_jp12)

(i) Resultative (+DAT)
Kare-wa ima **eki-ni** it-te-iru.
he-TOP now station-DAT go-CONN-RES
'Now he has gone to the station.' (Matsumoto 1997: 186)
(ii) Progressive (+ACC)
Kare-wa ima **miti-o** it-te-iru.
he-TOP now path-ACC go-CONN-PROG
'Now he is going (along) the path.' (Matsumoto 1997: *ibid*.)
Similarly, the V1 *ori-* (< *oriru*) 'move.down' or *nobot-* (< *noboru*) 'move.up' receive a progressive interpretation with the Median ground (+ACC), which is a less marked collocation, but also a resultative interpretation with the Goal ground (+DAT).

Competition between the progressive and the Deictic verb might well be one of possible causes for the decrease in use of the Deictic verb in describing these atelic scenes.

4.3. Summary: Motivation for the Use of the Deictic Verbs

The *Trajectoire* data supported what Miyajima (1984) and Shibatani (2003) had perceived of the high frequency of the use of the Deictic verb in describing spontaneous motion events in Japanese. This suggests that the Deictic information would be as fundamental as Path and Manner information in the expression of these type of events in the language. The data further showed that the distribution of the Deictic verbs is heterogeneous and their realization seems to be motivated by **characteristics of the scenes** (orientation of motion for vertical axis motions, distance of motion), the **lexical telicity** of the verb (more frequent use of the Deictic verbs with telic verbs than with atelic verbs), or the **competition** with another non spatial element (e.g., the progressive aspect).

5. Conclusion

The previous studies investigating the expression of motion events in Japanese have been much inspired by the Talmian typological model, a model consisting of the characterization of the language according to its preferential strategy to organize spatial information, namely, Path or Manner, at the verb stem level. These analyses only allowed an overall appreciation of cross-linguistic diversity but without apprehending intra-linguistic diversity in the way a particular language actually structures spatial expression. This study was based on spoken data in Japanese and proposes a more accurate description of the spatial expression in this language than previous studies had done.

The spoken data considered in this study were elicited from twenty native speakers of Japanese using the *Trajectoire* video stimulus. The data, including more than one thousand spatial clauses which describe 55 different spontaneous motion events, were more elaborate in their morphosyntactic structure and more dynamic in their intra-linguistic variability than the introspective examples of the previous studies. Moreover, by being contextualized the data allowed for exploration of phenomena which have been not been considered in previous studies, such as the distribution of the Deictic verbs. Observing twenty versions of eight selected scenes, this study has contributed to identifying three factors which would underlie their distribution pattern. One of these, the **telicity**, seems to be a key component, inducing intra-linguistic variations in the organization of spatial information: for instance, the choice between the 'Path verb' and 'Manner verb' strategy in Romance languages and Japanese, and the use of Deictic verbs in Japanese.

Although it was initially created for a cross-linguistic project, the *Trajectoire* video stimulus used in collecting the present data was also very beneficial for intra-linguistic investigation. On the other hand, as the stimulus was not created for the specific study of Deictic expression, further analyses will be carried out with more appropriate field methods to examine this topic, which will be developed within the *Deixis* project (2015-2018), the next stage of the *Trajectoire* project (*Fédération de Recherche en Typologie et Universaux Linguistiques*, CRNS, France)[16] to be conducted by Alice Vittrant, Anetta Kopecka and Benjamin Fagard.

References

Ameka, Felix K. and James Essegbey. 2003. Serialising languages: Satellite-framed, Verb-framed or neither. *Ghana Journal of Linguistics* 2(1): 19-38.

Aske, Jon. 1989. Path predicates in English and Spanish: A closer look. *Proceedings of the Fifteenth Annual Meeting of the Berkeley Linguistic Society*: 1-14.

Berman, Ruth A. and Dan I. Slobin. eds. 1994. *Relating events in narrative: a crosslinguistic developmental study*. Hillsdale: Laurence Erlbaum Associates.

Bon, Noëllie. 2014. *Une grammaire de la langue stieng, langue en danger du Cambodge et du Viêtnam.* Thèse de doctorat, Université Lumière Lyon 2.

Bowerman, Melissa and Pederson Eric. 1992. Topological relations picture series. In Stephen C. Levinson, ed., *Space stimuli kit 1.2: November 1992, 51*. Nijmegen: Max Planck Institute for Psycholinguistics.

Bowerman, Melissa, Marianne Gullberg, Asifa Majid and Bhuvana Narasimhan. 2004. Put project: the cross-linguistic encoding of placement events. In Asifa Majid, ed., *Field Manual Volume 9*, pp. 10-24. Nijmegen: Max Planck Institute for Psycholinguistics.

Braun, Theodore E. 1976. Motion and change of place in French and English verbs. *The French Review* 49(3): 388-392.

Cáceres, Natalia. 2011. *Grammaire fonctionnelle-typologique du ye'kwana langue caribe du Venezuela.* Thèse de doctorat, Université Lumière Lyon 2.

Chafe, Wallace. ed. 1980. *The pear stories: Cognitive, cultural, and linguistic aspects of narrative production*. Norwood: ABLEX Publishing Corporation.

Comrie, Bernard. 1976. *Aspect*. Cambridge: Cambridge University Press.

Du Bois, John W. 2003. Discourse and Grammar. In Michael Tomasello, ed., *The new psychology of language, vol. 2: Cognitive and functional approaches to language structure*, pp. 47-87. Mahwah: Laurence Erlbaum Associates.

Fillmore, Charles J. 1975. *Santa Cruz lectures on deixis 1971*. Bloomington: Indiana University Linguistic Club.

Fortis, Jean-Michel and Alice Vittrant. 2011. L'organisation syntaxique de l'expression de la trajectoire: vers une typologie des constructions. *Faits de Langues - Les Cahiers n°3*: 71-98.

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[16] http://www.typologie.cnrs.fr/spip.php?rubrique106

Fortis, Jean-Michel *et al.* eds. 2011. Dossier: La trajectoire. *Faits de Langues - Les Cahiers n°3*: 33-171.

Fujii, Tadashi. 1976[1966]. Doushi+shiteiru no imi. In Haruhiko Kindaichi, ed., *Nihongo doushi no asupekuto*, pp. 97-116. Tokyo: Mugishobo.

Grinevald, Colette. 2011. On constructing a working typology of the expression of path. *Faits de Langues - Les Cahiers n°3*: 43-70.

Inagaki, Shunji. 2002. Motion verbs with locational/directional PPs in English and Japanese. *Canadian Journal of Linguistics* 47(3/4): 187-234.

Inoue, Nobuko. 1962. Doushi no setsuji-ka: Manyô no iku to ku. *Man'yô* 43: 23-37.

Ishibashi, Miyuki. 2010. The (a)symmetry of source and goal in motion events in Japanese: Evidence from narrative data. In Giovanna Marotta, Alessandro Lenci, Linda Meini and Francesco Rovai, eds., *Space in Language: Proceedings of the Pisa International Conference*, pp. 515-531. Pisa: PDE.

Ishibashi, Miyuki. in prep. *(A)symétrie dans l'expression de la Source et du But : le cas du japonais.* Thèse de doctorat, Université Lumière Lyon 2.

Ishibashi, Miyuki, Anetta Kopecka and Marine Vuillermet. 2006. *Trajectoire* : *matériel visuel pour élicitation des données linguistiques*. Laboratoire Dynamique du Langage (CRNS/Université Lyon 2) – Fédération de Recherche en Typologie et Universaux Linguistiques, CRNS, France.

Kageyama, Taro. 1996. Nichi-eigo no idou hyougen. *Eibei Bungaku* 40: 91-121.

Kondic, Snjezana. 2012. *A grammar of South Eastern Huastec, a Mayan language from Mexico.* Ph.D. Dissertation, University of Sidney and Université Lumière Lyon 2.

Kopecka, Anetta and Bhuvana Narashimhan. eds. 2012. *Events of Putting and Taking: A crosslinguistic perspective.* Amsterdam: John Benjamins.

Lakoff, George. 1987. *Woman, fire, and dangerous things: What categories reveal about the mind.* Chicago: University of Chicago Press.

Lehmann, Christian. 2004. Data in linguistics. *The Linguistic Review* 21(3/4): 275-310.

Majid, Asifa. 2012. A guide to stimulus-based elicitation for semantic categories. In Nicholas Thieberger, ed., *The Oxford handbook of linguistic fieldwork*, pp. 54-71. Oxford: Oxford University Press.

Matsumoto, Yo. 1996a. Subjective motion and English and Japanese verbs. *Cognitive Linguistics* 7(2): 183-226.

Matsumoto, Yo. 1996b. *Complex predicates in Japanese: A syntactic and semantic study of the notion 'word'.* Stanford/Tokyo: CSLI Publications/Kuroshio.

Matsumoto, Yo. 1997. Kuukan idoo-no gengohyougen-to sono kakutyoo. In Minoru Nakau, ed., *Nichi-ei hikaku sensho 6: Kuukan-to idoo-no hyoogen*, pp. 125-230. Tokyo: Kenkyusha.

Mihara, Ken'ichi. 1997. Doushi no asupekuto kouzou. In Minoru Nakau, ed., *Nichi-ei hikaku sensho 7: Voisu-to asupekuto*, pp. 107-186. Tokyo: Kenkyusha.

Miyajima, Tatsuo. 1984. Nihongo to yooroppa go no idou doushi. In Kazue Akinaga *et al.* eds., *Kindaichi Haruhiko Hakase koki kine ronbunshu, vol 2: Gengogaku hen*, pp. 409-486. Tokyo: Sanseido.

Nakatani, Kentaro. 2001. Applying lexical rules in syntax: A case study of the V-te V construction in Japanese. *MIT Working Papers in Linguistics* 40: 191-204.

Ohara, Kyoko H. 2002. Linguistic encoding of motion events in Japanese and English: Observation from novels and their translations. *Hiyoshi Review of English Studies* 14: 122-153.

Papafragou, Anna, Christine Massey and Lila Gleitman. 2006. When English proposes what Greek presupposes: The cross-linguistic encoding of motion events. *Cognition* 98: B75-87.

Shibatani, Masayoshi. 2003. Directional verbs in Japanese. In Erin Shay and Uwe Seibert, eds., *Motion, direction and location in Languages: In honor of Zygmunt Frajzyngier*, pp. 259-286. Amsterdam: John Benjamins.

Slobin, Dan I. 1997. Mind, code, and text. In Joan Bybee, John Haiman and Sandra A. Thompson, eds., *Essays on language function and language type: Dedicated to T. Givón*, pp. 437-467. Amsterdam: John Benjamins.

Sugiyama, Yukiko. 2005. Not all verb-framed languages are created equal: The case of Japanese. *Proceedings of the Thirty-first Annual Meeting of Berkeley Linguistics Society*: 299-310.

Suzuki, Tai. 1999. Koten taishou goihyou to bunrui goihyou: Iku o koukouso to suru hukugou doushi no baai. *Kokubungaku: Kaishaku to Kanshou* 64(1): 121-129.

Tai, James H-Y. 2003. Cognitive relativism: Resultative construction in Chinese. *Language and Linguistics* 4(2): 301-316.

Talmy, Leonard. 1985. Lexicalization patterns: Semantic structure in lexical forms. In Timothy Shopen, ed., *Language typology and syntactic description, vol. III: Grammatical categories and the lexicon*, pp. 57-149. Cambridge: Cambridge University Press.

Talmy, Leonard. 2000. *Toward a cognitive semantics, vol. 2: Typology and process in concept structuring*. Cambridge: The MIT Press.

Tesnière, Lucein. 1969. *Eléments de syntaxe structurale*. Paris: Klincksieck.

Ueno, Seiji and Taro Kageyama. 2001. Idou to keiro no hyougen. In Taro Kageyama, ed., *Nichiei taishou doushino imi to koubun*, pp. 40-68. Tokyo: Taishukan.

Vinay, Jean-Paul and Jean Darbelnet. 1977[1958]. *Stylistique comparée du français et de l'anglais*. Paris: Didier.

Vuillermet, Marine. 2012. *Grammar of Ese Ejja, a Takanan language of the Bolivian Amazon*. Ph.D. Dissertation, Université Lumière Lyon 2.

Wilkins, David P. and Deborah Hill. 1995. When "go" means "come": Questioning the basicness of basic motion verbs. *Cognitive Linguistics* 6(2/3): 209-259.

Yoshikawa, Taketoki. 1976[1971]. Gendai nihongo no asupekuto no kenkyu. In Haruhiko Kindaichi, ed., *Nihongo doushi no asupekuto*, pp. 155-327. Tokyo: Mugishobo.

Zlatev, Jordan and Peerapat Yangklang. 2004. A third way to travel: The place of Thai in the motion event typology. In Sven Strömqvist and Ludo Verhoeven, eds., *Relating Events in Narrative: Typological and Contextual Perspectives,* pp. 159-190. Mahwah: Lawrence Erlbaum.