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Motion Event Components and Gesticulation as Linguistic Practice in Turkish

Türkçe'de Hareket Olgusu Bileşenleri ve Jestlerle Dilsel Anlatım

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Abstract

The present study investigates motion event expressions and their accompanying gestures in Turkish. Gestures, the non-verbal signals, are assumed to represent cognitive organizations along with speech. It aims to present the lexicalization patterns of motion event descriptions in Turkish to find out at what rate Turkish speakers prefer using a gesture to complement speech when describing motion event and how they combine the speech and gestures in V(erb)-framed Turkish language. Furthermore, it tries to explain the relationship between linguistic typology and gestures, depending on Talmy's (1985) grouping of languages. In order to achieve this aim, the typological features of Turkish are examined in relation to another part of human speech gestures. In order to reach the above-mentioned aims of the study, Turkish speakers' narrations are analysed. The participants are asked to narrate a story by looking at the drawings of a picture book. Gestures are marked by EXMARaLDA and their types are specified. As a result, it can be claimed that Turkish speakers' speech and gesture do not follow the typology of their language strictly. One of the important results of this study is that path of the motion is more frequently gestured than the manner of the motion. Furthermore, it has been observed that reoccurring motion verbs are not gestured since the time span between the occurrences of those verbs play an important role in gesturing.
Keywords: cognitive linguistics, motion event components, gesticulation, V(erb)-framed and satellite framed languages.

Öz

Bu çalışma, sözlü Türkçede hareket olgusu içeren eylemlerle birlikte kullanılan jestleri incelemektedir. Sözsüz işaretler olan jestlerin konuşmayla birlikte bilişsel düzenlemeyi temsil ettiği ve dillerin tipolojisiyle bu bilişsel düzenlemenin uyumlu olduğu varsayılmaktadır. Çalışmanın amacı eylem çerçeveli bir dil olan Türkçede konuşucuların hareket olgusu içeren olayları ifade ederken kullandıkları sözcüksel örüntüleri bulgulamak ve hareket olgusu bildiren sözcük örüntüleriyle, bilişsel düzenlemeyi gösterdiği varsayılan jestleri nasıl birleştirdiklerini ortaya koymayı amaçlamaktadır. Buradan hareketle deTalmy(1985)'nin dil gruplamasına dayanarak, dilbilimsel tipoloji ve jestler arasında ilişki Türkçe üzerinden açıklanmaya çalışılmıştır. Çalışmanın belirtilen amaçlarını gerçekleştirmek için Türkçe konuşucuları olan katılımcılardan resim kitabındaki çizimlere bakarak hikâye anlatmaları istenmiş ve bu anlatılar sırasında kullandıkları jestler incelenmiştir. Jestler, EXMARaLDA kullanılarak işaretlenmiş ve türleri belirlenmiştir. Çalışmanın sonucunda hareket olgusu bileşeni içeren eylemlerin alan yazında varsayılanın aksine Türkçe'nin tipolojisiyle katı bir şekilde uyumlu olmadığı ortaya konulmuştur. Bu çalışmanın önemli sonuçlarından biri de Türkçede hareket yönü gösteren jestlerin hareket şekli gösteren jestlerden daha sık kullanıldığıdır. Ayrıca tekrar eden hareket eylemlerinin her seferinde jestlendirilmediği saptanmıştır bu da eylemlerin ortaya çıkma sıklıkları arasındaki zaman aralığının jestlendirmede önemli rol oynadığını göstermektedir.
Anahtar Kelimeler: Bilişsel dilbilim, hareket olgusu bileşenleri, jestlendirme, E(ylem)-çerçeveli ve uydu çerçeveli diller.

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Introduction

Spatial cognition deals with the acquisition, the governing and the employment of spatial knowledge. Conveying spatial information through speech is also a basic function of spatial cognition. In this sense, spatial cognition in relation to linguistic expression might be studied under the framework of cognitive linguistics. What cognitive linguistics study are the notions that are hypothesized to be the portions of our conceptual system. Spatial cognition, on the other hand, is one of the tools that our conceptual apparatus offer in order to manage our knowledge about space. In everyday life, we often use description of events that include movement or location or to convey information in wide range of situations. The term motion event refers to an event that includes movement and or location (Slobin, 2005). A universal motion event pattern can be categorized under five main components on the following example sentences.

John	ran	into	the room
FIGURE	MOTION+MANNER	PATH	GROUND

There is a moving figure in *motion*, moving in a particular *manner* (running) forward along a *path* that crosses a boundary into a *ground* (goal) *location* (a room). Manner is seen as 'external' component, which is optional in an event scheme, while figure, motion, ground and path are 'internal' components, which are obligatory.

Although the pattern is accepted to be universal, languages vary in spatial organization and in their way of expressing spatial information because of typological factors affecting the choice and organization of the individuals. Talmy (1985) states that languages are divided into two typologically different groups in describing motion events depending on where the path of motion is described whether in verb roots(verb-framed) or separately from the root in a satellite particle (satellite-framed).
The following is an example from Turkish, which is a V-framed language.

Adam	girecek.
FIGURE	MOTION – PATH

On the other hand in English, which is a satellite language the same setting will be given as the following;

The man	will	go	in
FIGURE-	MOTION-		PATH

English gives path (in) in satellite particle separate from verb root, which is where motion (go) is presented. However, in Turkish (girecek) the path of motion is expressed in the verb root lexically. The obligatory path component without which one cannot talk about a motion event (Slobin, 2004) is typically encoded within the main verb in verb framed languages.

In this article, verb-framing typological features are examined in relation to another part of human speech gestures. The non-verbal signals like gestures are also assumed to represent cognitive organizations along with speech. Haviland (2005) asserts that gestures are accommodated and linked to the linguistic structures in form and meaning; however, they are thought to be more instinctive and sententious than speech. Furthermore, gesture and speech are often argued to be generated by a single system. Spontaneous gestures accompanying speech, especially in narratives, has shown evidence that gestures and speech are systematically combined with respect to one another (Ozyurek and Kita, 1999). When verb-framing typology in relation to gesticulation is considered, Turkish speakers' use of co-speech gestures when describing a motion event is intriguing since the speakers can express manner and path in separate verb clauses by giving path in the main verb;

e.g. KoşarakÇıktı (ran out)

Keeping the gesture and speech relation in mind, a Turkish speaker might prefer using a manner-only gesture, a path-only gesture complementing the lexical implication or a manner-path gesture when depicting an event. The aim of this study is to find out at what rate Turkish speakers prefer using a gesture to complement speech when describing motion event and how they combine the speech and gestures in V-framed Turkish language in terms of the types of gestures (manner, path…).

Literature Review

Conducted studies in the subject were mostly comparative studies of typologically different languages, such as Spanish, Basque, Chinese and Turkish (Berman and Slobin, 1994; Ozcalıskan, 2004; Chui, 2009). A study conducted by Ozyurek and Kita (1999) in motion event and gesticulation compares languages with different verb-framing typology such as English and Turkish. The discussion proposes that Turkish speakers prefer using separate verbs to talk about motion events but English speakers prefer using satellite expressions that contain manner and path together. They also find out that English speakers use more manner and path gestures than Turkish speakers. Their study is evidence supporting a separate conceptualization of manner in V framed languages. Another similar study was carried out by Nicoladis and Brisard (2002), in which they compared French and English to see the difference in children bilingual speech and gestures. Cross-linguistic variation expected in gestures weren't observed. Ozcalıskan (2002) studies semantic components of motion events focusing on less attended ones being ground and path.

Ozyurek, Kita, Allen, Furman and Brown (2008) investigated how children use speech and gestures to express motion events when they learn typologically different languages again comparing English and Turkish. Their study showed that Turkish and English speakers start with the same gesticulation, which differs in time.

Kawai (2002) also studied the linguistic and imagistic representations in Chinese, a satellite framed language. In the study he analysed types of gestures for all components of a motion event including ground and figure pointing their frequency. His results show that Chinese speakers don't gesture manner much in contrast to path, which they gesture often.

Recent studies have two mainstream views regarding speech and gesture system. The first view take the assumption that speech and gesture are parts of one system, the second view proposes that gestural representation has nothing to do with linguistic typology and it is claimed that gesture and speech are two separate systems (Chui, 2009; Hadar and Butterworth, 1997; Krauss, 1998).

Haviland (2005) asserts that gesture is linked to the linguistic structure in form and meaning. When v-framed languages, like Turkish are considered, the use of co-speech gestures when describing a motion event is intriguing since the speakers can express manner and path in two verbal clauses in just one sentence.

Methodology

One related theory used in the methodology is Slobin's (1987) *Thinking for Speaking Theory*, which claims that speakers organize their thinking to meet the needs of the linguistic encoding. It is assumed that languages have preferences when encoding semantic domains into syntactic ones.

How we say something affects our thinking. The theory emphasizes the essentiality of perspective in the framing of events. Although the target event is the same, it has to be expressed via language specific linguistic patterns, which filter or rather favour information (Slobin,2004). In this sense, the separate use of two verbal clauses for manner and path would suggest a separate conceptualization of manner and path information of the motion events in our minds (Ozyurek and Kita, 1999). According to this view, in Turkish, a V-framed language, the manner and path of motion should not be conflated within a single gesture due to the use of manner and path in two separate verb clauses within one sentence. Manner is assumed to be the most salient information type, since it is added optionally and only when it is necessary contextually. Furthermore, a V-framed language, like Turkish, prefers giving detailed descriptions of path information regardless of verb type. In a sentence like, "Çocukcamdanyereindi" (The boy from the window to the ground descended) includes a path description and has two path segments acquired through suffixes in addition to a path verb. Ozcalıskan and Slobin (2003, p. 260) state that, "Turkish speakers do not typically elaborate manner of motion, due to the constraintsin conflation patterns for encoding path and manner".

Another theory, which is related to the methodology of this study, is Growth Point (GP) Theory. According to this theory gestures and speech form growth points, which are psychological predicates carrying new information (McNeill and Duncan, 2000). A Growth Point (GP) blends imagery and linguistic content. GP is not applicable to all kinds of gestures because, it requires relatable content and

synchrony. Slobin's (1997) thinking-for-speaking also acknowledges imagistic and linguistic representations as fundamentally united since their interaction makes it possible to influence each other, which serves as a channel between cognitive and language (McNeill, 2000).

In accordance with the aims of this study, the research questions can be stated as follows:

1. At what rates do the speakers of Turkish prefer using gestures to accompany and to complement speech when describing a motion event in narrations?
2. How do Turkish speakers combine and match speech and gestures regarding the types of gestures in relation to manner and path of motion?

Participants and Data Collection

Seven monolingual Turkish speakers participate in this study. However, only 5 participant data were transcribed and calculated because the other 2 participants' narration included only used deictic gestures which are almost no different from one another. The participants are MA students from various universities in Ankara; namely Gazi University, Hacettepe University and METU. They are between 20-22 years old. Convenience sampling method is used in the selection of participants. The results of this study are limited and therefore, it is not possible to assume that they represent the whole population.

The tool used for data collection is Mercer Mayer's wordless picture book *Frog Where are you?* Each participant is asked to tell the story by looking at the pictures in the book. The participants are asked to narrate the story to a listener who has not seen it in order to provide natural ground to the use of motion events and gestures and to get as many details as possible in the narration. The focus of the study is not told to the participants so as not to lead them faking the gestures and therefore lose naturalness. Before the participants tell the story, they are asked to have a look through all the pictures in the book. The story of each participant is recorded on video. Gestures are marked in the video using a transcription program EXMARaLDA specifying their type. Verb types are illustrated above each line and gesture types are given in the parenthesis.

For the classification of the gestures the following categorization is used:

a. Manner Gestures: Showing only the manner of the motion with the gesture
e.g. Koşmak*(two fists making small circles at sides)*

b) Path gestures: Showing only the path of the motion with gesture
e.g. Çıkmak*(One hand or finger directing up)*

c) Manner- path gestures: Showing both manner and path of the motion within one gesture
e.gDönmek*(hand moving forward and making a curve to the direction after reaching the path point)*

Using the provided DVD, all the gestures can be watched as their time and duration are marked individually. The identification of the gesture according to the above categorization can sometimes be quite challenging, as some gestures are ambiguous. When the researcher is in doubt about one of the gestures, a second identifier is asked to figure out the type of gesture. Statistical data acquired in the study is organized and displayed in tables and charts.

Findings and Discussion

The data acquired from the recordings was difficult to analyse at the first attempts especially when deciding gesture types, even with the help of a second identifier. Some gestures were deictic for one identifier and quite clear for other at times. When necessary, the data were analysed in the same screen by the two identifiers.

At the end of the analysis process it has been found out that on the average, the narrators used 81 gestures during the narration and only 26% percent of these gestures were identified to be in the motion event descriptions. The rest of the gestures were meaningless or they were used to fill the pauses to find the right word and thinking process in speech or they were used for ground and figure.

Table 1: The Distribution of Gesticulation

Participants	Gestured Motion Verbs	Motion Verbs not Gestured
1	23	9
2	18	7
3	22	7
4	18	4
5	22	12
Average	21	8
Rate	26%	38%

As can be observed from Table 1, 38% of the motion verbs used in a narration was not accompanied by a gesture that shows manner or path. Figure and ground gestures were not included in this study, however, it has been observed from the data that 'figure' was not gestured as much as other components in Turkish. It is observed that reoccurring motion verbs in sequential sentences are not gestured by the participants if the previous one is gestured. The time span between the occurrences of the verbs seems to be important, as there are examples that the same verbs used in consecutive sentence are both gestured because the sentences were long and verbs were away from each other.

e.g. Participant S[1] (line 7)

"…birtaneşeyinüzerineçıkmış. Tam çıkarken…"

[7] Path verb "çıkmak"

	..	26 [02:36.9]	27 [02:39.8]	28 [02:42.7]	29 [02:51.9]
Salih [nv]	çıkarsam	...	bir tane şeyin (path) üzerine çıkmış	...	bir tane birden

Because they are too close the participants preferred only gesturing one of the verbs in such examples. The only group that is included in motion verbs that are not gestured are mostly manner verbs used in a separate verb clause from its path complementary. In those cases participants prefer either gesturing one of the components or gesturing manner-and-path together in one gesture.

e.g. Participant S (line 8)

"…alıp, kaçıp, koşmayabaşlamış"

[8] Manner verb "fırlamak" Path verb "kaçmak"

	..	30 [02:56.1]	31 [03:02.8]
Salih [nv]	(manner&path)bir geyik fırlamış	...	alıp (path) kaçıp koşmaya başlamış

The participant here only gestures 'kaçmak' (to escape) path verb but not its manner 'koşmak' (to run). This choice seems to be optional though since the use of manner-only and manner-and-path gestures are almost equal within the scope of this study.

The results found related to the second research question were slightly different from expected. Turkish speakers used path gestures most as expected; however, they used manner-and-path gestures almost as often as they used manner-only gestures.

[1]The initials of the participants' names are used in all of the examples and tables throughout the study.

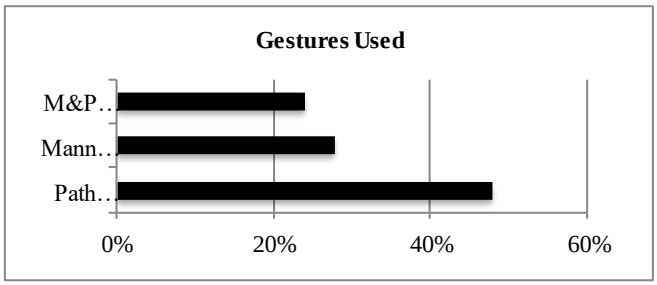

Figure 1: Percentage of Gestures Used

With a few exceptions, starting point of gesturing always preceded the articulation of the motion verbs, which were on direct object most of the time. What's more, this place was the point where path of the motion expressed separately in a satellite although it was already implication in the main verb. This actually shows that Turkish speakers' speech and gesture do not follow the typology of their language strictly. This could be seen as an evidence for Croft's addition of another category to the framing typology of languages, double framing languages in which the path is expressed twice; once in the verb and once in a satellite (Treis and Mietzner, 2007).

e.g. Speaker W(line1) Speaker W (line3)

"…fanustandışarıçıkıyor" "…birliktekurbağayıaramayaçıkıyorlar"

[1] Path verb "çıkmak" Manner verb "atlamak" Path verb "kaçmak"

	0 [00:00.0]	1 [00:02.4]	2 [00:14.3]	3 [00:20.0]	4 [00:24.2]	5 [00:28.0]
W [nv]	...	...	...	dışarı (path) çıkıyor ve pencereden (manner) atlıyor		kaçmış

[3] Path verb "çıkmak"

	10 [00:56.6]	11 [01:03.7]	12 [01:07.4]	13 [01:10.7]	14 [01:18.6]
W [nv]	düşüyo r ...	...	birlikte kurbağayı aramaya (path) çıkıyorlar	...	...

The double framing is found to be optional; the speakers may prefer omitting the second satellite as in the second example of the same speaker, a second path satellite was not preferred to use.

Table 2: Types of Gestures Used on Manner and Path Verbs

Gesture/ Verb	Participant B	Participant Ş	Participant S	Participant W	Participant N	TOTAL
Manner for Manner	2	6	8	3	5	24
Manner for Path	0	0	0	0	0	0
Path for Manner	3	2	0	2	3	10
Path for Path	7	3	11	8	8	37
Manner-and-path for Manner	7	2	1	4	4	18
Manner-and-path for Path	2	3	0	0	1	6

The table above shows the types of gestures used for manner and path verbs. It is possible to say from this data that Turkish speakerstend to gesture path of the motion more than they gesture the manner of the motion. Mostly, the type of gestures used is parallel with the type of verbs. Path gestures used for manner verbs were mainly on the verb 'düşmek' (to fall). Deciding on the verb type was difficult because the verb root itself includes no path coding apart from the inherent directionality of the verb itself (Slobin, 1996). Thus it is assumed to be a manner verb because some speakers used gestures showing not only the path of 'düşmek' (to fall) but also a separate gesture showing the manner only. Use of manner gestures for path verb is compatible with the expectations. None of the narrators preferred to gesture manner when a path verb existed. In other words, Turkish speakers do not use manner verbs as the main verb of the sentence as much as they use path verbs. This might be accepted as an evidence for the claim that verb framed language speakers do not pay attention to the manner of the motion as much as satellite-framed language speakers. (Ozyurek and Kita, 1999). An example for this is that the speakers do not use manner verbs that express location much in total only a few times manner verbs are used to state the maintenance of a stationary location. The verbs were 'uzanmak' (to reach), 'yatmak' (to lie), 'yaslanmak' (to lean), 'durmak' (to stand) and 'asılmak'(to hang). Interestingly, participant N used a clear gesture for 'asılmak' (to hang) although she didn't articulate the verb itself.

[2] *asılmak* Manner verb

	5 [00:54.9]			6 [01:02.5]	7 [01:12.0]	8 [01:19.8]
Nesrin [nv]	(manner)*gesticulates hanging* yatağın üstünde lamba var	...	...			yanında

It wasn't expected to see manner and path in one gesture because it was a characteristic of satellite framed languages. The narrators were expected to use manner verbs and path verbs in different clauses and they either gesture one of them or none, yet such structures were rarely observed. The narrators did use manner-and-path gestures, mainly on manner verbs rather than path verbs as seen in table 2.

e.g. Participant B (line 1)

"…içinedoğrueğilmiş…" (mannerandpath gestured)

[1]Manner verb "eğilmek"

	0 [00:00.0]	1 [00:02.0]	2 [00:06.0]	3 [00:08.0]	4 [00:10.2]	5 [00:14.8]	6 [00:15.5]	7 [00:19.0]
Belgin [nv]	...	...	...	içine doğru (manner&path) eğilmiş ...			...	...

Conclusion

In this study, the relation between motion events and gesticulation in narrations in Turkish is examined. The aim is to contribute to speech and gesture interrelations hypotheses. This study used motion event typology for analyses. In order to answer the research questions, the gestures of the participants are marked by EXMARaLDA and the types of these gestures are specified. The analysis of gestures in association with the corresponding motion event components showed that the typology was not strictly followed both in speech and gesture. It is observed that reoccurring motion verbs in sequential sentences are not gestured if the previous one is gestured since the time span between the occurrences of the verbs seems to be crucial. Another outcome of the study is that Turkish speakers used path gestures as anticipated; but they used manner-and-path gestures nearly as frequently as they used manner-only gestures.

When it comes to the comparison of path and manner gestures, it is possible to indicate that Turkish speakers tend to gesture path of the motion more than they gesture the manner of the motion. It has also been noticed that the narrators used manner-and-path gestures on the path of motion satellites of the manner verbs.

As a final remark, when there is a path verb, narrators did not prefer to gesture manner. This seems to support the view that speakers of V-framed languages are not attentive to the manner of the motion as much as satellite-framed language speakers. In short, it is possible to conclude that conceptualization of an event is composed of both imagery and linguistic content as they can be observed in gesture and speech. Yet, the conceptualization is also integrated in social interactions (Chui, 2009). Based on the evidence presented in this study, it is possible to question the assumption that motion event gestures and linguistic typology are highly related and dependent. It might be possible to claim that; speech and gestures may be governed by two separate systems that happen to show similar motion event typology at certain times. Furthermore, gesture and speech may also be governed by a single system that consists of crosscutting dimensions comforting to different modalities by showing similarity and difference. In the end, the dichotomy in the literature about speech and gesture production systems being separate or single may not be a necessary one, which necessitates future studies.

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