Linguistic and non-linguistic investigation of motion events

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Abstract

The verb-framed vs. satellite-framed language dichotomy (Talmy, 1985) is the most common framework used in the crosslinguistic investigation of motion event expressions. According to the classification, French is a verb-framed language, it integrates the path of motion into the main verb and uses a separate component to express the manner of motion. On the other hand, English, a satellite-framed language, gives the manner information in the main verb and expresses the path of motion with a separate component. This study uses this dichotomy to see whether the motion event expressions patterns of these two different languages (French and English) are also reflected in their motion event categorisations or not.

Key Words: motion events, typology, language and cognition

Theoretical background

The modern and systematic treatments of motion from a linguistic perspective start with Talmy (1985/2007)'s influential work. Although all languages have ways of describing a motion event, they express the same event differently. Talmy splits languages of the world into two categories, *verb-framed languages* (V-languages) and *satellite-framed languages* (S-languages). French is a V-language where path is typically encoded in the verb and manner is mostly expressed with an adverbial, as in (1). English is an S-language and instead of encoding the core component of a motion event (path) into the main verb, it uses a 'satellite' (e.g. a particle). S-languages have a tendency to encode manner into the main verb, as in (2).

(1) Le jeune homme est descendu les escaliers en courant.

Eng. The young man descended the stairs by running.

(2) The young man ran down the stairs.

There are a great number of studies investigating the motion event expressions in different languages (e.g. Özçalışkan and Slobin 1999&2000, Papafragou *et al.* 2006, Pourcel and Kopecka 2006, Choi-Jonin and Sarda 2007). On the other hand, there is another line of research questioning the effect of those crosslinguistic verbalization differences on the conceptual representation of motion events. This question is part of the renowned linguistic relativity hypothesis (Whorf, 1956). Scholars who take motion as the testing ground for this line of research use both verbal and non-verbal

experiments and analyze the results crosslinguistically (e.g. Gennari *et al.* 2002, Papafragou *et al.* 2002&2006, von Stutterheim and Nüse 2003).

Aim and scope

The first aim of the present study is to test the Talmyan dichotomy on two typologically distinct languages, i.e. English and French, by using a verbal production task. The second aim is to relate the results of the first task to the language and cognition debate by using a non-verbal categorization task. The main question here is whether the English and French speakers' categorization performances are influenced by the motion event verbalization patterns of their respective languages.

Methodology

20 monolingual speakers of English and 22 monolingual speakers of French, aged 20-35, took part in the study. The stimuli used in the experiments were 60 real-life video sequences exclusively shot for this purpose. There were 12 actions (crawl, dance, hop on one foot, hop on two feet, limp, march, patter, run, stagger, tiptoe, whirl and zigzag), each depicted with 5 different directions (into, out of, up, down and across).

The subjects first took the categorization task, during which they were to watch 30 motion events. The videos were organized in groups of three. In each group, there was a main video and two candidate videos. First, they watched the main video and then the candidate videos. One of the candidates was a same-manner alternate of the main video and the other was a same-path alternate. At the end, they were asked to choose which one of the candidates is more similar to the main video. Then the same subjects took the verbal production task, during which they watched and described 25 other motion events.

Results

Results of the production task showed that English speakers used manner sentences in 83% of their descriptions, whereas French speakers use path sentences in 96% of their utterances. The One-Way ANOVA revealed a significant difference between the two language groups ($F(1,40)=623.844$, $p<.01$). On the other hand, the categorization data showed that speakers of English and French do not differ at all in a non-verbal task, both having a significant tendency towards choosing the manner component as the criterion of similarity (72% and 64%, respectively). It was hypothesized that their choice of manner or path as the criterion for similarity would be influenced by the dominant verbalization patterns in their languages, which was clearly not the case in our data.

Discussion

The results of the verbal production task are perfectly consistent with the verb-framed language vs. satellite-framed language dichotomy, French speakers dominantly using path sentences and English speakers using manner sentences while describing motion events.

The results of the second task, on the other hand, may very well be interpreted as suggesting a clear evidence for the *universal approach*, which suggests that linguistic representation and conceptual representation are independent of each other, and which is presented as a counter-argument to the linguistic relativity hypothesis. It may also present evidence for the *underspecification / underdeterminacy view*, which claims that the cognitive representation (of motion events) is not bound by the linguistic labellings of one's native language (Papafragou and Selimis, 2010).

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