

From Motion Events To(wards) a Semantics of Relocation

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Abstract

The paper aims at further refining the theoretical tools and metalanguage available for comparing the lexicalisation of motion, and, in particular, the enterprise of moving (or being moved) from one place (Loc_1) to another (Loc_2), across languages, with special reference to the well-established distinction between Manner (and/or satellite-framed) and Path (and/or verb-framed) languages. Several authors have pointed out the need for a more consistent theoretical basis for (a) distinguishing so-called “motion events”, “directed motion”, etc. from motion in a wider sense, and (b) further specifying and differentiating the intuitively attractive, but vaguely defined parameters of Manner and Path. The presented approach addresses these issues in combination by suggesting a cross-linguistic situation and verb classification incorporating certain basic insights on pre-linguistic visual cognition involving delay-and-compare processing.

1. Background, aims, and scope

During the last 20 years or so, motion event research has grown into a well-established and highly productive discipline. Its theoretical cornerstone was, and still is, a classic study of Talmy (1985; see 2000: 25ff. for a review of further developments) as supplemented, in particular, by work of Slobin (e.g. 1996a/b; 2004a/b); see Mora Gutiérrez (2001) for an overview. The basic assumption is that while humans’ conceptualisation of the semantic domain under consideration is likely to be universal, the preferred way of lexicalising and verbalising particular variables of the relevant cognitive structures display profound and systematic cross-linguistic differences. Furthermore, it is generally postulated that most of the world’s languages fit into one of the two following typological (super)categories, despite all possible variations within them:

(a) **Manner languages** (and/or satellite-framed languages), e.g. Danish, Swedish, English, German, Russian, Chinese, where the Manner of motion is obligatorily lexicalised in the verb roots, while the direction or Path of motion can be explicated when required through the addition of a *satellite* in the shape of a particle (preposition/adverb) or a prefix, thus forming a complex (as for particles: a phrasal) lexeme e.g. English: *roll, fly, walk + down, off*, etc., and

(b) **Path languages** (and/or verb-framed languages), e.g. French, Italian, Spanish, Modern Greek, Turkish, Japanese, where the verb roots lexicalise *either* Manner *or* Path, e.g. French: *courir* vs. *entrer*, but only Path verbs conflate motion with change of location in terms of “going from Loc_1 to Loc_2 ”, leaving Manner to be explicated elsewhere in the sentence structure, e.g. *à pied, en avion*, if at all. Clearly, this complicates the transfer of information between the two prototypes of languages in various ways, most obviously in the course of translation. Moreover, the observation gives rise to reflections along the lines of linguistic relativism: Does the preferences of our native language bias our awareness towards different facets of motion, also when we engage in non-linguistic cognitive activities?

In continuation of these basic assumptions and observations, a number of sub-issues have been subject to more detailed investigation, including (a) the exact place of particular languages in the “binary” typology the validity of which is questioned by some authors (e.g. Zlatev & Yangklang 2004; Zlatev & David 2004; Berthele 2004; Ibarretxe Antuñano 2004, this volume; Fong & Poulin 1998; Smith 2006, 2003; Ozol 2004), (b) the possible impact of

cross-linguistic typological differences on non-linguistic thinking and problem solving (e.g. Pourcel 2005, this volume; Papafragou et al. 2002; Gennari et al. 2002; Herslund & Baron 2003; Slobin 1996b), (c) the impact of communicative settings, rhetorical norms, etc. on speakers' actual choices among the options offered by any given language (Strömquist & Verhoeven (eds.) 2004; Berman & Slobin (eds.) 1994; Korzen 2005), and (d) the actual consequences of the typological differences for cross-linguistic communication and translation (e.g. Rojo & Valenzuela 2001; Slobin 2004b, 1996a).

However, these efforts to dig deeper into various facets and implications of the Talmy-Slobin framework have so far not added much to the core assumptions and variables of the framework itself. Yet there does seem to be a growing awareness of the need for:

(a) A more explicit and consistent theoretical basis for distinguishing motion in general from *going somewhere* (i.e. from Loc_1 to Loc_2) – a distinction that obviously underlies most of the existing work on the subject but which has not yet been too unambiguously defined or, indeed, lexicalised. The latter form of motion is most commonly referred to as “motion events”, “translocation”, or “directed (or translational) motion”, while the verbs lexicalising it are called “directed motion verbs”, “change-of-location verbs”, etc. In this paper, a case for the terms *relocation* and *relocation verbs* will be made as an integral part of the theorising to follow. The closest parallels seem to be “displacement” and “displacement verbs” (French: “(verbes de) déplacement”) as defined by Tesnière (1976 [1959]: 307ff), but the theoretical basis is different in that an explicit link is drawn to the cognitive variables addressed by Talmy.

(b) A further specification and differentiation of the intuitively attractive, but vaguely defined parameters of Manner and Path. It seems so obvious that things can “move in different ways” and/or “go different places” and that these are the key variables that can be lexicalised by the verb expressions under consideration – which apparently keeps many authors from going into any further analysis of these “primitives”. Nevertheless, a number of possible variations of both parameters must eventually be accounted for if larger amounts of data from different spatial domains and different languages are to be compared in a meaningful way. A more concise metalanguage for these purposes is therefore required.

This paper aims at contributing to a further specification of Talmy's framework with regard to the two points just mentioned. It takes his analysis of the links between cognitive universals and linguistic specifics at issue somewhat further in view of existing insights on pre-linguistic visual cognition. The variables remain the same, but the levels of analysis are adjusted by drawing a distinction between humans' perception and conceptualisation of simple and complex situations, respectively. The suggested approach continues the principles of situation and verb classification developed by Durst-Andersen (1992; see also e.g. 2000, 2002, 2006) for a different purpose and relates them directly to the research questions and theoretical variables commonly addressed by motion event researchers in the Talmyan tradition.

2. Setting the scene

2.1 Some basic assumptions and prerequisites

As a basis for further analysis we will make the following assumptions where at least the first two are also an integral part of Talmy's approach. It is assumed (a) that the semantic modelling required here must incorporate insights gained on pre-linguistic visual cognition, (b) that figure/ground segmentation is a key variable in humans' perception and conceptualisation of the real-world situations of interest, and (c) that all motion detection

relies on some form of delay-and-compare processing, i.e. the comparison of contradictory visual information over time (see Borst 2000 for a concise review).

However, much seems to suggest that the delay-and-compare processing can be performed on two distinct cognitive levels and that “motion” is hence two very different things from a cognitive viewpoint. In an upcoming study by Blaser & Sperling (forthcoming), the term Perceptual (or Visual) Motion is suggested for motion detected through first-order processing of immediate visual stimuli partly based on “build in” neural hardware, whereas the term Conceptual Motion is suggested for motion detected through higher-order processing relying on general-purpose cognitive systems which does not necessarily involve any immediate visual stimuli at all (a “simulation” if you will of the first-order visual motion computations). Thus, seeing Mary waving her hand, thereby producing altering visual stimuli on your retina, is one kind of motion detection. Seeing (or being told) that Mary is sitting in your office which was empty when you left 2 minutes ago is a completely different kind of motion detection. If you conclude that she must have walked into your office while you were away it has nothing to do with you seeing her walking (or running, or crawling, etc.) at all. As we will soon see, Perceptual Motion corresponds to what will be called *activities* below with the Manner of motion as the salient feature, whereas Conceptual Motion corresponds what will be called *actions* below with the Path of motion as the salient feature. By *relocation* we understand motion in the latter sense. Further arguments for identifying two distinct levels of processing, which are most probably performed in different areas of the human brain, are offered by Dodge & Lakoff (2005).

2.2. The Talmyan basics revisited

The core elements in Talmy’s description of the cognitive representation of motion event can be summarised and schematised as follows (see Talmy 2000: 25f):

I (Main) Motion Event:

- Figure
- Ground
- Path
- Motion (in terms of *either* Motion *or* Locatedness (i.e. Non-Motion))

II Co-Event definable in terms of Manner or Cause.

(For matters of simplicity, we will not maintain Talmy’s differentiation between Manner and Cause in the following but use Manner as the catch-all term as is often the case in mainstream motion event research. An alternative way of differentiating the Manner component based on the analyses to be performed here is briefly sketched in 3.2 below.)

The above framework contains most of the elements that will be needed for clarifying the difference between simple motion and “going from Loc_1 to Loc_2 ”. And it is crucial to note that Talmy is quite aware of the importance of such a differentiation, reserving the term “translational motion” for the latter purpose. However, that term is not an integral part of the framework just outlined and this makes the status of the term “Motion” within the framework rather ambiguous. In a subsequent passage, Talmy states that it should be understood specifically in terms of translational motion (whether as occurrence or nonoccurrence), as distinguished from “self-contained motion” like rotation or oscillation. But how, then, does the latter aspect of motion fit into the overall framework? The *way* things move (no matter whether they end up in new places or not) is an important variable in all subsequent analyses and typological observations and is apparently seen as part of the Co-Event. But no additional categories are offered for capturing and analyzing this part of the overall scenario.

In the following we will try to take the analysis a step further by inserting an *additional level* of analysis. In continuation of the Talmyan framework (and following his use of capitals in this section for the sake of clarity), we will distinguish between:

- 2 types of *simple situations* definable in terms of Figure, Ground, and “simple” Motion or Locatedness only \approx I and II above – which will be labelled *activities* and *states*, respectively – and

- 1 type of *complex situation* given by observed or expected interdependencies between simple ones – which will be labelled *actions*. Both Motion in the “translational” sense and Path are seen as variables on this level only (and the term *relocation* will be suggested as an alternative to “translation”, though it is the underlying theorising, not the preferred terms, which are of primary importance here).

Discussing event structure in general, Zacks & Tversky (2001: 19) address the difficulty of capturing the dynamic and the static at once, speaking of “waves” and “particles” which provide contrasting perspectives on events. Continuing that metaphor, activities and states (\approx I and II) can be seen as the “waves” and “particles”, respectively, whereas actions are mental constructs relating them to each other – not on a first-order perceptual level, but on a higher-order conceptual level (see also 2.1).

3. A semantics for relocation

The core elements of the framework presented below were originally developed by Durst-Andersen (1992, 2000, 2002, 2006; Durst-Andersen & Herslund, 1996) as a basis for analyzing the category of *aspect* in Russian, English, and other languages. However, the framework has proven itself highly efficient for addressing other aspects of verb semantics as well in that it incorporates certain basic principles of pre-linguistic cognition in a more consistent way than some alternative available (a few even more recent insights of relevance were mentioned in section 2). It should be stressed that the terms state, activity, action, process, and event are all used in highly specific senses in the metalanguage introduced below which may differ from those familiar from other accounts, notably Vendler’s (for further theoretical and terminological positioning, see Durst-Andersen 2000: 46-59). The primary focus is on *visual* cognition, but the cognitive principles described below appear to have been generalised so that they have come to underlie verb semantics in general.

3.1 States, activities, actions

According to Durst-Andersen (e.g. 2000: 60ff), all humans, regardless of what language they speak, routinely distinguish between two kinds of real-world phenomena (situations) that can potentially be referred to by means of verbs, the mental representations of which can be described in terms of *figure-ground relationships*, namely:

(a) **States** which are perceived as a stable figure on a stable ground thus constituting a *stable picture*. In their own right, such situations are referred to by means of *state verbs*, e.g. English: *lie, stand, resemble*, etc.

(b) **Activities** which are perceived as either an unstable figure on a stable ground or a stable figure on an unstable ground thus constituting an *unstable picture*. In their own right, such situations are referred to by means of *activity verbs*, e.g. English: *dance, shiver, carry*, etc.

Only these two kinds of situations can be identified through direct observation. However, our world knowledge tells us that some activities, if sufficient, can bring about certain states,

and that some states have been brought about by certain activities. This allows us to also identify

(c) **Actions** which are mental constructs linking together a certain activity and a certain state. When perceived and referred to as elements of an action, activities are further classified as *processes* and states are further classified as *events*. The corresponding propositional interpretations are denoted p and q , respectively. The directed relationship between the two situations as such is described in terms of telicity. Actions (as represented by processes and/or events) are referred to by means of *action verbs*, e.g. English: *put*, *arrive*, *kill*, *show*, etc. The principle is illustrated by Durst-Andersen's verb model of actions, a variant of which is shown in Figure 1.

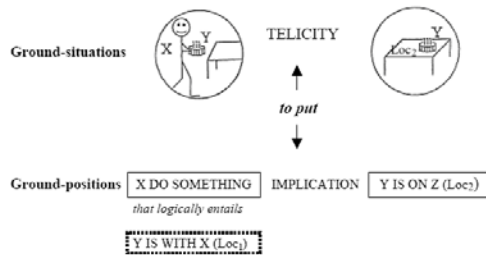


Figure 1. The semantics of putting.

In actual communication, an action verb will usually be referring to *either* an activity (presenting it as a process), e.g. "She is just *putting* the cake on the table", where p is asserted and q is treated as a standard implicature, *or* a (change of) state (presenting it as an event), e.g. "Who *put* that cake on

my table?", where q is asserted and p is presupposed (for further details on the metalanguage, see Durst-Andersen 1992: 60-63 and 100f.).

If the change of state in question is definable in terms of spatial relationships (location) alone, the corresponding verb is called a *location-based action verb* or as one might put it more compactly: a *relocation verb* – the alternative categories being possession-based, experience-based, and qualification-based action verbs (Durst-Andersen, 1992: 61 and 2002: 60ff) which will be touched upon very briefly in section 4.3. Thus, what differentiates relocation and hence action verbs from simple motion verbs – i.e. pure activity verbs – is that the change of location is not just a possible inference, but an integral part of the verb's semantics. A similar point has been underlying the Talmyan tradition of motion event research all along, but the present framework allows us to relate that point more immediately to a difference in humans' mental representation of simple and complex situations, respectively. To put it in Blaser & Sperling's terms mentioned in 2.1: Conceptual Motion constitutes a quite different target for lexicalisation than Perceptual motion which results in the formation of verbs with equally different semantic and syntactic properties.

3.2 Specifying the Manner/Path distinction

The present framework also allows us to further specify the Manner/Path distinction. Manner verbs are *activity-oriented* (whether or not the activity is seen as part of an action, i.e. as a *process*) specifying certain properties of either the *figure*, the *ground* and/or the interrelations between them. For example, a ball can *bounce* on a hard floor, but water cannot really *bounce* on a piece of fluffy cotton – though it may well *soak* through it. For transitive verbs, the agent's interaction with the figure and/or ground, given these properties, can also be part of the semantics. Thus, one may *throw* a ball, but not a handful of air.

Path verbs are (change of) *state*, i.e. *event*, oriented in that they specify certain properties of either the *initial location* (Loc_1), the *consequent location* (Loc_2), and/or the interrelations between them (the *figure* here being a variable only in terms of its presence/absence on these locations, i.e. *grounds*). This makes Path verbs action verbs and *relocation verbs* by nature. For example, a verb like *arrive* presents Loc_1 as distant and Loc_2 as close.

4. Applying the framework

4.1 Pinpointing the “Standard” Typology

As already indicated, we assume that the cognitive principles just outlined are universal and that all languages therefore have some classes of expressions “tailored” for referring to activities, states and actions, respectively. However, the default patterns according to which these cognitive universals are conveyed linguistically display profound crosslinguistic differences, in particular with regard to what is lexicalised (and how) and what can merely be inferred or explicated by means of free syntactic constructions. (The relevance of distinguishing the what-aspect of lexicalization from the how-aspect is further discussed in Smith 2000: 20ff).

Let us now return to the typological distinction between Manner (and/or satellite-framed) languages and Path (and/or verb-framed) languages presented in section 1 and see what the present framework can contribute to pinpointing the difference between a (proto)typical Path language, *French*, and a (proto)typical Manner language, *Danish* (expanding upon Herslund’s exemplification in 1998: 8-9).

In French we find one group of verbs which specify the Path of motion without saying anything about the Manner: The objects in question may be walking, crawling, flying, etc. These verbs are action verbs, and hence relocation verbs, by their very nature. To put it differently, their semantics is concerned with Conceptual Motion only and completely neutral with regard to Perceptual Motion. The Manner of motion is specified by a different group of verbs in French which however say nothing about the Path. The standard function of these verbs seems to be to characterise a motion in its own capacity without relating it directly to the change of state (in terms of location) that may or may not result from it. In other words, they lexicalize Perceptual Motion and their function is normally restricted to serve as pure activity verbs with no additional potential for presenting the activity as part of an action, i.e. as a process. Thus, they can refer to motion, but normally not to relocation.

French: Path	Manner
<i>aller</i> ‘go’	<i>marcher</i>
<i>entrer</i>	‘walk’
‘enter’	<i>courir</i> ‘run’
<i>venir</i> ‘come’	<i>ramper</i>
<i>sortir</i> ‘exit’	‘crawl’
etc.	<i>flâner</i> ‘stroll’
	etc.

Danish also has a very large and diversified group of verbs that specify the Manner of motion, a few of which are given below.

Danish: Manner	(+ Path _{satellite})	
<i>gå</i> ‘walk’	} <i>ind</i> ‘in’, <i>ud</i>	
<i>løbe</i> ‘run’		‘out’, <i>op</i> ‘up’,
<i>spadsere</i>		<i>ned</i> ‘down’,
‘stroll’		etc.
<i>kravle</i> ‘crawl’	etc.	
etc.		

Like the French ones, they are all activity verbs, at least to start with. However, the standard way of referring to Path in Danish is completely different from the French one in that it involves the present type of verbs as well. Danish does have a few “genuine” Path verbs, but the standard procedure is to take a suitable Manner verb and extend it with a Path-specifying *satellite* (most commonly in the shape of a preposition/adverb) which merges with the initial verb into a *phrasal lexeme*. This transforms the initial activity verb (e.g. *løbe* ‘run’) into a (phrasal) action verb (e.g. *løbe ud* ‘run out’) and hence a relocation verb. In such constructions, both Perceptual Motion and Conceptual Motion thus become part of the semantics, only on different structural level. The important difference compared to French, then, is that the Manner of motion has to “go along” with the Path, whereas speakers of French may well omit the Manner-related information if they do not feel like specifying it. (And when they do, they are forced to insert an additional Manner verb somewhere in the sentence structure, e.g. *en courant*, or rely on other lexical means such as *à pied*, *en avion*, etc.).

4.2 Addressing the borderland between lexicon and syntax

What has just been said naturally raises the question of what status the expression-units considered have in the larger context of what Sinha & Kuteva (1995) call *distributed semantics*, i.e. the distribution of space and motion related information across a whole clause. More specifically: What is the exact line of demarcation between (phrasal) lexemes and genuinely free syntactic constructions in a satellite-framed (i.e. Manner) language like Danish? The suggested distinction between activities and actions may contribute to answering that question. Thus, in languages like Danish and English, several satellites are often combined with one main verb in the same clause, and they can hardly all be seen as part of a phrasal lexeme, e.g. “She ran *out* of the kitchen *up to* the bedroom... etc.” However, the “satellite number one” somehow *is* different (see also Talmy 2000: 106f who reserves the term satellite for that entity only) and a viable explanation seems to be that it plays the decisive role in the shift from activity to action (and relocation) verb and hence merges semantically with the initial verb in a way that the rest do not, or rather: do not have to. This line of reasoning finds support in other satellite-framed languages. In German the corresponding satellite would be a prefix, at least in the infinitive, in casu: *hinauslaufen*, i.e. part of an independent word, and in Russian this would be the case in all forms, in casu: *выбежать* (*vybežat’*) (\Rightarrow *выбежала* (*vybežala*), etc.). As for Russian, these prefixes furthermore play the dual role of both Path and *aspect* markers. The two facts that (a) the prefix turns an activity verb into an action (and relocation) verb and that (b) only action verbs form *aspect pairs* in Russian, where the perfective member is prototypically coined through simple prefixation, while the imperfective member is prototypically coined through additional suffixation, can hardly be coincidental or irrelevant to understanding the mechanisms in play in typologically related languages as those mentioned.

4.3 Going beyond “pure” relocation

Finally, the suggested framework also provides a basis for addressing the semantics of such verbs that combine relocation with other types of semantic information. One category might be called *placement* or *positioning verbs* (see also Durst-Andersen 2006: 76ff who uses the former term). For example, in English you can *put* both a bottle and a book on a table, but in Danish you have to say “*stille* flasken på bordet” and “*lægge* bogen på bordet”. That is, in addition to the figure’s relocation from Loc_1 to Loc_2 , these verbs lexicalise the *position* of the figure on Loc_2 : Danish: *stille* implies EXIST VERTICALLY ON LOC_2 and Danish: *lægge* implies

EXIST HORIZONTALLY ON LOC₂. A further step would be to consider verbs which operate on some of the alternative semantic categories briefly mentioned in 3.1, i.e. *possession*, *experience*, and *qualification*, in combination with location (plus/minus position). For example, an English verb like *steal* is bound to refer to a relocation process or event, but it will also qualify the existence of *y* on Loc₂ in a certain way: as illegal.

5. Final remarks

The primary purpose of this paper was to enhance the “tool box” of motion event researchers with a few additional tools which facilitate a more consistent differentiation between the two senses of “motion” and pinpoint their connections to the key variables Manner and Path. Where the tools might really prove their worth, however, is in future empirical investigations into the various typological, cognitive, and communicative aspects of the whole issue that constitute the current growth point in motion event research. Only time can show if any expectations in that regard are indeed justified. Also, it should be stressed it is not the term *relocation* in itself, but the theorising behind it that should be seen as the main contribution to the “tool box“. If other authors prefer to speak of translocation, translational motion, displacement, Conceptual Motion, etc., these terms will make just as much sense, as long as the suggested specification of the levels of analysis is kept in mind.

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