

## **Motion and location: toward a cognitive typology\***

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### **1. The location verb project**

In recent years, there has been a rapidly growing interest in semantic typology within the domain of space, examining how typologically different languages talk about static and dynamic spatial relations.<sup>1</sup> Looking at the vast literature of studies within the typological framework set forth by Talmy (and thus ignoring the numerous studies on prepositions<sup>2</sup>), one is struck by the overwhelming bias towards motion verbs. The present paper sketches an ongoing research project that tries to remedy this unilateral focus on motion verbs, by studying that other (unjustly neglected) pillar of the typology, *viz.* posture and location verbs, a topic that I have been studying intensively for the last couple of years (see References).<sup>3</sup>

The project (henceforth, *location verb project*) aligns itself with the contrastive studies on posture verbs carried out at the Max Planck Institute for Psycholinguistics in Nijmegen, yet it does

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<sup>1</sup> Cf., for example, Berman & Slobin 1996, Bowerman 1996; Choi & Bowerman 1991; Hickmann (forthc.); Levinson 2003; Levinson & Meira 2003; Slobin 1996, 2003, 2004; Verhoeven & Strömqvist 2004.

<sup>2</sup> This is not to say that these are not pertinent, on the contrary, but since the vast majority of these do not situate themselves within the Talmian framework, they have a less direct bearing on the project described here.

<sup>3</sup> The research that is reported on here concerns a close collaboration with other researchers in France and abroad. Apart from individual work, it comprises two projects with external funding. First, the ACI project (ET0092, a grant of the Ministère de la Recherche, France) of which the author is the "responsable scientifique" (see Lemmens *et al.* 2003). Are involved in this project, besides the author: Maya Hickmann and Christian Champaud (Laboratoire Cognition et Développement, UMR 8605, Univ. Paris 5), Catherine Fuchs and Laure Sarda (UMR Lattice 8094 du CNRS & ENS, Paris), Henriette Hendriks (Univ. Cambridge), and Dejan Stosic (Univ. Artois). The second project, pending approval of the France-Berkeley Fund, involves besides the author: Dan Slobin and Eve Sweetser (Univ. California, Berkeley) and Ekatarina Rakhilina (Univ. Moscow). The following MA students at Lille3, working under the author's guidance, are engaged in the project: Aurélie Barnabé (English), Maria Hellerstedt (Swedish), Mark Tutton (English-French, FLE & EFL). Finally, Marc Miceli, graduate student at the Univ. Catholique de Louvain, Belgique, is carrying out his PhD research (co-dir. M. Lemmens) for Dutch, French and Dutch as a second language.

so with a different perspective and methodology.<sup>4</sup> First, the MPI studies on posture verbs rely exclusively on picture-based elicited descriptions of simple location scenes (e.g., a cup on the table, a rope in a tree, etc.), whereas such elicitation experiments are only part of our research project which will also involve longer narrations, bringing discourse-related factors into the discussion as well. Secondly, we take as our basic premises Talmy's (2000) typological distinction between satellite-framed and verb-framed languages and study the interrelation of motion and location verbs, generally absent from the MPI-studies.

The article is organized as follows. In the following section we first present a brief description of Talmy's typology as it has been applied to motion events and subsequently add some important nuances that have emerged from other studies. Section 3 then gives a more elaborate description of our location verb project, presenting the main hypotheses and research questions and some preliminary results.

## 2. Motion events

Talmy's by now well-known typological work (Talmy 2000) shows that motion events are parsed differently by different languages, in that certain languages provide lexicalizations that conflate components that necessarily remain distinct in other languages. The basic components of a Motion event are the *Figure* (the entity moving), the *Ground* (the locational anchor relative to which the movement is conceptualized), *the Path* and the *Motion* itself. Other, less basic, components, such as Manner or Cause, can also be integrated into the linguistic structure. According to Talmy, there are three privileged *lexicalization* patterns in the languages of the world:

- (i) Motion + Path, e.g., *enter, ascend / sortir, tomber*
- (ii) Motion + Manner/Cause, e.g., *stumble, trot; chop down / courir, grimper; être cloué*
- (iii) Motion + Figure, e.g. *rain, spit*

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<sup>4</sup> The following merely serves to highlight where our study differs from theirs. For more details, see the MPI annual reports ([www.mpi.nl](http://www.mpi.nl)).

Languages generally fall in two basic typological categories: “verb-framed” languages and “satellite-framed” languages.<sup>5</sup> The former express the core of the event (Motion and Path) in the verb, e.g., French *Il entra dans la chambre* or *Il traversa la rue*. Satellite-framed languages express the Path in a satellite and the verb expresses a Co-event, usually Manner or Cause, e.g., English *He slid down from the tree*, *He kicked the ball away*. In V-languages, manner will be expressed peripherally (e.g., *Il entra en courant*) if expressed at all, since it generally tends to be omitted. It is rarely omitted in S-languages.

Extensive experimental research on manner-of-motion verbs<sup>6</sup> has shown quite convincingly that S-languages (e.g., Germanic languages, Russian, Mandarin) “tend toward greater specification of manner, probably because the lexicon provides a large collection of verbs that conflate manner with change of location (*crawl, swoop, tumble*, etc.), often conflating cause as well (*dump, hurl, shove*, etc.)” (Berman & Slobin 1994:118). V-languages, such as Spanish, Hebrew, and Turkish “are less elaborate in this regard, but are often more elaborate in description of location of protagonists and objects and of endstates of motion” (ibid.). Indeed, a quick glance at Roget’s Thesaurus suffices to obtain a list of English manner of motion verbs one cannot even begin to translate equally compactly in French, if such manner distinctions are at all clear and/or relevant to French speakers.

An analysis of creative prose based on 9 novels from different languages (see Slobin 2003b) indicates that in the English novels, there are in total 62 types of manner of motion verbs, both monomorphemic and phrasal verbs. The Spanish novels in contrast, have only 27 types; the Turkish novels, 20 types, which corroborates the lower expression of manner in V-languages already revealed in the experimentally elicited data (the ‘frog stories’). Also in translation, the difference is significant: in translations from a manner-rich language to a manner-poor language, there is a loss of 38% (English to Spanish) or 32% (English to Turkish). When translation goes the other way,

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<sup>5</sup> The terms V-languages and S-languages will be used as handy abbreviations. The French terms commonly used are *langues à cadrage verbal* vs. *langues à satellite*.

<sup>6</sup> See, e.g., Berman & Slobin (1996); Slobin (1996a,b; 2003, 2004); Strömquist, S. & L. Verhoeven 2004.

most of the manner of motion verbs are preserved (95% for Spanish to English, 80% for Turkish to English).

Clearly, all languages probably have Manner verbs (e.g., French *grimper*, *rouler*, *ramper*, etc.) and Path verbs (e.g., English *ascend* or *enter*), but the frequency and the conditions with which they are used as well as their lexical diversity will be different, depending on the language's typological niche. For instance, in contrast to English, the French sentence *l'enfant roula dans la maison* cannot be used when a boundary is crossed (from outside to inside)<sup>7</sup> and the verb *grimper* cannot be used for downward motion, whereas in English *climb down* works fine.

In short, it appears that "it is more useful to rank languages on a *cline of salience*" (Slobin 2003:250) than to allocate them to one of several distinct typological categories. The Romance languages, Hebrew and Turkish undeniably eschew the use of manner of motion verbs, whereas Thai and Russian use them at a significantly higher rate. The Germanic languages straddle the border between the two, with English having a slightly higher ratio of manner of motion verbs than German and Dutch, a point to which we shall return.

Recent psycholinguistic research by Hickmann & Hendriks (forthc.) also adds further nuances to the typological differences, for both children (from 2 to 10 years old) and adults. In a nutshell, their results confirm once more "how language-specific properties are reflected both in the *locus* and in the *focus* of the information that is expressed in a given language." Concerning the information locus, the results lie in line of the foregoing: French speakers rely more on verbs and less on satellites in comparison to English speakers. With respect to the focus of information, English speakers are more concerned with position or with manner. Interestingly, their developmental study reveals how early on French children rely more on (specific) satellites and less on verbs, and that they thus are essentially more like English speakers. An influential factor here, they argue, is that for a language that relies more heavily on the verb, it takes longer for the child to learn a diversified verbal system.

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<sup>7</sup> See, among others, Slobin & Hoiting (1994) or Zlatev & David (2003, 2004) for some discussion of the boundary constraint.

Continuing to refine the typological oppositions, Kopecka (2004) points out that French is actually a language operating with a double typological strategy, since next to frequent use of Path verbs it also uses certain satellites (prefixes), some of which are semi-productively exploited (cf. *s'en-voler* 'fly away', *é-couler* 'flow out', or *dé-rouler* 'roll out'), a relic of a system productive in Old French. The Path thus being expressed in a satellite leaves room for other components to be incorporated into the verb, such as Manner in the examples just mentioned. Yet also Figure and Ground can be incorporated (mostly via derivations from nouns), Kopecka points out, and by doing so she also corrects Talmy's (2000, II: 61) who says that in the languages of the world the former is relatively uncommon and the latter highly rare. Kopecka illustrates Figure (+Cause) incorporation with forms such as *dépeupler* 'depopulate' or *é-crémer* 'skim' (lit. 'cream off'); Ground (+Cause) incorporation is involved in cases like *accrocher* '(to) hook', *dérailer* 'derail' or *encadrer* 'frame'. Strikingly, some of the English translations instantiate the same pattern, and also in the other Germanic languages one finds similar lexicalizations, e.g., *(in)kaderen* (Du.) / *inrama* (Sw.) 'frame'; *inkuilen* (Du.) 'put in a pit', *inkwartieren* (Du.) / *inkvatera/inhysa* (Sw.) 'put in quarters/in lodgings' (or metaphorical extensions thereof).

### **3. Location events**

#### **3.1 Counterbalancing motion**

That location events have not been studied more intensively within the framework of the Talmian typology is quite surprising, given that his definition of a Motion event explicitly refers to location as well: "The basic Motion event consists of one object (the Figure) moving or located with respect to another object (the reference object or the Ground)" (Talmy 2000, II: 25). The location verb project places the location verbs in the centre of the typological research and thus presents an essential complement to the existing research on motion verbs. The study by Hickmann & Hendriks (forthc.) mentioned above is one of the few studies that present an in-depth study of location and

placement verbs and thus sits comfortably within this project.<sup>8</sup> Currently, the interest in position and location verbs is gaining ground as is also witnessed by some recent publications, quite compatible with the views expressed here.<sup>9</sup>

The parallel between motion and location events can perhaps best be illustrated with a simple example as the following.

- (1)a. Les vêtements *sont* / \**sont couchés* sur le comptoir. (French)
- b. The clothes *are* / *are lying* on the counter. (English)
- c. Kläderna *\*är* / *ligger* på disken. (Swedish)
- d. De kleren *\*zijn* / *liggen* op de toonbank. (Dutch)

In these constructions, the neutral verb *zijn/vara* ‘be’ is unacceptable in Dutch and Swedish, as they require a more specific ‘manner of location’ verb.<sup>10</sup> In French, in contrast, a posture verb is plainly unacceptable. English seems to allow both equally well. So, as with the motion verbs, the typological distinction is not an either-or affair.

Our central research question is thus in how far posture and location verbs align with the Talmian typology.<sup>11</sup> More specifically, we will be concerned with different kinds of posture and location verbs as well as other expressions, as indicated in the following overview (for convenience, only English examples are given):

- (i) **posture verbs**, such as *sit, lie, stand, squat, kneel, lean*;
- (ii) **location verbs**, such as *hang, hover, slouch*, etc.<sup>12</sup>
- (iii) **causative posture verbs** or **causative location verbs**, such as *lay, wrapped, pinned*, etc.
- (iv) other expressions referring to **manner of location**, e.g., *a stack of, an array of*, etc.

The group of posture verbs, and particularly the three cardinal posture verbs, SIT, LIE and STAND, will be quite central. From a francophone point of view, this might seem rather strange, but from a

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<sup>8</sup> The careful reader will have noted that, not incidentally, these two researchers participate in the ACI project mentioned earlier (cf. footnote 2).

<sup>9</sup> See, e.g. Grinevald (forthc.), Newman (2002), Newman & Rice 2004, or Kopecka 2004.

<sup>10</sup> There are specific contexts where neutral verbs may be possible, but we will ignore these here.

<sup>11</sup> The term *location verb* will be used here to refer to those verb that provide some specific locational semantics; in a way, verbs such as English *be* or French *se trouver* or *se situer* are also location verbs, but here they will be regarded as *neutral* verbs that for their locational value depend more on other elements in the clause.

<sup>12</sup> The position of *hang* is open for debate. For many cultures, it is not a usual posture for humans (and in addition somewhat less specific), yet there are cultures where different ways of hanging in a hamac gives rise to different posture verbs (cf. Grinevald forthc.)

typological perspective it is not, as in many (unrelated) languages of the world, posture verbs have become basic location verbs for describing the location of any entity, animate or inanimate.

For the causative verbs (placement verbs), the interrelation of motion and location is obvious, as they refer to an Agent moving an entity from one position or location (in)to another. One of the major typological distinctions between French and English precisely involves the importance that the grammar attributes to this causal element. Unlike English (and the other Germanic languages), the French locative constructions are invariably ‘resultative-like’ [*être* + PP], e.g., *être couché*, *être suspendu*, *être rangé*, revealing that “locative verbs are lexicalised in French in the Agentive aspect from which the two others, the Stative and the Inchoative, are derived.” (Kopecka 2004:51, transl. ML).<sup>13</sup>

Another area where location and motion meet are those contexts where a motion verb is used to describe a static scene as in *The road runs from Brussels to Lille* or *Le long du mur courait une vigne vierge* (example taken from Fuchs 2002). Clearly, the road and the vine are not really moving, it is the speaker who mentally traces the trajectory (hence, Talmy’s term *fictive motion*). A more refined, corpus-based study of the different types of fictive motion (in the literature generally indiscriminately lumped together under one heading) is part of the larger location project as well (see also Fuchs 2003).

The remaining part of this article will discuss three issues central to the project: (i) the overall Figure-orientation of S-languages, (ii) the influence of discourse factors, and (iii) the division of labour between motion and location.

### **3.2 Figure-oriented vs. Ground-oriented**

Given its blended nature in the domain of location, English may not be the best starting point for a typological discussion, but opposing Dutch to French will be revealing. French, representative of

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<sup>13</sup> The term “aspect” is used here in the sense of Talmy (2000, II: 78) who distinguishes 3 aspect-causative types for the domain of ‘states’: Stative (being in a state), Inchoative (entering into a state) and Agentive (putting into a state). Languages differ in which pattern they take as their preponderant form of lexicalization, which is exactly what is being illustrated here.

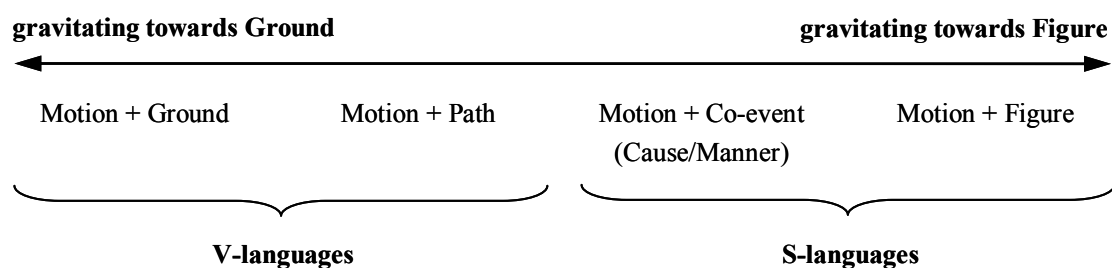
V-languages, is quite limited in its use of cardinal posture verbs. Even in reference to human beings in one of the three positions, it often uses a general verb, like *être*, “to be” or *se trouver*, “be (found)”. Dutch, on the other hand, representative of S-languages, has extended the meaning of the posture verbs enormously, stringently requiring their use when expressing the location of any kind of entity, ranging from humans and animals, over concrete objects like bottles or cars or paper, to abstract entities (time, love, etc.) or concrete entities located in metaphorical space (e.g., human beings “sitting” in a depression).

In a recent pilot study, drawing data from a Dutch novella, Miceli (2004) has analyzed how four Dutch posture verbs (*zitten* ‘sit’, *liggen* ‘lie’, *staan* ‘stand’, and *hangen* ‘hang’) are translated into French.<sup>14</sup> Strikingly, French uses some 50 different types of translations, most of them not involving any location verbs at all. Moreover, the results show that even when the cardinal posture verbs (*hangen* excluded) are used to refer to human posture, the French equivalents *être assis*, *être debout*, and *être couché* are used in only 30% of the cases, which clearly reveals that the “manner of being positioned in space” is not something French speakers care to express, even not for human posture. Miceli’s pilot study indicates an undeniable *loss* of “locational detail” in the translation of Dutch (S-language) to French (V-language), particularly regarding the manner in which the Figure is located.

In short, also for location events, the emphasis of descriptive detail seems to lie in different areas. A new overarching hypothesis that I have come to formulate is that satellite-framed languages generally have a larger concern for the Figure, whereas verb-framed languages put more grammatical and lexical effort in the description of the Ground. The latter follows directly from Slobin’s work showing that V-languages generally provide more static scene-settings from which the trajectories (and the manner) of the movement can be inferred (Slobin 1996b). The lexicalization patterns mentioned earlier could thus be seen as forming a continuum (recall that Motion covers both movement and location):

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<sup>14</sup> The novella in question is Patrick Bernauw’s (1997), *De witte vrouw/La femme blanche*. A revised version of the results of this study will appear in Miceli & Hiligsmann (subm.).



*Fig. 1: Figure vs. Ground-orientation*

Manner incorporation into the verb is essentially tied to the Figure, but the gravitation toward this component may also find its translation in a higher degree of descriptive detail for this entity. On the other hand, the relative ease with which in French the Ground can be incorporated into certain verb patterns (combined with satellites) may further testify to a built-in gravitation towards the Ground. The incorporation of a Cause, a common pattern in French as mentioned above [*être*+PP], may be held in evidence against our hypothesis.<sup>15</sup> This objection is only partially valid, however, since the causative pattern for a Motion event entails some downgrading of the Figure's prominence, it being made secondary to another entity, the Agent or Cause (even if the latter may often remain unexpressed). It should be stressed here that the suggested hypothesis is not to be interpreted as a strict and generally applicable pattern, but a tendency of coinciding patterns.

### **3.3 Influence of discourse factors**

Next to continued analysis of comparative corpus material, for different languages, our location verb project also includes a psycholinguistic line of research, with experiments aiming at collecting 'location-rich' descriptions for different languages.<sup>16</sup> This methodology, inspired by Slobin's work, consists in soliciting descriptions based on pictures from a wordless children's book. There are two different tasks. In the *location task*, one group of speakers will be asked to locate certain entities on the pictures, in response to questions of the type *Where is X?*. Another group has a *description task*, where the same pictures will be presented (in random order just as in the other group) and speakers

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<sup>15</sup> This was precisely a comment made by Leonard Talmy (pc, 24/11/2003).

<sup>16</sup> At this stage of the project, descriptions have been recorded for Swedish, Serbian, and for English; those for Dutch, French and Dutch L2 are planned for the near future.

will be asked to give a general description of the picture. The description task is meant to avoid a bias towards locative constructions only and to reveal the influence of discourse factors, such as order of reference, overall strategy of description (dynamic vs. static), anaphora, etc.

One such discourse related issue is the difference between presentational and locative clauses. Following the MPI Annual report 1998, a basic locative construction (BLC) can be defined as a finite clause (with the Figure in subject position) in answer to the question *Where is X<sub>[+def]</sub>?*, as e.g., *The cup is on the table*. A presentational construction, as for example *There is a book on the table*, does share some locative semantics with the BLC, yet it is functionally distinct. The MPI research on posture and location verbs limits itself to the BLC. Our project, in contrast, aims at a linguistically more varied set of constructions. As such, the different uses of, for example, the presentational and locative constructions can be examined. For one thing, even in response to the researcher's question *Where is X<sub>[+def]</sub>?*, speakers produce a high amount of existential constructions, revealing how general discourse strategies often take precedence. As can be expected, the type of construction used influences the choice of the verb.

By way of example, let us have a look at some results for the Swedish data.<sup>17</sup> The distribution of location verbs actually confirms the intuitive insight that presentationals are still more closely related to existentials than to locatives, since the frequency of neutral verbs (essentially *finnas* 'be found' and *vara* 'be') is significantly higher in presentational than in locative constructions, as is shown in the following table.

	<b>presentational</b>	<b>locative</b>	
location verb	403	311	714
	48,9%	74,9%	
neutral verb	420	103	523
	51,0%	24,8%	
<b>Total</b>	823	414	1237
	chi <sup>2</sup> 77.203	df 1	p-value 0

*Table 1: Types of verbs distributed over construction type*

<sup>17</sup> Drawn from MA-work in progress by M. Hellerstedt, Univ. Lille3.

Furthermore, the data clearly reveal a continuum from ‘pure’ existentials (without any locative complement) to more locative constructions. The following example is a typical case straddling the border:

- (2) på stol-en      längst till vänster      finns det      två klädesplagg **liggande**  
on chair-DEF    most to the right    be-found it    two pieces of clothes lying  
‘To the utmost right there are two pieces of clothes lying on the chair.’

In fact, the English construction is equally intermediate in character, also syntactically (*lying* as a post-modifier or as part of the progressive, even if for the latter interpretation the construction *two clothes are lying on the chair* would have been more suitable).

Moreover, in Swedish there is a relatively high degree of semantic distribution over the clause, especially with locative information, as illustrated by the following sentence that has some seeming redundancy<sup>18</sup>:

- (3) på den säng-en    ligger det      **utlagt** kläder  
on that bed-DEF    lie it          out-laid clothes  
‘Some (laid-out) clothes are lying on that bed.’

The adverbially used past participle *utlagt* encodes agentivity as well as manner of location which, however, is already expressed in the verb *ligga*. The multiple expression of manner stands in sharp contrast to the tendency in French (and possibly other V-languages) to omit it altogether. Clearly, also speakers of V-languages may sometimes pay attention to manner, but this is mostly restricted to contexts where manner is salient and worthy of appearing in constructions that would in normal contexts be judged heavy. A nice illustration of this can be found in our pilot recordings, where speakers of different languages describe the location of sweaters folded and arranged (by colour) in shelves behind the counter<sup>19</sup>:

- (4)a. ... and on the shelves are clothes **folded up** [speaker gestures ‘folding’] (English)  
b. wo verschiedene Kleider **zusammengelegt** in den verschiedenen Fächern **liegen** (German)  
c. ...een kast met allemaal vakjes in en daar zijn de kleren in **opgeplooid** (Dutch)

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<sup>18</sup> See, e.g., Sinha & Kuteva (1995).

<sup>19</sup> The first of these pilot recordings (Dutch) were made in 2001, at the K.U. Leuven, Belgium; the others (English, German, French), in 2003 at the Univ. of California, Berkeley.

- d. där det ligger kläder *sorterade* i olika färger fint *ihopvikta* (Swedish)
- e. qui sont *rangés* dans des étagères et qui sont *pliés*, les habits sont pliés ... (French)

While there are certain differences, all speakers consistently mentioned the visually quite prominent manner of location. Notice that the German example does exactly the same as the Swedish example above, combining a causative (*zusammenlegen*) and a stative verb (*liegen*). The English speaker from which this example was drawn displayed another interesting dimension that merits attention, i.e. co-verbal gestures that may downplay or enhance certain aspects of the event (Path, Manner, etc.). Previous studies (see, e.g., McNeill 2000, Kita et Özyürek 2003) have shown that speakers gesture according to the language they speak; it thus does not seem to be a coincidence that this English speaker (who used gestures quite a lot) expresses manner gesturally as well. At another occasion, he moved his hand (palm facing left) up and down while simultaneously moving from left to right to visualize various dresses being hung up one next to the other on cloth hangers on a rack.

### **3.4 Division of labour**

The “cline of salience” observed for motion holds for location as well. A striking feature in this respect concerns the intra-Germanic difference that can be observed in the use of posture verbs. From example (1) above, it will be recalled that while English allows both *be* and *lie* to encode the position of the clothes on the counter, Dutch and Swedish clearly opt for the posture verb and the verb *zijn/vara* ‘be’ is highly unidiomatic, to say the least. Significantly, this difference has led the MPI researchers to put the English (and German) in another category than Dutch in their classification of how languages express location.<sup>20</sup> Given that for motion events, the Germanic languages have all been shown to belong to the S-language group, how can this difference be explained?

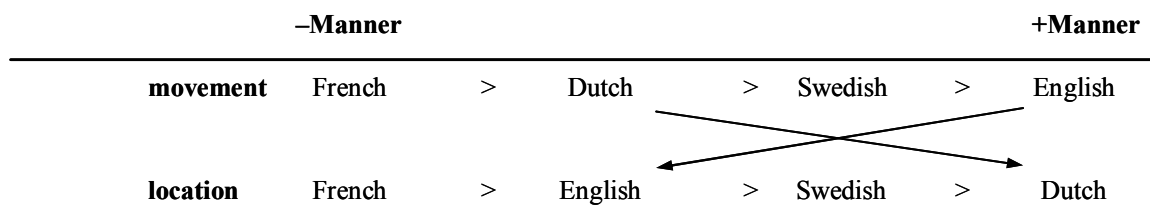
The explanation lies in the fact that in Dutch, and to a lesser extent also in Swedish, the use of posture verbs is obligatory when the location of entities is at issue (animate and inanimate, and often even abstract entities as well). Obligatory means that “the dimension in question cannot be

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<sup>20</sup> See MPI annual report 1999, available at [www.mpi.nl](http://www.mpi.nl)

regularly referred to without the expression in question” (Slobin 2003: 161). No such obligation exists for English and German. As I have argued elsewhere (see Lemmens, *subm. b*), the absence of obligation for English probably finds its origin in the new aspectual distinctions that came about with the rise of the *-ing* form, an evolution that the other Germanic languages have not known. Why German, which frequently uses posture verbs and in ways similar to Dutch, often uses a neutral verb (both in the MPI experiments and our own pilot recordings) is an issue that, to my knowledge, has not been looked into.

Some of Slobin’s studies on manner of motion verbs have also shown a difference between the Germanic languages, yet one that goes in the other direction, i.e. with English having a higher ratio of manner of motion verbs than German and Dutch. In earlier work, I have suggested a division of labour between the two domains, which can be schematically represented as follows:



*Fig. 2: Division of labour between movement and location*

By its extensive use of posture verbs, Dutch invests heavily in the domain of static location and may thus be less likely to parallel that in the domain of movement. This is plausible, given that the manner of movement can in many cases be derived from the posture one starts from, as is common in some other languages using quite specific positionals (cf. Brown 2004, Grineval *forthc.*). English, on the other hand, is much less committed to the postural domain and can thus invest more in dynamic description.

Let it be clear that I do not want to claim that the two are causally related: it is unlikely that English has become more restricted in its use of posture verbs (both in frequency and semantic coverage) because it has expanded its use of manner of motion verbs, or vice versa. Indeed, it would

be hard to defend that speakers are aware of such balancing act between the two domains. At the same time, given the high frequency of posture verbs in Dutch, they may indicate that this domain is salient to the speakers (cf. Slobin 2003:164). In other words, given the stronger commitment to expressing an entity's precise location entailed by the compulsory posture verbs, Dutch speakers will more readily encode one type of information rather than another.

We have no fully comparable data yet to test this hypothesis, but we have tested it against the frog-story data for English and Dutch (narrations by children aged 8-10), which gave the following result:

	Dutch		English	
CPV (lie sit stand)	316	91.9%	55	53.9%
HANG	14	4.1%	5	4.9%
LEAN	2	0.6%	6	5.9%
STICK	5	1.5%	4	3.9%
STUCK	7	2.0%	32	31.4%
<b>TOTAL</b>	<b>344</b>	<b>100%</b>	<b>102</b>	<b>100%</b>

Table 2: Manner of location in the frog stories

The results confirm the obvious difference in the use of posture verbs, but as far as the other location verbs are concerned, our division of labour hypothesis is not confirmed at all, since percentage-wise these verbs are systematically more frequent in English than in Dutch. However, the figures need to be interpreted with caution. First of all, except for the posture verbs, the numbers are in fact far too low to yield any reliable results. Secondly, and more importantly, an important linguistic subtlety is being ignored in this grouping, *viz.* that Dutch posture verbs often express what is expressed by other location verbs in English. For example, English *be stuck* will typically be expressed with *zitten*. So, simply ignoring the posture verbs is not a legitimate thing to do. But the interrelation of motion and location verbs is more complicated still. Suffice it to mention here three illustrations.

First, English generally uses dynamic verbs more often than Dutch. For example, at some point in the frog story, the protagonist, a young boy, gets stuck into what seem to be branches of a bush but later turn out to be the antlers of a deer. The English descriptions often use dynamic verbs like

*be snatched* or *be picked up* whereas the Dutch speakers (once more) mostly used *(vast)zitten* (lit. ‘stuck-sit’), expressing close containment and contact hindering movement.

Secondly, in Dutch a posture verb can be used for motion events where English requires a motion verb. Consider the following attestation describing a scene where a swarm of bees is chasing the boy’s dog:

- (5) de bijen zitten achter hem aan  
the bees sit after him AAN  
‘The bees are chasing him.’

Clearly, Dutch has ‘real’ motion verbs that more congruently express such an event (e.g., *volgen* ‘follow’ or *achter iemand aanhollen/aanlopen* ‘run after somebody’), yet there are a number of expressions using *zitten* that are often used in this context, like *achter iemand aanzitten* or *iemand achterna zitten* (lit. ‘sit after someone’) or *iemand op de hielen zitten* (lit. ‘sit someone on the heels’). These complex expressions are often used to profile the closeness of the chase, a logical extension of the notion of contact incorporated into the semantics of *zitten*. The closest English equivalent to these is probably *be after somebody*.

Finally, the posture verbs have undergone a partial auxiliatation process in Dutch towards semi-modals used to build a progressive construction of the type *Vpos+te+Vinf*. While they will mostly be used in combination with stative verbs, they do often occur with motion verbs, as in the following examples:

- (6)a. Onze ploeg **stond** lamlendig **te** hockeyen  
our team stood sluggishly to play hockey  
‘Our team were playing hockey sluggishly.’  
b. Wat **zit** ik hier toch **rond te lopen**? (pers. attestation)  
what sit I here (on earth) around to walk?  
‘What on earth am I walking (around) here for?’

While we cannot elaborate on these examples here (see Lemmens, *subm. c*), they clearly indicate that Dutch posture verbs cover areas where English needs motion verbs. The Dutch frog story data moreover show that even small children frequently use this type of construction.

In sum, while the hypothesis of a division of labour between the two domains has neither been confirmed nor falsified, the above discussion indicates that the two domains may indeed be more entangled than seems to be the case at first sight. One of the immediate goals of the location project is to further evaluate the hypothesis with full comparative data.

#### 4. Conclusions

The present paper, more programmatic than conclusive, has described the larger framework and research questions central to our location project. The main goal of the project is to study location verbs in their own right and in relation to motion verbs, remedying the one-sided focus on motion verb in the existing literature. In addition, two larger hypotheses are evaluated within the project:

- (i) Is there a tendency that S-languages are more oriented towards the Figure and that most V-languages gravitate more towards the Ground?
- (ii) Is there any (unconscious) division of labour between motion and location within the group of Germanic languages given that some are more concerned with location (e.g., Dutch and Swedish) than others (e.g., English and possibly German).

The second hypothesis clearly implies a careful study of structures within a subset of related languages. Also the first hypothesis may not rigidly apply to all languages, of course.

Situated in a much larger framework, our study of typological variation may contribute to the currently revived debate on linguistic relativity (cf. Gumperz & Levinson 1996 or Levinson 2003). For example, Levinson & Meira (2003:485) say that “the differences between [...] languages turn out to be so significant as to be incompatible with stronger versions of the universal conceptual categories hypothesis.” We, for our part, adopt a more cautious position, embracing Slobin’s *thinking-for-speaking* hypothesis (Slobin 1996a), which says that “the expression of experience in linguistic terms constitutes **thinking for speaking** — a special form of thought that is mobilized for

communication” and that “in acquiring a native language, the child learns particular ways of thinking for speaking” (Slobin 1996a:76).

While opponents of the *thinking-for-speaking* hypothesis may not subscribe the larger goal of our endeavour, we like to think that the validity of the current research project does not crucially depend on it being true or not. In fact, as has become apparent from the descriptions above, the fundamental differences discussed in this paper between English, Dutch or Swedish on the one hand and French on the other should be pertinent to any language teacher or any researcher engaged in translation studies.

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