Hacettepe University Graduate School of Social Sciences

Department of English Linguistics

# MOTION PREDICATES IN TURKISH: A MORPHO-SYNTACTIC TREATMENT

Abdullah TOPRAKSOY

Ph.D. Dissertation

Ankara, 2022

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**ACCEPTANCE AND APPROVAL**

The jury finds that Abdullah Topraksoy has on the date of May 25th 2022 successfully passed the defense examination and approves his/her Doctoral Thesis/Ph. D. Dissertation titled "Motion Predicates in Turkish: A Morpho-Syntactic Treatment".

Prof. Dr. Deniz ZEYREK BOZŞAHİN (Jury President)

Assoc. Prof. Emine YARAR (Main Adviser)

Prof. Dr. Işıl ÖZYILDIRIM (Member)

Assoc. Prof. Murat ELMALI (Member)

Asst. Prof. Zeynep DOYURAN (Member)

I agree that the signatures above belong to the faculty members listed.

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……/……/……

**Abdullah TOPRAKSOY**

*i*

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****** Tez* ***danışmanının*** *önerisi ve* ***enstitü anabilim dalının*** *uygun görüşü üzerine* ***enstitü*** *veya* ***fakülte yönetim kurulu tarafından karar verilir.***

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# ABSTRACT

TOPRAKSOY, Abdullah. *Motion Predicates in Turkish: A Morpho-Syntactic Treatment*, Ph.D. Dissertation, Ankara, 2022.

Research on space and language has had fruitful outcomes in the last decades. One of the related domains of study is motion itself, which is central to our experience. Although the work on the semantic analysis of motion events have had fruitful outcome in typological attempts to motion event encoding, a more recent approach to the field support the idea that motion independent properties which govern the morphological, lexical and syntactic resources available to languages may determine the selection or tendency in motion framing of languages. The present study sets off to question this recent approach and focuses on actual motion events in Turkish from a structural point of view and investigates motion expressions in relation to subordination and case marking. It aims to understand what kind of case markings and subordinate expressions are used to encode motion events and to describe the relations, if any, between these structural elements and motion expressions. Apart from the structural investigation of motion expressions, the present study also addresses a preliminary analysis of fictive motion in Turkish, which is a totally different travel from the structural analysis.

Two tasks were employed for the analysis of actual motion expressions and one task for the description of fictive motion expressions. Due to the nature of the content, no verbal expressions on it, and easy operability, The Pear film was taken as the first task of the study. A follow-up narrational experiment via a set of animated video clips was organized as the second task of the study. In the final section, a drawing task was administered to participants in order to account for the extent to which fictive motion is observable from the drawings. All the tasks are based on language production in their nature. The tasks were carried out online with individual participants (n=60), who are all native Turkish speakers.

The findings of the study taken from both tasks found out that participants made use of certain subordinate constructions to elaborate their narrations of motion expressions. Three subordinate types were described from the frequently used ones to the least. Their relations with motion expressions were explained as encoding mainly the manner of motion; modifying the figure and/or ground elements of motion expressions. In regard to the use of case markings, three types of cases were observed in participants' descriptions. The functions of these cases were linked to the translocational dynamics of motion expressions. The findings are in line with similar studies of its kind (e.g. Jackendoff 1990, 1996; Croft et al., 2010; Ibarretxe Antuñano, 2009 and Beavers et al., 2010) which suggest a flexible classification or continuum of motion typology

since languages may exhibit more varied motion constructions than they are expected or proposed to in just two- or three-way typology. In terms of the fictive motion analysis, judging from the differences shown in drawings of fictive and non-fictive pairs, the present study suggests that there may be traces of fictive motion as if there was some form of motion effect, but further analyses are needed to make sure about that.

Overall, apart from being the first investigation of fictive motion in Turkish, the present study can be regarded to contribute to the studies within the domain of motion in general and in Turkish in two ways: First, the present study tested the use of framework (by Beavers et al*.,* 2010) which highlights the place of linguistic resources in encoding motion events in a language and as the findings suggest, that framework can be really beneficial in using linguistic resources for the analysis of motion events. Second, using tools rich of motion for the analysis of motion events, the present study can shed light on new insights which emphasize the clausal patterns in description of motion events in Turkish where path and manner verbs are used and even supported via additional uses of subordinate clauses for extended motion events and descriptions via case markings.

## Keywords

Motion events, framing typology, grammar and space, case marking, subordination, Turkish.

# ÖZET

TOPRAKSOY, Abdullah. *Türkçe'deki Devinim Yüklemleri: Biçim-sözdizimsel bir Yaklaşım*, Doktora Tezi, Ankara, 2022.

Uzay ve dil üzerine yapılan araştırmaların birkaç on yılda verimli sonuçları olmuştur. İnsanlık olarak deneyimimizin merkezinde yer alan devinim, konuyla ilgili çalışma alanlarından birini oluşturmaktadır. Devinim olaylarının semantik analizi üzerine yapılan çalışmalar, devinimin kodlamasına yönelik tipolojik girişimlerde verimli bir sonuca sahip olsa da, alana yönelik daha yeni bir yaklaşım, diller için mevcut olan morfolojik, sözlüksel ve sözdizimsel kaynakları yöneten, devinimden bağımsız özelliklerin. dillerin devinim çerçevelemedeki seçimini veya eğilimini belirleyebiliceği fikrini desteklemektedir. Bu çalışma, bu yeni yaklaşımı sorgulamak için yola çıkmakta ve yapısal bir bakış açısıyla Türkçedeki somut (reel) devinim olaylarına odaklanmakta ve devinim ifadelerini yantümceleme ve durum belirleme bağlamlarında incelemektedir. Çalışma, devinim olaylarını kodlamak için ne tür durum belirleme ve yantümce ifadelerinin kullanıldığını anlamayı ve varsa bu yapısal elemanlar ile devinim ifadeleri arasındaki ilişkileri tanımlamayı amaçlamaktadır. Bu çalışma, devinim ifadelerinin yapısal incelemesinin yanı sıra, yapısal analizden tamamen farklı bir yolculuk olan Türkçedeki kurgusal devinimin bir ön analizini de ele almaktadır.

Çalışmada, gerçek devinim ifadelerinin analizi için iki aşamalı deney ve kurgusal devinim ifadelerinin betimlenmesi için bir deney uygulanmıştır. Herhangi bir sözlü ifade içermemesi ve kolay işlenebilirliği nedeniyle Pear film, çalışmanın ilk deneyi olarak belirlenmiştir. Çalışmadaki ikinci deney olarak, bir dizi animasyonlu video klip aracılığıyla yürütülen bir izleme-öyküleme deneyi düzenlenmiştir. Kurgusal devinimin çizim testlerinden ne ölçüde gözlemlenebildiğini belirlemek için katılımcılara bir çizim testi uygulanmıştır. Çalışmada yer alan her üç deney de, doğası gereği dil üretimine dayanmaktadır. Deneyler, tamamı anadili Türkçe olan katılımcılarla (n=60) çevrimiçi olarak gerçekleştirilmiştir.

Her iki deneyden elde edilen bulgular, katılımcıların devinim ifadeleri anlatımlarını detaylandırmak için belirli yantümce yapılarından yararlandıklarını ortaya çıkarmıştır. Kullanım sıklıklarına göre üç yantümce türü tanımlanmıştır. Bu üç türün devinim ifadeleri ile ilişkileri, esas olarak devinim tarzını kodlamak, ve devinim ifadelerinin şekil ve/veya zemin öğelerini değiştirmek olarak açıklanmıştır. Durum belirmeleme kullanımına ilişkin olarak, katılımcıların anlatı betimlemelerinde üç durum tipi gözlemlenmiştir. Bu durumların işlevleri, devinim ifadelerinin yer değiştirme dinamikleriyle bağlantılıdır. Diller, yalnızca ikili ya da üçlü tipolojiyle beklenenden veya önerilenden daha çeşitli devinim yapıları sergileyebileceğinden; çalışmadaki

bulgular, devinim tipolojisinin esnek bir sınıflandırmasını ya da sürekliliğini öneren kendi türündeki benzer çalışmalarla (örneğin Jackendoff 1990, 1996; Croft vd., 2010; Ibarretxe Antuñano, 2009 ve Beavers vd., 2010) uyumludur. Kurgusal devinim analizi açısından, kurgusal ve kurgusal olmayan çiftlerin çizimlerinde gözlemlenen farklılıklardan yola çıkarak, bu çalışma, katılımcıların çizim örneklerinde kurgusal devinim izleri olabileceğini, ancak bunu daha güçlü savunabilmek için daha fazla analiz yapılması gerektiğini öne sürmektedir.

Genel olarak, Türkçedeki ilk kurgusal devinim araştırması olmasının yanı sıra, bu çalışmanın Türkçeye ve genel olarak devinim alanındaki çalışmalara iki şekilde katkıda bulunduğu söylenebilir: Birincisi, bu çalışma dillerdeki devinim olaylarını kodlamada dilsel kaynakların önemini vurgulayan çerçevenin (Beavers vd., 2010 tarafından) kullanımı test etmiştir. Bulgulardan hareketle, bu çerçeve devinim olaylarının analizi için dilsel kaynakların kullanılmasında gerçekten faydalı olabilir. İkincisi, bu çalışma, devinim olaylarının analizi için devinim yönünden zengin içerikli deneyler uygulayarak, Türkçede devinim yapılarının betimlenmesinde yol ve tarz eylemlerinin kullanıldığı ve hatta yan tümcelerin ek kullanımlarıyla ve durum belirleme ekleriyle desteklendiği tümceli yapıları vurgulayan yeni anlayışlara ışık tutabilir.

## Anahtar Sözcükler

Devinim olayları, çerçeveleme tipolojisi, dilbilgisi ve uzay, durum belirleme, yantümce, Türkçe.

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## CONVENTIONS

The following is a group of listing which helps to understand the glosses, where applicable, the abbreviations that may be seen in the whole text, and the format which is followed both within the text and in the examples provided. The following begins with the list of glosses, list of symbols and abbreviations, and finally the typesetting.

### A. GLOSSES

∅: zero(empty) element

1: First person

3: Third person

ABL: Ablative

ACC: Accusative

ADV: Adverbial

ANom: Action nominal

AOR: Aorist

CAUS: Causative

CL: Clause

COMP: Complement

COP: Copula

CVB: Converb

DAT: Dative

DEF: Definite

DEM: Demonstrative

DET: Determiner

F: Feminine

GEN: Genitive

IMPF: Imperfective

INDF: Indefinite

INF: Infinitive

LOC: Locative

M: Masculine

MAIN: Main Clause

NUM: Numeral

OBJ: Object

ObjP: Object participle

OBLG: Obligation

PART/PTCP: Participle

PASS: Passive

PL: Plural

PERF: Perfective

POSS: Possessive

PRN: Pronoun

PROG: Progressive

PRS: Present tense

PST: Past tense

P.COP: Past copula

QUANT: Quantity

REFL: Reflexive

REL: Relative

SbjP: Subject participle

SG: Singular

SUB: Subordinate

VN: Verbal noun marker

## B. LIST OF SYMBOLS AND ABBREVIATIONS

-: indicates a mark between morpheme boundaries in a word

[ ]: shows the analysed section in clausal elements

MANNER: indicates Manner verb

PATH: indicates Path Verb

( ):shows the use of case marking

## C. TYPESETTING

In the text:

SMALL CAPS : Labels for basic anchoring categories.

*italics* : Terms defined or introduced for the first time, linguistic markers and expressions, variables for semantic contents, or used for emphasis.

Initial caps: Descriptive labels for grammatical elements of motion, such as Path, Manner.

'single quotes' : Terms used in other frameworks and English translations of the sample sentences from the study.

**bold**: When a marker is in the focus of a discussion, it is emphasized with a bold letter type.

In the examples:

SMALL CAPS : Gloss items for Turkish examples.

**bold** : Markers being analysed.

*italics* : the English translation of parts that correspond to the analyzed element in the Turkish examples, and sentences with fictive motion is given in italics.

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# INTRODUCTION

When we speak, there is actually a process whereby the information is linearized into sequential speech units. It becomes salient to talk about three-dimensional spatial information (Levelt, 1984) via different languages employing different ways to distribute the same spatial information into linguistic units.

Changing places in our lives, moving things from one place to another, and seeing things moving in nature are all instances of motion, which comprises a collection of spatial elements. The human experience also includes *talking* about motion; however, beginning with Talmy's (1975) seminal work on the typology of the linguistic expression of motion events, ways people talk about motion are said to differ according to the language they speak.

The significance of motion in linguistics lies behind the idea that motion is an indispensable part of human thinking, and it is one of the core concepts in our mindset (Goddard, 1998). The representation of motion is not only a fundamental but also a high-level human cognitive ability, which may let scholars carry out deeper analyses into cognition (Landau & Jackendoff, 1993), and motion concepts are acquired quite early in childhood (Choi & Bowerman, 1991). Moreover, as stated above, each and every language has its own way of speaking about motion, and there is variability in the linguistic encoding of motion events. This variation, in turn, can posssibly affect the mental representations, and it can lead to different mental imagery about how one navigates in space. Last but not least, its expression exceeds the lexical level, such that it reaches to sentence and even discourse level (Slobin, 2004).

In the last decades, "event" has been identified, with recent research on underlying conceptual organization of language, as one of the building blocks of language and cognition (e.g., Goldberg, 1998; Talmy, 2000). However, the definitions of the notion of 'event' differs both within and across different disciplines. For instance, within the field of linguistics and as part of the cognitive theories, events are viewed as conceptual units defined by perceived changes in quality between two breakpoints in the external world (Newtson and Engquist 1976; Zacks and Tversky 2001; Radvansky and Zacks 2014). In more detail, from this viewpoint, it can be assumed that event schemata or frames are

stored in the long-term memory and readily accessed during cognitive processing. On the other hand, events are described differently in semantic theory such that an event refers to a specific semantic unit which corresponds to a sentence (e.g., Davidson 1980; Kamp 1979). In this sense, the definition is more linked to the relations of quality and time (Klein 2010; Koenig 2016), as expressed by verbs and their arguments (Levin and Rappaport 2005).

Depending on the typological categorization of languages, a wide range of studies on language production, comprehension, and acquisition of this event type (e.g., Bylund et al*.,* 2013; Carroll et al*.,* 2012; Flecken et al*.,* 2015; Levinson 2003; Majid et al*.,* 2004; and Papafragou et al*.,* 2008) take their departure from the peculiarities between verb-framed (V-F) and satellite-framed (S-F) languages in that they differ according to how path and manner are encoded within their framing of events.

Slobin (2006) assumes that "this basic contrast leads speakers of satellite-framed languages to pay more attention to manner of motion, since manner is typically expressed in the main verb with "path" expressed by a satellite, while the reverse holds for speakers of verb-framed languages". However, many crosslinguistic studies demonstrate a high degree of variation even within language types. For instance, languages where *path* is typically encoded in the verb (e.g., French, Italian, and Spanish) also show relatively high frequencies in the use of manner verbs (Cardini 2012; Kopecka 2009). Likewise, English, categorized as satellite-framed where *manner* is encoded in the verb slot, displays frequent use of path verbs (Carroll et al*.,* 2012). Thus, questions arise concerning the factors which govern the selection of one pattern (path or manner) over the other in actual language use. There can be different sources which play a role in the variation of these patterns as Pourcel (2004) points out: "(a) *the type of entity* with respect to the features human/non-human, whereby human figures encourage path over manner in contrast to non-human figures which encourage manner; (b) *the type of manner*, as with marked forms of motion such as to limp or to dash, which lead to a manner bias, in contrast to default means of moving (e.g., to walk with a bias toward path); and (c) *the type of path*, whereby a long trajectory often entails a bias toward manner, with a bias toward path given a short trajectory". In the same vein, Durst-Anderson et al*.,* (2013: 129) compare Russian, English and Danish and they assert that the 'same' representation of a motion

event can result in different linguistic outlooks regarding mental focus for the languages compared. These language-based outlooks are meant for perceptual and conceptual images in which the grammatical system of a language is the major determining factor. The difference in languages can be based on the selection of the content by the speakers of each language having differing points of departure.

Language is very generous in extending motion expressions to the fictive domain as well. Fictive domain includes fictive entities which evoke for the entities and their relationship in between (animate or inanimate) in the real world. Linguistic studies of fictive motion have been attempted by numerous scholars (Bennett 1975; Talmy 1983; Langacker 1990; Levin 1993; Matsumoto 1996; and Matlock 2004 to name a few). Fictivity comes from 'virtuality' (Langacker, 1999), through which a lexical noun by itself (e.g., road, mountain) does not specify a type of 'thing', namely any specific instance of that type, as with a lexical verb by itself (e.g., go, run) barely specifies a type of event or situation, which Langacker (2005: 170) terms a 'process' but not any certain instance of the process. Rather, a type can be essentially described as a fictive entity that "represents an abstraction from actuality which captures the commonality (generic characteristics as a whole) inherent across a set of actual instances" (Langacker, 2005: 170). For example, let's assume that the sentence "Mountains run parallel to the coast" refers to an actual series of mountains located close to an actual coast. The linguistic reference to motion – i.e., *runs* – seems to be at the level of instance. However, while the sentence itself is a statement about actuality (both the mountains and the coast refer to actual instances), the process of motion aimed to describe the mountains is fictive because no actual movement occurs from mountains to the coast.

Fictive patterns are learned through abstraction, as put by Langacker (2008). Abstraction refers to a means of transcending direct experience and conforms to the structures it is based on but is less detailed. Abstraction is expressed in Langacker's terms as:

> Abstraction comes about through the reinforcement of what is common to multiple experiences. And since commonalities are often apparent only in a coarse-grained view, involving lesser precision, abstracted structures are usually schematic relative to these experiences. Though immanent in all of them, an abstracted structure is independent of any instantiation. It represents a

> generalization with the potential to be evoked in subsequent processing. Without the capacity for abstraction, every experience would be unique and unrelated to every other (Langacker, 2008: 525).

Fauconnier and Turner (2002: 349) argue that "fictive motion blends a dynamic scenario of motion with a static situation so that the static situation can be conceived and described as having motion. The dynamic input contributes a moving trajector on a path, which is mapped onto a relevant dimension of the static object in the other input."
There are different ways to analyze fictive motion expressions in languages such as eye-tracking experiments in which participants' eye movements are followed in a series of tasks by the experimenter; drawing studies in which participants are asked to draw on about the expressions they are showed. For the sake of the scope of the present study, these tools will not be extended here.

The origin of variation even within language types are relatively new to the field of linguistic analysis of motion. Few studies (as will be shown in fhe following sections of the present study) have focused on the linguistic elements which play a role in the variation of path and manner encoding in languages. Considering whether and to what extent linguistic elements abovementioned can result in differences in the encoding of path and manner constructions, the present study is one of the first attempts that focuses on the analysis of motion events in Turkish with a view on the role of certain morpho-syntactic elements on encoding actual motion; and also aims to describe fictive motion expressions on the basis of certain drawings derived from fictive and non-fictive pairs of sentences shown to the native speakers.

# CHAPTER I

# THE STUDY

This section presents the general aims and the research questions of the study. It also briefly introduces the need for carrying out the present study, boundaries and limitations. This chapter concludes with an outline of each following chapter in the present study.

## 1.1. STATEMENT OF THE PROBLEM

Following Talmy's studies (1985, 1991) on the typology of motion events, various languages[1] have been put on test ground for the analysis of motion events. Some of these languages have been categorized as typical of their typological group while some of them may exhibit certain idiosyncrasies. But this typology is mainly based on the lexical meaning of constituents, and do not focus on more general typological parameters such as morphosyntactic complexity, utterance structure constraints and relational information as controlled by verbal predicates (i.e. number of arguments, type of spatial complements, etc.). However, many crosslinguistic studies demonstrate a high degree of variation even within language types. For instance, languages where path is typically encoded in the verb (e.g., French, Italian, and Spanish) also show relatively high frequencies in the use of manner verbs (Cardini 2012; Kopecka 2009). Likewise, English, categorized as satellite-framed where manner is encoded in the verb slot, displays frequent use of path verbs (Carroll et al., 2012). Recent work on encoding patterns underlines the fact that spatial encoding involves a lot more than only lexical meaning (cf. Skopeteas 2008; Beavers et al. 2010). Therefore, the factors which govern the selection of one pattern (path or manner) over the other in actual language use is still open to debate.

Turkish motion events have mainly been investigated by Özçalışkan and Slobin (1999-

[1] English, Spanish, Hebrew (Aske, 1989; Berman and Slobin, 1994), Danish (Sinha et al., 1994), Russian, Dutch, German, Hindi (Bowerman et al., 2002), Korean (Choi and Bowerman, 1991), Chinese (Peyraube, 2006), Thai (Zlatev and Yangklang, 2004), Japanese (Nakazawa, 2006), Swedish and Icelandic (Ragnardottir and Strömqvist, 2004), Basque (Ibarretxe-Antunano, 2004), French (Kopecka, 2006), Tzeltal (Brown, 2004), Arrente (Wilkins, 2004), etc.

2000, 2003); Özyürek and Özçalışkan (2000) in terms of the acquisition of motion verbs and Toplu (2011) has carried out a study on motion events in Turkish with a comparison to those in English and French in terms of the linguistic relativity vs universals discussion. Recenlty Türk (2014) investigated whether there is a relation between accompanying gestures and motion expressions in Turkish.

To date, little is known about whether Turkish is to be only regarded in a V-Framed typology or there may be flexibility (degree of variation) in encoding motion events with considerable use of manner verbs as well as 'default' path verbs in the verb slot.

One outcome of the previous studies within the scope of motion expressions has showed that data comparability and replicability are significant in reaching quantitative and qualitative representativity. Therefore, with this idea in mind, one of the needs to carry out the present study is the methodological approach, and tools in the present study are easy to carry out in any language and open for comparability both within and across languages.

Several recent studies (e.g., Beavers et al., (2010); Iacobini et al., (2020)) focus on to emphasize that encoding of motion events is conditioned by a number of motion independent properties governing the morphological, lexical and syntactic resources available to languages. Moreover, in motion events encoding, the focus of the analysis have started shifting from the just the analysis of the semantic components to the parts of speech involved in their expression, with 'verb' playing a crucial role. Taking this standpoint, another need to set off this study comes from the main theoretical effort made for the study which consists in the identification of several necessary and sufficient categories for the linguistic analysis of encoding motion expressions. With its framework, the present study is one of the first attempts in analyzing motion events in Turkish with a morpho-syntactic perspective through which linguistic devices of case endings and relations within main and subordinate clauses are taken into consideration. Further, it also covers an analysis of fictive motion descriptions based on a drawing task, which, in turn, makes this dissertation a first attempt to deal with fictive motion in Turkish. Using dynamic elicitation tools and adopting an easy-to-operate and comparable framework into the motion event analysis, the present study will hopefully shed light on fruitful findings into the motion event descriptions in Turkish.

## 1.2. PRESENTATION OF THE STUDY

### 1.2.1. Aims of the Study and Research Questions

The present dissertation aims to provide a detailed description of the relation, if any, between motion verbs and morpho-syntactic elements regarding the uses of case markings and subordination in Turkish and to explain how these elements contribute to the description of motion and to have an outlook of fictive motion in Turkish by analysing drawings of fictive expressions. Accordingly, the research questions to be answered in this study are:

1. What kind of cases and subordinated constructions can go along with motion verbs to elaborate motion events in Turkish?
2. What is the contribution of occurrence for the cases and subordination to expressing motion events in Turkish?
3. Considering that linguistic elements such as case marking and subordination play a role in encoding motion events, in what ways any relation can be linked between subordination and encoding motion events in Turkish?
4. Does case marking play a role in regard to Change of State (CoS) and Change of Location (CoL) situations in participants' descriptions of motion events?
5. What is the relationship between motion verbs and fictive motion in Turkish?

### 1.2.2. Boundaries of the Research

This study had been planned to be carried out in person earlier, but the current pandemic conditions made this impossible. Therefore, the dataset in the current study was carried out all online, via ZOOM web application. Each session of the tasks with individual participants was recorded on the application.

Although the framework of Beavers et al. (2010) followed in this study includes several

grammatical devices (e.g., ideophones, subordinate clauses, adverbs, affixes, applicatives, semantic cases, adpositions, particles), the present study analyzes motion events by taking into account two elements from that framework, namely the *case markings* and *subordinate constructions* accompanied to motion verbs in Turkish.

For the analysis of fictive motion, a *drawing task*, adapted from Matlock (2006), was used for the descriptions of fictive expressions. The investigation of case marking and subordination was not applied to the analysis of fictive motion in the present study, since it has a different motivation.

### 1.3. OUTLINE OF THE DISSERTATION

The present thesis is further organized into six chapters.

The **current chapter** has outlined the general aims and the research questions of the study. It has also briefly introduced the need for carrying out the present study.

**Chapter 2** offers an extensive literature review on the background of this dissertation, on the bulk of research on motion covering different analyses and classifications of motion expressions that have been put forward.

**Chapter 3** consists of detailed information regarding the method and tools administered in this dissertation in a way that covers the beginning of the pilot study to the content of the main study and provides the theoretical framework of the study.

**Chapter 4** gives place to the analysis of the findings obtained in this dissertation. In addition, the results of the experiments are discussed in detail.

**Chapter 5** presents the overall results obtained in the main study and is divided into two sections for the discussion of the findings on actual motion and on fictive motion respectively. The discussion of the results is also supported by further samples from the present study.

**Final section** will conclude the dissertation by summarizing the study in the light of re-stated Researh Questions; contributions of the findings in the field of investigation and in Turkish, and providing some suggestions for future studies.

# CHAPTER 2

# LITERATURE REVIEW

This chapter offers an extensive literature review regarding the theoretical background of this dissertation, the majority of research on motion covering different analyses and some classifications of motion expressions that have been put forward so far. First, the term 'motion' is described in detail with its use in historical periods. Second, the use of motion in the field of linguistics is explained with the emphasis on the works of some prevailing scholars within the field of study. Following this, the core elements of motion events are described and further explained with relevant examples. Later, the acquisition of motion expressions is explained with pointing towards some relevant studies. Then, typlogical considerations on motion events are mentioned with an emphasis on Talmyian typology and on subsequent newly revisioned classifications of languages which can shed light on new possibilities of framing strategies in terms of motion constructions.

Moving on to the motion expressions in fictivity, the field of fictive motion is described and followed by defining the field within linguistics. What is more, the subsections include the traces of fictive motion in language, Talmyian categorizations of fictive motion and some studies carried out so far regarding fictive motion in languages.

After clearing the typological possibilities and placing the fictive motion, the overall mention is made on the studies of motion expressions in Turkish with some recent studies in the field. Following, the final section covers the case and subordination which comprise the methodological skeleton of the present study are explained in detail with reference to scholars and grammarians in the field.

## 2.1. THE CONCEPT OF 'MOTION'

*Motion* is such an inherent concept in our lives that every time we change places, and we move things from one place to another, we experience motion, be it consciously or unconsciously. It is unsurprising that motion is also central to our language since we have different expressions and ways to describe motion in language.

First inquiries on motion date back to Antiquity by pre-Socratic philosophers. Heraclitus of Ephesus (535-475 BC), reported by Plato (388 BC/1997) in Cratylus (401d, 402a),

claims that all entities move, and nothing remains still as the universe is constantly undergoing motionand change. For Aristotle, motion (*kinesis*) is a broad term found in his *Physics* (350 BC/1995),where he discusses the science of material nature in terms of motion and change and he definesmotion as "the actualization of what potentially is, as such". By 'actualization', Aristotle meansboth *energeia*, which means being-at-work, and *entelechia*, which means being-at-an-end, which relates respectively to a process and the result of a process (Waliński, 2018:24). For him,the concepts of *energeia* and *entelechia* function as synonyms, though a linguistic analysis of his definition (Kosman, 1969, 1987; Ugaglia, 2016) reveals a subtle complexity included in thisdefinition. Later on his definition was challanged by Descartes, Galileo, Newton and some others in many points[2]. In sum, from the natural philosophy of Antiquity to present, motion hasbeen seen both as *change in position* and *the energy* driving that change. The concept of motionis split in duality: inner and outer, process and result, active and inactive, cause and effect, animate and inanimate, volitional and accidental (Blomberg, 2014: 6), but the present thesis will not go into the details of each duality of motion pairs and will turn to the domain of motion in regard to linguistics.

## 2.2. MOTION IN RELATION TO LINGUISTICS

The duality of motion is not new to linguistics. Tesnière (1959), for instance, proposed a general distinction between *movement* (mouvement) and *displacement* (déplacement). The former is "inner motion, the activity involved in motion" whereas displacement is "outer motion concerned with how somebody or something changes its location in space, notably with respectto a given point of reference" (cited in Wälchli, 2001: 298). To exemplify this, the former consists of the movements which are typical of human beings such as to *run* and *walk* but should also include the inner motion characteristic of inanimate objects like to *oscillate* and *bounce.* Nonetheless, there is an important difference in that the latter, or displacement, requires a reference to a surrounding, objective space: to change location is to be in two different places at two different moments (Blomberg, 2014: 6).

[2] For details on views by Descartes and others, see Waliński, J. T. (2018: 24-28) *Verbs in fictive motion.*

It was only after the works of Leonard Talmy (beginning from the mid-1970s) that these stylistic differences and the distinction of Tesnière became the theme for general semantic andtypological inquiry in linguistics and motion typology has grown to a research field in its own right. A recent definition of *motion* proposed by Zlatev, Blomberg, and David (2010: 5) is as follows: "[M]otion … can be defined as the experience of *continuous change in the relative position of an object (the figure) against a background*". In the domain of motion, event properties and components such as agency and affectedness, intention and causation, and manner and path of motion are used by speakers.

### 2.2.1. Motion Events

Talmy (2000: 25) describes a *motion event* basically as the situation that "consists of one object (the Figure) moving or located with respect to another object (the reference object or Ground)[3]". A distinction between *motion* and *movement* is made by Talmy as the latter beingthe state of motion at a location (e.g., wriggling at a single spot) rather than change of location, which is the defining feature of motion. In addition, there is another distinction between *motionevents* and *motion activities*. For Pourcel (2010), a motion event refers to a situation in which the conceptual emphasis is put on directionality and reaching a goal through the path of motion, e.g. "Tom walked to the store". On the other hand, a motion activity specifies a motion in progress, e.g. "Tom is jogging". So, the main difference between motion activities and events relates to the presence of directionality or a destination. As put by Pourcel (2010), "on the one hand, motion events refer to directional or goal-oriented motion by entailing a change of location where a manner, if specified, serves merely to follow the course of the path. On the other hand, motion activities do not inherently require overt directionality. They refer to the type of motion performed, which typically describes a specific manner" (Pourcel, 2010: 423).

Zlatev, Blomberg, and David (2010) make a point about *boundedness* of motion.In a motion event, the Path implies *bounded* motion, whereas the Direction implies *unbounded*motion. The boundedness of motion refers to a state-transition[4], i.e., that the

[3] See Talmy, 1975b, 2000 (Vol 1), Ch. 5 for a discussion on *Figure* and *Ground* in language.

[4] See Pustejovsky, 1991; Vendler, 1967 for more about state transition.

Figure departs from the Source, or passes through a Midpoint, or reaches the Goal. On the contrary, the unboundedness of motion means that motion does not reach a definite end point, as in "They marched forward/uphill" (Cappelle & Declerck, 2005).

Another distinction between bounded vs. unbounded motion is *telicity*, which refers to the event completion understood as reaching the goal of motion (from Greek *telos*[5] meaning "end"). In this case, *telic* and *atelic* motion can be differentiated (Comrie, 1976: 44–48). Motion activities are generally atelic since they refer to ongoing, uncompleted instances of motion whereas motion events are telic because they involve an endpoint, i.e., a change of location or state. The notions *boundary* and *change* represent the essence of our spatial and temporal parameters respectively and they are helpful in determining what situation type a speaker address. Thus, it gives us more about knowing than just the meaning of verbs or tenses used in that situation. This point is highlighted in Langacker (1987: 258), where the distinction between events and states has a "primal character", because it is linked to a basic cognitive capacity: the ability to perceive change. The human mind is flexible enough to construe the same spaces as both locations and boundaries and it plays an immense role in the lexicalization of spatial domains which is why we are delving into the level between the perceptual and the linguistic, namely that of conceptualization.

An event can be conceived of two modules -an internal structure and a degree of complexity-. Thus, as given in Cifuentes Férez (2008: 25), there are complex events, which are composed of a main event or *framing event* and a subordinate event or *co-event* (both of which are 'conceptualized as unitary events'). In sum, there is the relation that the co-event depends on to the framing event. Talmy (1975b) divided motion into several semantic categories such as *figure*, *ground*, *path* and *manner*. Some additions have been made to the above explanation and somescholars pointed out that languages may show the path of motion, namely, the trajectory of thefigure with respect to the ground, as well as the manner of motion, in other words, the rhythm,motor pattern, and rate of motion (Jackendoff, 1990; Slobin, 2004; Talmy 1985, 1991, 2000). Talmyan typology, despite a semantic one, explains that languages exhibit systematic similarities

[5] The word *entelecheia* used by Aristotle in his discussion on motion in the sense of "being-at an-end" comes from the adjective *enteles*, meaning "complete, perfect", whose root is 'telos'.

and/or variations on the basis of the way in which they morpho-syntactically express the semantic domain of motion. Two sentences, one in English and the other in Turkish below, exemplify the main frame of motion:

(1) The man swam into the cave. (from Skordos & Papafragou, 2014)

(2) Adam ev-den koş-arak çık-tı.
Man.$_{NOM}$ house-$_{ABL}$ by run-$_{CVB}$ exit-$_{PST.3SG}$
'The man exited from the house by running.'

By looking at the example (1) above, it can be said that *the man* is the figure, *the cave* is the ground, *swam* displays the manner of motion, and *into the cave* encodes the path or direction of the motion event. On the contrary, in the example (2), we can see that *adam* 'the man' is the figure, *evden* 'from the house' is the ground/source, *çık* 'exit' encodes path of motion and *koşarak* 'by running' displays the manner component. As seen from the examples above, languages may encode path and manner elements in one clause as in (1) or in two separate clauses, one to employ path (e.g., to exit) and the other to encode manner (e.g., running), making two as matrix-subordinate construction as in (2).
To make those concepts clear, Talmy (2000: 25) explains each four element (as internal elements in motion) below:

- FIGURE: It is an object / a person moving or located with respect to another object.
- GROUND: It is the spatial reference point, according to which the motion or location of the 'figure' is determined.
- PATH: It refers to the trajectory followed, or the space occupied by the 'figure' duringmotion. It consists of a source (the starting point), a medium (the intermediate points), and a goal (the end point) (Pourcel and Kopecka, 2006). Aske (1989) broadens the path and divides it into two: One is the 'telic path' (e.g. *walk* <u>*to the store*</u> from Goodrich and Snyder, 2012) that includes a certain <u>end-point</u> of a motion event described, and the other one is the 'atelic path' (e.g. *walk* <u>*in circles*</u> from Goodrich and Snyder, 2012) by which no specific end-point but the <u>medium</u> is presented.
- MOTION: It is the presence of motion or locatedness itself. Talmy

distinguishes *motion* from *movement*, the latter being the 'state' of motion at a location (e.g., wriggling at a single spot) rather than 'change' of location, which is the defining feature of motion (Filipovićand Ibarretxe-Antunano, 2015: 527).

Apart from the four internal components of motion, Talmy (2000: 26) distinguishes an associated Co-event in the forms of Manner or Cause of a motion event:

"a motion event can be associated with an external Co-event that most often bears the relation of Manner or of Cause to it".

Thus, the MANNER component reflects the manner in which the motion takes place, or the way of moving or being located in a motion event. The CAUSE is the reason of the occurrence of a motion event.

Talmy (1985: 139) explains that the assessment of whether Manner or Cause is conflated in a verb depends on the verb's basic reference to what the Figure does or to what the Agent/Instrument does. To clarify, while "He pushed the keg" expresses *Cause* because the verb refers to what the Agent (he) did; "He rolled the keg" expresses *Manner* since the verb basically refers to what the Figure (keg) did.

### 2.2.2. Acquisition of Motion Events in Early Childhood

Some researchers have attested that spatial language emerges quite rapidly in young children, and spatial vocabulary seems to be mapped onto prelinguistic space and motion concepts (Piaget & Inhelder, 1956; Bowerman, 1978, 1980, 1996; Baillargeon, 1986, 1987; Clark, 2004; Casasola, 2008; and some others[6]).

Lexicalization biases are found to affect children's conjectures about the meaning of newly encountered verbs. Maguire et al. (2010) reported that 2-year-olds adopt similar motion verb construals regardless of language typology and they are mainly path-oriented. Moreover, by age 3, children start to diverge in their preferences in accordance with their mother tongue. Other studies have proved variations in the distribution of

[6] See Gibson & Spelke, 1983; Hespos & Spelke, 2004; Kellman, 1995; Landau, 1994; Johnston, 1984, 1985; Pruden, Göksun, Roseberry, Hirsh-Pasek, & Golinkoff, 2013; Pulverman, Golinkoff, Hirsh-Pasek, & Sootsman Buresh, 2008 and Quinn, 1994 for further.

manner- and path-oriented interpretations of novel verbs in older children based on the languages they acquire (Papafragou & Selimis, 2010; cf. Hohenstein, Naigles, & Eisenberg, 2004). This is also true when 'transitivity' is taken into account. In one study, transitivity was tested on participants' selection of motion verbs where English-speaking and Spanish-speaking adults tended to choose more path-focused interpretations of novel verbs when the verbs appeared in a transitive frame (e.g. *She is kradding the tree*) compared to an intransitive frame (e.g. *She is kradding toward the tree*; Naigles & Terrazas, 1998) because transitive frame motivated a relational/path interpretation of the predicate. Even in the domain of Spanish, they selected more path-focused ones because the transitive frame was consistent with Spanish language-specific (focus on path) verb lexicalization biases. On the contrary, in English, where the transitive frame contradicted the (focus on manner) language-specific verb biases, participants were indecisive between manner- and path-based verb generalizations.

## 2.3. ENCODING MOTION EVENTS IN TYPOLOGY

Lexicalization patterns of languages provide insights into how speakers of different languages encode their experiences of events. Although several components of events are lexicalized in all languages, there seems to be significant variation in the way this is reflected in individual languages.

Some languages express a group of components more frequent than others and also may omit some other components in particular structures that are habitually used in the lexicalizationof a domain (Filipović, 2007:1). There is by no means any doubt that verb meaning is central to any account of motion lexicalization in languages; but there are many other elements such as the roles of verbs, prepositions, prefixes, verb phrases, prepositional phrases, adverbials that are indispensable to the analysis of motion (Filipović, 2007: 2).

In regard to the clausal relations and motion events, Hieda (2016) studied Saamia, a Bantu language spoken by the Luhya people of Uganda and Kenya, in terms of event complexity and found that there are two different clausal elements by which a complex motion event is expressed: One is "no linker construction", the other is "ni-construction". According to Hieda (2016: 104), events described by a main and a subourdinate clause in the former are integrated into a complex event, while those in the

latter are not integrated, but separate. Further, it is concluded that "there is an iconic relationship between the order of events or states and that of clauses in the *no-linker construction*; the event or state described by the first clause has to happen before the event or state described by the second clause occurs. This could be an example of non-arbitrary relation between meaning and form" (Hieda, 2016: 109).

Another study by Chen and Guo (2009) analyzes the place of Mandarin Chinese in motion event typology via an investigation of motion event descriptions in nine Chinese novels. They analyzed motion verbs, constructions and ground elements in Mandarin Chinese. They found that the pattern of motion verb use in Chinese is different from that found in both an S-language like English and a V-language like Turkish by comparing their findings with those in Özçalışkan and Slobin (2003) (Chen and Guo, 2009: 1759) and they had a conclusion that Chinese novelists express motion events in a way that does not clearly match with writers of either V-languages such as Spanish and Turkish or S-languages such as English.

Aurnague (2011) deals with French intransitive motion verbs on the basis of change of relation and change of placement. He emphasizes the spatial properties of them with their semantic content. He states that the change of relation and placement introduced by the main verb in these constructions prevents the expression of another change of relation and placement in the infinitive clause (Aurnague, 2011: 28) and adds that some predicates (e.g., intransitive uses of *pénétrer* and *s'infiltrer* 'to infiltrate, to percolate through') are placed in between the expression of a change of relation and placement and of affectedness, that is, one aspect or the other being chosen according to the construction used (such as par-headed PPs, direct infinitival constructions).

Creissels (2009) outlines the topic of spatial cases with several subdomains. First, upon definition of *case,* Creissels deals with the topics such as simple and complex spatial cases; spatial cases and semantic classes of nouns. Second, he shows some case systems like the ones of unidimensional and bidimensional by exemplifying from various languages. However, since it is beyond the scope of present study, details of these systems in languages will not be mentioned here.

### 2.3.1. Talmyan Framework on Motion Event Encoding

Talmy was one of the first scholars to deal with a typology of motion events by investigating how the semantic structure of linguistic representations in different languages reflects the conceptual structure in the domain of motion. His early study on this topic (Talmy 1975) specified the range of surface structures (grammatical categories such as nominal, prepositional, verb constituents and subordination) and their semantic equivalents (*Figure*, *Ground*, *Path*, and *Motion*). Talmy's (2000:27) goal was not to provide a comprehensive inventory of every possible codifying structure that could be used to encode motion in a given language, but rather just those that are "characteristic" or typical of the language; that is, those that are prevalent, commonly used by the speakers.

The Path of motion is considered to be the fundamental component of a motion event because without Path there is no motion (though there may be movement), as Talmy (1985) states. The explicit presence of other components, such as Manner, though always present in reality, it is not obligatory for the verbalization of a motion event. Theoretical insights and exemplification from numerous genetically varied and geographically distant languages gave Talmy to create a two-way language typology on motion events:

− *Satellite-framed languages* (S-languages): Path is characteristically placed in the satellite.

(3) English *run* ***out***.

Satellite-framed languages are most Indo-European (excluding Romance), Finno-Ugric, Chinese, Ojibwa, and Warlpiri.

− *Verb-framed languages* (V-languages): Path is characteristically codified in the verb root.

(4) French ***partir*** *en courant* 'leave running'.

(Filipović and Ibarretxe-Antunano, 2015: 528).

Languages that are said to be verb-framed are Romance, Semitic, Japanese, Tamil, Polynesian, most Bantu, most Mayan, Nez Perce, and Caddo (Filipović, 2007: 18-19).

### 2.3.2. Further Categorizations After Binary Typology of Motion Events

More recent work extends Talmy's typology to include a third class of 'Equipollently framed (E-framed) languages' or Serial Verb Constructions (SVCs) in which 'path and mannerare expressed by equivalent grammatical forms' such as a series of two or more verbs that seemto be part of a single clause (Slobin 2004: 249; see also Slobin and Hoiting 1994; Zlatev and Yangklang 2004; Ameka and Essegbey 2013). Niger-Congo, Hmong-Mien, Sino-Tibetan, Mon-Khmer, Austronesian languages, Algonquian, Athabaskan, Hokan, Klamath-Takelman and Jaminjungan languages belong to this type. Croft et al. (2010) try to open a revision of Talmy's two-way typology by saying that this kind of typology is asymmetrical in that only path or manner selection is available, which means that any other option like having both path and manner elements together in motion event constructions are not applicable in any language. So, this point is made in Croft et al. (2010: 201) and they suggest a kind of typology or classification should include such options as well. Another point they made is that Talmy's typological classification applies to individual complex event types within a language, not to languages as a whole. Further, they give examples from Icelandic, Dutch, Bulgarian, and Japanese of certain widely cited examples in the resultative constructions (ibid: 202) and state that all of these languages use more than one of Talmy's types to encode complex events. Therefore, it is an important issue for contrastive construction grammar studies: the basic unit of comparison and contrast across languages in regard to motion events is not the language as a whole, but each construction that is used to express an equivalent state of affairs.

Fagard et al. (2013) question a two- or three-way typology of motion in languages by asking whether the notion of language types (with respect to motion typology or in general) should not be abandoned, and languages rather be described as conglomerates of constructionsand strategies, with complex overlaps (Kopecka 2006; Beavers, Levin & Tham 2010; Croft et al., 2010). They also restate the question of "what exactly should be regarded as MOTION, PATH, and MANNER, since the way in which these concepts are defined, both theoretically and operationally, will inevitably affect the results from empirical investigations" (Zlatev, Blomberg and David 2010; Fortis et al., 2011). They carried out this study with six languages from VF (French and Piedmontese), SF

(Swedish and German and Polish) and EF (Thai) typologies. By adopting a *holistic spatial semantics* (Zlatev, 2003, 2007) framework[7], their analysis is based on three elements: FRAMES of REFERENCE (FoR), PATH and DIRECTION. FoR can be sub-grouped as: The VIEWPOINT-CENTERED FoR which refers to deictic points in motion expression like "*The woman is coming this way*."(cf Fagard, 2013: 366); The OBJECT-CENTERED FoR which involves a GROUND elements as in "*Stand in front of me."* or "*He went into the room."*, and finally The GEOCENTRIC FoR that includes an absolute reference points or axes horizontally or the vertically as in "*Go west"* or *"He climbed up the stairs."* One of their findings is that 'boundary-crossing constraint' plays a rolein the VF/SF distinction due to the claim that manner verbs are highly restricted in VF languageswhen the FIGURE crosses a boundary, but much less so for SF languages (cf. Aske 1989; Slobin & Hoiting 1994). In short, their stimuli with boundary-crossing element typically elicitedutterances with manner verbs in SF languages but did not in VF languages of their sampling. Moreover, the differences they observed in patterns of expression of the PATH are not striking,unexpectedly between VF and SF languages. As a last category in their analysis, DEIXIS was expressed much less frequently than either PATH or MANNER. According to their conclusions, MANNER can be thought as a good distinctive element in framing languages as VF and SF. On the contrary, PATH was not found significantly different between VF and SF languages and the category DEIXIS was the most represented in Thai language. The overall conclusion from their study is that motion event typology should be performed on the basis of separate constructions or strategies, rather than on language as a whole.

Fortis and Vittrant (2016)'s study entitled "On the morpho-syntax of path-expressing constructions: toward a typology" deals with discussing Talmyan typology and offers an inventory of constructions used in the encoding of path. They start with the conflation(adjunction) of patterns Figure and static or dynamic move or locatedness by giving the example sentence "*The bottle floated into the cave*" in which the verb *float*

[7] A theory of the linguistic expression of spatial meaning which attempts to strike a balance between (embodied) universalism and language-specificity. It claims that the minimal unit of spatial analysis is the whole (trans)locative utterance, where the meaning of the parts is dependent on the whole utterance and vice-versa (Fagard et al., 2013:366).

results from a conflation of MOVE and AFLOAT. Later on, they cite Talmy (2000[1985]: 53-4) for the components of PATH: the *vector*, the *conformation* and the *deictic,* each of which will be explained right below:

- vector: specifies a relation with respect to a ground, and this relation may be either static or dynamic (i.e., evolving through time). There are five types of vectors that correspond to the fundamental relations AT, FROM, VIA, ALONG and TO.

- conformation: locates a figure with respect to spatial properties of a ground, such as its front, top, inside etc. For example, the 'front of a computer' is a spatial part which may specify the conformation of a figure with the ground in a motion event like: *he sat down in front of the computer* (cf. Fortis and Vittrant, 2016: 345).

- the deictic component: situates the vector with respect to a point of view.

Fortis and Vittrant (2016: 356) also exemplify (from Imbertt et al*.,* 2011) that there can be multiclausal elements in some languages and they can serve to express various stages of thesame event, and various relations to one or more grounds, like in the example given from *Tacanan* language (VUILLERMET, field notes in Fortis and Vittrant, 2016: 356): "*eta'a-jo neki kwaji-kwaji-jaasowa-ani"* [(lit.) 'He stands at the river, he goes up running'] but turns to motion-reflected meaning as 'he runs up from the river'. Here, the first clause (i.e. *eta'a-jo neki*) is functionally equivalent to an indication of the source of the motion event. Thus, they state the possibility that the specification of a path be left entirely to inferences based on sequenced events, with no path encoding form at all. Later in their study, they adopt a model which substitutes VERB with HEAD by showing that sometimes motion-including element is not always verb in languages and there are some cases where two verbs are found in a string ofclauses one of which functions as a converb as the *verbal* satellite of the verb and the other is the *verbal* head which expresses a change of place away from the speaker as given in Japanese example "*Ken-wa gakkoo-**ni** arui-te **it**-ta." 'Ken went to school walking.'* (Shibatani 2003 in Fortis and Vittrant, 2016: 356) where *–ni* is relator to satellite *arui* 'walk' verb and *it* 'go' functions asthe verbal head of motion expressing a change of place away from the speaker. Finally, they offer a model regarding a series of PATH components as H-framed, SR-framed, HSR-framed and HSRA-framed which aim to cover different possibilities of

combinations of each of these frames in a PATH environment in different languages, but the details will not be given further in here. The present study takes its departure with the framework given in the following section.

## 2.4. FICTIVE MOTION

It is not surprising to see that motion event analysis has gone beyond the experiences of actual motion. Thus, many kinds of experiences are so dynamic and tangible that they are thought of, imagined, and spoken of as if including a sense of motion.

### 2.4.1. Traces of Fictive Motion

Early forms of analyses included sentences like "*the post office is over the hill"* and were explained as involving a reference point through which somebody could get to the location in question (Bennett, 1975: 35).

To better understand, the sentences in (5) and (6) below convey a sense of motion but "not actually" in any domain; it is imagined, i.e., motion is layered on a static extended object:

(5) The mountain range goes all the way from Mexico to Canada. (Talmy 2000)

(6) The path rises steeply near the summit. (Langacker 2006)

The sentences like above were descriptively labelled as "directional extent sentences" in Bennett (1975: 42), and "virtual motion" in Talmy (1983: 236). The verbs in those sentences were categorized as "pseudo-motional locatives" in (Dowty, 1979: 67) and "meander verbs" in Levin (1993: 256).

In the literature, several different terms have been used to address the issue exemplified above, such as *fictive motion* (Talmy 2000), *subjective motion* (Langacker 1990), *implied motion* (Barsalou 2009), *abstract motion* (Matlock 2010) and recently *non-actual motion* (Brandt 2009; Blomberg & Zlatev 2013). Some cognitive researchers and psychologists have argued that the motivation behind using fictive expressions is based on a dynamic attitude on the speaker's behalf (Langacker 1990; Talmy 2000; Matlock

2004, namely as a “mental simulation of motion” (Matlock 2004).

(7) a. The balloon rose quite slowly. [objective, actual motion]

b. Last year the price of coffee rose steadily. [objective, metaphorical motion]

c. The trail rises steeply near the summit. [subjective, fictive motion]

Langacker (2006, p. 24)

Examples (7a-c) clearly show the different uses of the verb ‘rise’ in terms of motionfrom actual to fictive. As put by Langacker (2006:25) to clearly explain fictive motion:

> “This motion by the subject of conception is subjectively construed: the conceptualizer does not think of herself as moving through space, but merely apprehends the scene; the movement is inherent in the very conceptualizing activity, hence offstage and construed subjectively . . . The conceptual element of spatial movement therefore undergoes subjectification when rise is extendedfrom factive to (imperfective) fictive motion.”

In addition, the difference between actual and non-actual motion is a matter of *construal* in Langacker (1990)’s terms to account for linguistic means for signaling possible alternations in the speaker’s perspective. In more detail, actual motion pertains to an objective construal of motion and non-actual motion to a subjective construal; hence the term preferred by Langacker: *subjective motion* compared to fictive motion of Talmy’s.

Matlock (2004: 1390) sees fictive motion expressions on the basis of *mental simulation* and states that “the conceptualizer (speaker or listener) takes a perspective in the scene and mentally simulates ‘movement’ or ‘visual scanning’ along the figure”. In short, it can be summarized that there is a correspondence between acting and thinking. To exemplify, Blomberg (2014: 166) uses an account of the action verb ‘pick’ referring to a finding in a neurophysics study which shows that the ‘verb’ pick activates the same parts of the brain as when its corresponding action is performed (Pulvermüller 2005).

In sum, since sentences having an underlying sense of non-actual motion have their high degree of imaginability and reliance on “creativity”, these motion sentences

are clearly figurative (non-literal) and perhaps the only kind deserving to be called for them is "fictive". In sum, the visualization of motion can be seen as an additional "layer" on top of the two kinds of experiences assumed by the analyses of Langacker and Talmy (Blomberg, 2014: 170). For this reason, the present study will henceforth stick to the terminology of 'fictive motion' when dealing with such expressions.

### 2.4.2. Talmy's Categorization of Fictive Motion

Talmy (1996) proposes a systematic account of fictivity covering the combination of *perception* and *conception* in a single continuous cognitive domain associated with visual perception or conception alone. Consequently, he coins the term 'ception', which is meant "to cover all the cognitive phenomena, conscious and unconscious, understood by the conjunction of perception and conception" (Talmy, 2000: 139). He, then, categorized the expressions into six types (explained below) based on the following parameters:

a. Factive motion of some elements need not/must be present for that fictive effect.
b. The fictively moving entity is itself factive/fictive.
c. The fictive effect is observer-neutral/observer-based---and, if observer-based:
  i. The observer is factive/fictive.
  ii. The observer moves/scans.
d. What is conceived as fictively moving is an entity/the observation of an entity. (Talmy, 2000: 105)

His classification of fictive motion encompasses six relatively distinct categories:

- *emanation*, which is essentially the fictive motion of an intangible entity emerging from a source. This category comprises a number of relatively distinct types, including *orientation paths*, i.e. "a continuous linear intangible entity emerging from the front of some object and moving steadily away from it" (Talmy, 2000: 106); *radiation paths*, i.e. "radiation emanating continuously from an energy source and moving steadily away from it" (Talmy, ibid:111); *shadow paths*, i.e. "the linguistic conceptualization . . . that the shadow of some object visible on some surface has actively moved from that object to that surface" (Talmy, ibid: 114);and *sensory paths*, i.e. "the conceptualization

of two entities, the Experiencer and the Experienced, and of something intangible moving in a straight path between the two entities inone direction or the other" (Talmy, ibid: 115);

- *pattern* paths, which involve the fictive conceptualization of some configuration as moving through space. "The literal sense of a sentence depicts the motion of some arrangementof physical substance along a particular path, while we factively believe that this substance is either stationary or moves in some other way than along the depicted path." (Talmy, ibid: 129);

- *frame-relative* motion, in which the factively stationary surroundings are fictively depicted as moving;

- *advent* paths, which include depictions of a stationary object's location in terms of itsarrival or manifestation at the site it occupies. The two main subtypes include site arrival, i.e. the fictive motion of the object to its site; and site manifestation, i.e. the fictive change in the sense of the object' manifestation at its site (Talmy, ibid: 135);

- *access* paths, which are depictions of a stationary object's location in terms of a path that some other entity might follow to the point of encounter with the object. The representationof the object as stationary, without any entity traversing the depicted path, is factive. What is fictive is the representation of some entity traversing the depicted path (Talmy, ibid: 136);

- *coextension* paths, which are depictions of the form, orientation, or location of a spatially extended object in terms of a path over the object's extent (Talmy, ibid: 138).

In what follows, Talmy (2000: 138) also asserts that fictive change can also be expressed within fictive motion via some property of path. This is exemplified in the sentences (8) and (9) below:

(8) The road disappears for a while by the lake and then reappears toward the border.
(9) The fence gets higher as you go down the road.

In the sentence (8) above, the spatial arrangement of two road sections towards the lake is construed as a complete single fictive entity. Its fictivity starts to change, from being absent first and then coming back to present again, as our attention scans along the entity.

Sentence (9) covers both fictive change and fictive motion, in a way that the fence is construed fictively while extending along the successive states of its different sections via a path through the road.

In sum, what is generally meant from fictivity stems from the idea that perception is dynamic in two senses: One is that of a process unfolding together with movement, the other is the perceptual objects which give themselves in the dynamic flow of space. In turn, as can be linked to Husserl's ideas on *kinaestheses,* they provide us with the *kinesthetic capacity* of perceiving static objects as features of the environment that afford movement (see Waliński, 2018: 74).

### 2.4.3. Fictive Motion in Languages

Matsumoto (1996), Amagawa (1997), Takahashi (2001), Rojo and Valenzuela (2004), Stosic and Sarda (2009), and Hoffmann (2011) are among the few studies that cross-linguistically compare Fictive motion expressions often with English since it is one of the first and most studied languages in motion literature.

Based on his comparative work of English and Japanese, Matsumoto (1996:194) has proposed two conditions constraining fictive motion expressions which are given as follows:

A. The path condition: Some property of the path of motion must be expressed.

B. The manner condition: No property of the manner of motion can be expressed unless it is used to represent some correlated property of the path.

To exemplify the conditions given above, it is inconvenient for the path information to say "the road began to run" (Matsumoto, 1996: 195) without specifying any path information. We have to include some path elements like "the road began to run along the shore" (ibid). For expressing manner, "the road… zigzagged through…the forest" (Matsumoto, 1996: 196) is more appropriate than "the road … speeds … through the park" (ibid), because *zigzag* is helpful in depicting the shape of the road.

Rojo and Valenzuela express that there is evidence indicating that the two conditions are generally applicable to Spanish (Rojo & Valenzuela, 2004: 141). According to the two conditions proposed by Matsumoto above, fictive motion expressions generally reject manner information but must contain some path information. As a result, when English

fictive motion expressions are translated into Spanish, much less path and manner information is removed compared with translations of physical motion expressions (Rojo & Valenzuela, 2004: 134). In a later study by Rojo and Valenzuela (2009: 253), it is found that verbs expressing non-path-related manner information are harder for Spanish speakers to process.

Another study compares Serbia and French (Stosic & Sarda, 2009) in terms of the strategies employed in expressing static location in typologically different languages. Serbian is a satellite-framed language where more manner information can be encoded whereas French is a verb-framed language in which manner is less expressible. In expressing locative motion events, Stosic and Sarda (2009: 51) found that Serbian uses more sentences containing posture verbs (which are assumed to be equivalent to manner verbs in translational motion events) and fewer fictive motion expressions compared with French. Two significant outcomes of this study are: a) manner is more salient in satellite-framed languages (Serbian) than in verb-framed languages (French) in the domain of static location and, b) highly manner-salient languages tend to be limited in the use of fictive motion expressions and vice versa (Stosic & Sarda, 2009: 57).

All in all, the investigation of fictive motion has been developing since the mid-1980s. From that on, a number of varied tools and methods have been used to study this cognitive-linguistic phenomenon. These means of data collection range from rational linguistic analyses and cross-linguistic comparisons to empirical psycholinguistic experiments, eyetracking studies, and more recently, important insights contributed by neuroimaging (Waliński, 2018: 233). However, although the body of research continues to grow, we are still at an initial step to determine neatly how the conceptual mapping in fictive motion comes out and what the cognitive processes behind this phenomenon are.

## 2.5. AN OVERVIEW OF MOTION STUDIES IN TURKISH

Based on Talmy (2000)'s typology of languages, Turkish is said to belong to the verb-framed languages in which 'path' is encoded in the main verb and the 'manner' component is given, if necessary, by subordinated means such as the use of adverbials, gerunds or adpositional phrases as seen in the example below:

(10) Kadın, ayaklarının ucuna basarak oda-sın-dan *çık-tı.*

Woman.$_{NOM}$ on tiptoes$_{(Adv_{manner})}$ room-$_{3SG.POSS-ABL}$ exit-$_{PST.3SG(V_{motion+path})}$

'The woman exited from her room on tiptoe.' (from Özçalışkan and Slobin, 2003)

Turkish motion events have mainly been investigated by Özçalışkan and Slobin (1999-2000, 2003); Özyürek and Özçalışkan (2000), Özçalışkan (2009) and recently Toplu (2011) has carried out a study on motion events in Turkish with a comparison to those in English and French in terms of the linguistic relativity vs universals discussion. Another recent work on Turkish motion events comes from Türk (2014) where he dealt with the relationship between the motion events and gestures accompanied to motion event expressions. To briefly explain, Özçalışkan and Slobin (1999-2000) found, through experiments on children and adults of Turkish, English and Spanish, that a) the patterns of Turkish and Spanish were in tune with V-language typology, such as using path verbs frequently and, English patterns were closer to theS-language typology due to the vast use of manner verbs together with path satellites, and b) children also followed language-specific lexicalization patterns of motion beginning at the age of 3.

In another study, Özyürek and Özçalışkan (2000) found that gestural expressions of spatial concepts begin nearly at the age of 6 and added, to make sure, that there must be more prospective studies to be carried out with cross-linguistic comparisons of languages in this regard. Özçalışkan and Slobin (2003) analyzed a number of written narratives from selected novels in English and in Turkish and they reached the same typological differentiation in that English novels consisted of more manner verbs than Turkish novels, and Turkish novels included more path verbs.

Özçalışkan (2009) carried out another study on how children develop producing spatial motion patterns in a comparison between Turkish and English. She sampled three groups of children cohorts and adults. She found that crosslinguistic difference was evident the manner lexicon of languages in that English has more manner verb types than Turkish and that Turkish speakers do not express manner in the main verb. On the contrary, English has less path of motion lexicon and in terms of path satellites, English speakers tended to use more satellites aspath elements added to a single verb of motion but Turkish speakers did not have a tendency toproduce path elements other than the verb slot which is by default for Path in Turkish.

In her dissertation, Toplu (2011) found that languages under investigation (i.e. English, French and Turkish) did not show language-specific patterns in canonical motion event expressions used in the categorization task of motion events and this shows a universal frame of manner information while describing motion events. She also found similar results with former studies mentioned above in that native speakers of Turkish and French used path sentences nearly in all of their descriptions of motion events while English descriptions included very high manner information and this result is a reflection of V-framed vs S-framed typology as found in previous studies of Özçalışkan and Slobin (1999-2000, 2003); Özyürek and Özçalışkan (2000).

Türk (2014) investigated expressions of motion events and the gestures accompanied to them in Turkish discourse from a small gesture and speech annotated corpus. The corpus was obtained from video recorded narrations by the participants who narrated a story from a wordless picture book "Frog where are you?" (Mayer, 1969). The findings of study showed that path gestures were the most used type in the dataset. However, manner information is more frequently gestured when the number of manner expressions and manner gestures are compared. It was also found that the narrators did make gestures for path more than manner information although both types of elements were marked prominent in terms of prosody.

Unfortunately, no attempt on fictive motion expressions in Turkish has yet been found in the related literature.

## 2.6. CASE AND SUBORDINATION IN TURKISH

### 2.6.1. Case in Turkish

Case system in Turkish is represented via suffixation where the case markers are attached at the end of the nouns. Turkish has six[8] case suffixes and five of them mark respectively the accusative, dative, locative, ablative and genitive cases. The nominative case is not shown via suffixation but it functions to mark the subjects of the clauses. The

[8] The comitative (instrumental) marker *-(y)lA/ile* have similiar features in common with case suffixes, thus it is discussed in sections *8.1.4* and *17.2.1* in Göksel and Kerslake (2005).

function of case marking is to show the link between the noun phrase a case marker is attached to and other constituents of sentences. (Göksel and Kerslake, 2005: 154). Major case markers are given below:

Figure 1. *Case markers in Turkish*

| **Case Categories** | **Marking Suffix** |
|---|---|
| Nominative / absolute | ∅ |
| Accusative | (y)I |
| Dative | (y)A |
| Locative | DA |
| Ablative | Dan |
| Genitive | (n}In/Im |

There is an example set of clauses where each one of these cases is used and it is given below:

(11) Ahmet ∅ [[ Ali **-nin** gazete **-yi** Oya **-ya** büro **-da** ver -ip ] [ sen **-in** iş**-ten**

Ahmet**(NOM)** Ali **-GEN** newspaper -**ACC** Oya -**DAT** office **-LOC** give -and you **-GEN** work **-ABL**

konser **-e** gid -eceg -in] ] **-i** bil -Iyor

concert **-DAT** go -FNomFUT -3.SG. **-ACC** know -PR.PROG.

"Ahmet knows that Ali will give the newspaper to Oya in the Office and (that) you will go from work to the concert". (c.f. (752) in Kornfilt, 1997:213)

As a summary of the markers in (11) above, NOM and GEN markers are attached to the subjects in clauses; person markers are added before case markers are attached.

The following examples regarding the details of the cases will not be glossed but only the place of the case markers will be highlighted.

#### 2.6.1.1. The accusative case marker

The function of the accusative case marker is to mark the direct object of a transitive verb and it is decided through the following ways:

**(i)** The use of the accusative suffix is compulsory where the direct object is definite:

(12) Bütün arkadaşlarımız-ı çağıralım. (c.f. (63) in Göksel and Kerslake, 2005: 156)

'Let's invite *all our friends*.'

**(ii)** Accusative case marking is also required where a non-definite direct object comes before the verb but does not occupy the immediate pre-verbal position:

(13) Birçok şey-**i** şu raflara koyabiliriz. (Indefinite)

'*A lot of things* we can put on these shelves.'

(14) Patlıcan-**ı** her gün yiyebilirim. (Categorial)

'I could eat *aubergines* every day.'

**(iii)** An indefinite direct object which is in the immediately pre-verbal position must still take the accusative suffix in the following crcumstances:

(a) If the direct object is marked with a possessive suffix:

(15) Bir arkadaşım**-ı** getireceğim.

'I'm going to bring *a friend of mine.*

b) If the direct object is an indefinite or plural generic:

(16) Ahmet o anda [koşuya hazırlanan] bir atlet-**i** andırıyordu. (indefinite)

'At that moment Ahmet looked like {an athlete [preparing for a race]}.'

(c.f. (71) in Göksel and Kerslake, 2005: 333)

(17) Ali doktorlar**-ı** sevmez. (plural generic)

'Ali doesn't like *doctors*'.

(c.f. (72) in Göksel and Kerslake, 2005: 333)

(c) If the direct object refers to a member or members of a previously mentioned or implied group:

(18) Paketin içindekiler eksik çıktı. İki kitab**-ı** göndermemişler galiba.

'The contents of the parcel are incomplete. I think they've failed to send *two [of the] books*.'

(19) Salon kalabalıktı. Kapıya yakın duran bir adam**-ı** tanıdım.

'The room was crowded. I recognized *a man standing near the door*.'

### 2.6.1.2. The dative case marker

A noun phrase marked with the dative case suffix can have following functions as:

**(i)** An adverbial indicating one of the following:

(a) The recipient or beneficiary of an action:

(20) Çocuğ-**a** doğru dürüst bakamıyor.

'S/he can't look after *the child* properly.'

(21) Aysel'**e** anahtar verdim.

'I've given *Aysel* a key/keys.'

(b) The destination or target of an action:

(22) Beni Paris'**e** gönderdiler.

'They sent me *to Paris*.'

(23) Bu koltuk oturma odasın-**a** konacak.

'This armchair is to be put *in the sitting-room*.'

(c) The price at which something is sold or offered for sale:

(24) Bu bisikleti iki yüz milyon-**a** almıştım.

'I bought this bicycle *for 200 million* [lira].'

(d) Purpose:

This kind of dative-marked noun phrase is almost always a -mAK clause

(25) [Seni görmey]-**e** geldim.

'I've come *to see you*.'

**(ii)** The oblique object of many verbs of emotion, such as sevin- 'be pleased (about)', üzül- 'be sorry (about)', kız- 'be angry (with/about)', can-ı sıkıl- 'be annoyed (about)', and certain other verbs, e.g. benze- 'resemble', uy- 'conform (to)', 'comply (with)', inan- 'believe', güven- 'trust':

(26) [Ayşe'nin geleceğin]-**e** sevindik.

'We're glad *Ayşe's going to come*.'

(27) [Annemin isteğin]-**e** uymadım.

'I didn't comply *with my mother's wish*.'

**(iv)** The 'causee' of a causative construction based on a transitive verb, i.e. the person who is made or allowed to perform the action:

(28) Filiz bütün ev işlerini kocasın-**a** yaptırıyor.

'Filiz makes *her husband* do all the housework.'

### 2.6.1.3. The locative case marker

The locative suffix expresses physical or abstract location. A noun phrase in the locative case can function as one of the following:

**(i)** A time or place adverbial:

(29) O günler-**de** Selim çok sigara içiyordu.

'*At that time* Selim was smoking a lot.'

(30) İnsanlar artık komşularını bile tanımıyorlar büyük kentler-**de**.

'People don't even know their neighbours nowadays *in big cities*.'

**(ii)** The oblique object of a small number of verbs, such as karar kıl- 'decide (on)', ısrar et- 'insist (on)':

(31) [Hepsini denemek]-**te** ısrar etti.

'She insisted *on trying them all*.'

**(iii)** A subject complement:

(a) In linking sentences:

(32) Anahtar yerin-**de** değil.

'The key is not *in its place*.'

(b) In small clauses:

(33) [Onu İstanbul**da**] sanıyordum.

'I thought he was *in Istanbul*.'

**(iv)** The locational constituent of an existential sentence:

(34) Köy-**de** elektrik var mıydı?

'Was there electricity *in the village*?'

**(v)** Within a larger noun phrase, a compound adjectival modifier expressing metaphorical

'location' in some kind of attribute (size, shape, colour, name, age, etc):

(35) otuz metre derinliğin-**de** bir kuyu

'a well *thirty metres deep'*

### 2.6.1.4. The ablative case marker

The ablative case marker indicates that a noun phrase is functioning as one of the following:

**(i)** An adverbial associated with concepts such as departure, separation, source, or cause:

(36) Ali oda-**dan** çıktı.

'Ali left *the room*.'

(37) Zavallı bunu yorgunluk-**tan** yapmıştır.

'The poor thing must have done this *out of tiredness*.'

In association with the verb *geç-* 'pass' an ablative noun phrase indicates a place or space through which someone/something travels:

(38) Gelirken şehir merkezin-**den** geçtiniz mi?

'Did you go *through the city centre* on your way here?'

**(ii)** The oblique object of certain verbs of emotion, especially those which reflect the concepts of aversion, e.g. kork- 'be afraid (of)', iğren- 'be disgusted (by)', nefret et- 'hate', bık- 'get fed up (with)', hoşlan-'like':

(39) *O* adam-**dan** nefret ediyorum.

'I hate *that man*.'

Certain other verbs, notably vazgeç- 'give up', faydalan-/yararlan- 'benefit (from)' and oluş- 'consist (of)' also take ablative-marked objects:

(40) Zerrin [tenis oynamak]-**tan** vazgeçti.

'Zerrin gave up [playing tennis].'

**(iii)** The complement of:

(a) Certain bare postpositions, e.g. önce ‘before’, sonra ‘after’, başka ‘apart from’, dolayı ‘because of’:

(41) Okul-dan *sonra* genellikle futbol oynuyor.

‘*After school* he usually plays football.’

(b) Certain adjectives, e.g. memnun ‘pleased (with)’ :

(42) *Hayatın-dan* memnun g rünüyor.

‘She seems content *with life*.’

**(iv)** A subject complement with partitive meaning:

(a) In nominal sentences:

(43) Osman {yakın arkadaşlarım*dan* (biri)} değildir.

‘Osman is not *among*/(one of) my close friends.’

(b) In small clauses:

(44) {Memleketin en iyi ressamlarından (biri)} sayılır.

‘S/he is regarded as *among*/(one of) the best painters in the country.’

**(v)** In adjectival or adverbial structures expressing comparison, the modifier that expresses the object of comparison:

(45) Mustafa’nın evi bun*dan* (daha) büyük.

‘Mustafa’s house is bigger *than* this.’

### 2.6.1.5. The genitive case marker

The functrion of the genitive case marker is basically to mark a noun phrase as denoting the possessor of some item expressed by another constituent. However, an important secondary function is to mark the subject of certain kinds of non-finite subordinate clause.

**(i)** As the expression of a possessor, a genitive-marked noun phrase can function as:

(a) The modifier in a genitive-possessive construction (a composite noun phrase whose head is marked by a possessive suffix):

(46) {Bu çocu*ğun* annesi} nerede?

'Where is *this child's* mother?'

(47) {Ayten'*in* iki kız kardeş*i*} var.

'*Ayten* has two sisters.'

(b) A subject complement in nominal sentence:

(48) Fotoğraf makinesi benim değil, babam*ın.*

'The camera's not mine, it's *my father's.*'

(c) A subject complement in small clauses :

(49) [Bu odayı artık Fatma'*nın*] sayıyorum.

'I now regard [this room as *Fatma's*].'

**(ii)** The types of non-finite subordinate clause in which an overt subject is genitive marked are:

(a) most non-finite noun clauses marked with -mA, -DIK or -(y)AcAK:

(50) [Turgut-*un* gel-me-sin]-i istiyorum.

'I want [*Turgut* to come].'

(51) [Bu*nun* bir roman olduğun]-u söylemişti.

'He said [*this* was a novel].'

(b) those types of relative clause whose verb is suffixed with -DIK or -(y)AcAK plus a possessive suffix:

(52) [Siz-*in* söyle-dik-ler-iniz]-i beğendim.

'I liked [what *you* said].'

(53) [Anne-n-*in* getir-eceğ-i] pasta yetecek mi?

'Will the cake [*your mother's* going to bring] be enough?'

### 2.6.2. Subordination in Turkish

Kornfilt (1997: 45) asserts that the most salient markers of subordination in Turkish are various "nominalization" markers which nominalize them when attached to verbal stems. She also states that within the main clause, since the basic word order is always verb final, nominalized subordinate clauses occupy the position of a corresponding simple noun phrase and therefore will, within an unmarked word order pattern, always precede the main clause verb (Kornfilt, 1997: 46).

The following sections will describe each of the three categories of subordinate clauses in Turkish.

#### 2.6.2.1. Complement (Noun) Clauses

Complement clauses are marked by "nominalization" markers as well as "nominal" agreement and case markers. Complement clauses occupy the positions appropriate to

their grammatical and thematic roles; thus, the one which is a subject will be in initial position of the main clause, given that the basic word order is SOV; the other which is an object will be between the main subject and verb. Thus, in the following examples, where a complement clause is juxtaposed with a simple noun phrase, this situation is compared:

Subject Clause:

(54) [ Ahmed-in sinema-ya yalnız başına git-me -si] ben -i çok üz -dü.

Ahmet -GEN cinema-DAT alone go -ANom-3.SG. I -ACC very sadden-PST

"That Ahmet went to the movies by himself made me very sad."

(c.f. (215) in Kornfilt, 1997: 50)

Object Clause:

(55) Zeynep [ Ahmed-in sinema -ya yalnız başına git-me -sin] -e çok üz -ül -dü

Zeynep Ahmet -GEN. cinema -DAT alone go-ANom-3.SG. -DAT very sad -PASS -PST

"Zeynep was very saddened by Ahmet's going to the movies by himself."

(c.f. (217) in Kornfilt, 1997: 50)

Structurally complement clauses may be one of two types:

**(i)** finite (i.e., identical in structure to a full sentence):

(56) [Üniversite-ye gid-e-yim] isti-yor.

university-DAT go-OPT-1.SG .want-IMPF

'S/he wants [me to go to university].' (c.f. (1) in Göksel and Kerslake, 2005: 351)

**(ii)** non-finite (i.e., with their verbal constituent marked by one of the subordinating suffixes -mAK, -mA, -DIK, -(y)AcAK or -(y)Iş):

(57) [Konu-yu iyice anla-mak] gerek.

topic-ACC thoroughly understand-VN necessary

'One has to understand the topic thoroughly.' (c.f. (2) in Göksel and Kerslake, 2005:

351)

There are also sub-categories under the finite category:

*bare finite noun clauses* are simply juxtaposed to, or inserted within, the superordinate clause, as in (56) above, while *finite noun clauses with a subordinator* are linked to their superordinate clause by a preceding *ki* or a following *diye* or *gibi*:

(58) [Sen Londra-da-sı n diye] bil-iyor-du-m.

You London-LOC-2.SG. SUB think-IMPF-P.COP-1.SG.

'I thought [you were in London].' (c.f. (3) in Göksel and Kerslake, 2005: 351)

Unlike other complement clauses in Turkish, which can be placed either before or after the main predicate, ki clauses obligatorily follow the main predicate:

(59) Sanıyorum [**ki** iş-in-i bırak-mak isti-yor].

I.think that job-3SG.POSS-ACC leave-VN want-IMPF

'I think [(**that**) s/he wants to leave his/her job].' (c.f. (21) in Göksel and Kerslake, 2005: 355)

#### 2.6.2.2. Relative Clauses

Relative clauses are complex adjectival constructions that modify noun phrases. The most typical type of relative clause is non-finite and contains one of the participle suffixes -(y)An, -DIK, or -(y)AcAK, corresponding to the relative pronouns 'who', 'which', 'that', 'whom', 'whose', 'where', etc. in English. Finite relative clauses, incorporating the subordinator *ki*, also occur, but the range of this type is quite limited (Göksel and Kerslake, 2005: 380).

Except for *ki* clauses, all relative clauses precede the noun phrase they modify, in the same way that adjectives precede the noun they modify:

(60) küçük kız

'The little girl'

(61) *oyuncak-lar-ın-ı kır-an* (küçük) kız

toy-PL-3SG.POSS-ACC break-PART little girl

'The (little) girl *who* breaks/has broken her toys'

(62) her gün okul-da *gör-düğ-üm* kız

every day school-LOC see-PART-1SG.POSS girl

'The girl *whom I see* at school every day'

(c.f. (1-3) in Göksel and Kerslake, 2005: 380)

Relativization with *ki* is a quite different strategy. In a reversal of the order in non-finite relative clauses, the relativized constituent precedes ki and the finite clause it introduces.

The head noun in these constructions almost always functions as the subject of the main clause:

(63) *Ayşe*, [ki şu anda mutfakta yemek pişiriyor,] birazdan ortaya çıkacak.

'*Ayşe*, [*who* is cooking in the kitchen at the moment,] will appear soon.'

(c.f. (87) in Göksel and Kerslake, 2005: 396)

*ki* clauses can also be used, in a way somewhat like a certain use of 'which' in English, to introduce a comment on, or expansion of, something that has just been said. The clause introduced by ki usually contains a demonstrative, such as the pronoun *bu* 'this', or the adverbial *öyle* 'like that', which refers to the entire situation expressed in the previous clause:

(64) Ziya beni görmek istemiyormuş, [*ki* bunu daha önce söylemişti].

'Apparently Ziya doesn't want to see me, *which* he said before.'

(c.f. (96) in Göksel and Kerslake, 2005: 397)

Turkish has also headless relative clauses, which simply consist of the modifier clause without the head noun as a headless relative clause (∅ indicates the head position which is not filled with lexical material):

(65) a. [adam-ın ∅$_i$ ye -diğ -i ] *balık$_i$* (headed)

man -Gen. ∅ eat-ObjP-3.SG *fish*

'the fish that the man eats / ate'

b. [adam-ın ∅$_i$ ye -diğ -i ] ∅$_i$ (headless)

man -Gen. ∅ eat-ObjP-3.SG. ∅

'what the man eats / ate'

c. [adam-ın ye -diğ -in ] -i al -dı -m

man -Gen. eat-ObjP-3.SG. -Ace. take-Past-l.SG.

'I took what the man eats / ate'

(c.f. (255a-c) in Kornfilt, 1997: 63)

There are some constructions where the relativized constituent (e.g. kız 'girl' in (66)) is a constituent of a noun clause. The choice between -(y)An and -DIK/-(y)AcAK on the verb of this complex type of relative clause depends on whether the embedded noun clause is the subject of the relative clause or not. If it is, -(y)An is used; otherwise -DIK/ -(y)AcAK are used (Göksel and Kerslake, 2005: 387).

(66) [[İstanbul-da otur-duğ-u] san-ıl-*<u>an</u>*] kız

Istanbul-LOC live-VN-3.SG.POSS think-PASS-PART girl

'the girl [who is/was thought [to be living in Istanbul]]'

(c.f. (40) in Göksel and Kerslake, 2005: 387)

In the following example, on the other hand, the noun clause *(kızın) İstanbul'da*

*oturduğun-u* ‘that she lives/lived in Istanbul-ACC’ is not the subject of the verb *san-‘think’*, but its direct object. Therefore -DIK is selected in this example:

(67) [(ben-im) [İstanbul-da otur-duğ-un]-*u* san-*dığ*-ım] kız

I-GEN Istanbul-LOC live-VN-3SG.POSS-ACC think-PART-1SG.POSS girl

‘the girl [who [I think/thought lives/lived in Istanbul]]’

(c.f. (43) in Göksel and Kerslake, 2005: 388)

#### 2.6.2.3. Adverbial Clauses

These are the subordinate clauses functioning as adverbs within another clause. In Turkish, adverbial clauses can be finite or non-finite, but the non-finite forms are much more numerous and, in general, more widely used (Göksel and Kerslake, 2005: 399). The predicates of such clauses are referred to by a variety of labels in different works; e.g. Lewis (1975) calls these "gerunds". Traditional Turkological works call these forms "converbs" (Kornfilt, 1997: 67).

Finite adverbial clauses are all marked by subordinating conjunctions as in (68):

(68) [Çocukları getir-*ir-ler diye*] porselen eşyayı ortadan kaldırmıştı.

bring-AOR-3PL SUB

‘[Thinking they would bring the children], she had put the china pieces away.’

(c.f. (3) in Göksel and Kerslake, 2005: 400)

Non-finite adverbial clauses have subordinating suffixes on the verb, and in some cases the verb is also followed by a postposition or noun phrase (usually with oblique case marking):

(69) [Masa-sın-da koca-sı-nın üç tane resm-i ol-*duğ-un-a göre*] on-a düşkün olmalı.

desk-3SG.POSS-LOC husband-3SG.POSS-GEN three ENUM picture-3SG.POSS

be-CV-3SG.POSS-DAT according.to he-DAT very.fond be-OBLG

'[Seeing that there are three pictures of her husband on her desk,] she must be very fond of him.'

(c.f. (2) in Göksel and Kerslake, 2005: 399)

In some instances, the nominalized adverbial clause can be marked by just a case marker, without a postposition. In these instances, the case marker functions as a constant, inherent cue as to the nature of the adverbial clause (e.g. "cause", "comparative" etc.) and is not assigned by the verb of the superordinate clause (as it would be in subordinate complement clauses):

(70) [ [ müdür tatil-e çık-tığ -ın ] -dan] ofis kapalı

director vacation-Dat go -FNom-3.SG -Abl office closed

"Because the director went on vacation, the office is closed"

The gerundive adverbial clause modifies the predicate of the main clause directly, without the intermediary of a postposition or of some other category as in (71):

(71) [ [ müdür tatil -e çık-ınca] ofis -i kapa -dı -k

director vacation-Dat go -Ger office-Acc. close-Past-1.PL

"When the director went on vacation, we closed the office"

(c.f. (280-281) in Kornfilt, 1997: 68)

In the following subsections, subcategories of adverbial clauses will be exemplified.

*2.6.2.3.1. Time*

The most general way of expressing time specifications by means of a subordinate clause is by using the noun zaman 'time' in the manner of a postposition, following the subordinate clause nominalized with *-DIK*:

(72) [ [ müdür tatil -e çık-tığ -ı ] zaman] ofis kapa-n-ır

director vacation-Dat go -*FNom*-3.SG *time* office close-Refl-Aor

'When the director goes on vacation, the office closes'

(c.f. (282) in Kornfilt, 1997: 69)

Other adverbials include subordinate clauses headed by *sonra* 'after', *önce* and *evvel* 'before', and *beri* 'since' but will not be exemplified further here.

The adverbial construction with *önce / evvel* 'before' also offers the alternative of simply dropping the postposition, leaving the ablative marked adverbial clause by itself; note also that the factive *-DIK* is replaced by the negation marker *-mA* as in (73):

(73) [ [ müdür tatil-e çık- ma ] -*dan* ] ev -in -i ara -di -m

director vacation-Dat. go -Neg -*Abl*. home-3.SG-Acc seek-Past-l.SG

'Before the director went on vacation, I called his home'

(c.f. (289) in Kornfilt, 1997: 71)

*2.6.2.3.2. Manner*

The most widely used suffix to denote manner is *-(y)ArAk* as in (74) and the negation of this form is *-mAdAn* as in (75) below:

(74) ben [ etraf-ım -a bak -arak ] yür -ür -ürn

I around-l.SG-Dat. look -*MAdv*. walk-Aor.-l.SG

'I walk, looking around (myself)'

(75) ben [ etraf-ım -a bak -<u>madan</u> ] yür -ür -ürn

I around-l.SG-Dat. look -*without* walk-Aor.-l.SG

'I walk, looking around (myself)'

(c.f. (296-297) in Kornfilt, 1997: 73)

The forms *-(A/I)r gibi, -(A/I)rcAsInA, -mIş gibi* and *-mIşçAsInA* 'as if' express manner by evoking similarity with another, purely imagined action by the same subject, or by suggesting an underlying motivation or emotion:

(76) [(Sanki) uyku-da gez<u>er</u> *gibi*] dolaştım birkaç gün.

As if sleep-LOC go.around-CV

'For several days I wandered around [*as if* sleepwalking]'

(c.f. (67) in Göksel and Kerslake, 2005: 412)

*2.6.2.3.3. Purpose*

The postposition *için* 'for' takes as a complement either an infinitival clause (when matrix and subordinate subjects are co-referential) or a subordinate clause with the action nominalizer *-mA*, where the subjects are not co-referential; the meaning of the construction is 'in order to' (Kornfilt, 1997: 73):

(77) [Kışın üşü-me-<u>mek</u> *için*] kalorifer yaptırdık. (infinitival/co-referential)

in.winter be.cold-NEG-CV for

'We've had central heating installed [so as not to be cold in winter].'

(78) [Anne-m-in kışın üşü-me-<u>me</u>-*si için*] acaba ne yapabiliriz? (non-co-referential)

mother-1SG.POSS-GEN in.winter be.cold-NEG-CV-3SG.POSS for

'I wonder what we can do [so that my mother won't be cold in winter]?'

(c.f. (80-81) in Göksel and Kerslake, 2005: 414)

*2.6.2.3.4. Causality (Reason)*

The most commonly occurring converbial marker expressing reason or cause is *-DIğI/-(y)AcAğI için* 'because', 'as':

(79) [Bana kızdığın için] öyle söylüyorsun.
'You're saying that [because you're angry with me].'

(80) [Bu para yetmeyeceği için] Gürkan'dan borç isteyeceğim.
'[As this money won't be enough] I'm going to ask Gürkan a loan.'

Other forms with more or less identical meaning are: *-DIğIndAn/ -(y)AcAğIndAn (dolayı/ötürü), -mAsIndAn dolayı, -mAsI yüzünden* but will not be exemplified further.

(c.f. (87-88) in Göksel and Kerslake, 2005: 415)

*2.6.2.3.5. Condition*

Converbs marked with *-DIğI takdirde* 'in the event that' and *-mAsI halinde/ durumunda* 'in the case of' form clauses with conditional meaning equivalent to those formed with the suffixes *-sA/-(y)sA* as in (81) and (82):

(81) Hasan [[ kitab-ı san -a ver -dig -im] takdir -de ] çok kız -acak
Hasan book-Acc you-Dat give -FNom -l.SG *case -LOC* very angry -Past
'Hasan will get very angry if (in case) I give you the book'

(82) Hasan [kitab-ı san -a ver -ir -se-m ] çok kız -acak
Hasan book-Acc you-Dat give-Aor-*if* -l.SG very angry-Past
'Hasan will get very angry if I give you the book'

(c.f. (303-304) in Kornfilt, 1997: 74)

*2.6.2.3.6. Degree*

Suffix *-DAn* with *-sA* in comparative constructions as in (83):

(83) [ [ geç kal -mak -tan -sa ] hiç git -me -me –(y)i ] tercih ed -er -im

late stay -Inf -Abl -rather never go -Neg -Inf -Acc. prefer -Aor. -l.SG

'Rather than be late, I prefer not going at all'

(c.f. (305) in Kornfilt, 1997: 75)

The expression *kadar* 'as much as' in equative constructions as in (84):

(84) bu sebze -ler [[ tam gerek -tiğ -i ] kadar ] piş -miş.

this vegetable-PL exactly necessary-FNom-3.SG *as much as* cook-Infer. Past

"These vegetables have cooked exactly as much as required"

(c.f. (309) in Kornfilt, 1997: 76)

There is also a suffix like *-(y)AcAk kadar/derecede* 'enough' as in (85):

(85) [Komşuları uyutmayacak kadar] gürültü yapıyorlardı.

'They were making *enough* noise [to keep the neighbours awake].'

(c.f. (83) in Göksel and Kerslake, 2005: 414)

*2.6.2.3.7. Concessive*

The two concessive converbial forms in most frequent use are those marked with *-DIğI/-(y)AcAğI halde* 'although' and *-mAsIna rağmen/karşın* 'in spite of the fact that', the latter being based on the postpositions *rağmen/karşın* 'in spite of':

(86) Osman, [[Ali'ye yardım et-me-si] gerek-tiğ-i halde] hiçbir şey yapmadı

help AUX-VN-3SG.POSS be.necessary-CV-3SG.POSS although.

'[*Although* Osman should have helped Ali], he did nothing.'

(87) [Hayatında bazı çok kötü şeyler yap-mış ol-ma-sın-a rağmen] Şule'yi severim.

do-PF AUX-CV-3SG.POSS-DAT despite

'[*Despite the fact that* she has done some very bad things in her life], I like Şule.'

(c.f. (54-55) in Göksel and Kerslake, 2005: 409)

# CHAPTER III

# METHODOLOGY

This section is divided into two main parts. After setting the theoretical background of the study, the beginning part describes the Pilot trials carried out before the main study. It further includes a summary of each track of the pilot study and then the tools in data collection are described. Next, the procedures followed in each track are stated and finally the coding of the data is explained.

The seond part is devoted to the main study. This part begins with the subjects who took part in the main study and then tools in collecting data are explained. Further, the procedures are given in how to collect data in actual and fictive motion tasks sepearately. The final section of this part is reserved for the description of the statistical measurements applied for validating the results.

## 3.1. THEORETICAL BACKGROUND

The analysis of the actual motion was based on Beavers et al. (2010)'s Typology of Motion Expressions.

Beavers, Levin and Tham (2010) investigate motion event typology on the basis of linguistic resources in varying availability to different languages. These relevant linguistic resources can be listed as:

a) Lexical: manner and result verb roots/stems/affixes, spatial adpositions and particles, boundary markers
b) Morphological: case markers, applicative affixes, aspectual affixes, compounding
c) Syntactic: adjunction, verb serialization, subordination.

According to Beavers et al. (2010: 334), languages vary as to which options (given in a, b, c above) they have available, with the options available to a particular language reflecting its basic typological profile.

Regarding linguistic resources as well as the central importance of verb in encoding motion events, the options for expressing a given eventin a given language can be divided into two main classes: *manner in the verb* or *path in the verb* (Beavers et al., 2010: 360):

(a) Path as V (like in Turkish): If path is expressed in V for a given expression, then

(i) if the language has monoclausal multiverb constructions, manner may also be expressed as a V.

(ii) if the language has manner adverbials (ideophones, subordinate clauses, adverbs), these may encode manner.

(b) Manner as V: If manner is expressed in V for a given expression, then

(i) if the language has monoclausal multiverb constructions, path may also be expressed as a V.

(ii) if the language has appropriate result satellites (affixes, applicatives, semantic cases, adpositions, particles), these may encode path.

(iii) if the language has until-markers indicating temporal, spatial, numerical, and propositional boundaries, these may be used to encode path.

For the current aims of the present study, only case marking and subordination were investigated in terms of their contribution to motion events in Turkish.

Moreover, depending on their morphosyntactic complexity, languages may allow encoding possibilities 'against' their Talmyan typology, since there are languages where multiple verbs are used to express motion events, or may practically disprefer them as they are more complex than other available options which sometimes may be caused by some pragmatic factors (Beavers et al., 2010: 335). In sum, their framework focuses on explaining the diversity in languages and how languages encode motion events via their basic morphosyntactic and lexical properties. In other words, they show that even so-called verb-framed languages (like Turkish in Talmyan two-way typology) may not only allow but actually prefer satellite-framed patterns if the appropriate contextual support is found, that's a situation unexpected in a two- or three-way typology.

The analysis of fictive motion was derived from Matlock's (2006) study where some drawing tasks were applied.

Matlock (2006: 68) states that "Fictive motion is thought to be analogous in some respects to real motion in that it takes time to "go" from one imagined point in space and time to another". In her analysis with three novel drawing tasks, participants drew longer trajectors when conceptualizing fictive motion sentences(e.g., The road goes along the coast) versus comparable non-fictive motion sentences (e.g., The road is next to the coast),

The reason why a drawing task was chosen in the present study is inspired from the idea that our conceptualization of the world can be visualized and it can be applied to fictive motion as well. In this regard, Tversky (1991) states that "drawings are external representations of people's conceptions of the world, and they provide insights into how they conceptualize objects, states, and actions".

## 3.2. PILOT STUDY

Prior to the main analyses of motion events, a series of pilot studies was carried out and as a result of this pre-study, the current version of the study has come out. In this section, each track of the pilot study is explained.

An initial version of the pilot study was organized as:

1. Video Observation and Oral Narration Task (Movie Narration)
2. Verbal Description Task
3. Text Completion Task

Three steps mentioned above were planned to describe motion events both from the narrations of the participants and from their judgments in short videos and discourse oriented text completions, so that it covers also an inquiry if there is any interaction

between motion verbs and discourse, in the simplest sense. However, the final task was removed and planned to be carried out alone as another study. Moreover, the second task was re-shaped from verbal description into verbal judgment which was also divided into to as: *Verbal Judgment Task* and *Verb-Sentence Matching Task.* After all these revisions, the data collection of the study was started as described in the following section.

The following sections define, in sum, the tasks used in data collection and the procedures followed in each parts of the pilot study. The findings from each section of the pilot study are summarized in the *Appendix 4* of the present paper. The overall discussion of the application and benefits of the pilot study is given in section *3.2.4.*

### 3.2.1. Data Collection Tools

The Pilot section was carried out in three different sets. The following *Figure 2.* shows the division of the tasks administered in each section of the pilot study.

Figure 2. *The description of the tasks in each pilot study*

| **TASKS** | **PILOT STUDIES** |
|---|---|
| 1. Pear Film Narration<br>↓<br>2a. Verbal Judgment Task<br>↓<br>2b. Verb-Sentence Matching Task | **First Pilot Study** |

| | |
|---|---|
| 1. Pear Film Narration<br>↓<br>2a. Verbal Judgment Task<br>↓<br>2b. Verb-Sentence Matching Task<br>↓<br>3. Drawing Task | **Second Pilot Study** |
| 1. Pear Film Narration<br>↓<br>2. Animated Video Description | **Final Pilot Study** |

#### 3.2.1.1. First Pilot Study

This first trial of the pilot included only tasks for testing actual motion in Turkish. The fictive part was added in the second trial of the pilot.

The first set of the pilot study was carried out with 8 participants (5 female/3male, aged between 21-28 all belonging to Istanbul University) and organized in three parts.

In the first task, each participant was asked to watch a short movie called *Pear Film* and then narrate what they watch. Other than this explanation, there was no control over participants during the task.

Pear Film is a kind of short movie made by a group of scholars (pioneered by Prof. Wallace Chafe) at the University of California at Berkeley in 1975 and it was designed to elicit language samples around the world. It is a nonverbal (except natural background

sounds) movie with no dialogue and therefore it can be used as an elicitation tool in any language.

As a short summary of the movie, there is a man harvesting pears, some of which are stolen by a boy riding a bike towards a pear tree. That boy has some adventures with a group of other children coming through his way, and the farmer man finally discovers that his pears are missing and the movie ends with that scene.

The aim of this task was to see what kind of structural elements participants would employ while describing motion events in their oral narrations. The focus of the task would be on the motion verbs and the clauses they are used in, case endings and verb types of either manner or path.

The second task included two sub-sections:

a) Verbal Judgment Task

8 manner verbs (*fırlat-* throw', *düş-* 'fall', *kaç-* 'escape', *tırman-* 'climb', *uç-* 'fly', *it-* 'push', *kay-* 'slide'*, zıpla-* 'jump' and

8 path verbs (*ayrıl-* 'leave/depart', *gir-* 'enter', *takip et-* 'follow', *toplan-* 'gather', *saklan-* 'hide', *bin-* 'ride/mount', *kaldır-* 'lift', *yaklaş-* 'approach') were selected from Slobin & Özçalışkan (1999, 2003). These verbs were administered to each participant in the form of a written questionnaire.

A sample from the questionnaire is as follows:

(88) **Fırlatmak:** Adam topu karşıya fırlattı /1/ /2/ /3/ /4/ /5/

**to throw:** man.DEF ball.ACC across.DAT throw.PST:3SG

'The man threw the ball across.'

5 point scale refers to 1= no match, 2= rarely match, 3= no idea, 4= good match, 5=perfect match.

b) Verb-Sentence Matching Task

A written questionnaire consisted of 18 motion verbs. Each verb was provided with a sentence-long context.

The participants were given a set of four sentences related to each context and verb.

Every sentence in *a)* option is in the form of Main Clause-Subordinate Clause construction (no boundary crossing event or certain end point) [coded as *MS-boundary*].

Every sentence in *b)* option is in the form of Main Clause construction (no boundary crossing event or certain end point) [coded as *M-boundary*].

Every sentence in *c)* option is in the form of Main Clause-Sub. Clause construction with boundary crossing event or certain end point [*MS+boundary*].

Every sentence in d) option is in the form of Main Clause construction with boundary crossing event or certain end point [*M+boundary*].

A sample from the questionnaire is given below:

(89) ***verb:*** it- 'push'

***context:*** Züleyha eşyalarını taşıyordu.

Züleyha stuff.POSS.ACC carry.PROG.PST:3SG

'Züleyha was carrying her belongings.'

a) Züleyha koliyi iterek arabaya götürdü.

'Züleyha took the box to the car by pushing it.'

b) Züleyha koliyi arabaya itti.

'Züleyha pushed the box towards the car.'

c) Züleyha koliyi iterek evden dışarı çıkardı.

'Züleyha took the box out of the house by pushing it.'

d) Züleyha koliyi evden dışarı itti.

'Züleyha pushed the box out of the house.'

These two tasks were chosen to determine what would the participants' tendency be in selecting the structural elements while reading motion expressions. Since the first pilot study did not include any tools to analyze fictive motion, the analysis of fictive motion was added to the second pilot study.

#### 3.2.1.2. Second Pilot Study

This trial included a task for fictive motion as well as actual motion. The tasks used to test actual motion are the same as in the previous trial of the pilot study. Therefore, the ones for the actual motion are not described again. The samples from the task can be found in *section 3.2.1.1* of this study.

This time there were 7 participants (4 female/3 male) to attend the experiments. They are native Turkish speakers, aged between 21-28, and students at Istanbul University.

The same participants volunteered to take part in all three experiments.

The third task, namely Drawing Task, was designed to analyze fictive motion in Turkish.
16 pairs of sentences (one w/fictive motion and one without motion verb)

32 sentences were randomly ordered and then administered to the participants (n=6[9])

[9] One participant could not attend this part of the experiment.

Matlock (2006) was taken as a source and her way of analysis was modified into Turkish context. Sentences from Talmy (2000)'s sub-categorization of fictive motion paths (except Sensory and Access Paths-not translatable) were used within this framework.

They were translated into Turkish and then undergone a norming step by three researchers.

A sample from the questionnaire is given below:

(90) a) *Askeri üs iki dağ arasında uzanıyor*. (fictive)

'Military base lies between two mountains'

b) Askeri üs iki dağ arasındadır. (non-motion/non-fictive)

'Military base is between two mountains.'

(both sentences are similar in length and meaning except their verbal selection)

#### 3.2.1.3. Final Pilot Study

The final trial of the pilot was carried out to test only actual motion. As an update to the previous pilot study, the second task (*Verbal Judgment Task* and Verb-Sentence Matching Task) which was previously administered was removed. Instead, a set of short videos were included as *Animated Video Task*. These videos were adapted from 'Motion verb stimulus' designed by the research group in Language and Cognition Department of the Max Planck Institute for Psycholinguistics. The aim of this update is to see whether the production by narration is a better option to analyze motion events over the written forms of the data collection, since motion is itself a dynamic phenomena in nature, using a dynamic (animated) tool instead of a non-dynamic (i.e. questionnaire, or Picture book like 'Frog where are you?') tool would yield much proper results.

This time 9 participants volunteered to join the experiments. However, one participant could not attend the Pear Film narration, so this task included 8 participants. Since the Pear film was previously described, only new second task, Animated Video Task, is given here.

***Animated Videos Task***

Levinson (2001), under the name of 'Motion verb stimulus', presents us a task designed by the research group in Language and Cognition Department of the Max Planck Institute for Psycholinguistics to get linguistic elicitations of motion predications under contrastive comparison with other animations in the same set. This tool includes 86 very short (4 seconds each) films, very simple 3D animations, which can be easily replayed and contrasted in various orders. The videos are categorized like COME/GO series, MANNER, PATH, ENTER/EXIT series and FIGURE/GROUND series.

The short videos were reduced to 35 out of 86. The videos were randomly selected from each video set mentioned in the previous section. Then, their orders were randomized and mixed. 3 warm-up videos were shown at the beginning to make participants familiar with the task.

### 3.2.2. Data Collection Procedures

#### 3.2.2.1. First Pilot Study

In the *Movie Narration Task*, each participant watched the film and afterwards, they were interviewed individually in a quiet room. The observer asked each participant to describe the story and what they saw in the film. Other than this explanation, there was no control over participants during the task.

Each description was videotaped. Each participant was coded as *P* and numbered in their transcriptions respectively such as *P1*, *P2*,….*P8*.

The tapes were transcribed without details of pauses and false starts. The parts including motion events are underlined in the transcribed form of each description.

In the first part of the second task, namely *Verbal Judgment Task,* the same participants (n=8) were given 8 manner verbs and 8 path verbs which were previously described above. These verbs were presented to the participants with a sample sentence.

Each participant was requested to read these sentences for each verb first and then give judgments about their appropriateness for the verbs on a 5 point scale (1= no match, 2= rarely match, 3= no idea, 4= good match, 5=perfect match).

In the second part of the second task, i.e., *Verb-Sentence Matching Task,* same participants (n=8) were requested to rate on a 1-4 scale (1=perfect match, 2=good match, 3=rarely match, 4= little or no match) the closeness of each given sentence (through *a-d*) to the source sentence related to each motion verb

By this task, participants were tested regarding which of the four options (described above in section 3.2.1.1) would be a perfect match with the use of each verb according to the source sentence given.

Each selection of the participants were regarded as one count for the marking of the verbs.

#### 3.2.2.2. Second Pilot Study

In *Movie Narration Task,* the administering of this experiment is same as seen in the previous pilot trial.

Each description was videotaped during the narrations. Each participant was coded as Y and numbered in their transcriptions respectively such as Y1, Y2,….Y7.

Two sections of the *Second Task (Verbal Judgment Task* and *Verb-Sentence Matching Task*) were administered in the same way as to first of the pilot.

In the final task, i.e., *Drawing Task,* the participants were asked to read each sentence and then try to make a sketch of each sentence beneath it on the paper without focusing on aesthetic details

The sentences were not given in fictive-nonfictive pairs. Instead, they were randomized in order to prevent a copying effect from a fictive one to the nonfictive or vice versa.

#### 3.2.2.3. Final Pilot Study

In *Movie Narration Task,* the administering of this experiment is same as seen in the previous pilot trial.

Each description was videotaped during the narrations. Each participant was coded as Y and their narrations were numbered in their transcriptions respectively such as *yp1p*, *yp2p*, ….until *yp8p*[10].

In *Animated Video Task*, same participants (n=9) attended the Pear Film joined this task as well. Each was interviewed individually in a quiet room. Each participant was requested to watch each short video on the slideshow, and after each video they were asked to describe the scene in the video while they were being videotaped. They were told that videos could be watched as many times as they want, but nobody did not need to watch again any of the videos since they were short in length and had no memory load.

Each description was videotaped during the participants' descriptions. Each participant was coded as Y and their narrations were numbered in their transcriptions respectively such as *yp1*, *yp2*, ….*yp9.*

### 3.2.3. Data Analysis and Coding

#### 3.2.3.1. First Pilot Study

***Movie Narration Task***

The recordings were transcribed without details of pauses and false starts. The parts including motion events are underlined in the transcribed form of each description.

Participants' narrations were analyzed concerning:

- Sentence type (simple, complex)

- Other means (case markings, subordination)

[10] One of the participants could not attend the Movie Narration Task.

**Second Task Part 1 (*Verbal Judgment Task*)**

Participants' responses were calculated (raw frequency for now) in regard to:

-Their scores for verb selection (path and manner)

**Second Task Part 2 (*Verb-Sentence Matching Task)***

Participants' selections for the acceptability of each four sentence were distributed among 18 verbs in the questionnaire.

### 3.2.3.2. Second Pilot Study

***Movie Narration Task***

The recordings were transcribed without details of pauses and false starts. The parts including motion events are underlined in the transcribed form of each description.

Participants' narrations were analyzed concerning:

- Verb selection (path or manner)

- Sentence type (simple, subordinate)

- Other means (case markings, subordination)

***Second Task Part 1 (Verbal Judgment Task)***

Participants' responses were calculated (raw frequency for now) in regard to:

-Their scores for verb selection (path and manner)

***Second Task Part 2 (Verb-Sentence Matching Task)***

Participants' selections for the acceptability of each four sentence were distributed among 18 verbs in the questionnaire.

***Drawing Task***

The figure (trajectory) elements in drawings' of the participants for each sentence was calculated by its length (in centimeters).

The length score for each participant was measured by dividing the length by the width of each figure he/she drew.

Mean measurements were compared between fictive and non-fictive ones.

### 3.2.3.3. Final Pilot Study

***Pear Film Narration***

The recordings were transcribed without details of pauses and false starts in the way the participants uttered their sentences.

Participants' narrations were analyzed concerning:

- Sentence type (simple, complex-subordination)

- Case marking accompanied by motion verb

***Animated Videos Task***

The recordings were transcribed without details of pauses and false starts in the way the participants uttered their sentences per each video. Each video was named like V1, V2… V35.

The findings were analyzed on the basis of

- Sentence type (simple, complex-subordination)

- Case marking accompanied by motion verb

### 3.2.4. Contributions of the Pilot Sets

As an overview of the findings, the following points can be remarked:

It was observed through the present study that participants preferred to use complex clauses (mainly with subordination of adverbials) in nearly half of their descriptions in the Pear Film as well as they used simple clauses to narrate the story nearly more than the half of their descriptions. This may be due to the fact that participants had a tendency to integrate motion events together in their spontaneous narration while expressing a series of events online which, as supported by Özçalışkan & Slobin (2003), bears more processing load for the language users.

For the summary of case endings in movie narration, they follow a similar pattern that dative comes first higher in the frequency and ablative and locative cases follow it later. This can also show that participants make use of case endings in half of their descriptions which also shows the strength of case marking in expressing motion event narrations.

In contrast to findings in Pear Film, the higher use of simple clause descriptions may result from the fact that short videos do not include complex actions found in Pear Film story. The results of the present task show similar findings with those of Pear Film in that participants described short videos with motion expressions mainly ending in dative case and ablative case followed dative. There is also a tendency to use locative case in some of the descriptions as well.

The overall contribution of the pilot trials to the main study are twofold: First, although the findings out of the questionnaires and matching tasks can suggest comments on motion expressions, they, further, paved the way for noticing a need that dynamic tools would be a better application in analysing motion events. In this way, the main study took its final shape before collecting the final data. The final pilot study shows that the selection of the dynamic materials is good enough to analyze motion expressions in Turkish and the main study will include these tasks.

As a second contribution, in the main study, the pairs of the fictive task were changed and reduced into 24 sentences (12 pairs), since some of the sentences would not fit to Turkish

language use. That's why only the updated task for fictive motion will be given in *Appendix 3* of the study.

## 3.3. THE MAIN STUDY

### 3.3.1. Subjects

The participants are 60 native speakers of Turkish, who were all chosen on a voluntary basis. They are adults aged between 18 to 30, all current university students or recent graduates located in Istanbul and Ankara.

### 3.3.2. Data Collection Tools

In the field of motion studies, using static images as stimuli to analyze motion event elicitations has been widespread for decades. The most frequently referred material of analysis is the wordless picture book Frog, where are you? (Mayer, 1969), which tells the story of a young boy who tries to find his frog. Such static materials were and are still in use most probably due to their applicablility (see Özçalışkan & Slobin, 1999, 2000; Özyürek & Özçalışkan, 2000; Papafragou et al., 2001, 2007; Zlatev & Yangklang, 2004; Ibarretxe-Antunano, 2004, 2009). However, a number of recent studies have changed this paradigm by using animated clips or real-life video sequences to be able to better elicitate motion (c.f. Allen et al., 2007; Papafragou & Selimis, 2009; Bunger et al., 2010 for the use of animation clips; and Gennari et al., 2002; Pourcel & Kopecka, 2006; Soroli & Hickmann, 2010; for real-life videos). Following this latter paradigm, the present study is made of dynamic elicitation tools for motion event descriptions.

Aiming to analyze motion events in Turkish with a perspective of linguistic resources accompanied in actual motion and as a first trial on exploring fictive motion in Turkish, the present dissertation consists of two different sections of data collection. The first part is reserved for the analysis of actual motion and includes two tasks. The second is designed for the analysis of fictive motion and consists of one task. All of the tasks administered are based on *language production* in nature.

The tasks for the actual motion in the present study are

a) Movie Narration Task

b) Video Description Task

The task designed for the fictive motion is

a) Drawing Task

The tasks for actual motion are computer-based and the drawing task for fictive motion analysis is paper-based. All three tasks have been conducted online with subjects through a web meeting application (ZOOM) due to the pandemic restrictions.

*Movie Narration Task* is based on a short movie called 'Pear Film' made by a group of scholars (pioneered by Prof. Wallace Chafe) at the University of California at Berkeley in 1975 and it was designed to elicit language samples around the world (Chafe, 1980). It is a nonverbal(except natural background sounds) movie with no dialogue and therefore it can be used as an elicitation tool in any language. As a short summary of the movie, there is a man harvesting pears, some of which are stolen by a boy riding a bike towards a pear tree. That boy has some adventures with a group of other children coming through his way, and the farmer man finallydiscovers that his pears are missing, and the movie ends with that scene.

*Video Description Task* is adapted from 'Motion Verb Stimulus' by Bohnemeyer and Levinson (2001) and designed by the research group in Language and Cognition Department of the Max PlanckInstitute for Psycholinguistics to get linguistic elicitations of motion predications under contrastive comparison with other animations in the same set. This tool includes 86 very short(4 seconds each) films, very simple 3D animations, which can be easily replayed and contrastedin various orders. The videos are categorized like COME/GO series, MANNER, PATH, ENTER/EXIT series and FIGURE/GROUND series. The short videos were reduced to 35 out of 86 for the purpose of the present thesis. The videos were randomly selected from each videoset mentioned above. Then, their orders were randomized. Three warm-up videos were shown at the beginning to make participants familiar with the task.

*Drawing Task* is modified from Matlock's (2006) study on fictive motion and the stimulus sets of sentences are taken from Talmy (2000)'s sub-categorization of fictive motion paths (except Sensory and Access Paths-not translatable into Turkish pairs) within the framework of the present thesis. They were translated into Turkish and then underwent a norming step by three researchers. Later, their correspondents were produced rather than using them as just translations. In sum, a total of 12 pairs of sentences (one with fictive motion and one without any motion verb) were included in the task.

The samples from the tasks are given in *Appendix 3*.

## 3.4. PROCEDURE

### 3.4.1. For the Analysis of Actual Motion

The Pear Film in *the movie narration task* was shown to each participant on a computer screen individually and, each was interviewed individually[11] on ZOOM online application because of the current pandemic restrictions. Upon watching this short movie, the observer asked each participant to describe the story in the movie. Other than this explanation, there was no control over the participants during the task.

Each narration was videotaped during the task. Each participant was coded as P and their narrations were numbered in their transcriptions respectively such as *P1*, *P2*, and so on.

After the first task, each same participant moved on to *the video description task*. After three warm-up videos shown in the beginning, each participant was interviewed individually asstated in the previous session. Each was requested to watch each short video on the slideshow,and after each video, they were asked to describe the scene in the video while they were beingvideotaped. They were told that videos could be watched as many times as they want, but generally, there was not much need to watch again any of the videos since they were short in length.

[11] The prior trial as a pilot study was carried out with subjects in a quiet room at the faculty, since it was before the pandemic situations.

Each description of the participants was videotaped during the task. Each participant was coded as P and their narrations were numbered in their transcriptions respectively such as *P1A*, *P2A*, and so on.

#### 3.4.1.1. Transcription of the Narrations

Since two tasks are similar in terms of the narrational form, they were transcribed in the same way. All narrations of the participants relevant to the target motion events (i.e., each event containing Manner and/or Path) were transcribed by the researcher as a native speaker of Turkish. The relevant transcriptions for each participant were segmented into 'sentences', which are defined as a main(matrix) clause and its subordinates (if any).

The codes of the participants (i.e., P1 refers to participant 1 for the Pear Film Task and P1A1 refers to participant 1 from Animation video1) are placed next to each example sentence provided in the study.

Several types of sentences were discarded from analysis such as those which did not make sense or intelligible enough; those which were terminated before completion; and those which did not include any reference to the specific Manner or Path in the movie or animation videos being described.

### 3.4.2. For the Analysis of Fictive Motion

The pairs including one fictive motion sentence and one without any motion were shownto each participant on a paper. Then, they were requested to sketch, to draw about what they imagined from the sentences they have read.

Each drawing was coded without the real name of the participant and calculated by hand with a ruler in centimeters to see whether there is any difference in the mean lengths of drawings on motion/non-motion pairs. The expectation in doing this was to see that participants would draw bigger figure elements in fictive sentences than their non-fictive counterparts. By doing this, it can be seen if there is any fictive effect on participants' drawings.

### 3.4.3. Data Analysis

For the analysis of actual motion in the study, after collecting snd coding data by transcription process, obtained dataset was calculated in terms of mean numbers and frequency of use.

-The verb types being either Path or Manner were statistically tested to see if the difference between them was significant. To this end, a paired t-Test was applied to the data set to determine if there is a significant difference between the Path or Manner selections of the participants.

- The clause types of main and subordinate were also gone under statistical validation. For this aim, again a paired t-Test was carried out to see whether there is a significant comparable difference between the two.

- In order to analyze subordinate clauses, three types were gone statistical operation as well. Single factor ANOVA was run to see if there is a dominant leading clause type that is different from the other two.

In the analysis of case markers obtained from the visual elicitations of the participants, three case categories were determined. For the statistical measurement of this group, again a single factor ANOVA was administered to determine whether there is a dominant sub-type of case marking use in the dataset.

For the analysis of fictive motion out of drawings of the participants, Fictive and Non-fictive categories were determined and assigned as pairs. First, as an overall analysis to see any difference between Fictive and Nonfictive group, a paired t-Test was administered to the total counts of each category, namely Fictive general and Nonfictive general. Later on, each sentence pairs including one fictive and one non-fictive were also undergone a statistical validation. Each pair of sentences were statistically tested with the application of paired t-Test to see if there is any difference between two sentences in each group.

# CHAPTER IV

# ANALYSIS OF THE FINDINGS

The analysis carried out in the main study is covered in this chapter.

In the first main part of the chapter, the outcomes of the tasks in actual motion are stated in terms of a) the division of clauses with motion to total clauses, b) main and subordination clauses with motion, c) selection of motion verbs as either Path or Manner, d) categories of subordinate clauses, and finally e) the use of case markings in motion expressions.

In the second part of the chapter, the analysis and outcomes made from fictive motion drawings are stated in regard to a) mean lengths of the fictive/non-fictive sentences and b) comparison of fictive and non-fictive pairs in order to show which ones are significantly different based on the fictive effect shown in the drawings of the participants.

## 4.1. ANALYSIS OF FINDINGS ON ACTUAL MOTION EXPERIMENTS

In the first session *(i.e, Pear Film Narration)*, the recordings were transcribed in the way the participants uttered their sentences.

Participants' narrations were analyzed (coded) on the basis of:

- Clause type (Main Clause-Subordinate Clause) they used in narrating the movie
- Case marking used in the expression of motion scenes in their narrations.

In the second session *(Animation Descriptions)*, the recordings were transcribed inthe way the participants uttered their sentences per each video, similar to the previous session of the study.

The findings were analyzed on the basis of:

- Clause type (Main Clause-Subordinate Clause) they used in describing videos

- Case marking used in the expression of motion scenes in their descriptions.

The findings in both tasks will be given together for each element below.

### 4.1.1. Total Clauses/Clauses with Motion

The participants *(n=60)* used a total of ***5999* clauses** *(M[12]=99,98)* while narrating the movie and animations in both tasks. These include expressions with and without motion in general. As shown in Table 1, the number of clauses which participants uttered with motion expressions is ***3499*** *(M=58,31),* which counts as 58,32% of total clauses. This collection of clauses includes the main and subordinate clauses together. Their divisions are given in the next subsection.

Table 1. *The number of clauses counted in the short movie and video animations*

| **Categories** | **(n)** |
|---|---|
| Participants | 60 |
| Clauses with motion | 3499 |
| **Total Clauses** | **5999** |

### 4.1.2. Main/Subordinate Clauses with Motion

Moving on the findings of clauses included motion expressions alone, a further distinction is made: main and subordinate clause selections. This means that participants' narration included motion expressions in the form of a main clause which is itself producedby a motion verb to describe a scene in their narrations and of subordinate clauses which can further specify that motion scene in the forms of *complement clauses, relative clauses*or *adverbial clauses*. Some examples regarding main and subordinate clauses with motion expressions from participants' narration are given below:

(91) Sonra yanından keçiyle adam [geçiyo$_{MAIN+PATH}$], bisikletli çocuk [geçiyo$_{MAIN+PATH}$]. *(P1)*

[12] M= equals to mean number of clauses divided by total number of participants(n=60).

‘Later, a man with a goat passes through/near him (from the context), a kid with a bicycle passes through.’

In (91) above, there are two motion constructions, resulted from two separate *main* clauses of motion expression. Both clauses include *Path* verbs, the same verb ‘geçiyo’ used twice.

(92) Köylü, ağaçtan [iniyo$_{MAIN+PATH}$], armut ağacından. *(P8)*

‘The peasant descends from/climbs down the (pear) tree.’

There is just a *main* clause occupied with a *Path* verb ‘iniyo’ above.

(93) …onların çaldığını düşündü ve onlar da [uzaklaşırken$_{SUB+PATH}$]$_{ADV\ CL}$ film bitti. *(P6)*

‘(he -from the context-) thought they stole (the basket -from the context-) and the movie was over while they were moving away.’

Taking the clauses after the conjunction by ‘ve’, the main verb is not a motion-based verb, but the subordinate clause, which is an adverbial clause itself, consists of a Path verb ‘uzaklaşırken’.

(94) Ordan [geçerken$_{SUB+PATH}$]$_{ADV\ CL}$ çocuklar, adam aşağı [iniyodu$_{MAIN+PATH}$]. *(P26)*

‘While the children were passing by, the man was climbing down.’

There are two motion predicates: one is the one on the left-hand clause with a *Path* verb ‘geçerken’ which is an *adverbial subordinate* clause and the other one is on the right with a main clause verb ‘iniyodu’, again a *Path* verb.

The counting for clauses with motion observed in both tasks is *3499* in total (given in *Table 2* below). Out of this, *2339* (66,84%) them were found in main clause forms and *1160 (33,15%)* of them in subordinate clause forms expressing motion scenes in the narrations.The difference between the selection of main and subordinate clauses was also statisticallycalculated by a *t-Test* and it was found statistically significant. ($p < 0.05$).

Table 2. *Main and Subordinate clauses with motion counted in the short movie and video animations*

| **Clause Type** | **(n)** |
|---|---|
| Main | 2339 |
| Subordinate | 1160 |
| **TOTAL** | **3499** |

As can be seen in Table 2, there are 2339 main clauses and 1160 subordinate clauses in the sample. Therefore, there are a total of 3499 clauses that were examined in the study.

### 4.1.3. Selection of Motion Verbs

Selection of either *Path* or *Manner* verbs was also counted in terms of both main clauses and subordinate clauses.

As given in *Table 3* below, out of 3499 total clauses with motion, 2271 (64,90%) of the clauses included Path verbs and 1228 (35,09%) of them Manner verbs:

Table 3. *Path and Manner verbs in clauses with motion counted in the short movie and video animations*

| **Verb Type** | **(n=)** |
|---|---|
| Path | 2271 |
| Manner | 1228 |
| **TOTAL** | **3499** |

As can be seen in Table 3, the present study covered 3499 clauses with motion expressions. Out of this, there are 2271 path verbs and 1228 manner verbs were categorized in the sample.

As for further division and the selection of either Path or Manner in main and subordinate clauses, the following Table 4 shows the details:

Table 4. *Path and Manner verbs in main and subordinate clauses*

| **Verb and Clause Type** | **(n)** |
|---|---|
| Path in Main Cl. | 1694 |
| Manner in Main Cl. | 645 |
| Path in Sub.Cl. | 577 |
| Manner in Sub.Cl. | 583 |
| **TOTAL** | **3499** |

Table 4 summarizes that participants selected 1694 Path verbs (72,42%) in the main clauses and opted for 645 Manner verbs (27,57%) in the main clauses. On the other hand, in the subordinate clauses, participants'selection for Path verbs was 577 (49,74%) and 583 (50,25%) for Manner verbs. The difference between Path and Manner has also been statistically tested and for the main verb selection, their difference was statistically validated via *t-Test* ($p < 0.05$). However, the selection in the subordinate clauses cannot be seen much different as *t-Test* statistics says ($p$ =0,462).

### 4.1.4. Selection of the Subordinate Clauses with Motion

Moving on to the subtypes of subordinate clauses (n=1160) instantiated in the participants' narrations, *Table 5* below represents the number of uses for each subordinate clause types and the total numbers of each type.

Table 5. *Distribution of subordinate clauses with motion*

| **Subordinate Clause Type** | **(n)** |
|---|---|
| Adverbial Cl. | 789 |
| Relative Cl. | 209 |
| Complement Cl. | 162 |
| **TOTAL** | **1160** |

As given in Table 5, out of 1160 subordinate clauses, the most frequently used is the adverbial clause type with 789 instances (68,01%) (*M=13,15*). It is followed by the relative clause selection with 209 instances (18,01%) *(M=3,48)* and the last category is the complement clause selection with 162 instances (13,96%) *(M=2,7).* This result was also tested on *One-way ANOVA* and the difference in the selection of subordinate clause types was found statistically significant ($F$= 62,66444202; $F\ crit$= 3,04; $p < 0.05$).

### 4.1.5. The use of case markings in motion expressions

Case markings were only counted on the basis of the clauses which include motion expressions. Other case markers where there is no motion verb either in main or in subordinate clauses were not included. Three case types were obtained in the frame of the present study: *Dative, Ablative* and *Locative*. These are the common cases that can be mainly seen in motion events, due to the nature of translocating and displacing events. Since Accusative case is a grammatical case, it is out of the focus in this study.

The total number of case markings used in clauses of motion expressions is *1396*. *Table 6* below shows related figures for each case category:

Table 6. *The selection of case markings in motion expressions*

| **Categories of the Case Markings** | **(n=)** |
|---|---|
| Dative case | 762 |
| Ablative case | 500 |
| Locative case | 134 |
| **TOTAL** | **1396** |

In Table 6, Dative case is observed as 762 (54,58%) among 1396 instances; Ablative case as 500 (35,81%) and 134 (9.59%) of them are for Locative case.

This result was also validated through *ANOVA* and the difference in the selection of case markings was found statistically significant ($F$=107,725887; F crit=3,04; $p$<0.05).

Some example clauses including the selection of case markings are given below from the participants' use in the narration task:

(95) Taşa$^{\mathbf{(DAT)}}$ [takıldı$_{\text{MAIN+MANNER}}$] ve armutları [döktü$_{\text{MAIN+MANNER}}$] (P30)
'He(from the context) stumbled on a stone and poured the pears.'

The clauses in (95) consist of two *Manner* verbs coordinated together and the first main clause includes *Path* entity as given by *Dative* case (-A) marked object.

(96) O bahçıvan ağaçtan$^{\mathbf{(ABL)}}$ [indiğinde$_{\text{SUB+PATH}}$]$_{\text{ADV CL}}$, bi sepetin olmadığını görüyo. (P16)
'That gardener notices a basket is gone when he climbs down the tree.'

The first clause in (96) is a subordinate one which is of an adverbial type and the verbal element is formed with *Path*. The Figure 'O bahçıvan' moves from the source entity 'ağaçtan' and this is marked with Ablative case ending *-DAn*.

(97) Kıza bakarken bisikletiyle taşa$^{(DAT)}$ [çarpıp$_{SUB+MANNER}$]$_{ADV\ CL}$ [düşüyo$_{MAIN+MANNER}$]
(P51)

'While looking at the girl, (He) hits a stone with his bike and fell.'

The Figure moves toward a *Goal* entity 'taşa' which is marked with *Dative* case *-A*

(98) Bi tane adam ağaçta$^{(LOC)}$ armut [topluyo$_{MAIN+MANNER}$] (P41)
'A man is picking pears on a tree.'

Figure element 'Bi tane adam' is stationary in the setting described in (98) and this situation is marked on the *Source* element 'ağaçta' with Locative case *-DA.*

## 4.2. ANALYSIS OF FINDINGS ON FICTIVE MOTION EXPERIMENTS

*The Drawing Task* consisted of a total of 12 pairs of sentences (one with fictive motion and one without any motion verb. Then, sentences were randomly ordered from 1 to 24 and each participant was requested to draw about what they imagine from the total of 24 sentences they were shown.

Drawings of the participants were coded with each participant's number (like *P1*) and calculated by hand with a ruler in centimeters to see whether there is any difference in the lengths of drawings on motion/non-motion pairs. The figure element (mainly the element in the subject position of sentences) of each sentence was calculated with a ruler in terms of its length(L) and width(W). Then each L and W per sentence is added together to have a total calculation. Finally, total sums of each sentence were divided into total number of participants in order to have mean lengths of each sentence. In this way, it was easier to compare each sentence pairs of F and NF with their mean lengths.

### 4.2.1. Mean Lengths of the Fictive/Non-fictive Sentences

Participants' (n=59[13]) drawings were counted as centimeters in total. Total calculation was divided into mean lengths ($M_{lenght}$) for 12 Fictive and 12 Non-fictive pairs as shown in *Table 7*:

Table 7. *Mean length of Non-fictive and Fictive categories total in the drawing task*

| **Sentence Type** | **$M_{lenght}$ (=cm)[14]** |
|---|---|
| Fictive (F) | 96,53 |
| Non-Fictive (NF) | 82,65 |

Table 7 shows that $M_{lenght}$ for Fictive sentences in total was calculated 96,53 cm and for Non-fictive sentences in total was found 82,65 cm.
The difference in the length of two contrastive sentence groups were also statistically tested via *t-Test* and it was found statistically significant ($p$ <0.05).

### 4.2.2. Comparison of the Fictive/Non-fictive Pairs

Although an overall picture about fictive sentences in total seem striking from the figures above, the analysis between each pair tells us that the difference between some pairs is not so straightforward, while for some others, it is. This section is divided into two: a) *Pairs with no significant difference* and b) *Pairs with significant difference*. In each subsection, analysis on each pair is given in detail. Drawing samples from participants are given in each pair.

[13] Drawings of one participant (*P6*) could not be opened and processed on the computer and for this reason that participant was discarded from the list.

[14] Sum=Total calculation of Categories F and NF each/Participant total(n=59)

a) *Pairs with no significant difference*

With the findings at hand, the pairs 1-24, 8-2, 3-11, 17-6, and 12-20 are the ones which showed no significant difference to determine if there was any effect of fictive motion on participants' drawings. Table 8 shows below these pairs with mean lengths and each pair is listed thereafter. One sample from the drawings in the study is given under each pair of sentences.

Table 8. *Mean length of the pairs with no significant difference(=cm)*

| **Sentence Pairs (NF/*F*)** | **$M_{length}$ (=cm)[15]** |
|---|---|
| 1) Ev iki dağ arasında<br>24) *Ev iki dağ arasında yer alıyor.* | 5,36<br>5,91 |
| 8) Yapraklar ovanın her tarafındaydı.<br>2)*Yapraklar ovanın her tarafına saçılmış.* | 15,8<br>16,29 |
| 3) Market otoparkın yanında.<br>11) *Market otoparka bakıyor.* | 10,05<br>9,92 |
| 17) Yılan yoldan uzakta.<br>6) *Yılan yolun kenarında yatıyor.* | 4,51<br>4,70 |
| 12) Kadın bahçe kapısından uzaktaydı.<br>20*)Kadını bahçe kapısına doğru yönlendirdim.* | 5,40<br>5,50 |

Pair 1 – 24

The related sentences in this pair were (fictive one is italicized):

1) Ev iki dağ arasında.

'The house is between two mountains.'

24) *Ev iki dağ arasında yer alıyor.*

'The house is located between two mountains.'

From 59 participants' drawings, the non-fictive sentence (1) above was calculated as *M*=5,36 in centimeters and its fictive counterpart (24) was *M*=5,91. A *paired t-Test* was

[15] $M_{length}$=Total length of each sentence/Participants (n=59). The same is applied in *Table 24* as well.

administered to see if the difference between 1 and 24 was significant and it was not validated as significant ($p$=0,02).

(99) Drawings of the pair 1/24 from Participant 4 (P4)


In (99) above, the drawing of the figure element 'house' shows no clear difference between two sentences.

Pair 8– 2

The related sentences in this pair weres (fictive one is italicized):

2) *Yapraklar ovanın her tarafına saçılmış.*

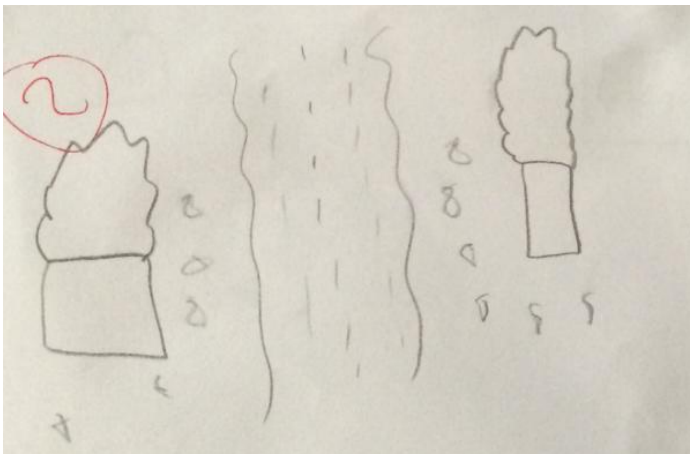
'The leaves were scattered all over the plain.'

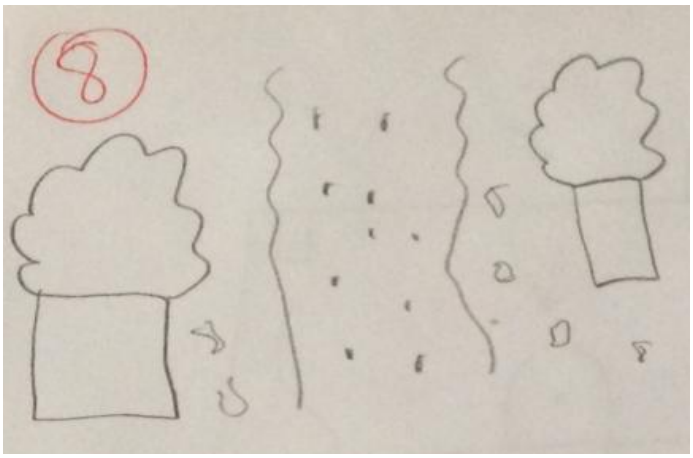
8) Yapraklar ovanın her tarafındaydı.

‘The leaves were all over the plain.’

The participants’ drawing accounts for a total of *M*=15,8 for the non-fictive sentence (8) above and for a total of *M*=16,2 for its fictive counterpart (2). A paired t-Test also showed the difference between two sentences is not significant (*p*=0,159).

(100) Pair 2/8 from P 13




The example (100) shows that two drawings are almost identical which means the participant did not mark any figure strikingly in the fictive sentence as well.

Pair 3 – 11

The related sentences in this pair were (fictive one is italicized):

3) Market otoparkın yanında.

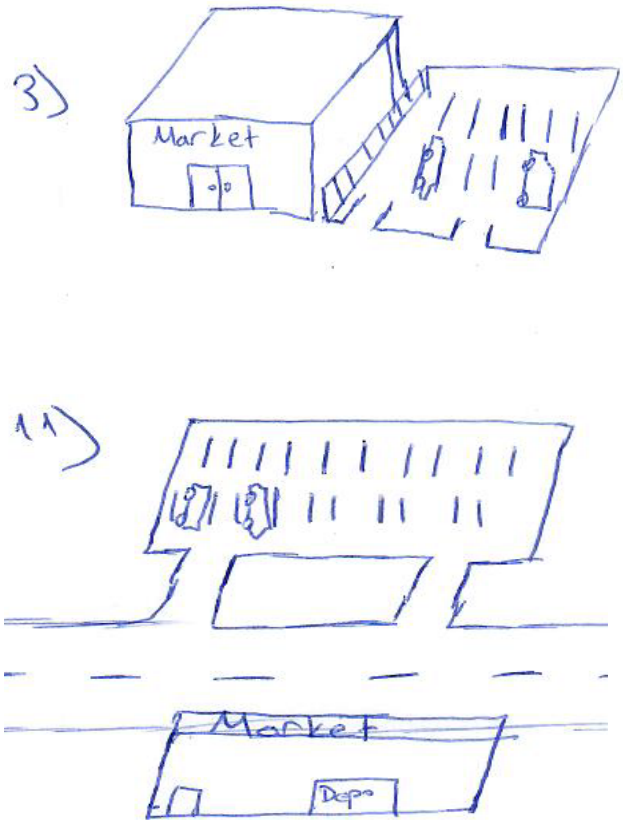
'The market is near/next to the parking lot.'

*11) Market otoparka bakıyor.*

'The market faces towards the parking lot.'

The participants' drawing accounts for *M*=10,05 for the non-fictive sentence (3) above and *M*=9,92 for its fictive counterpart (11). Again, there is no significant difference between the sentences *(p*=0,370).

(101) Pair 3/11 from P8



The example (101) shows that two drawings are almost identical except their orientational view. It means the participant did not draw bigger figure element in the fictive sentence (11).

Pair 17 – 6

The related sentences in this pair were (fictive one is italicized):

*6) Yılan yolun kenarında yatıyor.*

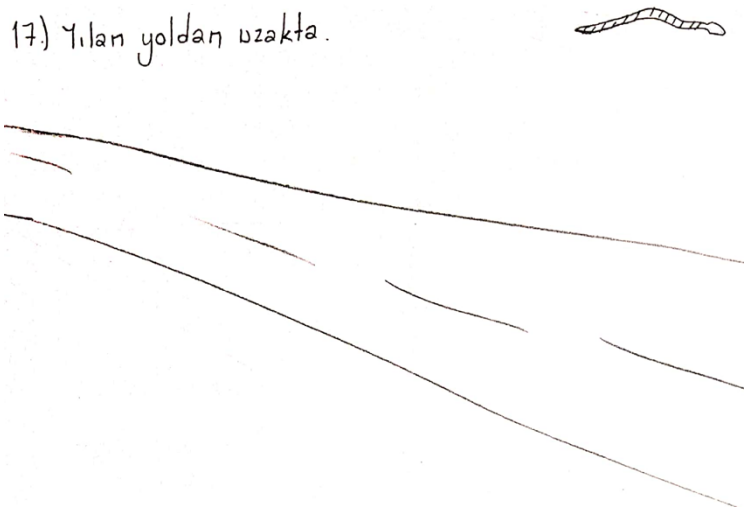
'The snake lies on the side of the road.'

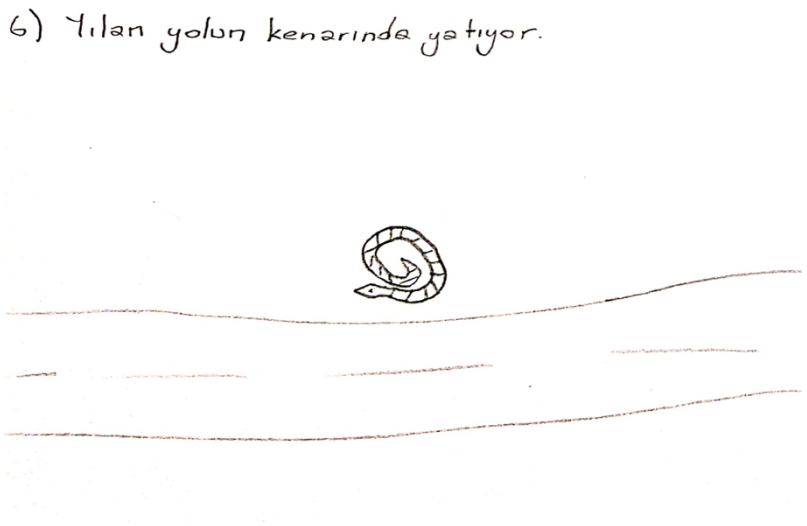
17) Yılan yoldan uzakta.

'The snake is away from the road.'

From participants' drawings, the non-fictive sentence (17) was calculated as *M*=4,51 and its fictive counterpart (6) was *M*=4,70. There is no significant statistical difference between the sentences either *(p*=0,21).

(102) Pair 17/6 from P5






The example (102) is clear in showing that the participant did not draw bigger figure element (as an overall length) in the fictive sentence (6) although the orientation of the figures in both sentences were not drawn the same.

Pair 12 – 20

The related sentences in this pair were (fictive one is italicized):

12) Kadın bahçe kapısından uzaktaydı.

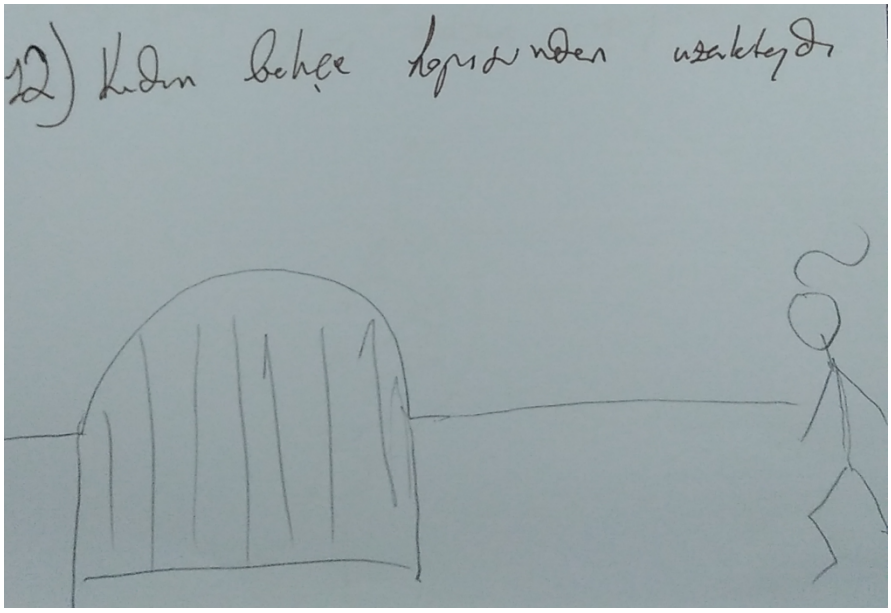
'The woman was away from the garden gate.'

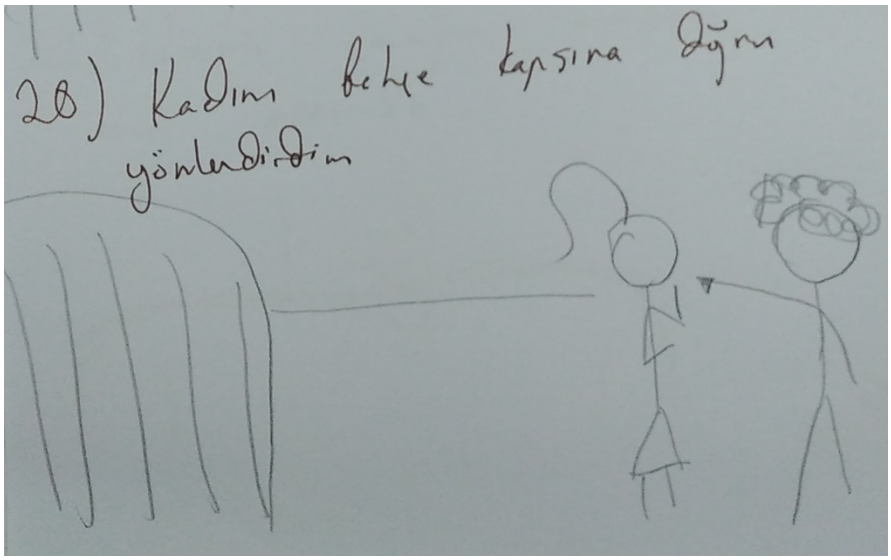
*20) Kadını bahçe kapısına doğru yönlendirdim.*

'I directed the woman towards the garden gate.'

The non-fictive sentence (12) was calculated as $M$=5,40 and its fictive counterpart (20) was $M$=5,50. No significant statistical difference between the sentences was observed ($p$=0,41).

(103) Pair 12/20 from P2




The drawings in (103) clearly show that the participant did not draw significantly bigger figure element in the fictive sentence (20).

b) *Pairs with significant difference*

The pairs *7-4, 22-5, 9-14, 10-13, 16-21, 19-18 and 15-23* are the ones which resulted in a difference between the drawings for the pairs of sentences. In what follows is the detailed picture of each pair set to show the degree of significance for the differences. As with earlier pairs of sentences, one sample of drawings for each pair is given under the pairs. Table 9. summarizes the mean lengths for the pairs.

Table 9. *Mean length of the pairs with significant difference(=cm)*

| **Sentence Pairs (NF/*F*)** | **$M_{lenght}$ (=cm)** |
|---|---|
| 7) Yön tabelası kasabaya doğruydu.<br>4) *Yön tabelası kasabayı gösteriyor.* | 5,09<br>5,66 |
| 22) Dövme çocuğun omzuyla boynunun arasında.<br>5)*Dövme çocuğun omzundan boynuna doğru uzanıyor.* | 1,76<br>3,42 |
| 9) Çocuğun doğum lekesi dizi ile ayak bileği arasındaydı.<br>14) *Çocuğun doğum lekesi dizi ile ayak bileği arasına yayılmış.* | 0,93<br>1,90 |
| 10) Dere orman ile vadi arasında.<br>13) *Dere kıvrıla kıvrıla vadiye doğru ilerliyor.* | 10,45<br>11,43 |
| 16) Top kapının yanındaydı.<br>21) *Yavaş yavaş topu kapıya yaklaştırdım.* | 2,34<br>6,56 |
| 19) Göl orman ve tren yolu arasında.<br>18*) Orman ile tren yolu arasında bir göl uzanıyor.* | 9,90<br>12,41 |
| 15) Çocuklar futbol sahasında.<br>23) *Çocuklar futbol sahasının etrafında toplanmış.* | 11,01<br>12,77 |

Pair 7– 4

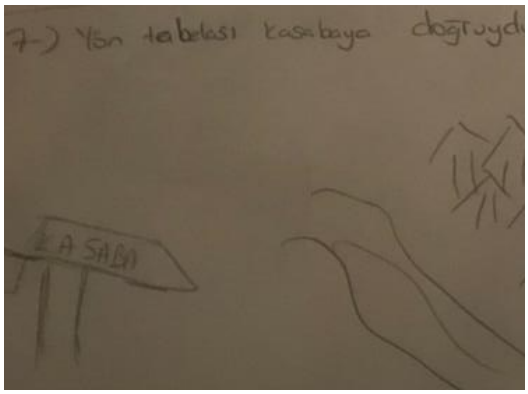
The related sentences in this pair were (fictive one is italicized):

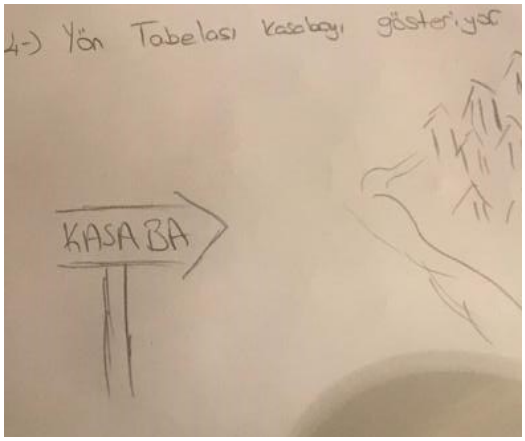
7) Yön tabelası kasabaya doğruydu. [The direction sign was towards the town.]

*4) Yön tabelası kasabayı gösteriyor.* [The direction sign points to the town.]

From 59 participants' drawings, the non-fictive sentence (7) was calculated as $M$=5,09 and its fictive counterpart (4) was $M$=5,66. Also, a paired *t-Test* analysis resulted in a significant difference ($p$< 0,05).

(104) Pair 7/4 from P35






In the drawings in (104), the participant did draw figure element slightly bolder and bigger in fictive sentence above, compared to its non-fictive counterpart.

Pair 22– 5

The related sentences in this pair were (fictive one is italicized):

22) Dövme çocuğun omzuyla boynunun arasında.

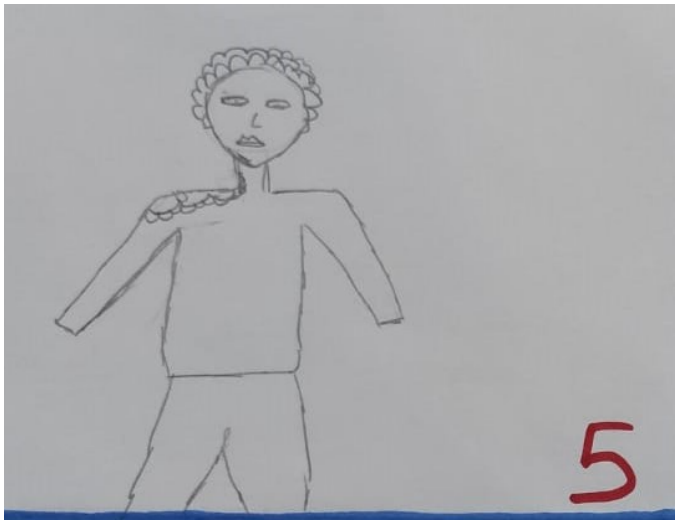
'The tattoo is between the child's shoulder and neck.'

*5) Dövme çocuğun omzundan boynuna doğru uzanıyor.*

'The tattoo extends from the child's shoulder to his/her neck.'

The fictive sentence (5) was calculated as *M*=3,42 and its non-fictive counterpart (22) was *M*=1,76. Again, a paired t-Test analysis resulted in a significant difference ($p< 0,05$).

(105) Pair 22/5 from P10


In (105), it is clear that the participant drew the figure element in fictive sentence bigger ane lengthier than its non-fictive pair.

Pair 9 – 14

The related sentences in this pair were (fictive one is italicized):

9) Çocuğun doğum lekesi dizi ile ayak bileği arasındaydı.

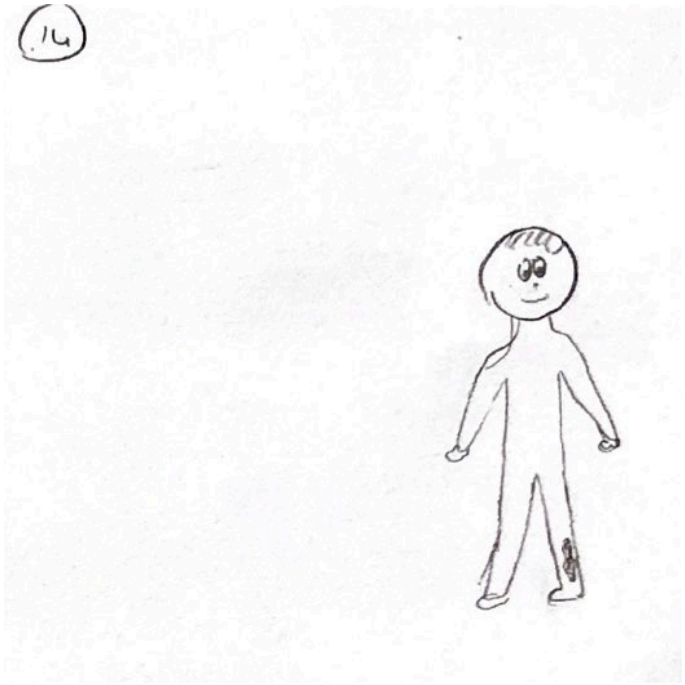
‘The child's birthmark was between his/her knee and ankle.’

14) *Çocuğun doğum lekesi dizi ile ayak bileği arasına yayılmış.*

‘The child's birthmark spread between his/her knee and ankle.’

The non-fictive sentence (9) was calculated as $M$=0,93 and its fictive counterpart (14) was $M$=1,9. A *paired t-Test* analysis resulted in a significant difference ($p$<0,05) between the sentences (9) and (14) in the pair.

(106) Pair 9/14 from P27



The sample drawing in (106) clearly shows the difference between two figure elements above for the benefit of fictive sentence, in which participant drew the figure longer.

Pair 10-13

The related sentences in this pair were (fictive one is italicized):

10) Dere orman ile vadi arasında.

‘The stream/creek is between the forest and the valley.’

13) *Dere kıvrıla kıvrıla vadiye doğru ilerliyor.*

‘The stream/creek curves/curls/zigzags forward towards the valley.’

The fictive sentence (13) was calculated as $M$=11,43 and its non-fictive counterpart (10) was $M$=10,45. In addition to this, a *paired t-Test* analysis showed that there is a significant difference ($p$< 0,05) between the sentences (10) and (13) in the pair.

(107) Pair 10/13 from P12



The drawings above in (107) are clear in differentiating the figure element in fictive sentence from its non-fictive counterpart, in that it is longer than non-fictive one.

Pair 16-21

The related sentences in this pair were (fictive one is italicized):

16) Top kapının yanındaydı.

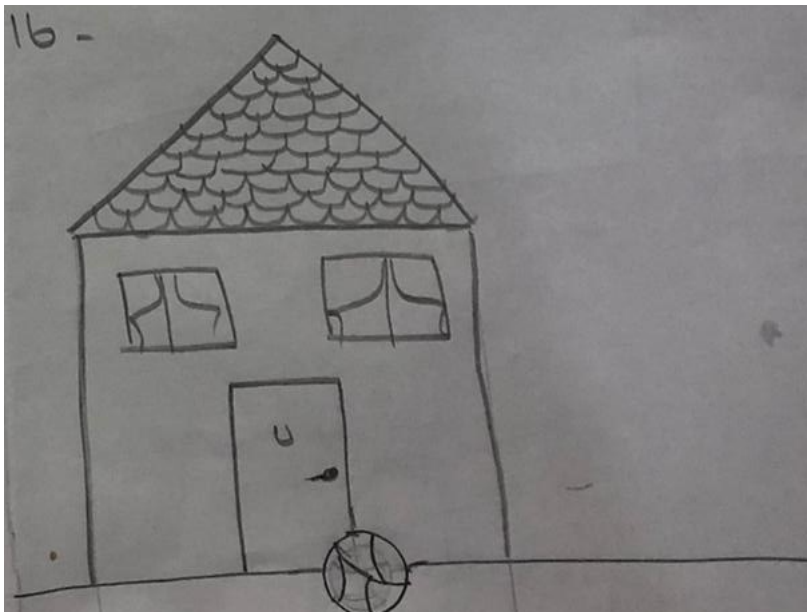
'The ball was near the door.'

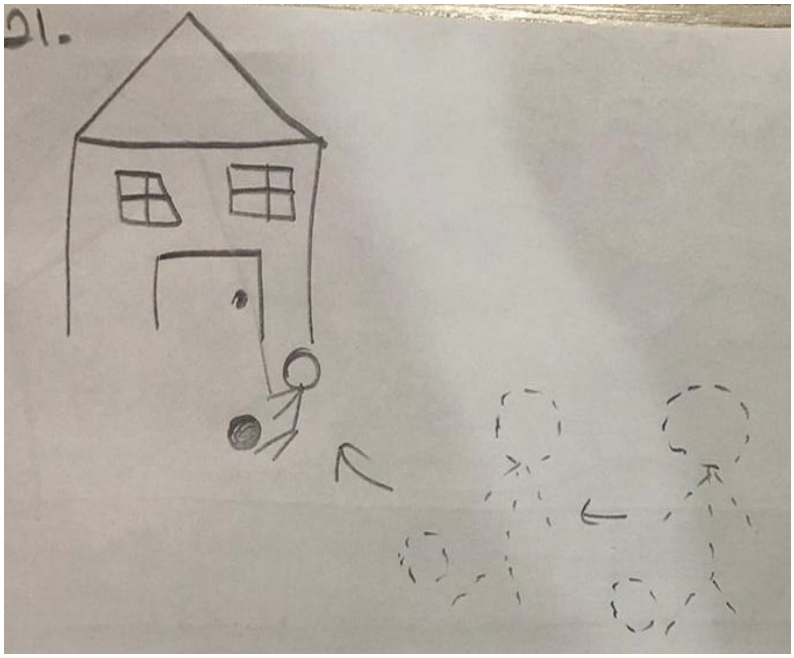
*21) Yavaş yavaş topu kapıya yaklaştırdım.*

'I slowly brought the ball closer to the door.'

The fictive sentence (21) was calculated as *M= 6,56* and its non-fictive counterpart (16) was *M*=2,34, a huge difference between the two. In order to check this difference out, a *paired t-Test* analysis validated that there is a significant difference ($p$<0,05) between the sentences (16) and (21).

(108) Pair 16/21 from P28





In (108), the difference in drawings is clear from the figure element which was drawn bigger and longer in fictive one.

Pair 19-18

The related sentences in this pair were (fictive one is italicized):

19) Göl orman ve tren yolu arasında.

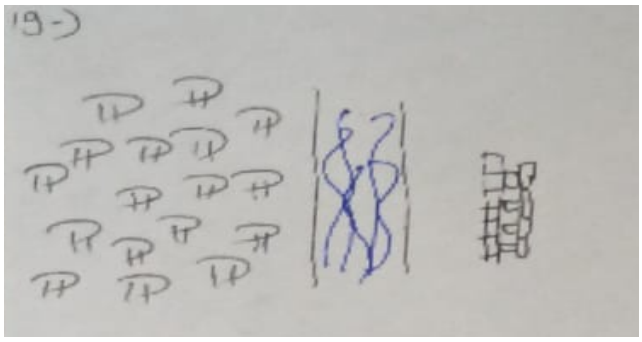
'The lake is between the forest and the railway.'

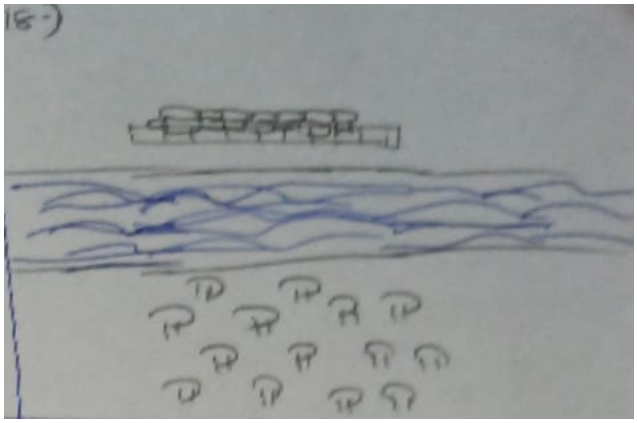
*18) Orman ile tren yolu arasında bir göl uzanıyor.*

'A lake lies/stretches between the forest and the railway.'

The fictive sentence (18) was calculated as *M=12,41* and its non-fictive counterpart (19) was *M*=9,9. Also, a *paired t-Test* analysis validated that there is a significant difference ($p$ <0,05) between the sentences (18) and (19).

(109) Pair 19/18 from P26




The drawings are clearly different in (109) above and the figure element in fictive one is far bigger than its counterpart.

Pair 15 – 23

The related sentences in this pair were (fictive one is italicized):

15) Çocuklar futbol sahasında.

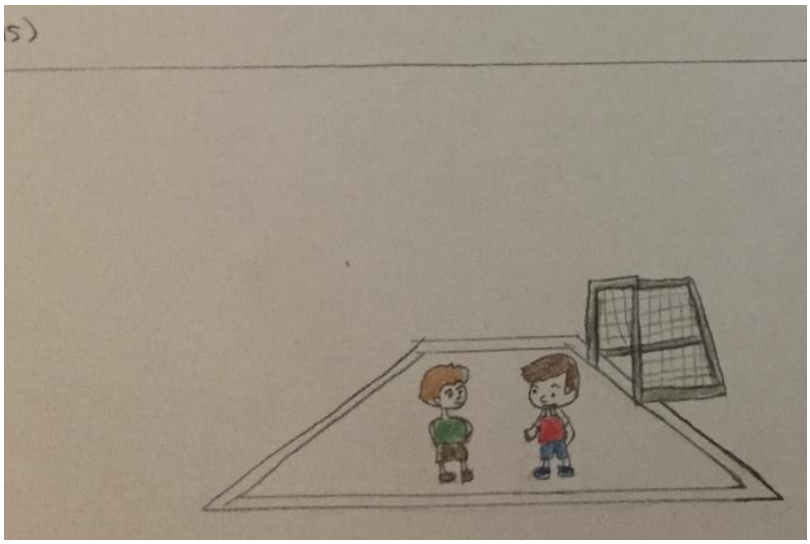
'The children are on the soccer field.'

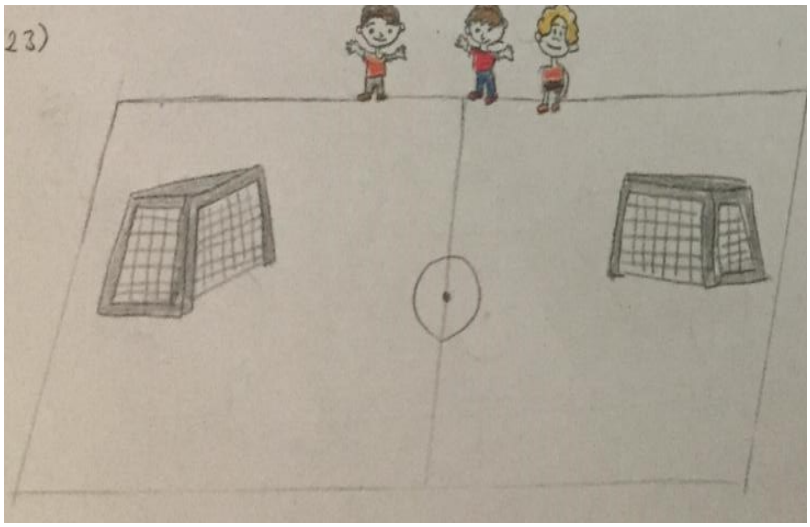
*23) Çocuklar futbol sahasının etrafında toplanmış.*

'The children gathered around the soccer field.'

Out of participants' drawings, the non-fictive sentence (15) got *M*=11,01 and its fictive counterpart (23) got *M*=12,77. Small but meaningful difference between the two was observed when a t-Test was administered as *p value* was below the threshold ($p < 0{,}05$).

(110) Pair 15/23 from P41




The drawings above in (110) is different in showing that the fictive sentence was drawn bigger in comparison to its non-fictive counterpart.

# CHAPTER V

# DISCUSSION OF THE FINDINGS

This section of the study is a place for discussing the overall results obtained in the main study. The chapter is divided into two subsections: a) discussion of the findings on actual motion and b) of the findings for fictive motion. The findings are also supported by further samples from the present study. The results are also compared, where possible, with other similar studies in the field.

## 5.1. DISCUSSION OF THE FINDINGS ON ACTUAL MOTION

This study analyzed motion predicates in Turkish with a focus on a group of morphosyntactic elements as the *selection of clause type (main vs subordinate)*, *case marking* and *verb type (path vs manner)* of motion. The analysis of actual motion was derived from two tasks in the study: a) *Short Movie Narration*, and b) *Description of Animation Videos*.

In this section, a comparison of the findings of the two tasks is made and linguistic outcomes are discussed. All of the findings is summarized below in *Table 10.*

Table 10. *The overall frequency of clauses and motion verbs in the study*

<table>
<tr><th>The number of participants (n)</th><th>The number of total clauses (n)</th><th colspan="4">The number of clauses with motion expressions (n)</th></tr>
<tr><td rowspan="5">60</td><td rowspan="5">5999</td><td colspan="4">3499</td></tr>
<tr><td colspan="2">Motion verbs in main clause</td><td colspan="2">Motion verbs in subordinate clause</td></tr>
<tr><td colspan="2">2339</td><td colspan="2">1160</td></tr>
<tr><td>Path verbs</td><td>Manner verbs</td><td>Path verbs</td><td>Manner verbs</td></tr>
<tr><td>1694</td><td>645</td><td>577</td><td>583</td></tr>
</table>

As it is summarized in Table 10 above, the participants *(n=60)* used a total of *5999* clauses in both tasks. Out of this, participants' 3499 clauses (58,32% of total) were counted as clauses with motion including motion expression both in the main and subordinate clauses.

It can be said that participants used motion expressions in 3499 clauses which refer to more than half of their clauses in both tasks. This means their expressions are motion-productive in general. In more detail:

Out of 3499, 2339 (66,84%) of them were found in **main clause** forms,
1160 *(33,15%)* of them in **subordinate clause** forms.
Out of 3499, 2271 (64,90%) of them are **Path** verbs,
1228 (35,09%) of them are **Manner** verbs.

Of 2339 main clause verbs:
1694 (72,42%) of Path verbs are found in main clauses,
645 (27,57%) of Manner verbs are found in main clauses.

Of 1160 subordinate clauses,
577 (49,74%) of Path verbs are found in subordinate clauses,
583 (50,25%) of Manner verbs are used in subordinate clauses.

By looking at the figures above, it can be said that participants selected mainly Path verbs in descriptions of motion events displayed in the tasks. This is an expected result when taking Turkish as a V-framed language where Path is always encoded in the verb. Although the sampling and the dataset may differ, our findings are compatible with Özçalışkan and Slobin (2003)'s comparative study on English and Turkish motion verbs. They found the figures below in subjects' oral narratives on the Frog Story:

Table 11. *Percentage of participants' motion verb use in the present study*

| Verb Type/Clause | Turkish Data (%) |
|---|---|
| V:path (main) | 72,42% |
| V:manner (main) | 27,57% |
| V:path (SUB) | 49,74% |
| V:manner (SUB) | 50,25% |

It is clear in Table 11 that the main verb slot in the narrations of the participants in the present study were dominated by the vast use of Path verbs (72,42%) and manner verbs were selected less frequently (27,57%) in main verbs of the clauses compared to the Path verbs. Moving to the selections of motion verbs in subordinate clauses, participants chose Path (49,74%) and manner verbs (50,25%) on a par, with manner verbs leading a bit higher.

Below is a summary of the findings regarding the distribution of path and manner selections from Özçalışkan and Slobin's study (2003) in Table 12:

Table 12. *Percentage of adults' motion verb use from Özçalışkan and Slobin's study (2003)*

| Verb Type/Clause | Turkish (%) | English (%) |
|---|---|---|
| V:path (main) | 62% | 30% |
| V:manner (main) | 30% | 54% |
| V:neutral | 7% | 15% |
| V:manner (SUB) | 1% | 1% |

Although Özçalışkan and Slobin's study (2003) is a comparison of motion expressions crosslinguistically for Turkish and English, the point of the comparison for the present study is just the findings in Turkish. Therefore, Table 11 and Table 12 give a clear

similarity in the selection of Path dominance over Manner verbs in Turkish. Therefore, it is easy to see that motion expressions are overwhelmingly based on Path in main verb and Manner is opted for where necessary. Manner can be represented via additional linguistic elements such as subordinate clauses, adpositions and case markers. So, it seems that in a V-framed language as in Turkish, use of manner information requires heavier syntactic packaging (e.g., subordinate constructions) (Özçalışkan and Slobin, 2003:6) and thus it is mainly dispreferred in the main verb slot for Turkish. This was also found out in similar studies. In one study, English and Korean (verb-framed) speakers were analyzed using a set of seven short video clips depicting real people walking and running in various locations (Oh, 2003). Oh found that adult and 3-year-old English speakers used more Manner verbs, and significantly fewer Path verbs, than their Korean counterparts in narrating the clips. Similar results were also found for much older children aged 4–12 and adult speakers of English and Greek (verb-framed) by narrating individual pictures containing both Manner and Path from the frog story book (Papafragou et al., 2002). Present data also show that the use of manner verbs in subordinate constructions is as high as path verbs. Unlike Özçalışkan and Slobin (2003)'s study, our data resulted in the high number of subordinated uses of manner verbs, and this may be explained by the differences in selection of the tasks since the content of the tasks may cause this difference between two studies. Because the present study did not include any analysis regarding the selection of non-motion(neutral) verbs, for the current purpose of the present study, it is not possible to comment on and compare the findings in Özçalışkan and Slobin (2003)'s study.

Moving on to the motion verb selection in subordinate clauses, our data resulted in 1160 subordinate clauses, and the most frequently used clause type is the adverbial clause type with 789 instances (68,01%). It is followed by the relative clause selection with 209 instances (18,01%) and the last category is the complement clause selection with 162 instances (13,96%). Although the use of adverbial forms was also stated in Özçalışkan and Slobin (2003: 6)'s study, the other two forms were not mentioned or analyzed. However, they also state that manner information is conveyed either in adverbial forms such as:

(111) “emin adımlarla (with confident steps)” (cf. Özçalışkan and Slobin (2003: 8)

(112) “yavaş yavaş (slowly slowly)” (cf. ibid:8)

(113) Elde fener seke seke dere boyuna varıldı. (Tekin) (cf. ibid: 6)

‘With lantern in their hands, they reached the riverside hopping hopping’

or alternative lexical means such as

(114) “Baykuş rahatsız edildiği için çok kızmış.“ (cf.ibid:8)

‘The owl is very angry because of being disturbed)’

Although such reduplicative elements as ‘emin adımlarla (with confident steps)’ or ‘yavaş yavaş (slowly slowly)’ were also observed in the present study, they were not in the form of clauses and thus were out of the focus of the study.

Our data showed that relative and complement clauses also play a role in expressing motion in subordinate forms as in:

(115) Sağ tarafa$^{(DAT)}$ [düşen$_{SUB+MANNER}$]$_{RELCL}$ top [sekip sekip$_{SUB+MANNER+REDUP}$]$_{ADV\ CL}$ cismin ortasında duruyo. (P2A23)

‘The ball *falling to the right* stops at the center of the object *after bouncing*.’

(116) Armutları [toplamasına$_{SUB+MANNER}$]$_{COMP\ CL}$ yardım ediyolar. (P1)

‘(The kids) help him *picking* the pears.’

In addition, it can be stated that although there are cases where manner verbs are seen in the main verb positions, many of the adverbial clauses were preferred in situations where the main verb is a path and there is some additional motion which adverbial clauses commonly function as modifying or extending the path or augmenting manner in the main verb or even subordinate path verbs with a path verb in the main. Examples are as follows:

(117) Tam [toplarken$_{SUB+MANNER}$]$_{ADV\ CL}$ armutlarının bi tanesini [düşürüyo$_{MAIN+MANNER}$]. (P1)

‘(He, from the context) *drops* one of his pears while *picking* them.’

In (117) above, though the main verb of motion is a Manner verb, the subordinate use of another Manner verb in the form of an adverbial clause has a function of extending the motion scene in such a way that the speaker embodies the beginning of the action of 'picking up' as a longer event and during that event, one of the pears is 'dropping' as another small event.

(118) Sol taraftan$^{(ABL)}$ top [yuvarlanıp$_{SUB+MANNER}$]$_{ADV\ CL}$ kutunun içine$^{(DAT)}$ [giriyo$_{MAIN+PATH}$]. (P2A5)

'The ball *rolls* from the left side and *enters i*nto the box.'

Here in (118) above, the beginning of the event as 'rolling' is subordinated in the form of an adverbial clause and the finishing event becomes the main part of the event with a main Path verb 'giriyo'.

Moreover, when talking about manner verbs in subordination, the converb constructions such as 'tırmanıp' *by climbing*, 'taşa çarparak' *hitting a stone* or reduplications like 'zıplaya zıplaya' *by bouncing (along*) were observed. This finding is also in tune with Özçalışkan and Slobin (2003: 6)'s study. Like the example (118) above where Manner is encoded in subordination to the main Path verb, Gaines (2001) also describes the use of subordinate clauses for expressing Manner of motion with Path verbs in four Bantu languages (Gikuyu, Swahili, Tswana, Zulu), but notes further that there are some minor differences within these languages with respect to the subordination markers involved. In the same vein, Iacobini et al. (2020: 21) points out that Manner is generally encoded in adjuncts ascribable to two main classes: non-finite verbal adjuncts (i.e., converbs) and non-verbal adjuncts (adverbs and nominal adjuncts). They also state that even in S-framed languages, Manner can be expressed out of the verb root, according to their analysis and they give examples from Latin, Italian and English:

(119) *Manner as non-finite verbal adjuncts*, such as

a) Lat. magna volumina labens templa parentis init

'gliding out with sinuous curves entered the temple of his parent',

b) It. gli andò incontro correndo

'he ran to meet him',

c) Eng. she came up, springing out of his carriage;

(120) *Manner as non-verbal adjuncts* such as

a) Lat. passuque incedit inerti

'(she) approached with slow strides',

b) It. vi si diresse frettolosamente,

'he hurried there',

c) Eng. she came in slowly. (119-120 from Iacobini et al. (2020: 21))

In sum, the findings from the present study regarding the use of subordinated manner constructions are in tune with similar studies mentioned above and it seems that, subordinated manner elements do not need to be dependent of the typical V- or S-framed typologies and languages may make use of similar ways to encode manner of motion in subordinate forms.

Moving from the adverbial clauses discussed above, the following is a detailed description of the findings in terms of the other subcategories of subordinate clauses namely the relative clauses and complement clauses. Relative clauses were generally used in modifying the figure of the motion or the ground elements, i.e. *the peasant*, or *the kid with the bike*, *the hat, pears* and etc. in the short movie and the animated objects like *the ball*, *the hoops*, *the boxes, the tunnel* and etc. in the video descriptions as exemplified below:

(121) Sağ tarafa$^{(DAT)}$ [düşen$_{SUB+MANNER}$]$_{REL\ CL}$ top [sekip sekip$_{SUB+MANNER+REDUP}$]$_{ADV\ CL}$ cismin ortasında duruyo. (P2A23)

'The ball *falling* on the right side stops in the middle of the object by bouncing off.'

The Figure element in (121) 'top' above is modified within an event of 'falling' with the use of relative clause and the other subordinate clause 'sekip sekip(bouncing), reduplicated form of an adverbial, is modifying the main verb 'stop'.

(122) Armut [toplayan$_{SUB+MANNER}$]$_{REL\ CL}$ adama rastlıyolar. *(P42)*

‘ (They) come across the man *picking the pears*.’

The relative clause above in (122) has the function of modifying the Figure element ‘adam’ and also describe the event of ‘picking’ in which the Figure acts.

Lastly, complement clauses come as the third category and they mainly function like ‘helping motion verbs’ since they are ordered with main clause verbs such as‘*çalışmak*’ [to try], ‘*başlamak*’ [to start] or ‘*yardım etmek*’ [to help] in both tasks:

(123) Armutları [toplamasına$_{SUB+MANNER}$]$_{COMP\ CL}$ yardım ediyolar. (P1)

‘(The kids) help him *picking* the pears.’

(124) Top bi tane tümseğe$^{(DAT)}$ [çıkmaya$_{SUB+PATH}$]$_{COMP\ CL}$ çalıştı. (P34A14)

‘The ball tried to *go up/ascend* on a bump.’

For the last linguistic element in our study, case markings in the motion expressions were counted as 1396. Out of this, the most frequently observed one is the dative case with 762 instances. It is followed by ablative with 500 and finally locative with 134 instances.

By looking at the data from both tasks together, it can be stated that there is a dominant use of dative case markers in both tasks. Dative case generally addresses the figure’s motion towards a ground element, Ablative case refers to translocational motion where the figure element has a motion beginning from Source or *Place 1* to Goal or *Place 2* or more places and Locative case marking refers to the locatedness on the ground which can mean no change of location or just motion on the same place.

Özçalışkan (2009: 272) states that Turkish speakers showed a greater tendency to describe events in their study without any path elements other than the Path verb in the main verb slot. However, unlikely, our study showed that participants had a tendency to describe

events with additional path links to path main verb via directional cases such as dative, ablative or locative. Some examples from our data can be given:

(125) Top bi tane tümseğe$^{(DAT)}$ [çıkmaya$_{SUB+PATH}$]$_{COMP\ CL}$ çalıştı. (P34A14)

'The ball tried to go up/ascend on a bump.'

In (125) the *Ground* element 'tümsek' -bump is marked with dative -*A* marker since it describes the direction of the action towards.

(126) Yolda$^{(LOC)}$ [ilerlerken$_{SUB+PATH}$]$_{ADV\ CL}$, karşılıklı bi bisiklet daha [geliyo$_{MAIN+PATH}$]. (P3)

'Another bike comes while (he) follows the way.'

The locative marker -*DA*, in (126) above, represents the continuation of the action on the same *Ground*.

(127) Bi halkanın içine$^{(DAT)}$ gri top [giriyo$_{MAIN+PATH}$]. (P36A13)

'A gray ball enters into a hoop.'

The direction of the main Path in (127) given by a Path verb 'giriyo' is marked with dative -*A* marker on 'içine', representing the Path of the Figure element towards the Ground.

The examples (125-127) given above show that Turkish speakers can use directional case markers as additional tools to add details about figure-ground, source-goalrelationships even when there is some Path verb in the main verb slot.

Overall, when thinking about the motion inventory of languages, it can be said from the findings and examples all given above that, Turkish places Path in the main verb slot in most descriptions of motion events and when required, the language inventory gives optional ways to express Manner information. One of these ways which is seen in the

present study is through the use of subordinate verb forms which mainly occurred with adverbial clauses. The use of case markings is a way of linking Path information between the figure and the ground elements. In our study, taken all these findings together, as put byBeaver's et al. (2010), Ibarretxe-Antuñano (2004) and Slobin (2004), the idea that "the morpho-syntactic configuration of a language may also act as an important factor in explaining typological patterns" seems a working hypothesis and present findings are compatible with this idea.

## 5.2. DISCUSSION OF THE FINDINGS ON FICTIVE MOTION

Participants' (n=59) drawings were counted as centimeters in total. Total mean length of total calculation for 12 Non-fictive sentences are ***M*=82,65** and for 12 Fictive sentences are ***M*=96,53** centimeters.

Below is a comparison made for two groups of pairs with sentence-to-sentence details regarding $M_{lenght}$ in each*:*

Table 13. *Comparison of the Pairs with and without any difference from drawings*

| **Pairs (NF/*F*) without difference** | **$M_{lenght}$ (=cm)** |
|---|---|
| 1) Ev iki dağ arasında<br>24) *Ev iki dağ arasında yer alıyor.* | 5,36<br>5,91 |
| 8) Yapraklar ovanın her tarafındaydı.<br>2)*Yapraklar ovanın her tarafına saçılmış.* | 15,8<br>16,29 |
| 3) Market otoparkın yanında.<br>11) *Market otoparka bakıyor.* | 10,05<br>9,92 |
| 17) Yılan yoldan uzakta.<br>6) *Yılan yolun kenarında yatıyor.* | 4,51<br>4,70 |
| 12) Kadın bahçe kapısından uzaktaydı.<br>20*)Kadını bahçe kapısına doğru yönlendirdim.* | 5,40<br>5,50 |

| **Pairs (NF/*F*) with difference** | **$M_{lenght}$ (=cm)** |
|---|---|
| 7) Yön tabelası kasabaya doğruydu.<br>4) *Yön tabelası kasabayı gösteriyor.* | 5,09<br>5,66 |
| 22) Dövme çocuğun omzuyla boynunun arasında. | 1,76 |

| | |
|---|---|
| 5) *Dövme çocuğun omzundan boynuna doğru uzanıyor.* | 3,42 |
| 9) Çocuğun doğum lekesi dizi ile ayak bileği arasındaydı.<br>14) *Çocuğun doğum lekesi dizi ile ayak bileği arasına yayılmış.* | 0,93<br>1,90 |
| 10) Dere orman ile vadi arasında.<br>13) *Dere kıvrıla kıvrıla vadiye doğru ilerliyor.* | 10,45<br>11,43 |
| 16) Top kapının yanındaydı.<br>21) *Yavaş yavaş topu kapıya yaklaştırdım.* | 2,34<br>6,56 |
| 19) Göl orman ve tren yolu arasında.<br>18*) Orman ile tren yolu arasında bir göl uzanıyor.* | 9,9<br>12,41 |
| 15) Çocuklar futbol sahasında.<br>23) *Çocuklar futbol sahasının etrafında toplanmış.* | 11,01<br>12,77 |

Table 13 above shows the two groups of pairs investigated through the present study in terms of fictivity of motion. Here, two groups of pairs were compared with their $M_{lenght}$. There are five pairs of sentences which showed no significant difference in terms of any fictivity in drawings and seven pairs of sentences with comparable difference in regard to the presence of fictivity found out in drawings.

The pairs which participants showed no difference in the drawings are *1-24, 2-8, 3-11, 6-17,* and *12-20.* Below is the list of sentences in these 5 pairs (fictive sentences are italicized):

1) Ev iki dağ arasında.
24) *Ev iki dağ arasında yer alıyor.*

*2) Yapraklar ovanın her tarafına saçılmış.*
8) Yapraklar ovanın her tarafındaydı.

3) Market otoparkın yanında.
11) *Market otoparka bakıyor.*

6) *Yılan yolun kenarında yatıyor.*
17) Yılan yoldan uzakta.

12) Kadın bahçe kapısından uzaktaydı.
20) *Kadını bahçe kapısına doğru yönlendirdim.*

It seems the verbs in the sentences above do not have any fictive effect on the drawings of the participants. They drew those pairs of sentences in more or less similar lengths. This may have resulted from the selection of verbs which did not make any motion effect on the participants' mental simulation (visual perception in Talmy's terms) of the figure elements.

The pairs that make difference in terms of drawings are *4-7, 5-22, 9-14, 10-13, 16-21, 18-19, and 15-23.* The sentences within these pairs are given below:

7) Yön tabelası kasabaya doğruydu.
*4) Yön tabelası kasabayı gösteriyor.*

22) Dövme çocuğun omzuyla boynunun arasında.
*5) Dövme çocuğun omzundan boynuna doğru uzanıyor.*

9) Çocuğun doğum lekesi dizi ile ayak bileği arasındaydı.
*14) Çocuğun doğum lekesi dizi ile ayak bileği arasına yayılmış.*

10) Dere orman ile vadi arasında.
*13) Dere kıvrıla kıvrıla vadiye doğru ilerliyor.*

16) Top kapının yanındaydı.
*21) Yavaş yavaş topu kapıya yaklaştırdım.*

19) Göl orman ve tren yolu arasında.
*18) Orman ile tren yolu arasında bir göl uzanıyor.*

15) Çocuklar futbol sahasında.
23) *Çocuklar futbol sahasının etrafında toplanmış.*

By looking at the mean lengths in the pairs, the order from bigger difference to the lower difference in pairs is as follows:

16-*21* [*M*=2,34; *M*= *6,56*; *p* =0,000000000000037]

22-*5* [*M*=1,76; *M*=3,42; *p* =0,000000008]

9-*14* [*M*=0,93; *M*=1,90; *p* =0,000000006]

19-*18* [*M=9,90*; *M*=12,41; *p* =0,000002]

7-*4* [*M*=5,09; *M*=5,66; *p* =0,004514]

15-*23* [*M*=11,01; *M*=12,77; *p*=0,020]

10-*13* [*M*=10,45; *M*=11,43; *p* = 0,031824]

From the figures above, it can be said that the nature of the verbs in fictive sentences may have a determining effect on participants' drawing in the advantage of bigger drawings for fictive sentences. By looking at the order of sentences given above, the verbs in sentences with high fictive reading in the present study were determined to be 'yaklaştır'[brings], 'uzan' [extends from/lies to], 'yayıl'[to be spread], 'göster'[points to], 'toplan'[to be gathered] and '(kıvrıla kıvrıla) ilerle'[curves/curls/zigzags towards]. Though not in the same direction with their frequencies, similar statement comes from Walinski (2018: 222) with the data on British National Corpus (BNC) by saying that some verbs are used in fictive motion far more systematically than others, which is indicated by their frequencies found in the corpus. The six most frequent ones listed in BNC are 'run', 'lead', 'go', 'pass', 'cross' and 'follow'. A follow-up study will make it possible to comment more on whether there can be a wider list of verbs which can show fictive motion when used in such sentences.

The fictive sentences in 12-20 and 16-21, however, may seem confusing for some since the verbs themselves may refer to causality in some sense but Talmy (2000:111) uses Demonstrative paths to discard this obscurity:

[Direct quotation from Talmy, 2000:111]

2.3 Demonstrative Paths

The demonstrative type of orientation path again involves a linear object with a point-type front from which an intangible line emerges. But here the fictively moving line functions to direct or guide someone's attention along its path. The particular orientation of the linear object can either be an independent factor that simply occasions an instance of directing someone's attention, or can be intentionally set to serve the purpose of attentional guidance. This function of directing a person's attention can be the intended end result of a situation. Or it can be a precursor event that is instantiated or followed by another event, such as the person's directing his or her gaze, or moving bodily along the fictive path. Thus, in the examples in (128a-b), a linear object with a front end, such as an arrow or an extended index finger, seems to emit an intangible line from its front end. This line moves in the direction of the object's orientation so as to direct someone's attention, gaze, or physical motion along the path specified by the preposition.

(128) a. I/The arrow on the signpost pointed toward/away from/into/past the town.

b. I pointed/directed him toward/past/away from the lobby.

By judging from the explanation above, the sentence *20 [Kadını bahçe kapısına doğru yönlendirdim]* seems to be compatible with this explanation and in tune with fictive judgments. However, sentence *21 [Yavaş yavaş topu kapıya yaklaştırdım]* seems like an outlier since it does not seem to fit to the explanation of Talmy abovementioned and has a sense of causality behind the verb itself. So, it can be discarded from the list.

In sum, the verb selection may affect the participants' understanding of the sentence pairs. In more detail, compared to the non-fictive sentences where, instead of a verb, a nominal predicate (generally with the copula verb 'be') is present in the verbal position, the motion verbs in their fictive counterparts may have an effect on participants' drawings. This is what was expected in the beginning of this study. The participants drew bigger or larger figure elements in the fictive sentences compared to the figure elements in non-fictive sentences. However, in order to be sure why just half of the pairs are driven by verb selection and resulting in bigger drawings in length whereas the other half of them is not, more research is needed with a variety of tasks in addition to drawing.

One possible explanation may come from ‘mental scanning’ the figure object. Like Matlock (2004: 1390) states, the conceptualizer (speaker or listener) takes a perspective in the scene and mentally simulates ‘movement’ or ‘visual scanning’ along the figure. From our data, we can think that participants may have felt that the figure element in the pairs *5-22, 9-14, 18-19, 4-7, 15-23 and 10-13,* required more visual scanning than their non-fictive counterparts. Also, Langacker (1990) calls it ‘*sequential* scanning’ (building up a representation in steps by “moving” from one point to another along the figure). In this way, when we compare the pairs which have no differences in drawing to the ones which resulted in difference, it can be said that the figure elements in the latter ones are more suitable to have a sequential scanning in the participants’ minds than their pairs with no difference in between.

As a final thought, although drawing studies give us a clue about mental scanning of the figure objects, more research (like decision-time studies in Matlock, 2004) is needed to clarify to what extent this mental simulation of motion is actually in effect.

# CONCLUSION

The present study has analyzed the actual motion events in Turkish from a structural point of view, such that linguistic structures of case and subordination have been tested within the context of narrated events. Moreover, the study has set off an attempt to analyze fictive motion as well but with a different point of view.

In this section, the findings of the study are summarized in the light of research questions set out at the beginning of the study. Then, the outcomes of the study are stated. Finally, possible suggestions are made for future research in the area of motion events.

The research questions are re-stated below and findings regarding each section are included accordingly:

1. What kind of cases and subordinated constructions can go along with motion verbs to elaborate motion events in Turkish?

   It was found in this study that *complement clauses, relative clauses,* and *adverbial clauses* are used in the subordinate forms of motion expressions. In addition, *dative, ablative* and *locative* cases were observed accompanying motion expressions. The details will be further explained in the subsequent lines.

2. What is the contribution of occurrence for the cases and subordination to expressing motion events in Turkish?

   Out of 3499 clauses which consist of clauses with motion expressions, which means each predicate includes a category of motion:
   The main and subordinate verbs of motion expressions are as follows:
   *2339 (66,84%)* of them were found in main clause forms,
   *1160 (33,15%)* of them in subordinate clause forms.

In order to see the proportion of Path and Manner verbs divided into subordinate clauses, the following figures are given:

| | | |
|---|---|---|
| Of 1160 subordinate clauses, | Path verbs were counted as | 577 (49,74%) and |
| | Manner verbs were as | 583 (50,25%). |

By looking at the figures given above, it can be said that participants selected mainly Path verbs in descriptions of motion events displayed in the tasks. This is an expected result when taking Turkish as a V-framed language where Path is always encoded in the verb. Although the sampling and the dataset may differ, our findings are compatible with Özçalışkan and Slobin (2003)'s comparative study on English and Turkish motion verbs. In that study, they analyzed English and Turkish in terms of the use of motion verbs based on the *Frog Story* narrations and literary texts they selected from Turkish and English. For the sake of comparability, though findings are similar in both of their tasks, the findings in the present study showed similarity with their results from the Frog story task, as Path of motion was dominant in the main verb slot.

Unlike Özçalışkan and Slobin (2003)'s study, where the limited use of manner verbs was counted, data of the present study resulted in the relatively high number of subordinated uses of manner verbs, and this may be explained by the differences in the nature of the tasks. The content of the tasks may cause this difference between two studies. In more detail, the present study made use of dynamic narration elicitations where the scenes included motion expressions a lot. This, in turn, provides the opportunity to count more options with motion expressions.

Turning to the frequency of case markers found in the present study, out of 1396 instances of case markings, the most frequently observed one is the *dative case* (n=762). It is followed by the *ablative case* (n=500) and the locative case comes in the last place (n=134).

3. Considering that linguistic elements such as case marking and subordination play a role in encoding motion events, in what ways any relation can be linked between subordination and encoding motion events in Turkish?

   Data in the present study resulted in 1160 subordinate clauses. and the most frequently used clause type is the adverbial clause (n=789**,** 68,01%). It is followed by the relative clauses (n=209, 18,01%) and the last category is the complement clause (n=162, 13,96%). Although the use of adverbial forms was also stated in Özçalışkan and Slobin (2003: 6)'s study, the other two forms were actually not included in their analysis:
   "For Turkish speakers, by contrast, it is typically only the adverbial expression that indicates manner. This contrast between the two language types is even more marked with regard to descriptions that only suggest manner."

   Adverbial clauses were mainly preferred in situations where the main verb is a path and there is some additional motion in which adverbial clauses commonly function as modifying or extending the path or manner main verb. When talking about manner verbs in subordination, the converb constructions such as *tırmanıp* '(by) climbing', *taşa çarparak* 'hitting a stone' or reduplications like *zıplaya zıplaya* 'by bouncing (along)' were found.

   Relative clauses were generally used in modifying the figure of the motion or the ground elements, i.e. *the peasant*, or *the kid with the bike*, *the hat, pears* and etc. in the short movie and the animated objects like *the ball*, *the hoops*, *the boxes, the tunnel* and etc. in the video descriptions of the present study.

   Complement clauses were found mainly functioning like 'helping motion verbs' since they are ordered with main clause verbs such as '*çalışmak*' [to try], '*başlamak*' [to start] or '*yardım etmek*' [to help] in both tasks.

4. Does case marking play a role in regard to Change of State (CoS) and Change of Location (CoL) situations in participants' descriptions of motion events?

By looking at the data from both tasks together, it can be stated that there is a dominant use of dative case markers in both tasks. The *Dative* case generally addresses the figure's motion towards a ground element; *Ablative* case refers to translocational motion where the figureelement has a motion beginning from Source or *Place 1* to Goal or *Place 2* or more places and *Locative* case marking refers to the locatedness on the ground which can mean no change of location or just having motion on the same place.

5. What is the relationship between motion verbs and fictive motion in Turkish?

The non-fictive sentences have a nominal predicate (generally with the copula verb 'be') in the verbal position. However, the motion verbs in their fictive counterparts may have an effect on participants' drawings. This is what was expected at the beginning of this study. The participants drew bigger or larger figure elements in the fictive sentences compared to the figure elements in non-fictive sentences. However, in order to be sure why just half of the pairs are driven by verb selection and result in bigger drawings in length whereas the other half of them are not, more research is needed with a variety of tasks in addition to drawing.

A question that cannot be fully answered on the basis of the results obtained in this study is to what extent our cognitive ability to mentally simulate motion conveyed by the verb plays a crucial role in structuring fictive motion expressions. However, the outcome of the big picture from the findings suggests that fictivity of motion is not random somehow. Rather, as put by Waliński (2018: 234), a fictive motion expression can be interpreted either as a simple representation of the state of spatial extension or more figuratively through the summary scanning based on a simulation of actual motion, and these are affected by the particular use and the wider linguistic context.

Further, brain studies carried out by Cacciari, et al. (2011) and Romero Lauro, et al. (2013) show that the activation in the motor cortex during the comprehension of sentences containing motion verbs (without any actual movement in the essence) depends on the abstractness of meaning as well as the

conventionalization of use. Therefore, it can be said that differences or the degree in the conceptual processing of fictive motion expressions may be determined according to the extent to which particular patterns are conventionalized.

Although the fictive motion is possibly fed by the effect of actual motion in our minds, there doesn't seem a necessary link between actual motion and fictive motion patterns, and fictive motion doesn't seem to have certain lexicalization typologies such as V- framed or S-framed, which shows us that fictive motion should be regarded differently from actual motion in language.

Through the present study, Turkish, in the case of Talmyan V-framed typology, has been analyzed with newly adapted dynamic elicitation tasks which can be beneficial in addition to narration booklets with only static stories on motion events.

This study also brings a detailed look at the motion event descriptions through using elaborate structural analysis via case marking and subordination in terms of motion verbs by means of the adaptation of Beavers et al. (2010: 360) in which the linguistic resources acting as the options for expressing a given event in a given language can be divided into two main classes: *manner in the verb slot* or *path in the verb slot.* First, the outcome of the findings suggests that in addition to motion expressions in simple clauses(one main verb of motion), the subordinate motion expression in the form of adverbial, relative or complement clauses are also helpful in finding a relation between the type of subordinate clauses and the way motion expressions are used. This relation has been found in a variety of forms: The use of adverbial clauses in motion expressions has a function of modifying or extending the main path or manner verb or even subordinate path verbs with a path verb in the main clause, as well as sequencing the motion events between main and subordinate clauses. As put in Beaver et al. (2010: 360), if the language employs Path in verb, and if the language has manner adverbials (ideophones, subordinate clauses, adverbs), these may encode manner. So, this is also true for the present findings where subordinated forms of motion expressions were encoded through adverbial clauses functioning as the manner of motion. Relative clauses are generally used in modifying the figure of the

motion or the ground elements. Complement clauses mainly function like ‘helping motion verbs’ to the main verbs.

Second, the present study offers an explanation regarding the possible relation between the use of case markings and the motion expressions in Turkish. Three types of cases, -dative, ablative and locative-, are mainly used by Turkish speakers to express either change or state of location of the motion events during the tasks.

In sum, the findings of the present study reported above suggest that conceptual event representation of motion expressions should be regarded on a graded continuum of path and manner of motion, instead of being just classified into a strict two/three-way typology of languages, which was also previously asserted by various researchers such as Jackendoff (1990, 1996), Croft et al. (2010), Ibarretxe Antuñano (2009) and Beavers et al. (2010), to mention a few.

The study is also a first attempt at analyzing fictive motion sentences. The participants drew bigger/larger figure elements in the fictive sentences compared to the figure elements in non-fictive sentences. However, future work with more elaborate tools of analysis needs to be carried out to state clearer if such a motion effect can be seen out of seemingly virtual motion sentences. Moreover, the conceptualization of fictive motion expressions is said to be affected likely by knowledge of foreign languages (Tomczak & Evert, 2015), by some other factors that apply to a particular instance of interactional discourse (Lewandowska-Tomaszczyk, 2012). Furthermore, in situations when a subjective experience of motion does occur for a fictive motion expression, there is a wide range of possible variants put by Blomberg and Zlatev (2014) as to its strength, character, clarity, homogeneity, and what is conceptualized as moving. Since very little is known about how exactly mental simulations take place for fictivity of motion or what aspects of simulation can be triggered by what sorts of language, it is hoped that the findings of the present study will shed light or add up to the new comments on the place of fictive motion in the literature.

*Areas of Application Suggested with the Findings in the Study*

Present study can be a added to the list of studies which adapted and applied dynamic elicitation tasks such as Motion Verb Stimulus created by the team of researchers (Levinson, 2001). In addition to narration booklets with only static stories on motion events, such tools can be beneficial in the analysis of motion events regarding discourse and syntactic relations which can yield more proper results since the concept of motion is dynamic itself. In that case, investigating a dynamic phenomenon with a dynamic set of tools can give new insights into our inventory of knowledge on motion. Since the present study was carried out via narration of dynamic visuals, all the data can be organized from the bits of sentences to the bigger chunks of utterances, which in turn, make possible to have free production of motion expressions. Moreover, since the tools can be easily applied in any language, it enables to have a comparable ground for findings from various languages.

The study is also a first attempt at analyzing fictive motion sentences. The participants drew bigger/larger figure elements in the fictive sentences compared to the figure elements in non-fictive sentences. In situations when a subjective experience of motion does occur for a fictive motion expression, there is a wide range of possible variants put by Blomberg and Zlatev (2014) as to its strength, character, clarity, homogeneity, and what is conceptualized as moving. Since very little is known about how exactly mental simulations take place for fictivity of motion or what aspects of simulation can be triggered by what sorts of language, it is hoped that the findings of the present study will shed light or add up to the new comments on the place of fictive motion in the literature.

The application of the tools yield an inventory regarding the types of motion verbs and their frequencies. They can be used in the semantic classification of verbs as well as lexicological tagging of the elements of motion.

*Contributions Of Findings into Turkish*

The present study is one of the first investigations analysing fictive motion expressions in Turkish. Although one single tool of analysis, namely drawing task, can be complemented with further follow-up studies, the preliminary findings in the study show

that participants can have a motion-based interpretation of the sentences with fictive expressions compared to those with non-fictive expressions.

This study also brings a detailed look at the motion event descriptions through using elaborate structural analysis via case marking and subordination in terms of motion verbs by means of the adaptation of Beavers' et al. (2010: 360) framework which encourages to use morpho-syntactic resources in languages in the analysis of motion events. First, the outcome of the findings suggests that in addition to motion expressions in simple clauses (one main verb of motion), the subordinate motion expressions in the form of adverbial, relative or complement clauses are also helpful in finding a relation between the type of subordinate clauses and the way motion expressions are used. Second, the present study offers an explanation regarding the possible relation between the use of case markings and the motion expressions in Turkish. Three types of cases, -dative, ablative and locative-, are mainly used by Turkish speakers to express either change or state of location of the motion events during the tasks. Third, using dynamic tools for the analysis of motion events in Turkish enabled to see narrations rich in motion expressions. This, in turn, yielded rich motion expressions even in subordinate clauses. In comparison to Path of motion elements found frequently in main clauses as well as in subordinate clauses, Manner of motion elements were also seen in high frequency both in main clauses and subordinate clauses. Therefore, instead of a certain classification of motion typology, Turkish should be given a wider place where Path and Manner elements of motion can clearly be observed.

Overall, the findings of the present study reported above suggest that using dynamic tools which directly point to motion events can yield findings that are rich in motion. Moreover, based on the structural resources investigated in the study and findings obtained, conceptual event representation of motion expressions should be regarded on a graded continuum of path and manner of motion, instead of being just classified into a strict two/three-way typology of languages, which was also previously asserted by various researchers such as Jackendoff (1990, 1996), Croft et al. (2010), Ibarretxe Antuñano (2009) and Beavers et al. (2010), to mention a few.

*Suggestions for Future Research*

The focus of the present study were subordinate forms of clauses and thus adverbial phrases functioning as manner of motion were not taken info consideration. The following study will include adverbial phrases as well so as to have a comprehensive understanding in motion.

The future studies would also work on motion events via eye-tracking tests. By doing so, a deeper analysis would yield results on how and where participants focus their attention (e.g., eye-fixation patterns onto the figure, ground, path, or manner of motion) when they are shown some dynamic stimuli. In turn, this would help us understand the nature of event encoding better.

Moreover, the present study did not have a scope regarding the comparison of in-group differences between participants. A follow-up study with the comparison of participants' selection of motion elements would also be of help in deciding on whether there is any individual (or in-group) difference that may have an effect on the selection of either path or manner over one another or the use of case selection and subordination. With current findings at hand, the way participants opt for path or manner constructions vary and it can be said that some of the participants produced longer utterances with the selection of motion verbs and some others did so with shorter utterances in descriptions of animations and in movie narration, but the reason(s) what could be the nature behind this variability will be the topic of a follow-up.

Finally, an addition of a discourse-based approach in which some contexts rich of motion events or sentence completion sets given with motion events (e.g., missing part would be the motion act itself) would provide us to see in a bigger picture how motion events are encoded, and which core elements of motion are selected based on the context. By doing so, we would have an opportunity to compare the results out of individual motion events (such as short video clips) and contextual events together, seeing that the variation between the two (or maybe three for the current literature) encoding patterns as V- or S-framing is conditioned by pragmatic and cognitive factors as put by Beavers et al. (2010, and favored in Iacobini et al. (2020)).

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# APPENDIX 1. ETHİCS BOARD APPROVAL FORM

Tarih: 07.02.2019 18:29
Sayı: 35853172-300-E.00000422419

**T.C.**
**HACETTEPE ÜNİVERSİTESİ**
**Rektörlük**

Sayı : 35853172-300
Konu : Abdullah TOPRAKSOY Hk

**SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜNE**

İlgi : 30.11.2018 tarihli ve 12908312-300/00000350041 sayılı yazı.

Enstitünüz İngiliz Dilbilimi Anabilim Dalı Doktora programı öğrencilerinden **Abdullah TOPRAKSOY**'un **Doç. Dr. Emine YARAR** danışmanlığında hazırladığı **"Türkçe'de Devinim Yüklemleri: Biçim-Sözdizimsel Bir Yaklaşım"** başlıklı tez çalışması Üniversitemiz Senatosu Etik Komisyonunun **8 Ocak 2019** tarihinde yapmış olduğu toplantıda incelenmiş olup, etik açıdan uygun bulunmuştur.

Bilgilerinizi ve gereğini saygılarımla rica ederim.

e-imzalıdır
Prof. Dr. Rahime Meral NOHUTCU
Rektör Yardımcısı



Hacettepe Üniversitesi Rektörlük 06100 Sıhhiye-Ankara
Telefon:0 (312) 305 3001-3002 Faks:0 (312) 311 9992 E-posta:yazimd@hacettepe.edu.tr İnternet Adresi: www.hacettepe.edu.tr

Duygu Didem İLERİ

# APPENDIX 2. ORIGINALITY REPORT

**HACETTEPE UNIVERSITY**
**GRADUATE SCHOOL OF SOCIAL SCIENCES**
**Ph.D. DISSERTATION ORIGINALITY REPORT**

**HACETTEPE UNIVERSITY**
**GRADUATE SCHOOL OF SOCIAL SCIENCES**
**ENGLİSH LİNGUİSTİCS DEPARTMENT**

Date: 06/10/2022

Thesis Title : Motion Predicates in Turkish: A Morpho-syntactic Treatment

According to the originality report obtained by myself/my thesis advisor by using the Turnitin plagiarism detection software and by applying the filtering options checked below on 06/10/2022 for the total of 190 pages including the a) Title Page, b) Introduction, c) Main Chapters, and d) Conclusion sections of my thesis entitled as above, the similarity index of my thesis is 16%.

Filtering options applied:

1. ☒ Approval and Decleration sections excluded
2. ☒ Bibliography/Works Cited excluded
3. ☐ Quotes excluded
4. ☒ Quotes included
5. ☒ Match size up to 5 words excluded

I declare that I have carefully read Hacettepe University Graduate School of Social Sciences Guidelines for Obtaining and Using Thesis Originality Reports; that according to the maximum similarity index values specified in the Guidelines, my thesis does not include any form of plagiarism; that in any future detection of possible infringement of the regulations I accept all legal responsibility; and that all the information I have provided is correct to the best of my knowledge.

I respectfully submit this for approval.

Date and Signature 06/10/2022

| | |
|---|---|
| **Name Surname:** | Abdullah Topraksoy |
| **Student No:** | N15146689 |
| **Department:** | English Linguistics |
| **Program:** | English Linguistics-PhD |
| **Status:** | ☒ Ph.D. ☐ Combined MA/ Ph.D. |

**ADVISOR APPROVAL**

APPROVED.

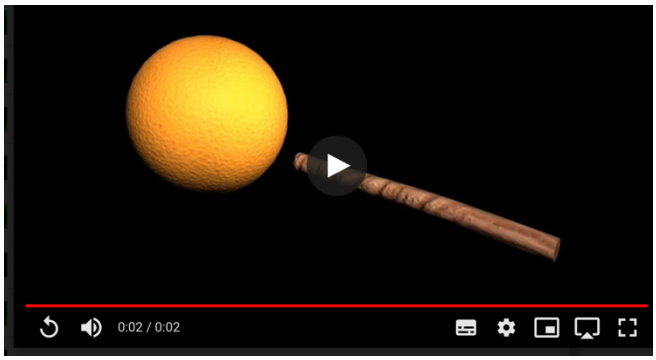
(Title, Name Surname, Signature)

# APPENDIX 3. SAMPLE OF THE TASKS ADMINISTERED IN THE DISSERTATION

## 1) PEAR FILM

https://drive.google.com/file/d/10yaZlAGzZWpnjcB-3biVkXUsmwX7TwhZ/view?usp=sharing

**2) ANIMATION VIDEOS**




Videos should be played from the link below:

**https://drive.google.com/drive/folders/1em9LO-j8MWQSvjg6Y5Gl92LxvvcJ4igt**

**3) DRAWING TASK**

Aşağıda verilen cümleleri okuyunuz. Okuduktan sonra, her bir cümleden ne anladığınızı ana hatlarıyla çizim yaparak anlatınız.

***1) Ev iki dağ arasında.***

***Çizim:***

***2) Yapraklar ovanın her tarafına saçılmış.***

***Çizim:***

***3) Market otoparkın yanında***

***Çizim:***

***4) Yön tabelası kasabayı gösteriyor.***

***Çizim:***

***5) Dövme çocuğun omzundan boynuna doğru uzanıyor.***

Çizim:

***6) Yılan yolun kenarında yatıyor.***

***Çizim:***

**7) *Yön tabelası kasabaya doğruydu.***

**Çizim:**

***8) Yapraklar ovanın her tarafındaydı.***

***Çizim:***

***9) Çocuğun doğum lekesi dizi ile ayak bileği arasındaydı.***

***Çizim:***

***10) Dere orman ile vadi arasında.***

**Çizim:**

*11) Market otoparka bakıyor.*

**Çizim:**

*12) Kadın bahçe kapısından uzaktaydı.*

**Çizim:**

***13) Dere kıvrıla kıvrıla vadiye doğru ilerliyor.***

**Çizim:**

***14) Çocuğun doğum lekesi dizi ile ayak bileği arasına yayılmış.***

**Çizim:**

***15) Çocuklar  futbol sahasında.***

**Çizim:**

***16) Top kapının yanındaydı.***

***Çizim:***

***17) Yılan yoldan uzakta.***

**Çizim:**

***18) Orman ile tren yolu arasında bir göl uzanıyor.***

**Çizim:**

***19) Göl orman ve tren yolu arasında.***

**Çizim:**

***20) Kadını bahçe kapısına doğru yönlendirdim.***

**Çizim:**

***21) Yavaş yavaş topu kapıya yaklaştırdım.***

**Çizim:**

***22) Dövme çocuğun omzuyla boynunun arasında.***

**Çizim:**

***23) Çocuklar futbol sahasının etrafında toplanmış.***

**Çizim:**

***24) Ev iki dağ arasında yer alıyor.***

***Çizim:***

***Teşekkürler***

# APPENDIX 4. FINDINGS FROM THE PILOT STUDY

## 4.1. FINDINGS FROM THE PILOT 1

The *Movie Narration Task* resulted in findings given below:

From the transcriptions, it was observed that participants used complex clauses (with gerunds, adverbial subordinate clauses) in most of their descriptions while expressing motion events such as

(129) …bi taşa takılıp düşüyo. (adverbial subordinate clause)

‘ trips over a stone and falls’ and

(130) … aşağı inip sepetinin içine boşaltıyo. (adverbial subordinate clause)

‘He(fr.context) goes down and empties it into his basket.’

They also used sequential simple sentences when describing motion expressions such as

(131) Çocuk armutlarla beraber devriliyo. Bisikleti devriliyo.

‘The boy rolls over with the pears. His bike is overturning.’ and

(132) Bisikleti devriliyo. İşte sepet de devriliyo. Armutlar dört tarafa saçılıyo.

‘His bike overturns. Here the basket is overturning. Pears are scattered all over.’

In some of their descriptions, participants also made use of ablative case endings while describing motion event in the story such as

(133) Şeyden iniyo merdivenden iniyo. Sonra o üç çocuğu görüyo, armut yiyerek önünden geçiyolar.

‘He's coming down from the thing, he's going down the stairs. Then he sees those three children, they pass by eating pears.’

and dative case endings like

(134) onu tekrar sepete koydu ve tekrar ağaca çıktı.

‘He put it back in the basket and went back to the tree.’

Participants also used some noncanonical sentence patterns like postverbal use of case endings:

(135) Orda işte adam armut topluyo daldan.

'There, the man is picking pears from the branch.'

and postverbal objects like:

(136) İşte tek tek armutları topluyo hatta yere düşüyo armut işte.

'Here he collects the pears one by one, even falling to the ground.'

The *Verbal Judgment Task* of the second step had the following findings:

1. *Table 14*. Below shows that participants scored higher for manner verbs *fırlat-, düş-, kaç-, tırman-, uç-*, and *zıpla-* while they gave lower score for manner verbs *it-,* and *kay-*

Table 14. *Participants' judgment scores for Manner Verbs*

| **Manner Verbs** | **1-5 rating choices of participants (n=8)[16] (%)** | | | | |
|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** |
| *Düş-* 'fall' | | | | 1 (12.5%) | 7 (87.5%) |
| *Fırlat-* 'throw' | | | | 2 (25%) | 6 (75%) |
| *Uç-* 'fly' | | | | 3 (37,5%) | 5 (62.5%) |
| *Kaç-* 'escape' | | | | 4 (50%) | 4 (50%) |
| *Tırman-* 'climb' | | | 1(12.5%) | 2 (25%) | 5 (62.5%) |
| *Zıpla-* 'jump' | | 1(12.5%) | | 5 (62.5%) | 2 (25%) |
| *Kay-* 'slide' | 1(12.5%) | 1(12.5%) | | 5 (62.5%) | 1 (12.5%) |
| *İt-* 'slide' | | 2 (25%) | 4 (50%) | | 2 (25%) |

2. Path verbs *gir-, saklan-, kaldır-, ayrıl-*, and *toplan-* were given higher scores by the participants while other path verbs *takip et-, bin-,* and *yanaş(yaklaş)-* were scored lower

[16] 1= no match, 2= rarely match, 3= no idea, 4= good match, 5=perfect match

on the acceptability scale. Figures regarding the acceptability judgments of participants can be seen in *Table 15* below:

Table 15. *Participants' judgment scores for Path Verbs*

| **Path Verbs** | **1-5 rating choices of participants (n=8)**[17] | | | | |
|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** |
| *Gir-* 'enter' | | | | | 8 (100%) |
| *Saklan-* 'hide' | | | | 1(12.5%) | 7 (87.5%) |
| *Kaldır-* 'lift' | | | | 1(12.5%) | 7(87.5%) |
| *Toplan-* 'gather' | | | 1(12.5%) | | 7(87.5%) |
| *Ayrıl-* 'leave/depart' | | | | 3 (37.5%) | 5 (62.5%) |
| *Takip et-* 'follow' | | | 2(25%) | 3(37.5%) | 3(37.5%) |
| *Bin-* 'mount/ride/get on' | 1(12.5%) | 1(12.5%) | 1(12.5%) | 3(37.5%) | 2 (25%) |
| *Yanaş(yaklaş)-* 'approach' | 4 (50%) | 1(12.5%) | 1(12.5%) | 2(25%) | |

**3.** When looked at the figures in *Table 14* and *Table 15* as a whole, it is no surprise that participants rated path verbs higher than manner verbs, although the difference is slight. At this point**,** it can be said that participants ratings are in compatible with Talmy's two-fold (S framed vs V-framed) classification of motion verbs in that Turkish follows a V-framed pattern in which path verbs are preferred higher. On the contrary, despite a V-framed language, judging from the figures in *Table 14* above, manner verbs were also scored high, though slightly lower than path verbs, by Turkish participants in numbers that cannot be underestimated.

[17] 1= no match, 2= rarely match, 3= no idea, 4= good match, 5=perfect match

*Verb-Sentence Matching Task* of the second step had the following results:

*Table 16* shows a summary of the rating numbers of participants according to the sentence structures.

Table 16. *Participants' rating according to the appropriateness of the chosen sentence to the verb*

| **Sentence Structure** | **Participants' rating choice for all verbs(n=18)[18] (%)** | | | |
|---|---|---|---|---|
| | **1** | **2** | **3** | **4** |
| M-boundary (b) | 12 (66.66%) | 1 (5.55%) | 4 (22.22%) | 1(5.55%) |
| M+boundary (d) | 2 (11.11%) | 10 (55.55%) | 3 (16.66%) | 3(16.66%) |
| MS+boundary (c) | 2 (11.11%) | 3(16.66%) | 7 (38.88%) | 6 (33.33%) |
| MS-boundary (a) | 2 (11.11%) | 4 (22.22%) | 4(22.22%) | 8 (44.44%) |

By looking at the figures in *Table 16*, it is evident that participants mostly preferred single main clause constructions without boundary crossing events. This is followed by those, which are in the form of single main clause constructions with boundary crossing events.

However, structures of main clause+subordinate clause were not preferred much. This finding is in tune with Özçalışkan&Slobin (2003:1) who stated that these complex patterns of motion events bring more processing load for the language users. That is why they are only preferred when manner is at issue.

## 4.2. FINDINGS FROM THE PILOT 2

***Movie Narration Task***

**a) Verb selection**

[18] 1=perfect match, 2=good match, 3=rarely match, 4= little or no match

The most frequently used 10 verbs were collected from the narrations of the participants. The distribution of the verbs is given in *Table 17.* Below:

Table 17. *The most frequent 10 verbs in the narrations of participants*

| **Verb Type (n=10)** | **Token (n=97)**[19] | **%** |
|---|---|---|
| [20]*(P) gel-* 'come' | 23 | 23.7% |
| *(P) topla-* 'pick up' | 17 | 17.5% |
| *(M) düş-* 'fall' | 15 | 15.4% |
| *(P) geç-* 'pass' | 11 | 11.34% |
| *(P) in-* 'descend' | 8 | 8.24% |
| *(P) kaldır-* 'lift/raise' | 7 | 7.21% |
| *(M) götür-* 'carry/take' | 5 | 5.15% |
| *(M) dökül-* 'pour' | 5 | 5.15% |
| *(M) yürü-* 'walk' | 3 | 3.09% |
| *(P) dön-* 'return' | 3 | 3.09% |

By looking at the figures in *Table 17*, it is clear that path verbs are more frequent in participants' narrations than manner verbs.

Some examples from the narrations are given below:

(137)

[19] Token refers to the sum of the total instances counted for each verb type.

[20] P= PATH / M= MANNER

| *O sırada, ıı,* | *başka* | *bi çiftçi* | *bi keçi-yle* | *geç-ti* | *armut-lar-ın* | *yan-ın-dan.* |
|---|---|---|---|---|---|---|
| At that moment, another | INDF farmer | INDF goat-INS | **pass**-PST.3SG | pear-PL-GEN | side-POSS-ABL | |
| | **Figure** | | **Path** | **Ground** | | |

'At that time, another farmer with a goat passed by the pears.'

Here above it can be seen that 'bi çiftçi' has the role of *Figure* and 'armutların yanı' is the *Ground* element in the sentence. The verb 'geçti' is the *Path* element itself.

(138)

| Bisiklet | taş-a | çarp-tı | ve | düş-tü, | çocuk da | düş-tü | bisiklet de | düş-tü. |
|---|---|---|---|---|---|---|---|---|
| bicycle | stone-DAT | crash-PST | and | fall-PST | boy-DEF too | fall-PST.3SG | bicycle too | fall-PST.3SG |
| **Figure** | **Ground** | **Manner** | | **Manner** | **Figure** | **Manner** | **Figure** | **Manner** |

'(The) bicycle crashed into a stone and fell, the boy fell too bicycle fell, too.'

In (138) there are two clauses connected to via 've' conjunction. Inside, there are two more clauses. In the first part of the sentence, there is a *Manner* verb 'çarptı' and is conjoined with another *Manner* verb 'düştü'.

In the second part, the verb 'düştü' is used again in both of the clauses. Therefore it is an all *Manner* example.

**b) Sentence type**

Participants used *subordinate clauses* (n=67 out of 97 clauses, 69%) in most of their descriptions while expressing motion events. The examples are given below:

(139) …bi <u>taşa takılıp</u> düşüyo.

INDF stumble/trip.CVB fall.PROG:3SG

'(he) falls down by stumbling.'

In (139), the *main verb* is ‘düşüyo’ which is a *Manner* verb, and the *subordinate verb* is ‘taşa takılıp’ again a *Manner* verb.

(140) ... aşağı inip sepetinin içine boşaltıyo.

descend.CVB basket.GEN inside.POSS put.PROG:3SG

‘(he) puts (them) into his basket upon descending.’

There is a *main verb* ‘boşaltıyo’ above and also there is another verb in *subordinate* clause ‘inip’.

Details regarding the distribution of subordinate clauses are given in *Table 18* below:

Table 18. *The distribution of subordinate clauses in narrations*

| **Type of Subordinate Clause** | **Frequency of Use (n=67)** | **%** |
|---|---|---|
| Adverbial Clause | 36 | 53.7% |
| Adjective Clause | 22 | 32.8% |
| Complement Clause | 9 | 13.4% |

**c) Other means**

Here this part includes findings such as the types of cases and deviated uses of sentences observed in motion descriptions of the participants.

The use of *ablative case endings* were also observed in their descriptions of the story such as:

(141)

Şey-den iniyo merdiven-den iniyo.

thing-ABL descend.PROG:3SG stairs-ABL descend.PROG:3SG

‘(he) descends from the stuff (thing), from the stairs.’

Here above it is clear that ablative case is used twice sequentially.

and *dative case endings* like:

(142) onu tekrar sepet-e koydu ve tekrar ağac-a çıktı.

that.ACC again basket-DAT put.PST:3SG and again tree-DAT ascend.PST:3SG

'(he) put it into the basket and (he) went up the tree again.'

Above is an example of dative-marked use of cases in conjoined clauses.

It was also noted that participants also used some noncanonical (for Turkish-an SOV language) sentence patterns like postverbal use of case endings:

(143)

Orda işte adam armut topluyo daldan.

there man.DEF pear pick.up.PROG:3SG tree branch.ABL

'there from the tree he picks up pears.'

In (143) above, the *Ground* entity 'daldan' is used in postverbal position instead of a regular preverbal position.

(144)

... üç çocuk da terse doğru gitti yani armut toplayan adamın yanına.

three boy.PL too opposite towards go.PST:3PL namely pear pick.up:REL man.GEN side.POSS.DAT

'… three boys went in opposite direction namely towards the man picking up pears.'

Again it is clear in the above example that the *Ground* entity '*armut toplayan adamın yanına'* is placed after the verb which is regarded noncannonical in Turkish SOV order.

postverbal uses of objects like:

(145)

İşte tek tek armutları topluyo hatta yere düşüyo armut işte.

one by one pear.PL.ACC pick.up.PROG:3SG even fall.down.PROG:3SG pear

'(he) picks up the pears one by one even (some of) it falls down.'

In this case, the secondary *Figure* entity 'armut' follows the verb 'düşüyo', which is still a postverbal position.

***Verbal Judgment Task***

The selection of the participants was counted based on the frequencies of each verb in groups of path or manner. Below is the description given for manner verbs in *Table 19* and for path verbs in *Table 20* respectively:

Table 19. *Participants' judgment scores for manner verbs*

| **Manner Verbs** | **Participants' rating (n=7)[21] (%)** | | | | |
|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** |
| *düş-* 'fall' | | 1 (14.2%) | | 1 (14.2%) | 5 (71.4%) |
| *fırlat-* 'throw' | | | 2 (28.5%) | | 5 (71.4%) |
| *uç-* 'fly' | | 1 (14.2%) | | 1 (14.2%) | 5 (71.4%) |
| *tırman-* 'climb' | | | 1 (14.2%) | 2 (28.5%) | 4 (57.1%) |
| *kaç-* 'escape' | | 1 (14.2%) | | 2 (28.5%) | 4 (57.1%) |
| *zıpla-* 'jump' | | 2 (28.5%) | | 2 (28.5%) | 3 (42.8%) |
| *it-* 'push' | | 4 (57.1%) | 1 (14.2%) | 1 (14.2%) | 1 (14.2%) |
| *kay-* 'slide' | 3 (42.8%) | 2 (28.5%) | | 1 (14.2%) | 1 (14.2%) |

[21] 1= no match, 2= rarely match, 3= no idea, 4= good match, 5=perfect match

Table 20. *Participants' judgment scores for path verbs*

| **Path Verbs** | **Participants' rating (n=7) (%)** | | | | |
|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** |
| *gir-* 'enter' | | | | | 7 (100%) |
| *toplan-* 'gather' | | | | 1 (14.2%) | 6 (85.7%) |
| *saklan-* 'hide' | | | | 2 (28.5%) | 5 (71.4%) |
| *kaldır-* 'lift' | | | 1 (14.2%) | 2 (28.5%) | 4 (57.1%) |
| *ayrıl-* 'leave/depart' | | 2 (28.5%) | | 2 (28.5%) | 3 (42.8%) |
| *bin-* 'ride/mount' | | 2 (28.5%) | | 3 (42.8%) | 2 (28.5%) |
| *takip et-* 'follow' | | 4 (57.1%) | 2 (28.5%) | | 1 (14.2%) |
| *yaklaş-* 'approach' | 2 (28.5%) | 2 (28.5%) | 2 (28.5%) | 1 (14.2%) | |

As shown in *Tables 19* and *Table 20* together, participants rated path verbs higher than manner verbs, as expected if Turkish is to be regarded as a V-framed language.

***Verb-Sentence Matching Task***

Table 21. *Distribution of sentence structure based on participants' ratings*(n=18)

| **Sentence Structure** | **Participants' rating[22] choice for all verbs. (%)** | | | |
|---|---|---|---|---|
| | **1** | **2** | **3** | **4** |
| M-boundary (b) | 11 (61,11%) | 2 (11,11%) | 4 (22,22%) | 1 (5,55%) |
| M+boundary (d) | 3 (16,66%) | 10 (55,55%) | 2 (11,11%) | 3 (16,66%) |
| MS+boundary (c) | 2 (11,11%) | 4 (22,22%) | 6 (33,33%) | 6 (33,33%) |
| MS-boundary (a) | 2 (11,11%) | 4 (22,22%) | 5 (27,77%) | 7 (38,99%) |

[22] 1=perfect match, 2=good match, 3=rarely match, 4= little or no match

By looking at the figures in *Table 21*, it is evident that participants mostly preferred *single main clause* constructions *without boundary crossing events*. This is followed by those, which are in the form of single main clause constructions with boundary crossing events.

However, structures of main clause+subordinate clause were not preferred much. This finding is in tune with Özçalışkan & Slobin (2003:1) who stated that these *complex patterns of motion events bring more processing load* for the language users. That is why they are only preferred when manner is at issue.

**Drawing Task**

Table 22. *Drawing comparisons for non-fictive vs fictive by mean average*

| **Pairs of sentences**[23] | **Mean length(=cm)** **(averaged by 6 pariticipants)** |
|---|---|
| 1-32 | 1.87 cm - **2.36 cm** |
| 8-2 | **2.70 cm** -2.36 cm |
| 3-12 | 1.46 cm - **1.93 cm** |
| 7-4 | 1.69 cm - **2.00 cm** |
| 29-5 | 0.35 cm - 0.375 cm |
| 21-6 | **3.84 cm**- 1.49 cm |
| 9-25 | 1.675 cm- **3.13 cm** |
| 10-17 | 0.52 cm- 0.72 cm |
| 11-15 | 1.14 cm- **2.62 cm** |
| 13-27 | 0.43 cm- **0.94 cm** |
| 16-14 | 1.37 cm- 1.39 cm |
| 26-18 | **4.15 cm-** 2.03 cm |

[23] Numbers of sentences on the right are those including *fictive* motion

| | |
|---|---|
| 19-31 | **1.87 cm-** 1.70 cm |
| 20-28 | 0.95 cm- **1.475 cm** |
| 23-22 | 0.96 cm- **1.29 cm** |
| 24-30 | **1.37 cm**- 0.68 cm |

From the mean average comparisons in *Table 22* above, some of the fictive expressions do not seem to have any effect on participants' sense of actual motion when drawing. Even, in some cases, non-fictive sentences were higher in length than their fictive counterparts, which was not expected.

Some pairs where *fictive expressions* were regarded to be prominent (NF refers ton on-fictive and F refers to fictive):

(146)

(NF-1) Askeri üs iki dağ arasındadır.

'Military base is between two mountains.'

**(F-32)** ***Askeri üs iki dağ arasında uzanıyor.***

'Military base lies down between two mountains.'

(147)

(NF-3) Uçurum duvarı vadinin yanındadır.

'The cliff wall is near/next to the valley.'

**(F-12)** ***Uçurum duvarı vadiye bakıyor.***

'The cliff wall faces toward the valley.'

(148)

(NF-9) Arabaya oturdum ve manzara önümdeydi.

'I sat in the car and the scenery was in front of me.'

**(F-25)** ***Arabaya oturdum ve manzaranın önümden hızla geçişini izledim.***

'I sat in the car and watched the scenery rush past me.'

Some pairs where *non-fictive expressions* were regarded to be prominent:

(149)

***(NF-21) *Yılan ışıktan uzaktadır.***

'The snake is away from the light.'

(F-6) *Yılan ışıktan uzakta yatıyor.*

'The snake is lying away from the light.'

(150)

***(NF-26) *Tavanı boyadığımda boya lekeleri zemindeydi.***

'As I painted the ceiling, there were paint spots on the floor.'

(F-18) *Tavanı boyadığımda boya lekeleri yavaş yavaş zemine yayıldı.*

'As I painted the ceiling, paint spots slowly progressed across the floor.'

(151)

***(NF-24) *Silahım oturma odasından uzaktaydı.***

'My gun was away from the living room.'

(F-30) *Silahımı oturma odasından uzağa doğrulttum.*

'I pointed my gun away from the living room.'

As a short summary of the findings from drawings, 8 of the pairs (1-32; 3-12; 7-4; 9-25; 11-15; 13-27; 20-28; 23-22) resulted with the dominance of fictive sentences over non-fictive counterparts whereas in 5 of the pairs (8-2; 21-6; 26-18; 19-31; 24-30), non-fictive sentences led the fictive counterparts and there was no clear distinction to be made with 3 of the pairs (29-5; 10-17; 16-14).

In conclusion, while some fictive expressions may have required participants to have a sense of actual motion in their drawings, which is seen by average length results, some of the fictive expressions do not seem to have any effect on participants' sense while drawing them.

### 4.3. Findings from the Pilot 3

It is the final pilot in which the materials and the ways of analysis are similar to the main study. So, it can be seen from the findings that they are consistent with those of found in the main study.

Below is a summary of findings in the form of overall descriptions from both tasks. Therefore, the findings are given together in each section of the analysis below.

#### 4.3.1. Selection of the Clause Types

Participants (n=8) used *complex clauses with subordination* (n=93 out of 202 clauses, 46%) and simple clauses in main verbs (n=109 out of 202 clauses, 54%) in a total of their narrations for the *Pear Film*; and they used 396 simple clauses and 163 complex clauses with subordination in expression motion descriptions throughout the second task (the set of animated videos.). The summary of participants' selection for the clauses is given together for both tasks in *Table 23.* below:

Table 23. *Total distribution of subordinate clauses with motion in both tasks*

| **Type of Subordinate Clause** | **Frequency of Use (n=256)** | **%** |
|---|---|---|
| Adverbial Clause | 180 | 70.31% |
| Relative Clause | 49 | 19,14% |
| Complement Clause | 27 | 10,54% |

an example of a complex clause used with motion expression in the narrations:

(152)

Armutları topla-yıp aşağı indir-iyo.

pear.PL pick.up-CVB down put.down-PROG:3SG (from *yp1p)*

'he (*from the context)* puts the pears down after picking them up.'

In (152), there are two clauses integrated into each other. The main verb is ‘indiriyo’ and the subordinate verb is ‘toplayıp’ which is an adverbial clause.

### 4.3.2. Selection of the Case Markings

Participants (n=8) used *Dative case* in their descriptions of motion events with 225 instances in both tasks. In the second place, they selected *Ablative case* with 131 and finally *Locative case* with 32 instances as seen in *Table 24*. below:

Table 24. *Total distribution of case markings in both tasks*

| **Type of the Case** | **Frequency of Use (n=388)** | **%** |
|---|---|---|
| Dative | 225 | 57,98% |
| Ablative | 131 | 33,76% |
| Locative | 32 | 8,24% |

Some examples showing the cases in use are given below:

(153)

Çocuk yeniden yol**a** çıkıyo bisikletli şekilde. (from *yp2p*)

Boy.DEF again set.out.DAT: PROG:3SG bicycle by

‘The boy sets out for again by bicycle.’

(154)

… eşekle birlikte birisi geçiyo adamın yanın**dan** *(yp6p)*

Donkey.INST with somebody pass by.PROG:3SG man.GEN side:POSS.3SG.ABL

‘Someone passed by with a donkey near the man.’

(155)

Yol**da** bi bisikletli başka bi kızla karşılaşıyo sanırım. *(yp7p)*

Road.LOC. a. bicycle.INST another girl.INST run.into guess:1SG

'I think he meets (runs into) another girl with a bike on the road.'

(156)

Top tepey**e** çıkıyo. (yp3-V21)
Ball.DEF hill.DAT ascend.PROG:3SG

'The ball goes up the hill.'

In (156) above there is a dative case marked *Ground* entitiy 'tepeye'

(157)

Top tepe**den** yuvarlanarak geçiyo. (yp5-V9)
Ball.DEF hill.ABL roll.CVB pass.PROG:3SG

'The ball passes the hill rolling.'

Here above, Figure 'Top' follows a path over the *Ground* element 'tepeden' which is marked for Ablative case.

(158)

Top belirli bi tümseğin zirvesin**de** bi kere sekiyo. (yp6-V11)

Ball.DEF certain a elevation.GEN peak:POSS.LOC once bounce.PROG:3SG

'The ball bounces once at the peak of a certain elevation. '

In (158), the Figure 'top' is located on the *Ground* 'zirvesinde' which is marked for Locative case.