Climb up vs. ascend climbing:
Lexicalization Choices in Expressing Motion Events with
Manner and Path Components

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1. Introduction

Earlier theoretical work on the linguistic expression of movement in space has suggested a (likely to be universally applicable) typological dichotomy between languages of the world (Talmy, 1985). Languages are proposed to differ in their preference to encode path of movement in either a verb (e.g., exit, ascend) or an associated “satellite” (e.g., go out, go down). Talmy (1985, 1991) refers to these two types as “verb-framed” (V-language) and “satellite-framed” (S-language), respectively. These two types also contrast with each other in expressing manner of movement. Because S-languages prefer to encode path by satellites (verb particles, prefixes), the main verb slot is generally available for a manner verb (e.g., walk/run/crawl in/out/across). By contrast, V-languages tend to use the main verb to encode path, leaving manner to be subordinated only in those contexts where attention to manner is salient or foregrounded (e.g., enter/exit running). However, in most instances, this leads to the omission of manner information in V-languages.

For instance, in describing a motion event with both manner and path components, such as ‘going up the ladder’ (as in Figure 1) speakers have various lexicalization options. They can choose to encode only manner (he is climbing), only path (he is ascending, he is going up), or both manner and path (he is climbing up, he ascends climbing). According to Talmy’s typology, the preferred patterns for the two language types in describing this scene will be such that S-language speakers will chose to encode both manner and path (he is climbing up the ladder), by conflating motion with manner in the main verb and indicating path in the particle ‘up’. V-language speakers, on the other hand, will typically encode only path (he ascends the ladder), leaving out manner information. However, in describing scenes where manner is
perceptually salient, V-language speakers may choose to encode both manner and path, but typically in a path verb+subordinate manner verb construction (*he ascends the ladder climbing*).

Recent empirical work also provided support to the basic typological distinctions proposed by Talmy (Ozcaliskan & Slobin, 1999; Slobin, 1996, 1997, 1998). Analysis of written texts and orally elicited narratives from children and adults showed clear indications of differential attention paid to manner of movement, with S-language speakers showing both more frequency of mention and greater lexical diversity with regard to the manner component of motion events, as compared to V-language speakers (Ozcaliskan & Slobin, 1998, 1999, in press). And this variation in linguistic perspective was found to become apparent very early in developmental time. A comparison of narratives produced in three V-languages (Hebrew, Spanish, Turkish) and three S-languages (English, Mandarin, Russian) by monolingual native speakers showed that children are sensitive to the typological distinctions of their native language as early as 3 years of age (Ozcaliskan & Slobin, 1999). And it was argued that this variation in linguistic expression also has cognitive consequences, by tuning speakers of these two language types to attend to and form mental images of movement in space in two distinct ways.

The aforementioned studies clearly demonstrated the typological contrast in encoding manner of movement between the two language types, thus showing how native speakers’ are tuned to the semantic patterns of their native language, starting from early ages on. In this study, we take a further step and look at the intratypological variation that could be caused by the availability of simpler syntactic forms that encode for manner in V-languages. Thus, we examine the interplay between semantic and syntactic complexity in describing motion events with both manner and path components, for which such syntactic forms are available. The analysis involves a comparison of narratives elicited in English (S-language) and Turkish (V-language).

The basic premise of the study is that speakers have a tendency to convey the most amount of semantic information in the simplest syntactic form possible, given processing constraints. Additionally, this tendency may override typological considerations for the description of particular motion events for which simpler syntactic forms are available. Thus, we claim that encoding of manner in a V-language may be influenced by the availability of such syntactic forms that are more easily processible by its speakers, which simultaneously convey more semantic information (i.e., both manner and path). That is, in instances where the V-language provides two lexicalization options involving the same degree of semantic complexity (conveying both manner and path information), with one option being syntactically less complex, speakers will use the simpler option more frequently, regardless of typological constraints. One such option is the single verb option, that encodes both manner and path (e.g., *tirman* ‘climb-up’) in Turkish for particular motion events. This option, if
available in the lexicon of a V-language, provides a syntactically less complex construction type as compared to a subordinate manner construction (e.g., *ascend climbing*), while conveying an equal amount of semantic information. Additionally, speakers will prefer this lexical option over forms that involve equal amount of syntactic complexity, but carry less semantic information (only path).

We start with the expectation that the interplay between syntactic form and semantic complexity will jointly determine speakers’ choices to encode various features of a motion event, and we predict the following:

- **If the language provides two lexicalization options involving the same degree of syntactic complexity (a single verb), with one option being semantically more complex (carrying both manner and path information as opposed to encoding only path or manner), speakers will use this option more frequently. Thus, the availability of single-verb options in a V-language will enable V-language speakers to encode manner of motion at comparable rates to speakers of an S-language, for the relevant events.**

- **If the language provides two lexicalization options involving the same degree of semantic complexity (conveying both manner and path information), with one option being syntactically less complex (a single verb as opposed to a main verb+subordinate construction), speakers will use the single verb option more frequently.**

**Developmentally, children could follow one of two paths:**

- **no development:** Children encode manner and path in language specific ways from early on, with no changes over developmental time
- **development:** Children will initially encode manner and path separately in an either-or fashion, and later on encode both manner and path in a single verb or in a manner verb+directional satellite construction

2. Sample

The sample comes from an already collected set of data from children aged 3 to 11, and adults, using a picture story-book, *Frog, where are you?* (Mayer, 1969) in a wide variety of languages (see Berman & Slobin, 1994). We will only use data collected from English- and Turkish-speaking children and adults. A summary of the sample characteristics is provided below:

<table>
<thead>
<tr>
<th>language</th>
<th>location of data collection</th>
<th>ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Sydney (Australia), Berkeley (USA)</td>
<td>3,4,5,6,8,9,10, adult</td>
</tr>
<tr>
<td>Turkish</td>
<td>Istanbul (two data sets), Tarsus (Turkey)</td>
<td>3,4,5,7,9, adult</td>
</tr>
</tbody>
</table>

All the subjects were monolinguals, coming from middle-class, literate backgrounds (except for village children in Tarsus). The 3-to-5-year-olds generally attended preschool or kindergarten, the 9-year-olds were generally
fourth-graders, and adults were college students or graduates, ranging from 18 to 40 years of age. The number of subjects in each age group for each language ranged between 30 and 50.

3. Procedure

The procedure for data collection was uniform across ages and languages. Each subject was interviewed individually and was given the same instructions, with slight modifications depending on age. Subjects were asked to first look through the entire picture book and then tell the story while looking at the pictures. Each interview was audiotaped and transcribed for future analysis (see Berman & Slobin for further information on the material, data collection, and coding processes).

Motion verbs—with associated satellites—were taken as the unit of analysis, and percentage of different types of motion verb use was computed for each age and language. The different types of verbs included in the analysis are presented below:

V:path (path verbs) = exit, descend, follow
V:manner (manner verbs) = run, fly, pop
V:manner + SAT (manner verbs + directional particles) = run away, fly out, creep out, sneak out, jump out
V:manner-path conflated (manner-path conflated verbs) = chase, escape
V:neutral+SAT (neutral verbs + directional particles) = go out, go after
V:neutral (neutral verbs) = go, move
V:path+V:m(SUB) (path verb + subordinated manner verb) = exit flying, follow running

For the purposes of this study, we analyzed two types of events:

● Events where the V-language does have a lexicalization option to encode manner and path in a single verb (e.g., escape, chase). These events included the frog’s escape from the jar, the dog’s escape from the bees, and the bees’ chase after the dog.

● Events where the V-language does not have a lexicalization option to encode manner and path in a single verb. These events included the owl’s exit from a hole in a tree and the boy’s fall from the tree.

4. Findings

4.1. Lexicalization patterns across ages in English and Turkish

4.1.1. Events with manner-path option

In line with our predictions, the results indicated that in describing events for which Turkish speakers have the linguistic option of encoding manner and path in a single verb, they utilize this option more frequently than encoding only path (48% to 35%) (see Figure 2). On the other hand, English speakers utilized
the manner verb+directional satellite and manner-path conflated single verb options almost equally (33% to 36%) (see Figure 3). Subordinate manner expressions were not observed in the English data, and the use of such constructions was almost negligible in the Turkish data (0.5%) (see Table 1). Subordinate manner expressions were, in fact, used only twice, once by a 5-year old (kopek kosa kosa gidiyor ‘dog is going running running’), and once by an adult speaker (kopek kosarak geciyor ‘dog passes running’).

![Figure 2](image2.png) Percentage of motion verb use in Turkish (frog's exit + bees' chase + dog's escape)

![Figure 3](image3.png) Percentage of motion verb use in English (frog's escape + bees' chase + dog's escape)

<table>
<thead>
<tr>
<th>Table 1: Percentage distribution of motion verb use in English &amp; Turkish</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>V:manner-path</td>
</tr>
<tr>
<td>V:manner+SAT</td>
</tr>
<tr>
<td>V:neutral+SAT</td>
</tr>
<tr>
<td>V:path</td>
</tr>
<tr>
<td>V:manner</td>
</tr>
<tr>
<td>V:neutral</td>
</tr>
<tr>
<td>V:path+V:m(SUB)</td>
</tr>
</tbody>
</table>

Percentages were computed by dividing the total number of manner or path verbs by the total number of motion verbs in each language

4.1.2. Events with no manner-path option

As expected, the results indicated that in describing events for which Turkish speakers do not have the linguistic option of encoding manner and path in a single verb, they mainly use bare path verbs (96% of the time) (see Figure 4). Similar to Turkish speakers, English speakers also use a higher percentage of path verbs in describing these events (81%) (see Figure 5). However, since English always has the option of encoding both manner and path in a syntactically less complex construction (via the use of directional satellites), we observe a higher encoding of manner in English (18%) than in Turkish (4%). Again, subordinate expressions were not observed in either the Turkish or the
English data, except for one instance by an adult English speaker (*the owl comes rushing out*).

### Table 2: Percentage distribution of motion verb use in English & Turkish

<table>
<thead>
<tr>
<th></th>
<th>Turkish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>V:path</td>
<td>96</td>
<td>81</td>
</tr>
<tr>
<td>V:manner+SAT</td>
<td>not an option</td>
<td>17</td>
</tr>
<tr>
<td>V:manner</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>V:manner-path</td>
<td>not an option</td>
<td>1</td>
</tr>
<tr>
<td>V:path+V:m(SUB)</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Percentages were computed by dividing the total number of manner or path verbs by the total number of motion verbs in each language.

Some descriptions of these two types of motion events by English and Turkish speakers are presented below (the age of the subject is indicated in parentheses):

**(4;9)** *He looked in the owl’s hole. The owl flew off and knocked him, and then he [the dog] ran away from the bees.*

**(4;7)** *Ondan sonra çocuk ağaca çıkıyor. Ondan sonra kopeğin *pesine düşuyor arılar. Ondan sonra da kopek *kosuyor. Cocuk *dusmus. Bi tane agactan bi tane hayvan *cikmis. [=Then the child ascends the tree. Then the bees start following the dog. Then the dog runs. The child had fallen. An animal exited from a tree.]*

**(9;7)** *And the dog was still playing with the bees. The bees started to chase him, cause the beehive fell. The boy is calling the frog in this tree. And then the dog is*
running away cause the bees were all chasing him. And he had fell down, cause an owl poked him out of the tree.
(10;1) Orda agaca cikmis. Ondan sonra ordan baykus cikiyor. Cocuk da korkudan vere dusuyor. Arilar da kopegi kovaliyor. Kopek de kaciyor. [= There, he ascended the tree. Then the owl exits from there. The child falls to the ground with fear. The bees are chasing the dog. The dog is running away]

(adult) And the little boy is looking in the tree trunk for the frog, and all the bees start chasing the dog who runs away. And this owl comes out, and the boy falls.
(adult) Ve arilar kizginlikla yuvalarindan firliyorlar. Kopegin pesine dusuyorlar. Cocuk da bu arada bir agac kovugunun icinde dogru sesleniyor. Aaa, agac kovugunun icinden bir baykus cikiyor ve cocuk asagi dusuyor. Arilar da bu arada kopegi kovaliyor. Kopek de korkuyla kaciyor. [=And the bees dash out from their hives with anger. They start following the dog. The child, meanwhile, calls into a tree hole. Wow, an owl exits from the inside of the tree hole, and the child falls down. In the meantime, the bees are chasing the dog. And the dog is running away with fear.]

4.2. Lexicalization patterns by age in English and Turkish
4.2.1. Events with manner-path option

The data indicated clear developmental patterns for both English and Turkish. For Turkish speakers, the use of path verbs decreased with increasing age, and this change was accompanied by a steady increase in the use of manner-path conflated verbs (see Figure 6). For English speakers, we also observed a steady increase in the use of manner-path conflated verbs with increasing age. This corresponded to a steady decrease in the use of neutral verbs+directional satellites. (see Figure 7). The use of the manner verb+directional satellite construction type was quite frequent at all ages. However, there was a shift between manner verb+directional satellite constructions and manner-path conflated verbs, with the former being more frequently used at early ages, and the latter more dominant around adulthood (see Table 3).
Table 3: Percentage distribution of motion verb use by age in English & Turkish

<table>
<thead>
<tr>
<th></th>
<th>Turkish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>V:manner + SAT</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>V:manner-path</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>V:neutral + SAT</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>V:path</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>V:manner</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>V:neutral</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>V:path + V:m</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Percentages were computed by dividing the total number of manner or path verbs by the total number of motion verbs in each language.

Another important dimension regarding the use of motion verbs is the diversity of this lexicon type in the narrative accounts. The data clearly revealed age as a good indicator of a more varied lexicon. Children’s lexicon extended slightly with increasing age, and adult performance was always significantly more extensive than that of children at any age. A closer look at the descriptions of one particular scene in terms of the different types of manner and path verbs used may illustrate this point further. The event chosen is the frog’s exit’ from the jar while the boy and the dog are sleeping at night.
4.1.1. Events without manner-path option

In describing events for which Turkish does not have the option of a single verb encoding both manner and path, we observed a much higher percentage of path verb use at all ages (see Figure 8). The same pattern held true for English speakers (see Figure 9). However, by adulthood, English speakers showed a steep increase in their use of manner verbs+directional satellites, which was accompanied by a decline in the use of bare path verbs (see Table 4).
Table 4: Percentage distribution of motion verb use by age in English & Turkish

<table>
<thead>
<tr>
<th></th>
<th>Turkish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>V:manner+SAT</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>V:manner-path</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>V:path</td>
<td>100</td>
<td>96</td>
</tr>
<tr>
<td>V:manner</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>V:path+V:m</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Percentages were computed by dividing the total number of manner or path verbs by the total number of motion verbs in each language.

Motion events where manner of motion is not perceptually salient led to a much narrower variety of motion verbs in both languages, and there was no effect of age. A closer look at the descriptions of one particular event in terms of the different types of manner and path verbs used may illustrate this point further. The event chosen is the owl’s exit from a hole in the tree, leading to the boy’s fall from the tree.

**English**

<table>
<thead>
<tr>
<th>3-4 year olds</th>
<th>5-6 year olds</th>
<th>9-10 year olds</th>
<th>adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>owl comes out</td>
<td>owl comes out</td>
<td>owl comes out</td>
<td>owl comes out</td>
</tr>
<tr>
<td>owl gets out</td>
<td>owl flies out</td>
<td>owl flies out</td>
<td>owl flies out</td>
</tr>
<tr>
<td>owl flies out</td>
<td>owl pops out</td>
<td>owl pops out</td>
<td>owl pops out</td>
</tr>
<tr>
<td>owl jumps out</td>
<td>owl emerges</td>
<td>owl comes rushing out</td>
<td></td>
</tr>
</tbody>
</table>

**Turkish**

<table>
<thead>
<tr>
<th>3-4 year olds</th>
<th>5-6 year olds</th>
<th>9-10 year olds</th>
<th>adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>baykus cikar</td>
<td>baykus cikar</td>
<td>baykus cikar</td>
<td>baykus cikar</td>
</tr>
<tr>
<td>[=owl exits]</td>
<td>[=owl exits]</td>
<td>[=owl exits]</td>
<td>[=owl exits]</td>
</tr>
</tbody>
</table>

5. Conclusions

Our analysis confirmed all our predictions. The three main conclusions that can be drawn from the data are presented as follows:

- Availability of single verb options (conflating manner-path) in the V-language led to greater encoding of manner of movement in Turkish. Even though, overall, English speakers used more manner verbs than Turkish speakers, Turkish speakers, in scenes where they had the option of encoding for...
manner and path in a single verb used that option more frequently than encoding path alone.

- Speakers showed a preference for syntactically less complex constructions in both language types. Turkish speakers showed a preference for manner-path conflated verbs over subordinate constructions (V:path + V:manner-SUB), and English speakers showed an equal preference for manner-path conflated verbs and V:manner+directional SAT constructions.

- Lexicalization preferences showed clear developmental patterns. Turkish speakers started by encoding path alone, and encoded path and manner jointly in a single verb more frequently with increasing age. English speakers initially encoded for path and manner in a V:manner+directional SAT construction, and eventually encoded path and manner in a single verb.

Endnotes

1 The satellite-framed construction type applies to most Indo-European languages except Romance, along with Finno-Ugric, Chinese, and various Amerindian languages. Verb-framed languages include Turkic, Semitic, and Romance languages, along with Japanese, Korean, and others.

2 Manner refers to factors such as the motor pattern of the movement of the figure, rate, and degree of effort. Path refers to the translational motion of a figure (a moving entity) which, in the most elaborated sense, moves from a source to a goal through some medium, passing one or more milestones.

3 A manner verb+directional satellite or a neutral verb+directional satellite construction is an option only in English. Turkish does not have directional particles.


5 The Turkish data were gathered by Ayhan Aksu-Koc and Aylin Kuntay in Istanbul, and in Tarsus by Jeroen Aarsen (1996). The English data were collected by Virginia Marchman and Tanya Renner in Berkeley and by Gillian Wigglesworth in Australia.

References


