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ANAYSIS OF SOME SEMANTIC PRIMITIVES IN TURKISH WITH SPECIAL REFERENCE TO JACKENDOFF'S CONCEPTUAL SEMANTICS

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YÜKSEK LİSANS TEZİ

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Bu çalışma jürimiz tarafından İngiliz Dili ve Edebiyatı Anabilim Dalında YÜKSEK LİSANS TEZİ olarak kabul edilmiştir.

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Yukarıdaki imzaların adı geçen öğretim elemanlarına ait olduklarını onaylarım.

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ÖZET

Bu çalışmanın ana hedefi Türkçe'de kavramsal yapıları ve kavramsal ilkelleri incelemektir. Bu amaca ulaşmak için, Türkçe sözlüklerden ve çeşitli elektronik metinlerden saptanan veritabanı incelenmiş, Türkçe sözcüklerin kendi anlambilimsel özelliklerinden yola çıkılarak anlambilim ve sözdizimi alanları bir araya getirilmiş ve Türkçe tümcenin kavramsal altyapısı ayrıştırılmış, betimlenmiş ve sınıflandırılmıştır. Türkçe'nin kavramsal alt yapısı için yapılabilecek kapsayıcı sınıflandırma ve betimlemeler hem Türkçe dilbilgisine katkıda bulunacak hem de sözlük yazanlar, yabancı dil öğrenenler, ikinci dil olarak Türkçe öğrenenler ve dil yapısı, dil evrenceleri çalışmaları yapanlar için yararlı olacaktır.

Çalışmanın Giriş bölümünde araştırma problemi tanıtılmış, çalışmanın amaçları, veri toplama yöntemi, sınırlamalar ve çalışmaya temel oluşturacak bazı kavramların tanımları belirtilmiştir.

I. bölümde, Kavram Anlambilimi ve Jackendoff'un Kavramsal Yapı Kuramı sunulmuştur. Ayrıca, Kavramsal Yapı Kuramı çerçevesinde, anlambilimsel kategoriler, kavramsal ilkeller, kavramsal işlevler ve anlam alanlarından söz edilmiş ve Konusal İlişkiler Kuramı (Thematic Relations Hypothesis) hakkında genel bilgi verilmiştir. Kavram Anlambilimi'nde sözdizimi ile anlambilimi arasındaki ilişki de bu bölümde anlatılmıştır.

II. bölümde, Türkçe ve İngilizce'de Uzam anlambilimsel alan üzerinde durulmuş, Yer ve Yol kavramsal ilkelleri tanıtılmıştır. Daha sonra, devinim eylemlerinin bir sınıflandırması verilmiş ve Türkçe'de yön ve tarz gösteren devinim eylemleri ayrıntılı olarak tartışılmıştır. Bunun yanı sıra, uzamsal alanda [OLAY] ve [DURUM] gösteren eylemler üzerinde de durulmuştur. Bu bölümde, ayrıca, ettirgen işlevler Talmy (1985b)'nin

güç dinamik (force dynamic) etkileşimi ve Jackendoff (1990)'un bu etkileşimi uyarlayarak oluşturduğu ettirgen işlevlerin kavramsal anlam biçimselleştirmesi çerçevesinde kısaca incelenmiştir.

III. bölümde, Uzam anlambilimsel alana da uzantıları olan Uzam-dışı anlambilimsel alan, Zaman (Temporal), İyelik (Possessive), Tanımlama (Identificational), Koşul (Circumstantial) ve Varoluş (Existential) alanlarındaki Türkçe ve İngilizce örnekler ile ayrıntılı olarak tartışılmıştır.

SUMMARY

This study aims to analyze the conceptual structures and conceptual primitives in Turkish and English. In order to reach this aim, the database collected from Turkish dictionaries and various electronic texts has been studied in detail. Two separate fields, syntax and semantics, have been combined by means of the semantic properties of the words. Also, the conceptual structures of Turkish sentences have been decomposed, defined and classified.

The comprehensive classifications and definitions for the conceptual structures in Turkish would contribute Turkish grammar and provide valuable information to dictionary writers, foreign language learners, second language users and those who study language structure and language universals.

Introduction presents the problems and the hypotheses of this study. This section, also, introduces the purpose of the study, data collection, limitations and the definitions.

In Chapter I, we have presented Conceptual Semantics and Jackendoff's Conceptual Structure Hypothesis. In the frame of Conceptual Structure Hypothesis, semantic categories, conceptual primitives (conceptual constituents), conceptual functions and semantic fields have been discussed and an overall information about Thematic Relations Hypothesis has been given. The relation between syntax and semantics in Conceptual Semantics has also been discussed in this section.

In Chapter II, we have dealt with the Spatial semantic field in Turkish and English especially focusing on the conceptual primitives Place and Path. Next, the

classification of motion verbs has been given and the motion verbs that express direction and manner in Turkish have been discussed in detail. Moreover, the causative functions in Turkish and English have been studied according to Talmy's (1985b) force dynamic interaction and Jackendoff's (1990) conceptual semantic formalization of causative functions on the basis of force dynamic.

Chapter III focuses on the Non-spatial semantic field providing Turkish and English examples for Temporal, Possessive, Identificational, Circumstantial and Existential field.

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INTRODUCTION

Concepts form the basis for the meaning of nouns, verbs and adjectives. Providing a means of understanding the world, concepts are used to interpret our current experience by classifying it as being of a particular kind and hence relating it to prior knowledge. The concept "concept" is central to many of the cognitive sciences. The mechanisms for conceptualization have been investigated by philosophers and psychologists as well as cognitive scientists. Conceptualization is an abstract, simplified view of the world that we wish to represent. It is one of the most difficult and most fundamental part of our understanding on human intelligence. It reflects the lexical meanings of words which is the subject of lexical semantics. Lexical semantics purposes to represent the meaning of each word in the language and to show how the meanings of words in a language are interrelated.

One of the basic goals of lexical semantic theory is to provide a specification of word meanings in terms of semantic components and combinatory relations among them. Different works in lexical semantics indicate that the meaning of every lexeme can be analysed in terms of a set of meaning components. The individuation of meaning components characterising classes of words in a language and the combinations of such components within word roots lead to the identification of lexicalization patterns varying across languages.

The basic goals of research on lexicalization of meaning components aims to define a set of meaning components, to provide a description of word meanings in terms of meaning components and combinatory relations among them, to identify preferences displayed by languages for lexicalization patterns and to identify linkings between each

meaning components' conflation pattern and syntactic properties of words.

Relying on the basic assumption that it is possible to identify a set of semantic components and combinatory relations among them, Jackendoff (1983, 1990) develops a decompositional theory of meaning which he calls Conceptual Semantics. Conceptual Semantics identifies the meanings of expressions with mental entities. Jackendoff (1987:122) defines that "meaning in natural language is an information structure that is mentally encoded by human beings" (cited in Saeed, 1997:249). Thus, the meaning of a sentence is a conceptual structure.

Jackendoff (1993:31) defines the conceptual structure as the form of mental representation and adds that in conceptual structure, all distinctions of meaning in language are encoded and humans conceptualize the world. He summarizes the goals of conceptual structure as follows:

a. to state the primitives and principles of combination that generate the infinite class of possible concepts, both phrasal and lexical;

b. to state the rules of inference, pragmatics and heuristics;

c. to state the correspondence rules between conceptual structure and the various other faculties of mind with which it interacts.

This semantic analysis of Jackendoff is tied with Chomsky's Generative Syntax. Jackendoff proposes a semantic theory which is based on the idea that meaning is compositional like syntactic structures. In Generative Syntax, words are organized into phrases and in Jackendoff's Conceptual Semantics, the word meaning is projected into phrase meaning by means of syntax. For example, the prepositional phrase *in the house* has a direct correspondence in semantics, $[_{\text{Place}}$ IN $[_{\text{Thing}}$ HOUSE] which is built from the

meanings of the individual words IN and HOUSE.

Jackendoff, also bases his framework of Conceptual Structures on Gruber's Localistic Approach which takes the motion and spatial events as central for the conceptualization of other events. Motion and the location events are the two types of events considered. In the case of location events, the set of participants are the located entity and the location. In the case of motion events, they are the moving entity and the path it follows. The moving entity is referred to as the Theme in the Localistic Approach (Gutierrez, 2001).

Under the light of Generative Syntax and Localistic Approach, Jackendoff decomposes the natural language into a set of semantic categories, conceptual primitives (also called conceptual constituents), conceptual functions and semantic fields. He identifies six semantic categories: Event, State, Thing, Path, Place and Property. A sentence is built up of these semantic categories at the level of conceptual structure. There are correspondence rules that determine which semantic categories are expressed by which syntactic categories and these rules can be language specific. Events and States are identified by verbs; Things by nouns; Paths and Places by prepositions and adverbs and Properties by adjectives. Conceptual primitives (conceptual constituents) are the essential units of conceptual structure and each of which belongs to one of a set of semantic categories mentioned above. They are the unitary pieces of mental representation and are encoded within square brackets [...] like [EVENT], [STATE], [THING], [PATH], [PLACE] and [PROPERTY]. Among conceptual functions, the main ones are BE, which represents a [STATE], and GO, which represents any event. STAY, CAUSE and INCH (inchoative) are the other functions which represent [EVENT] and ORIENT and EXT (extension) are the functions which represent [STATE] in addition to BE. The place-

functions are ON, IN and AT and the path-functions are TO, FROM, TOWARD, AWAY-FROM and VIA.

Jackendoff, also, mentions the subfields of semantic primitives which he calls semantic fields. These semantic fields are spatial semantic field and non-spatial semantic field. The spatial semantic field in the language can extend into non-spatial fields which are Temporal, Possessive, Identificational, Circumstantial and Existential. For example, (1a) shows the function BE_{Loc} which represents location in space. (2a), (3a) and (4a) show the non-spatial use of BE as Temporal, Identificational and Possessive respectively.

(1) a. Jim is in the pub.

a'. $[_{State}\ BE_{Loc}\ ([_{Thing}\ JIM], [_{Place}\ IN\ ([_{Thing}\ PUB])])]$

(2) a. The party is on Saturday.

a'. $[_{State}\ BE_{Temp}\ ([_{Thing}\ PARTY], [_{Place}\ AT\ ([_{Time}\ SATURDAY])])]$

(3) a. The theatre is full.

a'. $[_{State}\ BE_{Ident}\ ([_{Thing}\ THEATRE], [_{Place}\ AT\ ([_{Property}\ FULL])])]$

(4) a. This book belongs to John.

a'. $[_{State}\ BE_{Poss}\ ([_{Thing}\ BOOK], [_{Place}\ AT\ ([_{Thing}\ JOHN])])]$

Identifying the constituents of such structures allows us to analyze the alternations in the linguistic context in which particular words, mainly verbs and prepositions, can be used, and to identify generalizations over relations between alternate uses of lexical items.

Statement of the Problem

This study attempts to analyze the conceptual structures and conceptual primitives in Turkish and to answer the questions below.

1. Which semantic primitives are used to identify the linguistic structures in Turkish sentences?

2. Which linguistic units are used to express semantic primitives?

3. What are the semantic fields of semantic primitives in Turkish sentences?

Hypotheses

Our hypotheses are the following:

1. In Turkish, the semantic primitives Event, State, Thing, Path, Place and Property are used to identify the linguistic structures.

2. Event and State correspond to verbs; Thing to nouns; Path to postpositions, case markers and adverbs; Place to cases and postpositions and Property to adjectives and inchoative verbs.

3. In Turkish sentences, the semantic fields of semantic primitives are spatial field and non-spatial fields which are temporal, Possessive, Identificational, Circumstantial and Existential.

Purpose of the Study

In Turkish, there is no study in the field of Conceptual Semantics. In this respect, this study is the first in the field. The main purpose of this study is to combine two

separate fields, syntax and semantics, by means of the semantic properties of the words. This study also aims to decompose, to define and to classify the conceptual structures of Turkish sentences. Conceptual Structure claims that word meanings are mentally represented and the central principle of Jackendoff's theory relies on the feature that Conceptual Structure formulates the primitive concepts. The significance of the theory increases when it is shown that the formulations of primitive concepts are innate and universal, i.e. they have cross-linguistic realizations. The other purposes of this study are to show Event-, State-, Path- and Place-functions in Turkish and to determine the properties which are specific to Turkish.

Data Collection

In order to form a comprehensive database, firstly the Turkish dictionaries, Kamusi Türki, TDK Güncel Türkçe Sözlük and Türkçe Sözlük, were scanned and verbs and their complements were compiled. Also, to determine the conceptual structures in different uses, polysemous nature of the verbs were examined. In addition to this procedure, to access the naturally occurring data for the identification of different uses linguistic expressions, various electronic texts were scanned and collected.

Limitations

This study is particularly limited to the motion Events in the main clause in terms of the analysis of conceptual structures and semantic categories. The methodological base for the analysis is Jackendoff's (1983, 1990) Conceptual Structure Theory.

Definitions

Semantic Categories: The conceptual parts of speech that are the bases of conceptual structure. A sentence is built up of these semantic categories at the level conceptual structure.

Conceptual primitives (conceptual constituents): The unitary pieces of mental representation which are encoded within square brackets [...].

Conceptual functions: The functions which impose conceptual constraints on the nature of and relations between function argument(s) and which correspond to conceptual constituents.

Real world: The source of environmental input.

Projected world: The world as experienced.

Organization of the Study

In the first chapter, we will present the Jackendoff's theory of Conceptual Semantics. We will also provide overall information on Conceptual Structure Hypothesis, semantic categories, semantic constituents and Thematic Relations Hypothesis.

Chapter II focuses on Spatial semantic field in Turkish and in English. It includes a detailed description and classification of Motion verbs and a comparison between Turkish and English explaining the semantic categories Place and Path. This chapter also deals with the causative functions in Turkish and in English.

Chapter III concentrates on the Non-spatial semantic field in which there are extensions of Spatial semantic fields. It provides the Turkish and English examples for Temporal, Possessive, Identificational, Circumstantial and Existential fields.

I. CONCEPTUAL SEMANTICS

In this chapter, a general account on the Jackendoff's theory of Conceptual Semantics will be introduced. In the first section, the basis of Conceptual Semantics, the concept, and the difference between E-concepts and I-concepts will be dealt. The second section will focus on the Conceptual Structure Hypothesis. In the third section, Jackendoff's distinction between the real world and the projected world will be presented. Then, the components of Jackendoff's conceptual structure will be categorized and discussed. In the fifth section, thematic roles and Thematic Relations Hypothesis which is the basis of the analysis of the field of spatial expressions will be discussed. The sixth section will present the syntax-semantics relationship in conceptual structure. Lastly, tokens and type distinction which is the result of applying human categorization to the conceptual structure will be presented.

I. 1. E-concepts and I-concepts

Semantics can roughly be defined as the study of meaning and the meaning of nouns, verbs and adjectives are based on concepts or thoughts. Jackendoff (1990:7; 1992:22) defines the term concept as follows:

> On the one hand, it is something out there in the world.... On the other hand, a concept is spoken of as an entity within one's head, a private entity, a product of the imagination that can be conveyed to others only by means of language, gesture, drawing, or some other imperfect means of communication.

Following Chomsky's distinction between E-language (externalized language) which treats language as an external artifact used by human beings and I-language (internalized language) which treats language as a body of knowledge within the minds of

speakers, Jackendoff (1990, 1992) distinguishes between E-concepts and I-concepts. He chooses I-concepts rather than E-concepts as the basis for his theory of meaning which he calls Conceptual Semantics.

On any semantic theory, there are a number of constraints. Jackendoff (1983:11) lists them as follows:

> *Expressiveness:* A theory of semantic structure must be observationally adequate; it must be able to express all the semantic distinctions made by a natural language.
> *Universality:* The stock of semantic structures used by particular languages must be universal.
> *Compositionality:* A semantic theory must provide a principled way for the meanings of the parts of a sentence to be combined into the meaning of the whole sentence.
> *Semantic Properties:* A semantic theory must be able to account formally for so-called 'semantic properties' of utterances, such as synonymy, anomaly, analyticity, and presupposition.

Jackendoff (1983:13) suggests two further restrictions on a semantic theory: the *grammatical constraint* and *cognitive constraint*. Grammatical constraint claims that the relation between syntactic structure and semantic structure should be efficient and direct and also differences between them should be minimal. Cognitive constraint points out that there should be some levels of mental representation at which language becomes compatible with other peripheral systems (i.e. vision, audition, smell etc.). Jackendoff (1983:16) says that without such a level of representation we would be unable to talk about what we see and hear. In response to the cognitive constraint, Jackendoff proposes the Conceptual Structure Hypothesis.

I.2. The Conceptual Structure Hypothesis

This hypothesis states that "there is a single level of mental representation,

conceptual structure, at which linguistic, sensory, and motor information are compatible" (Jackendoff, 1983:17). Jackendoff admits that such a level of mental representation is at worst "a plausible idealization" and at best it is "a strong unifying hypothesis about the structure of mind". Conceptual structure is not part of language by itself but it is part of thought. Thoughts expressed by language are structured in terms of a cognitive organization, that is, conceptual structure.

Jackendoff assumes that conceptual structures can be characterized by a set of conceptual well-formedness rules and correspondence rules. The conceptual well-formedness rules are universal and innate, i.e. everybody is born with the capacity to develop same concepts. Yet, one's developing the concepts is dependent upon linguistic experience and world knowledge. In other words, concepts must be able to encompass at least everything which can be expressed in language as well as having "the expressive power to deal with the nature of all of the other modalities of experience" (Jackendoff, 1983:17).

Correspondence rules (or interface rules) concern the mapping between the representational modules of grammar which are phonology, syntax and semantics. The correspondence rules are part of the grammar. Therefore, they must be acquired by the child. In other words, like syntactic and phonological rules, they must be constrained as to be learnable (Jackendoff, 1990:40).

Jackendoff (2002:125) illustrates the overall grammar as in Figure 1.

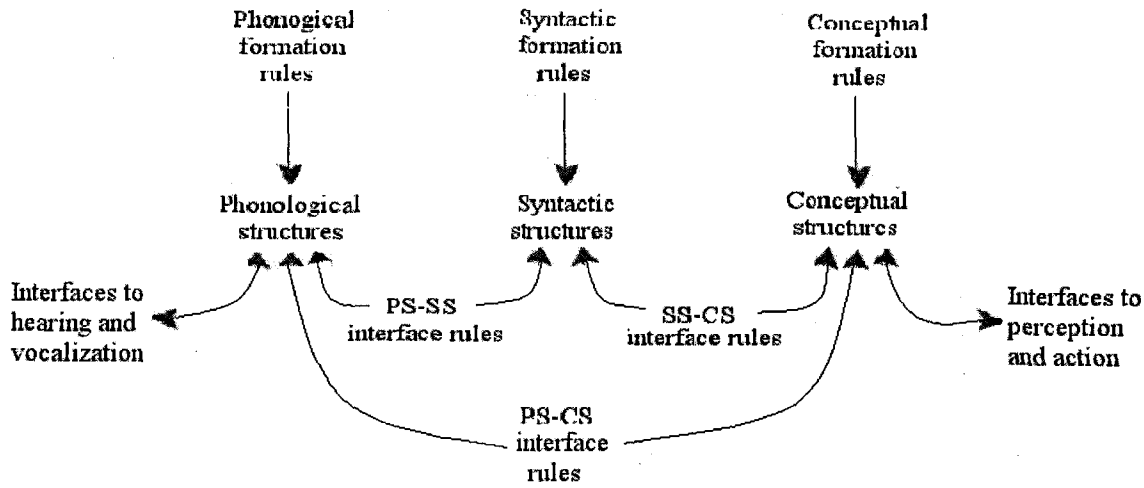


Figure 1. The overall grammar

Conceptual structure is related to the linguistic system in two ways:

> First, conceptual structure could be a further level beyond semantic structure, related to it by a rule component, often called pragmatics, that specifies the relation of linguistic meaning to discourse and extralinguistic setting.
>
> ....
>
> Alternatively, semantic structures could be simply a subset of conceptual structures – just those conceptual structures that happen to be verbally expressible.

(Jackendoff, 1983:18-19)

To sum up, the Conceptual Structure Hypothesis claims that there is a single level of mental representation onto which and from which all peripheral information is mapped. This level is characterized by conceptual well-formedness rules which are innate and universal.

I. 3. The Real World vs. the Projected World

Jackendoff also presents a discussion depending on the fact that we know the

world only through senses, never directly. If we cannot know the real world, but only its projections into our minds, then statements in language cannot be about the real world because truth is as we perceive it. Thus, Jackendoff (1983:28) differentiates *the real world* and *the projected world* (also called *experienced world* or *phenomenal world*). The projected world does not consist of mental images and the real world is not what we see. Rather, the real world is the source of environmental input and the projected world is the world as experienced. As Jackendoff (1983:29) observes:

> We have conscious access only to the projected world – the world as unconsciously organized by the mind; and we can talk about things only insofar as they have achieved mental representation through these processes of organization. Hence *the information conveyed by language must be about the projected world.*

A metalanguage is introduced for distinguishing the real world from the projected world. The metanotation distinguishes between real-world entities, #projected-world entities# and MENTAL REPRESENTATIONS. The projected world is made up of experiences, that is, conscious awareness. With lack of knowledge of what the projected world is really like, Jackendoff (1983:34) assumes a one-to-one correspondence between #projections# and REPRESENTATIONS of objects.

Language conveys the expressions of conceptual structure as information and this information, which is the reference of linguistic expressions, is not the real world, but the projected world. Projected world is divided into #things# which are the #entities# "with a certain kind of spatial and temporal integrity". A #thing# is "the figure of a figure-ground opposition in the visual field"; the ground is "unattended and relatively less vivid" (Jackendoff, 1983:42).

The #entities# referred to cannot be #things# or #shapes#. Rather, each corresponds to a different sort of projected #entity#, distinct from #things#. Jackendoff

(1983:49) gives the pragmatic anaphoras in (5) to refer to projected #entities#. Each types of projected #entity# represents an organization of the visual field different from #things#.

(5) a. Pro-prepositional phrase:

Your coat is here [pointing] and your hat is there [pointing].

He went thataway [pointing].

b. "do it/that":

Can you do that [pointing]?

Can you do this [demonstrating]?

c. "that ... happen":

That [pointing] had better not happen again around here.

d. Pro-manner adverbial:

You shuffle cards { thus / so / this way } [demonstrating].

e. Pro-measure expression:

The fish that got away was { this / that / yay } [demonstrating] long.

In (5a-e), *here* and *there* refer to #places#, *thataway* refers to a #direction#, *do it* refers to an #action, *that ... happen* refers to an #event#, pro-manner adverbs *thus*, *so* and *this way* refer to #manners# and pro-measure expressions *this*, *that* and *yay* refer to #amounts#.

To support the projection of this variety of #entities#, six semantic ontological categories are listed. These ontological categories will be discussed in detail in section I. 4.

I. 4. Components of Jackendoff's Conceptual Structure

Jackendoff decomposes the natural language into a set of *semantic ontological categories*, *conceptual primitives* (conceptual constituents), *conceptual functions* and *semantic fields*. The semantic categories and conceptual primitives are discussed in the same section, 1. 4. 1.

I. 4. 1. Semantic Ontological Categories

Jackendoff (1983, 1990) proposes a set of semantic categories (or conceptual parts of speech) that are the bases of conceptual structure. At the level of conceptual structure, a sentence is built up of these semantic categories. He identifies six semantic categories: Thing, Event, State, Place, Path and Property. Each representational constituent corresponds to one of these categories. Such constituents contain [THINGS] in their internal structure (Jackendoff, 1983:50).

Jackendoff notes that this list is not to be taken as a complete list. However, "the total set of ontological categories must be universal" (1983:56). He does not speculate on how many categories might exist, but supposes that particular languages can choose from the available set. There are six points of similarity among them (Jackendoff, 1990:22-23-24):

> 1. Each major syntactic constituent of a sentence (excluding contentless constituents such as epenthetic *it* and *there*) maps into a conceptual constituent in the meaning of the sentence.
>
> ....
>
> 2. Each conceptual category supports the encoding of units not only on the basis of linguistic input but also on the basis of the visual (or other sensory) environment.
>
> ....

3. Many of the categories support a type-token distinction.

....

4. Many of the categories support quantification.

....

5. Each conceptual category has some realizations in which it is decomposed into a function-argument structure; each argument is in turn a conceptual constituent of some major category.

....

6. The conceptual structure of a lexical item is an entity with zero or more open argument places. The meanings of the syntactic complements of the lexical item fill in the values of the item's argument places in the meaning of the sentence.

The semantic categories match with the syntactic categories and this is determined by the correspondence rules that can be language specific. Event and State are the categories present in verbs; Thing in nouns; Path and Place in prepositions and adverbs; Property in adjectives.

These major conceptual categories cannot be reduced to the others, but they share important formal properties.

Jackendoff (1983, 1990) proposes a set of conceptual primitives based on the semantic categories. The term conceptual primitives (or conceptual constituents) is used to mean "a unitary piece of mental representation" and they are encoded within square brackets [...] such as [EVENT], [STATE], [THING], [PATH], [PLACE] and [PROPERTY].

I. 4. 2. Conceptual Functions

Jackendoff's conceptual structures are built up from the semantic ontological categories which have the entities Thing, Event, State, Place, Path and Property. Jackendoff proposes a basic formation rule which decomposes each conceptual category

into three basic feature complexes:

(6) [Entity] → [Event / Thing / Place / …
Token / Type
F (< $Entity_1$, < $Entity_2$, < $Entity_3$ >>>)]

On the basis of this basic formation rule, each category allows more specialized formation rules. Jackendoff (1990:43) states these rules for the spatial domain as in (7).

(7) a. [PLACE] → [$_{Place}$ PLACE-FUNCTION ([THING])]

b. [PATH] → [$_{Path}$ { TO / FROM / TOWARD / AWAY-FROM / VIA } ([{ THING / PLACE }])]

c. [EVENT] → { [Event GO ([THING], [PATH])] / [Event STAY ([THING], [PLACE])] }

d. [STATE] → { [State BE ([THING], [PLACE])] / [State ORIENT ([THING], [PATH])] / [State EXT ([THING], [PATH])] }

e. [EVENT] → [$_{Event}$ CAUSE ([{ THING / EVENT }], [EVENT])]

As can be seen in (7), each primitive can be decomposed into function-argument structure. "Functions impose conceptual constraints on the nature of and relations between function argument(s), which are themselves required to correspond to conceptual constituents" (Verspoor, 1997:14). In (7a), Place category can be elaborated as a Place-function with an argument that belongs to the category Thing. IN, ON and AT are major Place-functions. In (7b), Path can be elaborated as one of the five functions - TO, FROM, TOWARD, AWAY-FROM and VIA - that map a reference Thing or Place. In (7c), Event can be elaborated as either of the two Event-functions which are GO or STAY. Each of these functions takes two arguments. The function GO denotes motion along a path and the function STAY denotes statis over a period of time. In (7d), there are three State-functions: BE, ORIENT and EXT. The function BE specifies the location of objects; the function ORIENT specifies the orientation of objects and the function EXT specifies the spatial extension of linear objects along a path. (7e) elaborates an Event as the Event-function of CAUSE. This function takes two arguments which are an Agent or a Cause as the first argument and the Effect as the second argument.

I. 4. 3. Semantic Fields

When schemes for analyzing concepts of spatial location and motion are abstracted, they can be generalized to parallel semantic fields. This claim is based on the fact that many verbs and prepositions occur in two or more semantic fields and form intuitively related patterns. Jackendoff (1990, 1992, 1994, and 2002) illustrates this with four semantic fields: spatial location and motion, possession, ascription of properties and scheduling of activities. Possession, ascription of properties and scheduling of activities are

considered as non-spatial semantic fields. These non-spatial fields will be analyzed in detail in Chapter III with their comparison to spatial semantic field.

I. 5. Thematic Roles and the Thematic Relations Hypothesis

The traditional thematic roles refer to a small set of elements including agent, patient, theme, source, goal and others which are assigned to one argument of a verb. The concept of thematic roles is examined in the works of Gruber (1965), Fillmore (1968, 1977), Dillon (1977), Chomsky (1981) and Marantz (1984). Fillmore calls thematic roles *semantic cases*, Dillon *semantic roles*, Gruber *thematic relations* and Chomsky and Marantz *θ (theta) roles*. Jackendoff (1990:46) defines thematic roles as "part of the level of conceptual structure, not part of syntax" and they are "particular structural configurations in conceptual structure" (47). The core set of thematic relations for the analysis of verbs of motion proposed by Gruber (1965) are:

Agent: An entity which causes an event or state

Theme: The object undergoing motion or being located

Location: The location of the object located

Source: The initial location of the object undergoing motion

Goal: The final location of the object undergoing motion.

There are some additional ones for arguments which do not fit any of the set of relations: Instrument, Experiencer, Situation and Path. Jackendoff (1990:47) claims that "the terms *Theme, Agent,* and so on, are not primitives of semantic theory. Rather, they are relational notions defined structurally over conceptual structure".

Jackendoff sees the semantics of motion and location as a key to other semantic fields. This assumption is the *thematic relations hypothesis* which says that in any semantic field of [EVENT]s and [STATE]s the principal conceptual functions are a subset of those used for the analysis of spatial motion [EVENTS] and location [STATES]; fields differ in (i) what sort of entities appear as theme, (ii) what sorts of entities may appear as reference objects, (iii) what kinds of relations assume the role played by location in the field of spatial expressions (Jackendoff 1983: 188). The basis of this thesis is the analysis of the field of spatial expressions.

I. 6. The Relation Between Syntax and Semantics in Conceptual Semantics

Jackendoff distinguishes phonetic representation, syntactic structures and conceptual structures. He adopts the Conceptual Structure Hypothesis which has been discussed in section I. 2. "The concerns of semantic theory with the nature of meaning and with the mapping between meaning and syntax translate into the goals of describing the conceptual well-formedness rules and the correspondence rules, respectively" (Jackendoff, 1983:22). For Jackendoff, semantic properties are not sufficient to explain how the syntactic form of language reflects the thought. To do that Grammatical Constraints, which are part of his theory and explain the relation between syntax and lexicon, are necessary.

Jackendoff applies Chomsky's syntactic theory to conceptualization process. He gives the syntactic evidence of conceptual structure from the X-Bar theory of grammatical categories. This theory presents that all major lexical categories include the same range of types of modification. In X-Bar theory, the major distinction is made between the lexical categories and the phrasal categories. Lexical categories are Noun (N), Verb (V), Adjective (A), and Preposition (P) and the phrasal categories are Noun Phrase

(NP), Verb Phrase (VP), Adjective Phrase (AP), Prepositional Phrase (PP) and the Sentence (S). Each phrasal category has a head which is a member of one of the lexical categories and a variety of possible modifiers which are other phrasal categories. There is a major phrasal category corresponding to each lexical category. For example, NP is the major phrasal category corresponding to N and S is the major phrasal category corresponding to V. The major phrasal categories are the phrases that a lexical item strictly subcategorizes and they appear as daughters of the single-primed phrasal category and as daughters of the major phrasal category (Jackendoff, 1983:67).

Jackendoff finds these principles of phrase structure sufficient to state a relationship between syntax and conceptual structure. Because, as he states, "every major phrasal constituent in the syntax of a sentence corresponds to a conceptual constituent that belongs to one of the major ontological categories" and "the lexical head X of a major phrasal constituent corresponds to a function in conceptual structure – a chunk of the inner code with zero or more argument places that must be filled in order to form a complete conceptual constituent" (1983:67).

For example, in (8), the head of the S is the verb "put". V subcategorizes a subject NP, a direct object NP and a PP. "Put" has three Arguments which are two [THING]s and a [PLACE] or [PATH]. The conceptual structure of the sentence (8) is given in (9).

(8) The man put the book on the table.

(9) $$\left[\begin{array}{l}\text{EVENT} \\ \text{PUT}\left(\left[\begin{array}{l}\text{THING} \\ \text{THE MAN}\end{array}\right], \left[\begin{array}{l}\text{THING} \\ \text{THE BOOK}\end{array}\right], \left[\begin{array}{l}\text{PLACE} \\ \text{ON}\left(\left[\begin{array}{l}\text{THING} \\ \text{THE TABLE}\end{array}\right]\right)\end{array}\right]\right)\end{array}\right]$$

(Jackendoff, 1983:68)

The semantics of the head determines which major ontological category is expressed by a particular major phrasal constituent. Some verbs (*put*) map into EVENTs and others (stative verbs – *seem*, *know*, *believe* and *be*) map into STATEs; nouns map into THINGs (*table*, *house*), EVENT (*destruction*) and AMOUNT (*mile*); adjectives map into PROPERTIES and prepositions into PLACEs and PATHs.

The relation between syntactic and ontological categories is not one-to-one, so the correspondence observed in English is not universal. What must be universal is

(i) the distinction between lexical categories and major phrasal categories,

(ii) a system of subcategorization in which lexical categories subcategorize major phrasal categories (Jackendoff, 1983:68-69).

As Jackendoff (1983:69) observes this theory of conceptual structure overcomes a number of difficulties. Instead of constants and variables, there are conceptual constituents of various ontological categories. Furthermore, there are functions that map into major ontological categories instead of predicates that map into propositions when their argument places are filled. "In short, we use the same formal device, function-argument structure, but with a much richer range of function and argument types".

I. 7. [TOKENS] and [TYPES]

Jackendoff (1983) applies the human categorization to the conceptual structure. The syntactic and the semantic rules are innate and each speaker refers to his or her projected world. While doing this he or she uses conceptual structures which are projected as entities of various kinds. Jackendoff is against other theories of meaning, especially theories of truth conditions in terms of human categorization. Human categorization concerns the human ability to classify particulars under types. In Jackendoff's view (1983:78), categorization concerns the understanding of atomic sentences. Thus he takes the theory of categorization to concern "what information and processing must be ascribed to an organism to account for its categorization judgments". He categorizes the ontological categories further as [TYPE] or [TOKEN]. He refers to the representation of the thing being categorized and of the category as [TOKEN] concept and [TYPE] concept respectively. The [TOKEN] is "a mental construct of potentially elaborate internal structure, which can be projected into awareness as a unified #entity#; and the [TYPE] is "the information that the organism creates and stores when it learns a category" (Jackendoff, 1983:78). In other words, all phrases that express [TOKEN] constituents refer to real-world concepts and phrases that express [TYPE] constituents are non-referential.

Referring to the semantic ontological categories, there are [THING TOKENS], [EVENT TOKENS], [PLACE TOKENS], [THING TYPES], [EVENT TYPES] and [PLACE TYPES]. The sentence "a is a dog" can be represented as (10).

(10) $\begin{bmatrix} \text{STATE TOKEN} \\ \text{IS AN INSTANCE OF} \ (\begin{bmatrix} \text{THING TOKEN} \\ a \end{bmatrix} , \begin{bmatrix} \text{THING TYPE} \\ \text{DOG} \end{bmatrix}) \end{bmatrix}$

The function IS AN INSTANCE OF is part of the conceptual structure and maps the [TOKEN] and the [TYPE] into a [STATE]. In addition to the function IS AN INSTANCE OF, there is an operator, INSTANCE OF. This operator maps a [TYPE] into a feature of a [TOKEN] as illustrated in (11).

(11) $\left[\begin{array}{l}\text{THING TOKEN} \\ \text{INSTANCE OF} \left(\left[\begin{array}{l}\text{THING TYPE} \\ \text{DOG}\end{array}\right] \right)\end{array}\right]$

The inference rule in (12) which is a mapping from one class of conceptual structures into another, relates (10) and (11).

(12) $\left[\begin{array}{l}\text{STATE TOKEN} \\ \text{IS AN INSTANCE OF } ([\text{TOKEN}]_i, [\text{TYPE}]_j)\end{array}\right] \Longleftrightarrow$

$\left[\begin{array}{l}\text{TOKEN} \\ \text{INSTANCE OF } ([\text{TYPE}]_j)\end{array}\right]_i$

(Jackendoff, 1983:81)

Jackendoff (1983:81) proposes another operator, EXEMPLIFIED BY, that maps a [TOKEN] into a feature of a [TYPE] that it is an instance of. This is illustrated in (13).

(13) $\left[\begin{array}{l}\text{THING TYPE} \\ \text{DOG} \\ \text{EXEMPLIFIED BY} \left(\left[\begin{array}{l}\text{THING TOKEN} \\ a\end{array}\right] \right)\end{array}\right]$

The inference rule that relates the operator EXEMPLIFIED BY to categorization judgments is like this:

(14) $\left[\begin{array}{l}\text{STATE TOKEN} \\ \text{IS AN INSTANCE OF } ([\text{TOKEN}]_i, [\text{TYPE}]_j)\end{array}\right] \leftrightarrow$

$\left[\begin{array}{l}\text{TYPE} \\ \text{EXEMPLIFIED BY } ([\text{TOKEN}]_i)\end{array}\right]_j$

(Jackendoff, 1983:81)

The mapping of [TOKEN] and [TYPE] uses the internal conceptual structure of [TOKEN] and [TYPE]. These structures have the conceptual features. For example, in the sentence "a is a dog", *a* is seen as a four-legged animal and this feature is entailed in the conceptual structure DOG. So, *a* fits the conceptual structure of the type DOG. Also, the categorization is creative because the new tokens as belonging to a specific [TYPE] can be identified and also new [TYPE]s can be created. Therefore, creativity is an evidence for the structural isomorphy between [TOKEN]s and [TYPE]s. That [TOKEN]s and [TYPE]s of a given ontological category are expressed by the same syntactic category gives grammatical evidence to this assumption (Jackendoff, 1983:88).

[TYPE]s and [TOKEN]s have parallel internal structure and they are expressed by the same syntactic category. Also, they may have the same internal syntactic structure, i.e. both [THING TOKEN]s and [THING TYPE]s are expressed by noun phrases. Jackendoff (1983:88) exemplifies this argument by giving the different choices of the NP after *be* as in (15).

(15) a. Clark Kent is a reporter.

b. Clark Kent is Superman.

c. Clark Kent is the man drinking a martini.

(15a) expresses a categorization judgment and (15b) expresses the identity of two [TOKEN]s. (15c) is "ambiguous between these two readings". On the token identity reading, *the* "serves as a demonstrative" and on the categorization reading, it "expresses uniqueness of the categorized [TOKEN] within its [TYPE]" (Jackendoff, 1983: 89). (16a) and (16b) illustrate the semantic structure of (15a) and (15b) respectively. In (16b), there is a different relationship between the two relata which Jackendoff calls IS TOKEN-IDENTICAL TO.

(16) a. [STATE TOKEN
IS AN INSTANCE OF ([THING TOKEN: CLARK KENT], [THING TYPE: REPORTER])]

b. [STATE TOKEN
IS TOKEN-IDENTICAL TO ([THING TOKEN: CLARK KENT], [THING TYPE: SUPERMAN])]

In short, the verb *be* has two unrelated readings and "it is just coincidence that a single morphological form expresses both token-identity and categorization" (Jackendoff, 1983:89).

II. SPATIAL FIELDS IN TURKISH AND ENGLISH

In Chapter I, we have seen that expressions like *here*, *there*, *thataway* refer to #places# and #paths# in the projected world. This chapter gives a classification of #places# and #paths# in their relationship to prepositional and postpositional phrases in English and Turkish. In the rest of this thesis, the projected world markers # # will be dropped for ease of reading and writing.

II. 1. Places

As mentioned before, in Conceptual Semantics, there is a direct mapping. Each part of speech corresponds to a conceptual entity. Nouns correspond to THINGS, verbs to EVENTS and STATES, prepositional phrases to PATHS and PLACES.

A [PLACE] projects into a point or region in space and is normally occupied by a [THING] within the structure of an event or state as in the examples in (17) (Jackendoff, 1983:163):

(17) [THING] occupies [PLACE]

a. John is in the room.

b. The lamp is standing on the floor.

c. The mouse stayed under the table.

Also, as Kornfilt & Correa (1993:85) state, [PLACES] are "identified by reference to an object as with the prepositions 'in', 'on', 'at' and 'under'" (18a) or "by the intransitive preposition 'here'" (18b).

(18) a. John is in / at / on the house.

b. John is here.

[PLACE] is different from [LOCATION]. The locations of objects are conceptualized as points, not volumes and a place refers to a volume, surface, line or point. Nam (1995:551) proposes four classes of locatives:

a. *Topological Invariants* – PPs with *at, in, on*

b. *Symmetric Locatives* – PPs with *across, through, over, past, around*

c. *Orientational Locatives* – PPs with *in front of/ behind, to the left / right of, above/ below*

d. *Directional Locatives* – PPs with *to, from, into, out of, towards.*

A PP of location can express the location of the event or state as in (19).

(19) a. In Cincinnati, Max met a cockroach.

b. Jean ate breakfast in her bedroom.

(Jackendoff, 1983:163)

Among Nam's typology above, topological invariants and orientational locatives are places, symmetric locatives are routes and directional locatives are directions in Jackendoff's terminology.

II. 2. Paths

Path is one of the basic concepts of spatial language and it is claimed to be "a crucial notion in perception / cognition of movement or journey, and it is one of the main cognitively motivated devices for representing changes of location" (Nam, 1995:555). A [PATH] is "a connected sequence of points or regions in space" (Kornfilt & Correa,

1993:85) and plays a wider variety of roles than [PLACE] in [EVENTS] and [STATES]. In the internal structure of a [PATH], there are a path-function and a reference object as in (20a-b) or a reference place as in (20c).

(20) a. I went (from Boston) to New York.

b. I went via Schenectady.

c. Beth came running from under the bridge.

(Kornfilt & Correa, 1993:85)

The path-function may have a reference place as its argument. For example, in (20a) *from* expresses the path-function and *under the table* expresses the reference place; and in (21b) *into* expresses both a path-function and the place-function of the reference place. The conceptual structures of the sentences (21a) and (21b) are as in (21a') and (21b').

(21) a. The mouse ran from under the table.

a'. [$_{\text{Path}}$ FROM ([$_{\text{Place}}$ UNDER ([$_{\text{Thing}}$ TABLE])])]

b. The mouse ran into the room.

b'. [$_{\text{Path}}$ TO ([$_{\text{Place}}$ IN ([$_{\text{Thing}}$ ROOM])])]

(Jackendoff, 1983:163)

Jackendoff (1983:163) states that prepositions like *over*, *under*, *on*, *in*, *above* and *between* are ambiguous because they express both a place-function and TO + place-function, as illustrated in (22).

(22) a. The mouse is under the table.

a'. [$_{\text{Place}}$ UNDER ([$_{\text{Thing}}$ TABLE])]

b. The mouse ran under the table.

b'. [$_{Path}$ TO ([$_{Place}$ UNDER ([$_{Thing}$ TABLE])])]

In Turkish, however, the distinction between path and place readings is obvious because Turkish uses case suffixes efficiently. Certain Turkish postpositions take locative case when used as place-functions and dative case when used as path-functions.

There are three patterns in English:

(23) a. [$_{Place}$ PLACE-FUNCTION ([THING])]

in the room, on the table, between the trees, under the house

b. [$_{Path}$ PATH-FUNCTION ([$_{Place}$ PLACE-FUNCTION ([THING])]

(functions lexicalized separately)

from in the room, from on the table, from between the trees, from under the house

c. [$_{Path}$ PATH-FUNCTION ([$_{Place}$ PLACE-FUNCTION ([THING])]

(functions lexicalized together)

in (to) the room, on(to) the table, between the trees, under the house

(Jackendoff, 1983:164)

For Turkish we can apply these patterns like this:

(24) a. [$_{Place}$ PLACE-FUNCTION ([THING])]

evde, masanın üstünde, ağaçların arasında

b. [$_{Path}$ PATH-FUNCTION ([$_{Place}$ PLACE-FUNCTION ([THING])])]

tünelin içinde karşıdan karşıya, tünelin içinde enine, Sarıyer istikametine doğru

c. [$_{Path}$ PATH-FUNCTION ([$_{Place}$ PLACE-FUNCTION ([THING])])]

odanın içine, masanın üzerine

II. 2.1. The Classes of Paths

Path is major ontological category and "it is pointless to try to eliminate it from language on the grounds of parsimony" (Jackendoff, 1983:170). Jackendoff (1983) proposes a classification of Paths as shown in Figure 2.

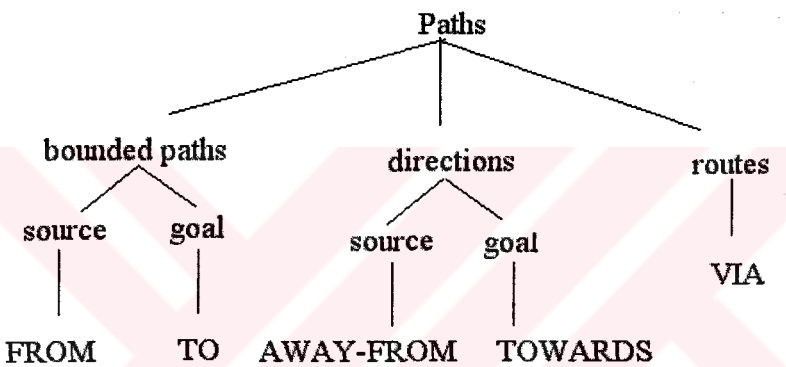


Figure 2. Jackendoff's classification of Paths

According to this classification, Paths are divided into three broad classes with respect to the path's relationship to the reference object or place. These are bounded paths, directions and routes. The bounded paths are divided into source-paths and goal-paths and the reference object or place is an endpoint of the path. This endpoint is the beginning in a source-path and the end in a goal-path. The path-function for source-path is FROM and for goal-path is TO.

In directions, the reference object or place does not fall on the path unless the path is extended some unspecified distance. *Away from* and *toward* are the common transitive prepositions expressing directions. The path-functions AWAY-FROM and TOWARD indicate the source-direction and the goal-direction respectively. In (25) the

difference between bounded paths and direction can be seen:

(25) a. John ran to the house. (bounded path)

b. John ran toward the house. (direction)

c. John ran from the house. (bounded path)

d. John ran away from the house. (direction)

(Jackendoff, 1983:165)

Up(ward), *downward*, *forward*, *backward*, *homeward* and *northward* are the examples of intransitive prepositions of directions. The basic path-functions of directions are the expressions TOWARD and AWAY-FROM.

In routes, the reference object or place is related to some point in the interior of the path and *by*, *along*, *through* are the examples. Many route expressions of English use place-prepositions like *by*, *along* and *over* to express VIA + place-function. Jackendoff (1983:166) exemplifies this as in (26):

(26) a. The mouse went under the table.

a'. $[_{Path}$ TO ($[_{Place}$ UNDER ($[_{Thing}$ TABLE])])]

b. The mouse went under the table.

b'. $[_{Path}$ VIA ($[_{Place}$ UNDER ($[_{Thing}$ TABLE])])]

"The mouse went under the table" is ambiguous because it has the goal and route readings. However, in Turkish, there is no ambiguity for this sentence because the path-function for goal and route is expressed by case suffixes efficiently.

(27) a. Fare masanın altı<u>na</u> gitti.

'The mouse went under the table.'

a'. [$_{Path}$ A ([$_{Place}$ ([$_{Thing}$ MASA])] ALT)]

b. Fare masanın altından (geçerek) gitti.

'The mouse went from under the table.'

b'. [$_{Path}$ DAN ([$_{Place}$ ([$_{Thing}$ MASA])] ALT)]

The goal reading is expressed by the dative case suffix –A and the route reading is expressed by the ablative case suffix –DAn (and manner adverb *geçerek*).

II. 2. 2. Prepositions and Postpositions Indicating Paths

In English, as stated above, the source-path is expressed by the path-function FROM and the goal-path is expressed by the path-function TO. In Turkish, the source-paths can be exemplified by the ablative case suffix –DAn as seen in (28a) and the goal-path by the dative case suffix –A as seen in (28b). also the postpositions *kadar* and *dek* express goal-path as seen in (28c-d).

(28) a. Adam evden koştu. (source-path)

'The man ran from the house.'

b. Adam eve koştu. (goal-path)

'The man ran to the house.'

c. Adam eve kadar koştu.

'The man ran up to the house.'

d. Adam eve dek koştu.

'The man ran up to the house'

The directions in English are expressed commonly by the transitive prepositions *away from* and *toward*. Also, the intransitive prepositions *up(ward)*,

down(ward), forward, backward, homeward and *northward* express the direction.

In Turkish, the direction is expressed by the postpositions *-e doğru* 'towards', *-dan doğru* 'away from', *cihetine (doğru)* 'toward side', *civarına (doğru)* 'toward neighborhood', *yönüne (doğru)* 'toward direction', *istikametine (doğru)* 'toward direction', *tarafına* 'to the side', *dolaylarına* 'to the surroundings'. The examples for these postpositions can be seen in (29).

(29) a. Karaöz'den sahilin batı yönüne doğru ilerledim.

'I proceeded from Karaöz toward the west side of the shore.'

b. Turistlerden bir bölümü Kapalıçarşı'yı gezmek üzere Beyazıt tarafına doğru yolalıyor.

'Some of the tourists are proceeding towards Beyazıt to visit Bazaar.'

c. Rum kesiminden Türk tarafına doğru akan derelerin tamamen kesilmesinin ardından Güzelyurt Derivasyon projesi hazırlandı.

'The Güzelyurt Derivation Project was prepared after all the streams flowing from the Greek part to the Turkish part were dammed.'

d. 17 Ağustos depremi, bir noktadan başlayarak, konik bir açıyla, İstanbul cihetine doğru geldi.

'The earthquake on 17th August came towards İstanbul by a conical angle, starting from one point.'

e. Rüzgar Karadeniz'den doğru geliyor ve denizin yüzü soğuktan ya da heyecandan titreyen insan vücudu gibi çırpınıyordu.

'The wind came away from the Black Sea and the face of the sea fluttered like one's body trembling from cold or excitement.'

f. Yollardan biri Karaman tarafına, diğeri ise Hadim tarafına gitmektedir.

'One of the roads goes to the direction of Karaman, the other goes to the direction of Hadim.'

g. Akhisar cephesi bozulunca Balıkesir bölgesindeki kıtalar Bursa istikametine doğru çekilmeye başladı.

'When Akhisar front collapsed, the detachments of troops started retreating towards Bursa.'

The third class of paths, the routes, is expressed by the prepositions *by*, *along*, *through* and *over* in English. In Turkish, route is expressed by the postpositions *boyunca* 'along', *yanından* 'from the side', *etrafından* 'around', *üstünden* 'over', *üzerinden* 'over', *altından* 'under', *kenarından* 'from side', *içinden* 'from inside', *çevresinden* 'around', *peşisıra* 'behind', *ardısıra* 'behind', *önüsıra* 'ahead of', *bir başından öbür başına* 'from beginning to end', *boydan boya* 'from end to end', *uzunlamasına* 'lengthways', *yanlamasına* 'sideways' etc. examples are in (30).

(30) a. Yol boyunca tenhalığı görünce nüfusu sordum.

'As I saw the solitude along the road, I asked the population.'

b. Bu köyden geçen ve yürüyüşümüz boyunca bize eşlik eden Gökdere boyunca yürüyoruz.

'We are walking along Gökdere which goes across this village and accompanies us during our walk.'

c. Ay hem kendi etrafında hem de Dünyanın etrafında döner. Dünya hem kendi etrafında döner, hem de Güneşin etrafında.

'The moon revolves around the Earth as it spins. The Earth revolves around the sun as it spins.'

d. Top ile odanın etrafında koştu. Odanın etrafında koşarken topu havaya attıp yere düşürmeden tuttu.

'He ran around the room with a ball in his hand. While running around the room, he threw the ball in the air and held it without dropping it.'

e. Mısır Devleti'ndeki bilim düşüncesi Fenikeliler aracılığıyla Kıbrıs ve Girit üstünden İyonya'ya gelmiştir.

'Scientific concepts in Egyptian government came to Ionia by means of the Phoenicians through Crete and Cyprus.'

f. Dışarı çıkıp tuvaletteki yaratığı öldürün ve çitlerin üstünden atlayıp kuzeye ilerleyin.

'Get out and kill the alien in the bathroom and jump over the fence and go to the north.'

g. Kendi halinde giden "eski" teknoloji ürünü bir Volkswagen-Kaplumbağa'nın yanından oldukça yüksek bir hızla geçip gitmişsinizdir.

'You must have passed quickly a Volkswagen Beetle moving on its own, a product of old technology.'

h. Dev geminin, köprünün altından geçtiği sırada su yüzünden yüksekliği yaklaşık 60 metreye kadar indirildi.

'The height of the giant ship from the water surface was lowered down to approximately 60 metres when it passed under the bridge.'

i. Dere kenarından geçtim soğuk sularından içtim.

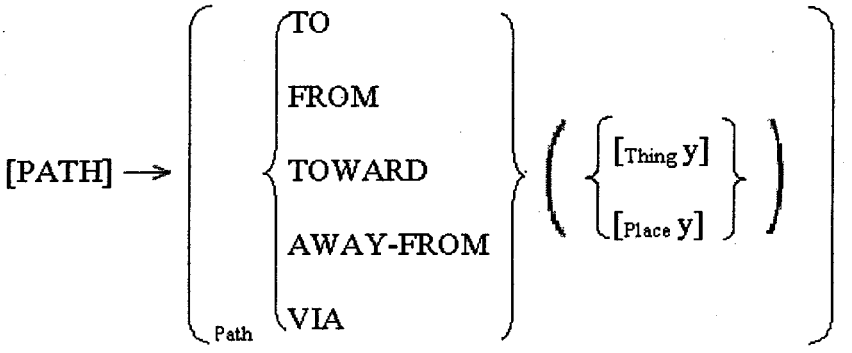
'I passed from the riverside and I drank from its cold water.'

j. Duvar <u>üzerinden</u> veya <u>çevresinden</u> aşılması gereken bir engeldir.

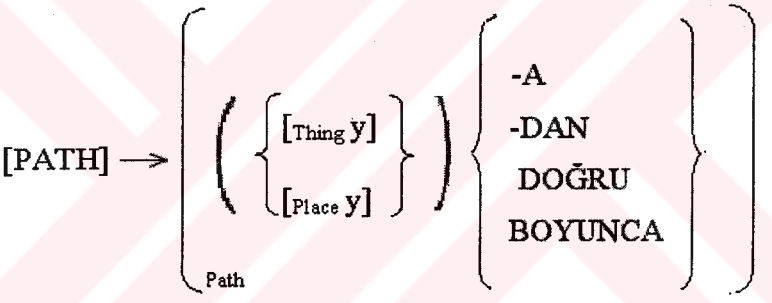
'A wall is an obstacle which must be passed over or sidestepped.'

Paths can be expressed by the well-formedness rules for English (31) and for Turkish (32):

(31)



(32)



The identification of the set of primitive concepts above plays an important role in the human conceptual system. Yet, as Kornfilt & Correa (1993: 87-88) state there is a need for a larger set and they show the expanded principal primitives of path and location expressions as follows:

Primitive (paths)	Arguments	Intended denotation
PATH	none	Some unspecified path.
TO	x	A path whose goal end-point is at thing or location x.
TOWARD	x	A path whose goal end-point is in the direction of thing or location x.
FROM	x	A path whose source end-point is at thing or location x.

AWAY	x	A path whose source end-point is in the direction of thing or location x.
VIA (locations)	x	A path which passes by thing or location x
HERE	none	The place of the speaker.
AT	x	The location occupied by thing x.
IN	x	The volume contained by thing x.
ON	x	The upper or outer surface of thing x.
UNDER	x	The space under or inside thing x.
OVER	x	The space over or outside thing x.

Jackendoff (1983:167) proposes a further class of place-concepts that appear to be based on reference paths. He gives the sentence in (33a) as an example and claims that it "seems to imply on a (distal) point of a path up the hill" (33b and c) are the other possibilities. The conceptual structures are illustrated in (33a', b' and c').

(33) a. The house is up the hill.

a'. $[_{Place}$ ON $([_{Path}$ UP $([_{Thing}$ HILL$])])]$

b. The firehouse is across the street from the library.

b'. $\left[_{Place}\text{ ON }\left(\left[\begin{array}{l}\text{FROM }([_{Thing}\text{ LIBRARY}]) \\ _{Path}\text{TO }([_{Place}\text{ OTHER SIDE OF }([_{Thing}\text{ ROAD}])])\end{array}\right]\right)\right]$

c. The firehouse is two miles down the road (from here).

c'. $\left[_{Place}\text{ ON }\left(\left[\begin{array}{l}\text{FROM }([_{Place}\text{ HERE}]) \\ \text{DOWN }([_{Thing}\text{ ROAD}]) \\ [_{Distance}\text{ TWO MILES}]\end{array}\right]_{Path}\right)\right]$

The well-formedness rule for [PLACE] is illustrated in (34) below.

(34) [PLACE] —> $[_{Place}$ ON $([_{Path}$ x$])]$

In Turkish, this is expressed by the sentences in (35) and conceptual structures

are illustrated in (35a', b', c' and d'). The well-formedness rule [PLACE] in Turkish is like in (36).

(35) a. Ev tepenin üstünde.

'The house is up to hill.'

a'. [$_{Place}$ ([$_{Path}$ ([$_{Thing}$ TEPE]) ÜST]) DA]

b. Ev kütüphanenin karşısında

'The house is opposite the library.'

b' [$_{Place}$ ([$_{Path}$ ([$_{Thing}$ KÜTÜPHANE]) DAN
([$_{Place}$ ([$_{Thing}$ YOL]) KARŞISI])]) DA]

c. Ev buradan iki sokak aşağıda.

'The house is two streets down from here.'

c'. [$_{Place}$ ([$_{Path}$ ([$_{Place}$ BURA]) DAN
([$_{Thing}$ SOKAK]) AŞAĞI
[$_{Distance}$ İKİ SOKAK] AŞAĞI]) DA]

d. Ev buradan 50 m ötede.

'The house is 50 m. Farther from here.'

d'. [$_{Place}$ ([$_{Path}$ ([$_{Place}$ BURA]) DAN
([$_{Thing}$ SOKAK]) AŞAĞI
[$_{Distance}$ 50 m] ÖTE]) DA]

(36) [PLACE] —> [$_{Place}$ ([$_{Path}$ x]) DA]

Corresponding to an event or state, a [THING] may traverse a [PATH] as shown in (37a), extend over a [PATH] as in (37b) or be oriented along a [PATH] as in (37c). For Turkish, the examples are in (38).

(37) a. ([THING] traverses [PATH])

John ran into the house.

The mouse skittered toward the clock.

The train rambled along the river.

b. ([THING] extends over [PATH])

The highway extends from Denver to Indianapolis.

The flagpole reaches (up) toward the sky.

The sidewalk goes around the tree.

c. ([THING] is oriented along [PATH])

The sign points to Philadelphia.

The house faces away from the mountains.

The cannons aim through the tunnel.

(38) a. ([THING] traverses [PATH])

Ali eve koştu.

'Ali ran to the house.'

Ali eve doğru koştu.

'Ali ran toward the house.'

Ali yol boyunca koştu.

'Ali ran along the road.'

b. ([THING] extends over [PATH])

Yol Mersin'den Adana'ya gidiyor / uzanıyor.

'The road goes / extends from Mersin to Adana.'

Ağaç tavana ulaşıyor / varıyor / uzanıyor.

'The tree reaches / arrives / extends to the ceiling.'

Patika gölün etrafında dolanıyor.

'The path surrounds around the lake.'

c. ([THING] is oriented along [PATH])

Levha/ tabela/ işaret Ankara'yı gösteriyor.

'The sign points to Ankara.'

Ev deniz tarafına bakıyor. / Ev deniz tarafını görüyor.

'The house has a view of the sea. / The house overlooks the sea.'

Tren tünelin içinden geçiyor.

'The train is passing through the tunnel.'

II. 3. Verbs of Motion

In this section, first, we will introduce Talmy's (1985a, 1991) typology of motion verbs in languages and lexicalization patterns among meaning components. Second, Levin's (1993) classification of verbs of motion in English will be listed and it will be applied to the motion verbs in Turkish. Third, we will discuss the verbs of path and verbs of manner of motion according to Jackendoff's (1983, 1990) Lexical Conceptual Structure (LCS).

The class of motion verbs and motion complexes (verb + preposition) has been considered as the central subject of many studies by linguists and cognitive psychologists. Motion plays an important role in human thinking. As Goddard (1998:195) states, "immediate and inbuilt is our perception of motion that most people would not hesitate to include it among the most basic of human concepts". Meaning is considered as mental pictures and it "primarily consists of spatial entities and relations" and "everything else is simply secondary metaphors of this" (Pedersen, 1997:64). Then, motion events are the

primary bases for investigating meaning. Miller and Johnson-Laird describe the motion verbs as follows:

> If one wishes to identify the most characteristically verbal of all verbs, therefore, one would turn to the verbs of motion, the verbs that describe how people and things change their places and their orientation in space. (...) In turning first to an analysis of the semantics of motion verbs, we believe we are launching our study of verbs with their purest and most prototypical forms.
>
> (qtd. in Pedersen, 1997:64)

As a result, all languages have different ways of expressing motion and different ways of describing different kinds of motion.

II. 3. 1. Typology of Verbs of Motion

Talmy (1985a) typologically analyzes the motion verbs in languages, mainly English, Spanish and Atsugewi, and investigates the lexicalization patterns among meaning components and the verb connected with the expression of motion. He isolates elements separately within the domain of meaning and within the domain of surface expression. The semantic elements are Motion, Path, Figure, Ground, Manner and Cause and the surface elements are verb, adposition, subordinate clause and satellite. He examines which semantic elements are expressed by which surface elements. And there is not one-to-one relationship between them. He treats a situation containing movement or the maintenance of a stationary location alike as a "motion event" (60). Talmy (1985a:61) proposes lexicalization patterns of motion verbs by looking over several languages and identifies the elements of the basic schema underlying the motion event:

Figure: the object that is moving or located with respect to another object.

Ground: the reference-object with respect to which the Figure is moving or is located.

Path: the course followed or site occupied by the Figure object with respect to the Ground object.

Motion: the presence per se of motion or location in the event.

Manner /Cause: distinct external events that cause or modify the motion event.

He states that the elements of this motion schema are lexicalized in typologically distinct ways:

> In a motion-sentence pattern characteristic of one group of languages, the verb expresses at once both the fact of Motion and either its manner or its cause. A language of this type has a whole series of verbs in common use that express *motion* occurring in various manners or by various causes. (1985a: 62)
>
> ....
>
> In the second typological pattern for the expression of Motion, the verb root at once expresses both the fact of motion and the Path. (1985a: 68)
>
> ....
>
> In the third major typological pattern for the expression of Motion, the verb expresses the fact of Motion together with the Figure. Languages with this as their characteristic pattern have a whole series of surface verbs that express various kinds objects or materials as moving or located. (1985a:72)

Languages such as English lexicalize both Manner and Motion in the verb root, whereas languages such as Spanish and Turkish do not lexicalize Manner and Motion in the verb root, but express the Manner information in an adjunct. The differences between these two language types can be exemplified in the following examples from English (39) and Turkish (40).

(39) The ball rolled into the hole

(40) Top deliğin içine yuvarlanarak girdi.

'The ball entered the hole (in the manner of rolling)'.

In (39), the verb *roll* expresses the fact of motion and manner of motion. The

path of the movement is expressed by the preposition *into*. In (40), the verb *gir* (enter) expresses the fact of motion and its path. The manner of motion, *yuvarlanarak* (rolling) is expressed optionally.

The third pattern is that "the verb expresses the fact of Motion together with the Figure" (Talmy, 1985a:72) that is, what type of object is moving such as *rain* and *spit*. Talmy gives Atsugewi as an example for this type of languages.

These contrasting patterns result in different syntactic privileges of occurrence of the same verb in English and Spanish. In the following example, the verb *flotar* 'float' in Spanish cannot be used as the syntactic head of the clause to describe the manner in which a change of location event occurs (42). In English however, *float* can also occur as the head of a clause with a path phrase, and is interpreted as the manner in which the bottle moves into the cave (41). The verb *float* can occur as a participial adjunct in both Spanish and English (Talmy 1991: 488):

(41) The bottle floated into the cave.

(42) *La botella flotó a la cueva.

*The bottle floated to the cave

(43) La botella entró flotando a la cueva.

The bottle moved-in floating to the cave.

Talmy suggests that a verb such as *float* represents distinct lexicalizations of meaning in English—it represents a *lexicalization doublet* (1985a: 64). In its basic sense, it is stative and refers to "the buoyancy relation between an object and a medium" (64):

(44) The craft floated/was afloat on a cushion of air.

float$_1$

In its second usage, it "includes the idea of motion together with that of buoyancy" (64):

(45) The craft floated into the hangar on a cushion of air.

float$_2$

Talmy (1985a:65) argues for the view that *float* represents two distinct lexicalizations on the basis of the existence of verbs which lexicalize just one of the senses. Thus, the verb *lie* in (46) only has a stative sense, and cannot be used to express translational motion, whereas *glide* or *drift* in (47) expresses motion, but not stative location (65):

(46) The pen lay on the plank/*down the incline.

(47) The canoe glided (*on that spot of the lake for an hour).

Since the term "lexical" is interpreted in different ways, it is necessary to make clear the notion of "lexicalization" in Talmy's hypothesis. Since Talmy explicitly refers to "single morphemes and, to a lesser extent, words (composed of root and derivational morphemes)" (1985a: 58), it appears that his notion of lexicalization has to do with X^0-*level items* of particular syntactic categories. At the level of *meaning*, Talmy uses the term "lexicalization" when a (set of) meaning component(s) is "in association with a morpheme, making up the whole of the morpheme's meaning" (1985a: 59).

Talmy's lexicalization hypothesis claims that typological differences can be

accounted for in terms of the different semantic components encoded in the verb. He says that the verbs have two of the elements by several ways. For example, the verb *descend* consists of Motion and Path (down) and the verb *go around* consists of Motion and Manner. Talmy defines motion with other components of meanings as 'conflation'. As mentioned before, he classifies languages into three main types with respect to the way to lexicalize verbs with the components:

- Conflation of Motion and Manner or Cause
- Conflation of Motion and Path
- Conflation of Motion and Figure

Languages such as English have "a whole series of verbs in common use that express motion occurring in various manners or by various causes" (Talmy, 1985a:62) and languages such as Spanish "have a whole series of surface verbs that express motion along various paths" (69).

The five basic semantic elements may be found either lexicalized independently of one another, or conflated in the meaning of single words variously. The examples are taken from Talmy (1985a):

(48) a. The rock	moved	down		the hill	rolling.
FIGURE	MOTION	PATH		GROUND	MANNER
b. The rock	rolled			down	the hill
FIGURE	MOTION+MANNER			PATH	GROUND
c. La botella	entró		a	la cueva	flotando
the bottle	moved-in		to	the cave	floating
FIGURE	MOTION+PATH		PATH	GROUND	MANNER

d. She powdered	her nose
MOTION+PATH+FIGURE	GROUND
e. I shelved	the books
MOTION+PATH+GROUND	FIGURE

In his 1991 paper, Talmy proposes a typological division based on "whether the core schema is expressed by the main verb or by the satellite". The core schema is the path of movement or directed motion. Path-type languages which are characterized as verb-framed languages "characteristically map the core schema into the verb (Talmy, 1991:486). These languages also have verbs that express manner of motion. Yet, these verbs are grammatically restricted in their use. Languages which are characterized as satellite-framed languages "characteristically map the core schema onto the satellite" (Talmy, 1991:486). Satellites, verb-framed languages and satellite-framed languages are discussed in detail in the following sections.

II. 3. 1. 1. Satellites

Talmy (1985a:102) examines the representation of certain semantic categories by a type of surface constituent called satellite. Satellites "are certain immediate constituents of a verb root other than inflections, auxiliaries, or nominal arguments" and "relate to the verb root as periphery (or modifiers) to a head". "A verb root together with its satellites forms a constituent in its own right, the 'verb complex'" (102). This constituent as a whole relates to other constituents as an inflectional affix-set, an auxiliary, or a direct object noun phrase. Talmy (1985a:102) suggest that since satellites "belong to particular recognizable grammatical categories, it seems better to consider the satellite role as a grammatical category in its own right but as new kind of grammatical relation". The

term traditionally used for such elements is 'verb particle'. "The term 'satellite' has been introduced in order to capture the commonality between such particles and comparable forms in other languages". "The satellites in English are mostly involved in the expression of Path. Generally, the Path is expressed fully by the combination of a satellite and a preposition. But usually the satellite can also appear alone" (1985a:103).

Talmy's criteria for identifying satellites in English are that in many languages, the satellite and the preposition are distinguished by occupying different positions in the sentences (1985a:105). For examples, in Russian, Classical Greek and Latin, satellites are found pre-verbally. The following example is from Russian (105):

(49) Ya vbezal (v dom)
I in ran (into house (Acc))
I ran in (-to the house)

However, in English, the satellites are found post-verbally and just adjacent to the prepositional phrase and Talmy refers to them as "satellite-prepositions" (106).

(50) a. I went to him → with a preposition alone
b. I followed him in → with a satellite alone
c. I went in to him → with both a satellite and a preposition
d. I went past him → with a satellite-preposition

Satellites show properties which differ from those of adpositions (Talmy, 1985a:105). A satellite can occur intransitively and satellites often have different senses than their corresponding prepositions ("I went to the store" vs. "I came to").

II. 3. 1. 2. Verb-framed and Satellite-framed Languages

Languages vary in mapping lexical resources onto semantic domains (Talmy, 1985a). Talmy (1991) groups the world's languages in terms of a "two-category typology" according to the way the core schema of a particular semantic domain is mapped onto lexical and syntactic structures: *verb-framed languages* versus *satellite-framed languages*. The **satellite-framed** construction type applies to most Indo-European languages except Romance, along with Finno-Ugric, Chinese, and various Amerindian languages. **Verb-framed** languages include Turkic, Semitic, and Romance languages, along with Japanese, Korean, and others.

The verb-framed languages prefer to encode path of motion in a *verb* (e.g., *exit, enter, descend*) and the satellite-framed languages in a *particle* (e.g., go *in, out, up, down*). Talmy (1991:483) proposes that the two-way classification of languages can also be motivated in terms of the locus of encoding of the path element - the "core schema" of the motion event". In verb-framed languages (e.g., Spanish, Turkish), the path is encoded (together with any ground elements) in the verb root (e.g., *eve girdi, entro a la casa* 'enter to/in the house'), while in satellite-framed languages (e.g., English), the path is encoded in "satellites" (the bottle floated *into the cave*). Such a criterion for typological classification is compatible with the possibility that two languages can have similar manner-verb lexicons, yet differ in how the path is lexicalized (in the verb vs. the satellite).

Path refers to the translational motion of a figure (a moving entity) which moves from a source to a goal through some medium, passing one or more milestones. *Ground* refers to an explicit feature of the physical environment serving as source, medium, milestone, or goal. *Manner* refers to factors such as the motor pattern of the

movement of the figure, rate, and degree of effort (Özçalışkan & Slobin, 1998:542). The possible consequences of the differences between the two language types regarding these three dimensions can be summarized as follows:

1. S-framed languages can attach any number of grounds to a single verb of motion (often three or more), whereas V-framed languages tend to attach fewer ground elements to a verb (typically no more than two).

2. S-framed languages typically conflate manner with motion in the main verb, and express path through satellites, whereas V-framed languages tend to express path in the main verb, subordinating manner to the main verb where manner is salient.

3. S-framed languages have a more diverse lexicon of manner verbs, due to the fact that manner is backgrounded (routinely expressed) in the languages, whereas V-framed languages encode manner only if it is foregrounded (at issue) (Özçalışkan & Slobin, 1998:542).

II. 3. 2. Classification for Motion Verbs

Levin (1993:263) classifies and defines the verbs of motion in English as follows:

a. Verbs of Inherently Directed Motion: The meaning of these verbs includes a specification of motion, even in the absence of an overt directional complement (Levin, 1993:264). (*advance, arrive, ascend, ?climb, come, ?cross, depart, descend, enter, escape, exit, fall, flee, go, leave, plunge, recede, return, rise, tumble)*

b. Leave verbs: These verbs do not specify a manner of motion; they simply indicate that motion away from a location taken place (Levin, 1993:264).

(*abandon, desert, leave*)

c. Manner of Motion Verbs: These verbs describe motion that typically, though not necessarily, involves displacement, but none of them specifies an inherent direction as part of its meaning (Levin, 1993:264).

i. Roll verbs: These verbs relate to manners of motion that are characteristic of inanimate entities (Levin, 1993:264).

(*bounce, drift, drop, float, glide, move, roll, slide, swing*)

ii. Run verbs: Most of these verbs describe the manners in which animate entities can move, although some of them may be used to describe the movement of inanimate entities (Levin, 1993:267).

(*amble, backpack, bolt, bounce, bound, bowl, canter, carom, cavort, charge, clamber, climb, clump, coast, crawl, creep, dart, dash, dodder, drift , file, flit float, fly, frolic, gallop, gambol, glide, goosestep, hasten, hike, hobble, hop, hurry, hurtle, inch, jog, journey, jump, leap, limp, lollop, lope, lumber, lurch, march, meander, mince, mosey, nip, pad, parade, perambulate, plod, prance, promenade, prowl, race, ramble, roam, roll, romp, rove, run, rush, sashay, saunter, scamper, scoot, scram, scramble, scud, scurry, scutter, scuttle, shamble, shuffle, sidle, skedaddle, skip, skitter, skulk, sleepwalk, slide, slink, slither, slog, slouch, sneak, somersault, speed, stagger, stomp, stray, streak, stride, stroll, strut, stumble, stump, swagger, sweep, swim, tack, tear, tiptoe, toddle, totter, traipse, tramp, travel, trek, troop, trot, trudge, trundle, vault, waddle, wade, walk, wander, whiz, zigzag, zoom.*)

d. Verbs of Motion Using a Vehicle:

i. Verbs that are vehicle names: These verbs are all zero-related to nouns that are vehicle names; they mean roughly "go using the vehicle named by the noun" (Levin, 1993:268).

(*balloon, bicycle, bike, boat, bobsled, bus, cab, canoe, caravan, chariot, coach, cycle, dogsled, ferry, gondola, helicopter, jeep, jet, kayak, moped, motor, motorbike, motorcycle, parachute, punt, raft, rickshaw, rocket, skate, skateboard, ski, sled, sledge, sleigh, taxi, toboggan, tram, trolley, yacht.*)

ii. Verbs that are not vehicle names: Although these verbs are not zero related to vehicle names, they all describe motion using a particular type of vehicle (Levin, 1993:268).

(*cruise, drive, fly, oar, paddle, pedal, ride, row, sail, tack*)

e. Waltz Verbs: These verbs are zero-related to names of dances and mean roughly "perform dance" (Levin, 1993:269).

(*boogie, bop, cancan, clog, conga, dance, foxtrot, jig, jitterbug, jive, pirouette, polka, quickstep, rumba, samba, shuffle, squaredance, tango, tapdance, waltz*)

f. Chase verbs: They are typically transitive, with the chaser as subject and the person being chased as object (Levin, 1993:270).

(*chase, follow, pursue, shadow, tail, track, trail*)

g. Accompany Verbs: These verbs relate to one person taking a second from one place to another (Levin, 1993:270).

(*accompany, conduct, escort, guide, lead, shepherd*)

We can apply Levin's classification of motion verbs to Turkish as follows:

a. Verbs of Inherently Directed Motion

(*aç-* 'open', *ağ-* 'rise, hang downward' , *as-* 'hang', *aş-* pass over', *ayır-* 'part', *bin-* 'get on, mount', *çık-* 'exit, ascend', *dik-* 'set up, build', *dön-* 'return', *eğ-* 'bend', *geç-* 'pass', *gel-* 'come', *gir-* 'enter', *git-* 'go', *in-* 'go down, descend', *sark-* 'hang down, lean out', *sok-* 'thrust into', *var-* 'arrive')

b. Leave verbs

(*ayır-* 'part', *çık-* 'exit', *at-* 'throw', *kaç-* 'escape', *kalk-* 'leave')

c. Manner of Motion Verbs

i. Roll verbs

(*ak-* 'flow', *bur-* 'twist', *çevir-* 'spin', *dür-* 'roll up', *kay-* 'slide', *kıvır-* 'curl', *salla-* 'swing', *yuvarla-* 'roll', *dön-* 'spin')

ii. Run verbs:

(*ak-* 'flow', *aş-* 'pass over', *atla-* 'jump', *fırla-* 'rush out', *kaç-* 'escape', *kay-* 'slide', *koş-* 'run', *seğirt-* 'run', *sek-* 'hop', *sıçra-* 'jump', *sıvış-* 'slip away', *tırman-* 'climb', *yuvarla-* 'roll', *yürü-* 'walk')

d. Verbs of Motion Using a Vehicle:

i. Verbs that are vehicle names

(No Turkish verbs)

ii. Verbs that are not vehicle names

(No Turkish verbs)

e. Waltz Verbs

(No Turkish verbs)

f. Chase verbs

(*peşine düş-* 'pursue', *peşinde dolaş-* 'pursue', *peşinden git-* 'follow', *peşinde / peşinden koşmak* 'pursue', *peşine takıl-* 'to tack oneself on to someone', *peşini bırakma-* 'follow up, keep following', *arkasına düş-* 'follow closely')

g. Accompany Verbs

(*eşlik et-* 'accompany', *birlikte git-* 'accompany', *refakat et-* 'accompany')

Since Turkish is a path-language or, in other words, a Verb-framed language according to Talmy's typology, it has inherently directed motion verbs. Next section will discuss the verbs of path and verbs of manner of motion.

II. 3. 3. Verbs of Directed Motion in Turkish

II. 3. 3. 1. Verbs of Path

In Turkish, many verbs describe motion and imply an implicit path. These verbs are *aç-*'open', *ağ-* 'rise, hang downward', *as-* 'hang', *ayır-* 'part', *bin-* 'get on, mount', *çık-* 'exit, ascend', *dik-* 'set up', *dön-* 'return', *düş-* 'fall', *eğ-* 'bend', *geç-* 'pass', *gel-* 'come', *gir-* 'enter', *git-* 'go', *göm-* 'bury', *in-* 'go down, descend', *sark-* 'hang down, lean out', *sok-* 'thrust into', *ulaş-* 'reach' and *var-* 'arrive'.

Jackendoff (1983:165) divides the paths into three types according to the path's relationship to the object or place: bounded paths which include source-paths and goal-paths, directions and routes. The source-path is usually expressed by the preposition *from* and the goal-path by the preposition *to* in English. *Away-from* and *toward* are the common prepositions for directions, and *by*, *along* and *through* for routes.

In Turkish, these three types of paths can be expressed by not only postpositions and cases but also their lexicalization into the verbs. When we analyze the motion verbs above, we see that they express different paths in relation to their polysemous natures. Considering this specialization of path, we classify the motion verbs that denote path according to Jackendoff's Lexical Conceptual Structure (LCS). The polysemy in Turkish motion verbs can be shown by assigning them different conceptual structures. While classifying the verbs of path, we consider whether they are transitive or intransitive since "the analysis of path intransitives has assumed that every intransitive that involves motion entails a spatial path" (Nakipoğlu, 2000:72). We will first discuss the intransitive verbs which have two groups: unaccusatives (51), (52) and (53) and unergatives (54). Secondly, we will discuss the transitive verbs.

(51) *Goal*

a. Kurşun ayağıma geldi.

'The bullet hit my foot.'

b. Telgraf geldi.

'The telegram arrived.'

c. Yağmurdan duvar indi.

'The wall fell down because of rain.'

d. Sağ tarafına inmiş.

'He is paralysed on his right side.'

e. Yeni 250 000 liralıklar piyasaya çıktı.

'The new 250 000 TL – coins came out to the market.'

f. Postadan mektup çıktı.

'A letter came out from the post.'

g. Bu yol nereye çıkar?

'Where does this road lead to?'

h. Bu işin sonu kötüye gitti.

'The end of this matter went bad.'

i. Mektup postaya gitti.

'The letter went to the post.'

j. Bu yol köye gider.

'This road goes to the village.'

k. Bu söz tarihe geçti.

'This word made history.'

l. Uçak düştü.

'The plane fell down.'

m. Ağaçtan bu yaprak düştü.

'This leaf fell down from the tree.'

n. Dağlara kar düştü.

'Snow dropped to the mountains.'

The verbs exemplified in (51) indicate the goal, the implicit endpoint of the path. All the verbs in (51a-n) are unaccusative verbs, whose subject is not an agent or not an actor. In (51a, e, i and n), the endpoints of the path are explicitly stated by the dative case marker –A: *ayağıma, piyasaya, postaya and dağlara*. However, when the direct objects are omitted from the sentences, the path does not change (*Kurşun geldi, Yeni 250 000 liralıklar çıktı, mektup gitti, Kar düştü*). They again imply the endpoints: the part of the body of the speaker, the market, the post and the ground respectively.

In (51b, c, f, l and m), the verbs *gel-*, *in-*, *çık-* and *düş-* have implicit paths. It is

inferred from the natures of these verbs that the goal is the speaker who has received the telegram / letter in (51b) and (51f), the ground in (51c), (51l) and (51m).

In (51d, g, h, j and k), the verbs *in-, çık-, git-* and *geç-*, indicate the endpoint of the path. The indirect objects that have the dative case –A reinforce the goal sense.

(52) *Source*

a. Kabine düştü.

'The cabinet was overthrown.'

b. Bebeğin patiği çıktı.

'The baby's shoe moved out.'

c. Ekinler çıktı.

'The crops grew.'

d. Arabanın direksiyonu çıktı.

'The steering-wheel of the car moved out.'

e. Gemiler ve saray hepsi gitti.

'The ships and the palace, all were gone.'

f. Haber daha yeni gitti.

'The news has just gone.'

The verbs listed in (52) describe the source, the origin of the path, rather than the endpoint of the path. Like in (51), all the verbs in (52a-f) are unaccusative. In the sentences (52a-f), the origins of the path are inferred by the different senses of these verbs. In (52a and e), the sense is losing the position and property respectively, in (52b and d) coming out, in (52c) growing and in (52f) sending the message.

(53) *Focus on the path*

Oluklardan buzlar sarkıyordu.

'Ice was hanging down from the gutters.'

The verb *sark-* 'hang down' in (53) focuses on the path itself. It does not denote either the goal or the source of the path.

(54) a. Bir arkadaşımla konaktan çıktık.

'I went out from the mansion with a friend.'

b. Hastaneden çıktı.

'He left the hospital.'

c. Çocuk koşarken düştü.

'The child fell down while running.'

d. Yolum buraya düştü.

'I was passing by.'

e. Gurbet ellere düştü.

'He is away from home.'

f. Dağdan kurt indi.

'The wolves came down from the mountain.'

g. Merdivenden indim.

'I went down the stairs.'

h. Attan indi.

'He dismounted from the house.'

i. Elimdeki kitabı bırakıp bulundukları odaya geçtim.

'I left the book in my hand and entered the room they are in.'

j. Yan komşuya geçtim.

'I went to the neighbor next door.'

k. İstanbul'a geldim.

'I came to İstanbul.'

l. Dün akşam amcamlar bize geldi.

'Last night my uncle and his family visited us.'

m. Konya'ya gittim.

'I went to Konya.'

n. Danıştaya gitti.

'He applied for the State Council.'

o. Eve girdi.

'He entered the house.'

p. Kalabalığa girdi.

'He went into the crowd.'

q. Askere gitti.

'He joined the army.'

r. Köye vardım.

'I arrived at the village.'

The verbs exemplified in (54) are unergative verbs whose subject is an agent or an actor. The verbs in (54a and b) denote the sources of the path which are the mansion and the hospital and the verbs in (54c-r) denote the goal of the path. The goal reading is either inferred from the nature of the verb as in (54c, f, g and h) or reinforced by the dative case –A as in (54d, e, i, j, k, l, m, n, o, p, q and r).

In the second group of verbs of path, we discuss the transitive verbs. Transitive verbs mainly express the goal and it varies according to the direction of the path. It can be from inside to outside (55), from outside to inside (56), from up to down (57) or from down to up (58).

(55) a. Yumağı açtım.

'I unraveled the ball.

b. Kapıyı açtı.

'She opened the door.'

c. Türlü dertleri vardı, arasıra bunları bana açardı.

'She had various troubles; she sometimes opened them to me.'

d. Anıtın çevresini açtılar.

'They cleaned the surroundings of the monument.'

(56) a. Çukuru açtı.

'He opened the hole.'

b. Kafamı yastığa gömdüm.

'I buried my head in the pillow.'

c. Çocuğu arı soktu.

'The bee stung the child.'

(57) a. Adamı astılar.

'They hung up the man.'

b. Lambayı tam pencerenin karşısına astılar.

'They hung up the lamp opposite the window.'

c. Kadehi başına dikti.

'He drained his glass.'

d. Başını önüne eğdi.

'He bowed his head.'

e. Yokuşu indim.

'I went down the hill.'

f. Sandığı toprağa gömdüler.

'They buried the box under the soil.'

g. Cenazeyi gömdüler.

'They buried the corpse.'

(58) a. Yokuşu çıktım.

'I went up to the hill.'

b. Örtüyü açtım.

'I opened the cloth.'

c. Otobüse bindim.

'I goton the bus.'

d. Dağın tepesine çıktım.

'I went up to the top of the mountain.'

e. Yol kenarına elektrik direği diktiler.

'They set up an electric pole on the edge of the street.'

f. Topu havaya dikti.

'He threw the ball in the air.'

g. Evi iki günde diktiler.

'They built the house in two days.'

The path-verbs also express the direction (59) and routes (60).

(59) a. Köşeyi döndü.

'He turned round the corner.'

b. Köprüden sarkma, suya düşersin.

'Don't lean out of the bridge, otherwise you fall down the water.'

(60) a. İki gündür sarp yollarından aşıyoruz.

'For two days, we have been passing over the steep mountain roads.'

b. Kapının önünden birkaç kisi acele acele geçtiler.

'A few people passed hastily from front of he door.'

c. Tünelden geçtik.

'We passed through the tunnel.'

d. Nehir şehrin içinden geçer.

'The river passes through the city.'

e. Eve giderken sizin sokaktan geçeriz.

'While going home, we pass through your street.'

In (59a and b), paths are extended some unspecified distance. The verbs *aş-* 'pass over' and *geç-* 'pass' in (60) express routes. In (60b, c, d and e), we see the postpositions *önünden* and *içinden* and the ablative case –DAn which can be replaced by a postposition: içinden in (60c) and (60e).

II. 3. 3. 2. Verbs of Manner of Motion

As proposed by Talmy (1985a, 1991) the world's languages can be grouped in terms of the core feature in the verb: verb-framed languages (V-framed) and satellite-framed languages (S-framed). In S-framed languages (e.g. English), Manner of motion is typically encoded in the verb (e. g. *walk*, *run*), while the Path of motion is expressed by

prepositional phrases. In V-framed languages (e.g. Turkish), the verb usually encodes the Path of motion (e.g. *gir-* 'enter', *çık-* 'exit'), while the Manner of motion is encoded in Manner adverbials. S-framed languages do have verbs which encode Path information (e.g. English *enter, exit, ascend, descend*). And V-framed languages have verbs encoding Manner of motion (e.g. Turkish *kıvır-* 'dance undulatingly', *çömel-* 'crouch'). However, the two language groups prefer different lexicalization of motion events. For example, English has a lot of verbs which convey Manner, but not directionality *(slide, roll, bounce, jump,* etc.). These verbs can be combined with a large set of adverbial or prepositional elements expressing Path *(in, up to, across,* etc.). By contrast, in the second group, Turkish, for instance, has fewer Manner of motion verbs. In Turkish, change of location is expressed mostly by Path verbs such as *çık-* 'ascend', *in-* 'descend', *gir-* 'enter', *çık-* 'exit'. However, as Slobin (2003:17) proposes "verb-framing does not 'suppress' attention to manner: manner of motion is too important for human beings to ignore". So, Turkish, unlike English, does not express the Manner information by using its lexical items but by using adverbials (61), ideophones (62) and demonstratives (63). The manner adverbs express manner or means of motion (Banguoğlu, 2000; Ediskun, 1999; Gencan, 2001). They may be in the base form as in (61a), in the derived form as in (61b-c) or in the reduplicated form as in (61d-e).

(61) a. Geç kaldık! Çabuk gidelim.

'We are late! Let's go quickly.'

b. Bir ağaç kütüğüne sessizce yaklaştı.

'He silently approached a tree trunk.'

c. Çocuklar hızlıca koştular.

'The children ran fast.'

d. Yaşlı adamla kadın ağır ağır yürüyorlardı.

'The old man and the woman were walking slowly.'

e. Ali evine koşa koşa gitti.

'Ali goes home running.'

Ideophones serve as "movement imitatives" and they can express "acoustic dimensions, inner states, and so forth, which can serve to suggest manner of motion" (Slobin, 2003:14). They may also be reduplicated (62b) and (62c).

(62) a. Birlikte cumbadanak bir suya düşüyorlar.

'They together fall splash into some water.'

b. Badi badi yürüyor.

'He walks waddling.'

c. Suyun içine gümbür gümbür düşüyor.

'He falls splash into the water.'

The demonstrative expression *öyle bir ... ki* also denotes the manner of the motion as in (63).

(63) Öyle bir koştu ki, rüzgâr gibiydi.

'He ran in such a manner that he was like wind.'

In addition to bare verbs, adverbials and ideophones Turkish has derived verbs to express Manner of motion like *topalla-* 'limp', *emekle-* 'crawl', *sendele-* 'stumble', *sürün-* 'creep', *yalpala-* 'lurch' etc.

There have been a lot of debates on motion events with Manner components. Talmy (1985a) discusses the extensions of the motion conflation patterns in English, in which Motion and Manner can be compounded with mental-event notions (64) or with

specific material in recurrent semantic complexes (65).

(64) I waved him away from the building.

(65) I slid him another beer.

Levin (1993:264) defines the Manner of motion verbs as follows:

> These verbs describe motion that typically, though not necessarily, involves displacement, but none of them specifies an inherent direction as part of its meaning. All of these verbs have meanings that include a notion of manner or means of motion. They differ from each other in terms of the specific manner or means.

As mentioned in section II. 3. 2 before, she divides them into two sub-classes: *Roll* verbs (*bounce, float, roll, move* etc.) and *Run* verbs (*climb, crawl, hop, jump, walk* etc).

Özçalışkan & Slobin (1998, 2000a, 2000b, 2002, in press) focus on the Manner of motion by using developmental data (pictures, oral and written narratives). They study the frequency and variation of chidren and adults'using manner and path verbs and how children learn to encode manner.

Slobin (2003) examines three major components of motion events: Manner of motion, Path of motion and grounds and shows the crosslinguistic differences in the expression of these components in narrative with the additional factors present in the languages.

With a closer look, the concept of Manner can be dealt with in different ways. In the issue on Linguist List 13.899, the linguists present the notion of Manner from different points of view (Klopfenstein, 2002). Antonopoulou divides the Manner in the broad sense into three: various types of human motion on ground (e.g. *run*, *walk*), different ways of moving in water or air (e.g. *swim*, *fly*) and hyponyms of verbs belonging to the

central area (e.g. *pace*, *stride*). More specifically, Slobin sees Manner of motion as multidimensional domain and considers the motor pattern (e.g. *crawl*), rate (e.g. *hurry*), and attitude (e.g. *stroll*) as features of Manner. Even, instrument and intentionality can be taken into account as factors in defining Manner (Basseaa-Bezantakou, Zlatev).

We can group our data with the criteria that are spatial, motor pattern, rate, attitude, instrument and intentionality as in (66). Spatial is concerned the motion in air, ground or water. Motor pattern is the motion that one's using his / her body or arms and legs appropietly. Instrument denotes the motion with an instrument. Intentionality is one of the properties of the agent in a sentence. Agent, typically, starts the action, controls what he does, and uses his hands, body or some instruments (Aksan, 2001:11).

(66) a. Adamla kadın yol boyunca yürüdüler.

'The man and the woman walked along the road.'

b. Pencereden dışarı bir gölge çıktı, arkasından seğirttiler.

'A silhouette went out of the window and they run after it.'

c. Trene yetişmek için erkenden fırladı.

'He dashed early to catch the train.'

d. Çocuk taştan taşa hopladı.

'The child hopped from stone to stone.'

e. Dansöz kıvırdı.

'The dancer danced undulatingly.'

f. Maymun daldan dala sıçradı.

'The monkey sprung from branch to branch.'

g. Adam İstanbul'a uçtu.

'The man flew to İstanbul.'

h. Adam denize daldı.

'The man plunged into the sea.'

The manner of motion verbs in (66a-h) and the other examples in Turkish are classified in Table 1.

Motor Pattern		*yürü-* 'walk', *seğirt-* 'run', *koş-* 'run', *sıvış-* 'decamp', *kaç-* 'escape', *topalla-* 'limp', *emekle-* 'crawl'
Rate	Semalfactive	*fırla-* 'dash', *dal-* 'plunge', *saç-* 'scatter', *serp-* 'sprinkle'
	Iterative	*hopla-* 'hop', *sıçra-* 'spring', *sek-* 'hop'
Attitude		*kıvır-* 'undulate one's hips; dance undulatingly', *sıçra-* 'spring', *Atla-* 'jump', *çevir-* 'spin', *çömel-* 'crouch', *kay-* 'slide', *sek-* 'hop', *yuvarlan-* 'roll', *sendele-* 'stumble', *sürün-* 'creep', *yalpala-* 'lurch'
Instrument		*uç-* 'fly', *kay-* 'slide', *pedal çevir-* 'pedal'
Spatial	Air	*uç-* 'fly'
	Water	*bat-* 'sink', *dal-* 'plunge'
	Land	*yürü-* 'walk', *seğirt-* 'run', *koş-* 'run'
Intentionality		*çevir-* 'spin', *kaç-* 'escape', *koş-* 'run'

Table 1. Verbs of Manner in Turkish

All the verbs listed between (66a-h) encode Manner and also Path. In the debate on Linguist List 13.899, Slobin is interested in how people talk about moving from one place to another, that is the verbs of translocation. The sentences "he jumped over the fence" and "he jumped up and down" are different. First has the translocational meaning but the second does not. As Zlatev suggests Manner verbs are "potentially translocational" which means that they lead to a change of location. In Turkish, the Manner verbs are mostly translocational except for some verbs like *kıvır-* 'undulate one's hip; dance undulatingly' and *çömel-* 'crouch' which denote purely Manner.

Let us consider the sentences (67-70) below. When the verbs in (a) sentences are regarded as directed motion they encode the Path readings. The insertion of postposition *–A kadar* emphasizes this Path reading and they imply translocation, whereas (b) sentences do not imply a traversed Path and change of location with the insertion of the adverbial *olduğu yerde* 'on one's location'. The Manner reading will be clear if the sentences are read supposing that the man is in a gym. The emphasis is on the motor pattern in (67b), rate in (68b), attitude in (69b) and (70b).

(67) a. Adam eve kadar koştu.

'The man ran up to the house.'

b. Adam olduğu yerde koştu.

'The man ran on his location.'

(68) a. Adam eve kadar zıpladı / hopladı / sıçradı.

'The man jumped / hopped / sprung up to the house.'

b. Adam olduğu yerde zıpladı / hopladı / sıçradı.

'The man jumped / hopped / sprung on his location.'

(69) a. Adam eve kadar sekti.

'The man hopped up to the house.'

b. Adam olduğu yerde sekti.

'The man hopped on his location.'

(70) a. Adam eve kadar pedal çevirdi.

'The man bicycled up to the house.'

b. Adam olduğu yerde pedal çevirdi.

'The man bicycled on his location.'

We can say that the Manner verbs in (67-70) have the sense of proceeding and

they are the hyponyms of the verb *ilerle-* 'proceed'. When we paraphrase them with *ilerle-* 'proceed', we see that the difference between them is the expression of the manner of motion.

(71) Adam koşarak ilerledi.

'The man proceeded running.'

(72) Adam zıplayarak / hoplayarak / sıçrayarak ilerledi.

'The man proceeded jumping / hopping/ springing.'

(73) Adam sekerek ilerledi.

'The man proceeded hopping.'

(74) Adam kayarak ilerledi.

'The man proceeded sliding.'

(75) Adam pedal çevirerek ilerledi.

'The man proceeded bicycling.'

In addition, *yuvarlan-* 'roll', *topalla-* 'limp', *sürün-* 'creep', *emekle-* 'crawl' imply the sense of proceeding and they can also be paraphrased by *ilerle-* 'proceed':

(76) a. Taş yuvarlandı.

'The stone rolled.'

b. Taş yuvarlanarak ilerledi.

'The stone proceeded rolling.'

(77) a. Adam topalladı.

'The man limped.'

b. Adam topallayarak ilerledi.

'The man proceeded limping.'

(78) a. Asker süründü.

'The soldier crept.'

b. Asker sürünerek ilerledi.

'The soldier proceeded creeping.'

(79) a. Bebek emekledi.

'The baby crawled.'

b. Bebek emekleyerek ilerledi.

'The baby proceeded crawling.

Since the interpretations of (a) sentences and (b) sentences in (67-70) are not identical, two different conceptual structures must be assigned to the verbs which denote both Manner and Path in Turkish due to the context of the sentences used. When we evaluate the motion verbs according to the adverbials we insert, the conceptual structure (80) can be assigned to the (a) sentences in (67-70) and the conceptual structure (81) to the (b) sentences in (67-70).

(80) $[_{\text{Event}}$ GO ($[_{\text{Thing}}$ ADAM], $[_{\text{Path}}$ A ($[_{\text{Place}}$ EV])])]

(81) $[_{\text{Event}}$ MOVE ($[_{\text{Thing}}$ ADAM])]

Jackendoff (1990:89) proposes a distinction between a MOVE-function and GO-function. He uses a MOVE-function to analyze sentences which describe an object's motion for verbs like *wiggle, dance, spin, wave* which cannot occur with complements referring to a PATH as in (82).

(82) a. Willy wiggled.

b. Debbie danced.

c. The top spun.

d. The flag waved.

(Jackendoff, 1990:88)

Sentences which contain Manner of motion verbs and allow directional complements like (83a-b) express a conceptual structure that includes both a MOVE-function and a GO-function.

(83) a. Willy wiggled out of the room.

b. Debbie danced into the room.

Jackendoff (1990:224-225) further differentiates between MOVE-function and GO-function by inserting *X's way construction*.

(84) Willy jumped into Harriet's arms.

(85) Willy jumped his way into Harriet's arms.

These examples show different perspectives: the directed motion and manner of motion. While (84) is in-between, (85) takes the perspective of the accompanying jumping event, since the jumping is lasted over time. So the sentence in (84) implies a single jump whereas (85) implies a series of jumps since "the *way*- construction requires the modifying Event to be a process" (Jackendoff, 1990:224). Turkish, however, does not have an equivalent construction for the English *X's way construction*. Turkish uses manner adverbials instead.

II. 4. Verbs of Spatial Location and Motion

The class of spatial sentences is divided to those that Express [EVENTS] and those that express [STATES]. Jackendoff (1983:170) gives the linguistic test for the

distinction that is "the possibility of occurring after 'What happened / occurred / took place was (that) …'; events happen, while states do not". The contrast is given in (86) below.

(86) a. (Events)

What happened was that { Bill flew around the pole. / the rock fell off the table. / the mouse ran up the clock. / a bee buzzed in the window. }

b. (States)

? What happened was that { Max was in Africa. / the rug lay on the floor. / the statue stood in the park. / a vine clung to the wall. }

(Jackendoff, 1983:171)

Another distinction concerns the use of the simple present tense. With states, simple present tense can be used to express present time (87a). With events, simple present may only be used to express generic events, future time, stage directions and newspaper headlines (87c) and present time must be expressed by present progressive aspect (87b).

(87) a. (States)

Max is in Africa.

The rug lies / is lying on the floor.

The statue stands / is standing in the park.

The picture hangs / is hanging on the wall.

b. (Events)

Bill is flying / *flies around the pole.

The rock is falling / *falls off the table.

The mouse is running / *runs up the clock.

A bee is buzzing / *buzzes in the window.

c. Bill flies around the pole tomorrow. (future)

Bill flies around the pole every day. (generic)

Bill flies around the pole, and then says, "..." (stage direction)

BILL FLIES AROUND THE POLE! (headline)

II. 4. 1. States

In sentences that express state, the location of the theme in a place is expressed with the conceptual structure (88) for English.

(88) [$_{State}$ BE ([$_{Thing}$ x] , [$_{Place}$ y])]

For Turkish, the conceptual structure is given in (89) and the verbs like *ol-* 'be', *dur-* 'stand, remain, stay', *-lı dur-* (*serili dur-* 'stay spread, *takılı dur-* 'stay attached', *asılı dur-* 'stay hanged'), *bulun-* 'be, exist' and *seril-* 'to be spread over' express the maintenance of position over time.

(89) [$_{State}$ OL ([$_{Thing}$ x] , [$_{Place}$ y])]

(90) a. Arkanızda yön gösteren bir tabela bulunuyor.

'There is a sign which points direction behind you.'

b. Türkiye'de 11 bin doğal bitki çeşidi bulunuyor.

'There are 11 000 kinds of natural plants in Turkey.'

c. İki külüstür araba benzin pompalarının önünde duruyor.

'Two jalopies are standing in front of the gas pumps.'

d. Kitapları tek tek elden geçiriyorum hemen hepsinde ciddi bir okurun parmak izleri duruyor.

'Almost all of the books have fingerprints of a serious reader.'

e. Eğilip içeri baktı, keten bezleri orada serili gördü.

'She looked inside and saw the linen cloths spread there.'

BE is not the only state-function. The sentences in (92a) and (92b) express state rather than event and the roles that paths play are extent and orientation.

(91) a. The highway extends from Denver to Indianapolis.

The flagpole reaches (up) toward the sky.

The sidewalk goes around the tree.

b. The sign points to Philadelphia.

The house faces away from the mountains.

The cannons aim through the tunnel.

(Jackendoff, 1983:172)

The orientation sentences (91b) describe not the location of the subject but the direction it is pointing. The PP is a path-function, usually a direction or route, and specifies the orientation of the subject. Thus, there is a need for a new function that is ORIENT in (92) and its Turkish counterpart in (93).

(92) [$_{State}$ ORIENT ([$_{Thing}$ x] , [$_{Path}$ y])]

(93) [$_{State}$ YÖNEL ([$_{Thing}$ x] , [$_{Path}$ y])]

In Turkish, *göster-* 'point out', *işaret et-* 'point', *yönel-* 'go towards', *yönelt-* 'orientate', *doğrult-* 'aim, point', *çevir-* 'orientate', *(yöne) bak-* 'face towards', *nişan al- (nişanla-)* 'to take aim at', *hedef al- (hedefle-)* 'to take aim at' etc. describe the orientation.

(94) a. Mardin'de hemen hemen her ev bu "deniz"e bakıyor.

'Almost all houses in Mardin face towards this sea.'

b. Pembe-mavi bir neonun ışıkları herkesin gittiği yönü işaret ediyor.

'The ligths of a pink-blue neon point to the direction that everybody goes.'

c. "Siz anımsamazsınız ama hocam iyi bilir..." diye bir parmak uzanıyor üstüme doğru.

'A finger reaches toward me saying "you don't remember but my teacher knows well…'

d. Kameralar orada, uzanıyor bir mikrofon.

'There are the cameras, a microphone reaches out.'

The extent sentences differ from motion sentences such as "Amy went from Denver to Indianapolis". In a motion sentence, the subject is asserted to have traversed the path, covering each point of the path in order over time. In a state sentence, the subject is asserted to occupy the entire path at a single point in time. The function expressed by extent sentences is called GO_{Ext} as in (95) and (96) (Jackendoff, 1983:173).

(95) $[_{State}\ GO_{Ext}\ ([_{Thing}\ x]\ ,\ [_{Path}\ y])]$

(96) $[_{State}\ GİT_{Ext}\ ([_{Thing}\ x]\ ,\ [_{Path}\ y])]$

Most verbs of extent can also be used as verbs of motion. The possibility of a motion or extent interpretation is determined by the motility of the subject and sometimes by the tense (simple present for extent, a state and progressive for traversal, an event). With the proper choice of subject and tense, an ambiguous sentence can be produced such as "The giant reached to the ceiling". This sentence may describe either a movement by the

giant or the giant's extreme height (Jackendoff, 1983:173).

In Turkish, the verbs like *uzan-* 'strech, reach', *uza-* 'extend', *yayıl-* 'spread', *eriş-* 'reach', *ulaş-* 'reach', *var-* 'arrive', *sür-* 'extend', *sürüp git-* 'extend', *kapla-* 'cover', *sar-* 'surround', *bürü-* 'cover', *kuşat-* 'surround', *dağıl-* 'spread' are the verbs of extent. The examples are in (97):

(97) a. Dışarıda çivit mavisi deniz ufuklara doğru uzanıyor. Sağda ve solda karaltıdan yeşilliğe dönen renkleriyle ormanlar ve çayırlar uzanıyor.

'Outside the deep blue sea streches to the horizon. On the left and right side, the woods and meadows strech turning from dark to green.'

b. Aşevi Kuyruğu sokak boyunca uzuyor.

'The queque of restaurant extends along the road.'

c. Buradan güneye yayılan drenaj alanı Seferihisar bölgesine açılıyor ve Ege'ye boşalıyor.

'The drainage area which spreads out south from here, opens to Seferihisar region and discharges to Aegean sea.'

d. Gobi Çölü,1.300.000 kilometrekarelik alanı kapsıyor ve doğu-batı uzunluğu 1930 km., kuzey-güney uzunluğu 970 km.'ye erişiyor.

'The Gobi Desert takes up a space of 1,300,000 square kilometer. The legth between the East and the West goes up to 1930 km. and the North and the South up to 970 km.'

e. Şehrin duvarları, gerideki dağ eteklerine kadar varıyor.

'The walls of the city arrives up to the foots of the mountain backward.'

f. Trafik sokaklardan taşıp nehre kadar ulaşıyor Bangkok'ta.

'In Bangkok, the traffic overflows and reaches up to the river.'

g. Yolculuk, Yarmuk Vadisi'nden, Ürdün'ün içlerine kadar sürüyor.

'The journey extends from the Yarmuk Valley to inside of Jordan.'

h. Aynı manzarada ikinci bir ufuk, Tuna boyunca sürüp gidiyor.

'A second horizon in the same view extends along the River Tuna.'

i. Kükürtdioksit yüklü dumanlar kimsenin beklemediği zamanlarda tüm coğrafyayı kaplıyor ve kabus o zaman başlıyor.

'The smoke loade with sulphurdioxide covers the whole area unexpectedly and then the nightmare starts.'

j. ...değişim atmosferi, başta Türkiye olmak üzere tüm bölgeyi sarıyor.

'The atmosphere of change surrounds the whole region, mainly Turkey.'

k. Sular o ormanları bürüyor.

'Water covers up that forests.'

l. Osmanlı savunucularının onardığı sur, hala Sinop merkezini kuşatıyor.

'The city wall which Ottoman defenders repaired, is still surrounding, the centre of Sinop.'

These verbs can also be used as verbs of motion.

(98) a. Çocuk rafa uzanıyor.

'The child reaches the shelf.'

b. Ağacın en üst dalına erişiyor.

'He reaches up to the top branch of the tree.'

c. Akşamın erken saatlerinde Ankara'ya varıyor.

'He arrives at Ankara early in the mrning.'

d. Her biri bir küçüğünü kucaklayarak şehrin etrafını kuşatıyor.

'Each surrounds the city by comprising the smaller one.'

II. 4. 2. Events

In sentences that express event, the motion of the theme along a path is expressed with the conceptual structure (99) for English. (100) shows the examples for the motion event.

(99) [$_{Event}$ GO ([$_{Thing}$ x] , [$_{Path}$ y])]

(100) a. Bill flew around the pole.

b. The rock fell off the table.

c. The mouse ran up the clock.

d. A bee buzzed in the window.

For Turkish, the conceptual structure and the examples are shown in (101) and (102) respectively.

(101) [$_{Event}$ GİT ([$_{Thing}$ x] , [$_{Path}$ y])]

(102) a. Ortalık ağarırken, bir arkadaşımla evden çıktım.

'When it became light, I went out from the house with a fiend.'

b. Ertesi gün Bodrum'a döndük.

'The following day we wemt back to Bodrum.'

c. Dağdan kurt indi.

'The wolves came down from the mountain.'

d. Köye akşama doğru vardım.

'I arrived the village towards evening.'

e. Babam Konya'ya gitti.

'My father went to Konya.'

f. Burnundan kan geldi.

'His nose bled.'

g. Musluktan su gelmiyor.

'Water doesn't come from the tap.'

GO is not the only event-function. Verbs like *stay* and *remain* express the maintenance of position over time. Jackendoff (1983:172) gives the tests below to reveal these as expressions of events.

(103) a. What happened was that { the bird stayed in its nest. / Bill remained on the floor. }

b. The bird is staying / *stays in its nest.

c. Bill is remaining / *remains on the floor.

The conceptual structure of these verbs is like in (104).

(104) [$_{\text{Event}}$ STAY ([$_{\text{Thing}}$ x] , [$_{\text{Place}}$ y])]

In Turkish, the verbs like *kal-* 'stay', *otur-* 'sit', *-a kal-* (*kalakal-* 'keep on staying', *bakakal-* 'keep on looking', *yatakal-* 'keep on lying', *donakal-* 'be petrifed'), *tüne-* 'perch' etc. express the maintenance of position. The conceptual structure for Turkish is:

(105) [$_{\text{Event}}$ KAL ([$_{\text{Thing}}$ x] , [$_{\text{Place}}$ y])]

(106) a. Deprem gecesi işte bu yatakta tam 45 saniye oturdum kaldım.

'On the night of the earthquake I sat paralysed with fear on this bed for45 minutes.'

b. Herkesin acıyarak bakışlarına, bana yol vermelerine şaşırarak bakakaldım.

'I was bewildered at the people looking at me with pity and stepping aside.'

c. Tüm bağrınmalarıma karşın kimseye sesimi duyuramayınca yaklaşık bir saat aslanın tepesinde kaldım.

'I stayed on top of the lion statue when nobody heard me although I cried for hoursfor help.'

d. Dün otobüse bindiğimde her zamanki gibi dörtlü koltuklara oturdum.

'When I got on the bus yesterday, I sat in the facing seats as usual.'

e. Kedi kaçınca gidip kuşu aldım. Sanki insana çok alışkınmış gibi parmağıma tünedi.

'When the cat ran away I went and caught the bird. As if it was accustomed to human, it perched on my finger.'

The function GO is often thought as expressing a change of state from one position to another, reducing the event GO to a succession of two states and apparently eliminating one primitive spatial function. There are three arguments against such a treatment (Jackendoff, 1983:174):

1. GO can occur not only with bounded paths (sources and goals) but also with directions and routes. Therefore, the beginning- and end-states are not essential to the use of GO function. Rather, GO expresses the traversal of every point of the path.

2. The reduction of GO to a change of state is incompatible with the generalization of GO to expressions of extent.

3. Perception must include representations of motion: we are aware not just of the things in one place and then somewhere else but also of their moving.

So there must be an event-function GO that is not reducible to a succession of BEs. To sum up, the well-formedness rules (107a -b) express the functional decomposition of [EVENTS] and [STATES].

(107) a. $[\text{EVENT}] \rightarrow \left\{ \begin{array}{l} [_{\text{Event}}\ \text{GO}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Path}}\ \text{y}]\ )\ ] \\ [_{\text{Event}}\ \text{STAY}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Place}}\ \text{y}]\ )\ ] \end{array} \right\}$

b. $[\text{STATE}] \rightarrow \left\{ \begin{array}{l} [_{\text{State}}\ \text{BE}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Place}}\ \text{y}]\ )\ ] \\ [_{\text{State}}\ \text{ORIENT}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Path}}\ \text{y}]\ )\ ] \\ [_{\text{State}}\ \text{GO}_{\text{Ext}}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Path}}\ \text{y}]\ )\ ] \end{array} \right\}$

For Turkish, the well-formedness rules are as follows:

(108) a. $[\text{EVENT}] \rightarrow \left\{ \begin{array}{l} [_{\text{Event}}\ \text{GİT}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Path}}\ \text{y}]\ )\ ] \\ [_{\text{Event}}\ \text{KAL}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Place}}\ \text{y}]\ )\ ] \end{array} \right\}$

b. $[\text{STATE}] \rightarrow \left\{ \begin{array}{l} [_{\text{State}}\ \text{OL}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Place}}\ \text{y}]\ )\ ] \\ [_{\text{State}}\ \text{YÖNEL}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Path}}\ \text{y}]\ )\ ] \\ [_{\text{State}}\ \text{GİT}_{\text{Ext}}\ (\ [_{\text{Thing}}\ \text{x}],\ [_{\text{Path}}\ \text{y}]\ )\ ] \end{array} \right\}$

So far, we have discussed the motion verbs in Turkish and in English, the verbs of inherently directed motion in Turkish, and the spatial location and motion namely the states and the events. In the next section, the causative functions will be examined in detail according to Talmy's (1985b) force-dynamic interaction and then Jackendoff's (1990)

adopting it to the conceptual semantics formalization of causative functions will be discussed.

II. 5. Causative Functions

II. 5. 1. Causative Agency

The researches on the structure of verb meanings have proposed that the meaning of a verb can be analyzed into a structured representation of the event. They also see the complex events as having an internal structure which consists of an inner and an outer event. The inner event is in relation with telicity and change of state; the outer event is in relation with causation and agency. According to linguistic approaches, causation is a relation either between two propositional expressions, two events or between an agent and an event (Tenny & Pustejovsky, 2000:7-8).

Analyzing causation as a relation between two events, Carter (1976) represents the meaning of the verb *darken* as in (109):

(109) x. CAUSE ((y BE DARK) CHANGE))

(cited in Tenny & Pustejovsky, 2000:8)

This means that "x causes the state of y being dark to change".

Jackendoff (1983, 1990, 1993) sees causation as a notion of spatial function and as relation between an individual and an event. He shows the relation between the sentences (110a) and (110b, c and d). The sentences in (110b ,c, and d) describe an agent bringing about the events described in the sentences in (110a). The role of the agent is represented by means of a binary function CAUSE and the conceptual structure for the

sentences in (110a, b, c, and d) is like in (110a', b', c' and d').

(110) a. Sim came into the room.

The ball flew out the window.

The books stayed on the shelf.

a'. [$_{Event}$ CAUSE ([$_{Thing}$ x], [$_{Event}$ y])]

b. The wind pushed Sim into the room.

b'. .[$_{Event}$ CAUSE ([$_{Thing}$ WIND],[$_{Event}$ GO ([$_{Thing}$ SIM],[$_{Path}$ INTO ROOM])])]

c. Beth threw the ball out the window.

c'. [$_{Event}$ CAUSE ([$_{Thing}$ BETH] , [$_{Event}$ GO ([$_{Thing}$ BALL] , [$_{Path}$ OUT WINDOW])])]

d. Suzanne kept the books on the shelf.

d'. [$_{Event}$CAUSE ([$_{Thing}$SUZANNE] , [$_{Event}$STAY ([$_{Thing}$BOOKS] , [$_{Place}$ON SHELF)])]

The syntactic relation between the sentences in (110a) and the sentences in (110b, c and d) is like this: the noncausative sentences have the form NP_1 V PP, with the theme in the subject and the causative sentences have the form NP_2 V NP_1 PP, with the agent in the subject and the theme in the direct object.

Jackendoff claims that the function CAUSE permits either a [THING] or an [EVENT] as its first argument and this argument appears invariably in subject position. (111a) is represented as (111a') and (111b) is represented as (111b').

(111) a. John made us laugh.

a'. [$_{Event}$ CAUSE ([$_{Thing}$ JOHN], [$_{Event}$ WE LAUGH])]

b. John's blowing bubbles made us laugh.

b'. [$_{Event}$ CAUSE ([$_{Event}$ JOHN BLOW BUBBLES], [$_{Event}$ WE LAUGH])]

The second argument of CAUSE is explicitly an [EVENT], not a [STATE], for agents make things happen. (113a) and (113b) are the two alternative analysis of (112).

(112) Amy put the flowers in the vase.

(113) a.[$_{Event}$CAUSE ([$_{Thing}$AMY], [$_{Event}$GO ([$_{Thing}$FLOWERS], [$_{Path}$INTO VASE])])]

b. [$_{Event}$ CAUSE ([$_{Thing}$ AMY], [$_{State}$ BE ([$_{Thing}$ FLOWERS], [$_{Place}$ IN VASE])])]

Arguments may contain semantic information which is determined by the predicate. For example, the verb *eat* has two arguments: the one who eat and the thing which is eaten. They are called Agent and Theme respectively. Agent and Theme are thematic roles (or theta roles). And each argument is assigned a thematic role. There are several types of thematic roles. The thematic roles and the examples are illustrated in (114-122) below.

(114) Agent: the initiator of some action, capable of acting with

a. David cooked the rashers.

b. The fox jumped out of the ditch.

(115) Patient: the entity undergoing the effect of some action, often undergoing some change in state.

a. Enda cut back these bushes.

b. The sun melted the ice.

(116) Theme: the entity which is moved by an action, or whose location is described.

a. Roberto passed the ball wide.

b. The book is in the library.

(117) Experiencer: the entity which is aware of the action or state by the predicate but which is not in control of the action or state.

a. Kevin felt ill.

b. Mary saw the smoke.

c. Lorcan heard the door shut.

(118) Beneficiary: the entity for whose benefit the action was performed.

a. Robert filled in the form for his grandmother.

b. They baked me a cake.

(119) Instrument: the means by which an action is performed or something comes about.

a. She cleaned the wound with an antiseptic wipe.

b. They signed the treaty with the same pen.

(120) Location: the place in which something is situated or takes place

a. The monster was hiding under the bed.

b. The band played in a marquee.

(121) Goal: the entity towards which something moves.

a. Sheila handed her license to the policeman.

b. Pat told the joke to his friends.

(122) Source: the entity from which something moves.

a. The plane came back from Kinshasa.

b. We got the idea from a French magazine.

(Saeed, 1997:140-141)

Agent is called Actor by some linguists and Foley & Van Valin (1984:29) suggest that Actor "expresses the participant which performs, effects, instigates or controls the situation denoted by the predicate" (cited in Saeed, 1997:142). Some linguists do not distinguish Theme and Patient and prefer Theme. Jackendoff (1990, 1993) suggests tests for Actor (123) and Patient (124).

(123) What NP did was

(124) { What happened / What y did } to NP was

So, for example, in the sentence in (125), the test (126) identifies Sue as Actor and Fred as Patient (126).

(125) Sue hit Fred

(126) What happened to Fred was Sue hit him.

We have seen that there is a one-to-one correspondence between entities and thematic roles. However, sometimes one entity fulfills more than one role. Jackendoff (1990:126) presents a theory of tiers of thematic roles for the fulfillment of more than one role. A *thematic tier* and an *action tier* are the two tiers that conceptual roles have. A thematic tier deals with motion and location containing the standard functions CAUSE, GO, BE and STAY and an action tier deals with Actor-Patient relations. His examples are in (127):

(127) a. Sue hit Fred.
Theme Goal (thematic tier)
Actor Patient (action tier)

b. Pete threw the ball.
Source Theme (thematic tier)
Actor Patient (action tier)

c. Bill entered the room.
Theme Goal (thematic tier)
Actor Theme (action tier)

d. Bill received a letter.
Goal Theme (thematic tier)
(action tier)

Jackendoff (1990:127; 1993:34) introduces an elaboration of Events in the

action tier:

(128) [EVENT] → [... AFF (< [THING] > , <[THING] >)]

The function AFFECT (AFF) represents an action tier and its first argument is the Actor and its second argument is the Patient. The arguments in brackets < > indicate that they are optional. Therefore, a sentence can have only an Actor or only a Patient.

(129) a. [AFFECT ([X],[Y])] (X= Actor, Y=Patient)

b. [AFFECT ([X],)] (X = Actor only)

c. [AFFECT (,[Y])] (Y = Patient only)

d. [AFFECT ([ ],[Y])] (implicit Actor)

e. [AFFECT ([X],[ ])] (implicit Patient)

(129a) is used for a notation which is ambiguous. (129b) is used when there is only an Actor and (129c) when there is only a Patient / Undergoer. (129d) and (129e) are for the cases where there is an implicit Actor or Patient (Jackendoff, 1990:128).

A feature elaboration [± volitional] may be used to capture the notion of willful agency. The different senses of *roll* in English as in (130) can share the same thematic structure but be associated with different action tiers, as shown in (132). The test can be in (131).

(130) Bill rolled down the hill.

a. Volitional

[CAUSE ([BILL], [GO ([BILL], [DOWN [HILL]])])]

b. Nonvolitional

[GO ([BILL], [DOWN [HILL]])]

(131) a. What Bill did was roll down the hill.

b. What happened to Bill was he rolled down the hill.

(132) Bill rolled down the hill.

$$\left(\begin{array}{l} \text{GO ([BILL] , [DOWN [HILL]])} \\ \left\{ \begin{array}{ll} \text{a. AFF}_{+\text{vol}} \text{ ([BILL],)} & \text{(willful doer)} \\ \text{b. AFF}_{-\text{vol}} \text{ ([BILL],)} & \text{(nonwillful doer)} \\ \text{c. AFF (, [BILL])} & \text{(undergoer)} \end{array} \right. \end{array} \right)$$

In (131), Bill is the Theme of this sentence, but can be identified as the Agent because it can be interpreted that he deliberately cast himself down the hill.

Jackendoff (1990) takes up and develops Talmy's (1985b) account of force dynamics and adopts it to the conceptual semantics formalization of causative functions. In the following section, first Talmy's force dynamic interaction is discussed in detail, then, the general function CS with a success parameter which Jackendoff introduces will be presented.

II. 5. 2. Force Dynamic Interactions

Talmy (1985b) argues that concepts of force interaction constitute basic principles for structuring and organizing meaning in language. He has elaborated a schema called *force dynamics*. According to Talmy, the smallest complex structure of forces seems to involve two actors and two forces. The actors are called the *agonist* and the *antagonist.* The agonist is the main character and has a tendency toward performing or performing some action. The antagonist tries to oppose the agonist. According to Talmy, the entities

are exerting forces by virtue of having an intrinsic tendency toward manifesting it. This tendency can have two values: either toward *motion* or toward *rest*. Generally, only the tendency of the Agonist is shown explicitly. A dot is used for a tendency toward rest and an arrow head for a tendency toward motion. The tendency of the Antagonist is understood to be opposite that of the Agonist. (133) and (134) show the representations of the agonist and the antagonist respectively. In (133), the former has an intrinsic tendency toward rest and the latter has an intrinsic tendency toward motion.

(133)

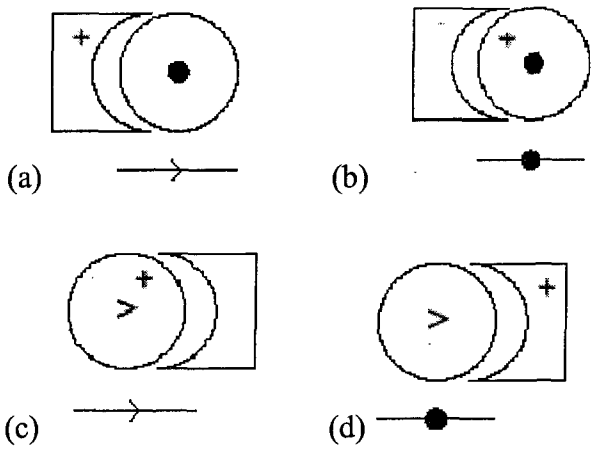
(134)

The force of the antagonist can be stronger or weaker than that of the agonist. The relative strength between two entities can be indicated by means of a plus (+) in the stronger entity and a minus (-) in the weaker entity. The resultant of the force interaction is indicated for the Agonist as either one of rest or motion. The resultant is represented by a line beneath the Agonist: a dot for rest and an arrow head for motion as in (135).

(135)

Talmy (1985b:298) has developed a set of force dynamic patterns. The steady-state patterns are shown in (136) and described below.

(136)



Ago's tendency (a, b): toward rest

(c, d): toward action

Ago's resultant (a, c): action

(b, d): rest

Ago's force relative to Ant's (a, d): lesser

(b, c): greater

(a) The ball kept rolling because of the wind blowing on it.

(b) The shed kept standing despite the gale wind blowing against it.

(c) The ball kept rolling despite the stiff grass.

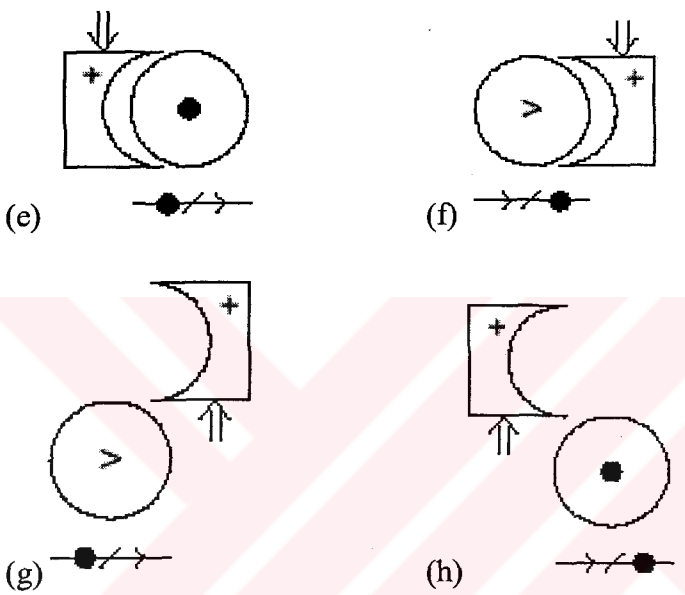
(d) The log kept lying on the incline because of the ridge there.

In (136a), the Antagonist overcomes the intrinsic tendency of the Agonist toward rest. The Agonist's resultant is motion. This pattern can be classed as "causative" involving the extended causation of motion. In (136b), the Agonist has the tendency toward rest but the Antagonist is weaker than the Agonist. So, it remains in place. In (136c), the Agonist's intrinsic tendency is toward motion but the Antagonist is again weaker than the Agonist. So, the tendency of the Agonist is not overcome. In (136d), the

Agonist's tendency toward motion is overcome by the opposing force exerted by the Antagonist. The Agonist's resultant is rest.

Talmy's (1985b: 300) change-of-state force dynamic pattern are shown in (137) and described below.

(137)



Ago's tendency (e, h): toward rest

(f, g): toward action

Ant's effect (e, f): causing

(g, h): letting

Ago's resultant (e, g): starting

(f, h): stopping

(e) The ball's hitting it made the lamp topple from the table.

(f) The water's dripping on it made the fire die down.

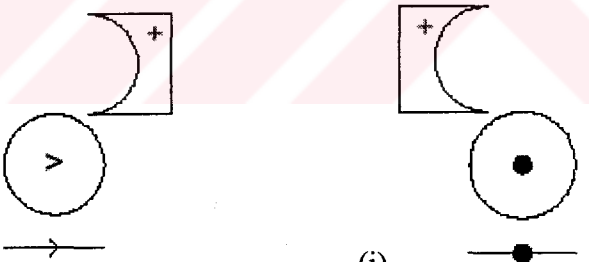
(g) The plug's coming loose let the water flow from the tank.

(h) The stirring rod's breaking let the particles settle.

In (137e), a stronger Antagonist comes into position against an Agonist with an intrinsic tendency toward rest. The Antagonist produces a state of change of the Agonist, resulting in a state of motion. In (137f), a stronger Antagonist comes into impingement against an Agonist that tends toward motion. The state of the Agonist is changed from a state of motion to a state of rest. In (137g), the Antagonist, which has been blocking the Agonist, with a tendency toward motion, disengages and releases the Agonist. As a result the state of the Agonist changes from rest to motion. In (137h), the Agonist has forcibly been kept in motion by the Antagonist. The Antagonist ceases impingement on the Agonist and allows it to come to rest.

Finally, Talmy (1985b:302) proposes a set of secondary steady-state patterns. These are shown in (138).

(138)



(i) (j)

(i) The plug's staying loose let the water drain from the tank.

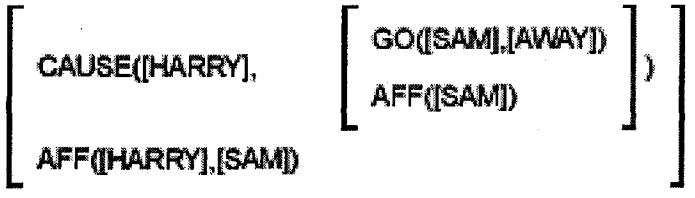
(j) The fan's being broken let the smoke hang still in the chamber.

In (138i), the Antagonist remains away and lets the Agonist move. In (138j), the Antagonist remains away and lets the Agonist rest.

Talmy's agonist- antagonist dyad is on the action tier. The Agonist is Patient that is the person on whom force is being applied. The Antagonist is the Actor that is the person applying the force. Jackendoff (1990) uses the notion "what the antagonist is trying

to bring about" namely the Effect <for> instead of Talmy's notion of "agonist's tendency". For example, in (139) Sam is the agonist and has an inherent tendency not to go away. Harry is the antagonist and opposes this tendency and the outcome is that Sam leaves.

(139) Harry forced Sam to go away.



Jackendoff (1990:131; 1993:36) gives another example in (140). In this example Harry's effort is directed toward Sam's not leaving.

(140) Harry prevented Sam from going.

The verbs *force* and *prevent* express the same force dynamic oppositions but they have different outcomes. Jackendoff (1990, 1993) introduces a general function CS containing a "success parameter". CS^{+} encodes the application of force with a successful outcome which replaces the notation CAUSE. CS^{u} is used for the application of force with an undetermined outcome.

Jackendoff (1996:120) summarizes and compares the basic parameters of two systems as follows:

(141) a. Talmy

i. Distinction between two opposed force entities:

Agonist and Antagonist

ii. Intrinsic force tendency of Agonist:

toward action or toward rest

iii. Balance of strategies:

Agonist stronger or Antagonist stronger

iv. Resultant of force interaction:

Agonist action or Agonist rest

b. Jackendoff

i. Distinction between two opposed force entities:

Antagonist (=Agent) and Agonist (=Patient)

ii. Patient action desired by Antagonist

iii. Success of Antagonist:

+ (success) vs. – (failure) vs. u (indeterminate)

II. 5. 3. Permissive Agency

The second kind of agency is called permissive agency. The sentences in (142a) and (142b) express similar causative versions. The sentences in (142c) involve a different relation between the agent and the event, which is called the function LET:

(142).a. The rock went down the cliff

The bird flew out the cage.

Sam ran around the tree.

b. Bill pushed the rock down the cliff.

Bill removed the bird from the cage.

Bill made Sam run around the tree.

c. Bill dropped the rock down the cliff.

Bill released the bird from the cage.

Bill let Sam run around the tree.

The structure for the LET function is like in (143):

(143) [Event LET ([Thing x], [Event y])]

The following two event types must be added to the taxonomy of (107) in the section II. 4. 2.

(144)

$$[\text{EVENT}] \longrightarrow \left\{ \begin{array}{l} [_{\text{Event}}\ \text{CAUSE}\ (\ [\ \left\{ \begin{array}{l} \text{Thing} \\ \text{Event} \end{array} \right\}\ x],\ [_{\text{Event}}\ y]\ )\ ] \\ [_{\text{Event}}\ \text{LET}\ (\ [\ \left\{ \begin{array}{l} \text{Thing} \\ \text{Event} \end{array} \right\}\ x],\ [_{\text{Event}}\ y]\ )\ ] \end{array} \right\}$$

For Turkish, the sentences in (145b, c and d) below describe an agent bringing about the events described in the sentences in (145a). (145a', b', c' and d') are the representations of the sentences.

(145) a. Ali odadan içeri girdi.

'Ali came into the room.'

Top camdan dışarı çıktı.

'The ball flew out the window.'

Kitaplar rafta kaldı.

'The books stayed on the shelf.'

a'. [Event ([Thing x], [Path ([Place y])])]

b. Rüzgar Ali'yi odanın içine itti / soktu.

'The wind pushed Ali into the room.'

b'. [Event NEDEN ([Thing RÜZGAR] , [EventGİT ([ThingALİ] , [PathODANIN İÇİNE])])]

c. Ahmet topu camdan dışarı attı / fırlattı / savurdu.

'Ahmet threw / flung / hurled the ball out of the window.'

c'. [EventNEDEN ([ThingAHMET] , [EventGİT ([ThingTOP] , [PathCAMDAN DIŞARI])])]

d. Ayşe kitapları rafta tuttu / sakladı / korudu.

'Ayşe kept the books on the shelf.'

d'. [Event NEDEN ([Thing AYŞE], [Event KAL ([Thing KİTAPLAR], [Place RAFTA)])]

The sense of "volitional actor" in Turkish is similar to English. The sense of the verb *yuvarlan-* 'roll' in (146) can be read as either volitional or nonvolitional.

(146) Ali tepeden aşağı yuvarlandı.

'Ali rolled down the hill.'

a. Volitional

[NEDEN ([ALİ] , [GİT ([ALİ] , [AŞAĞI [TEPE]])])]

b. Nonvolitional

[GİT ([ALİ] , [AŞAĞI [TEPE]])]

When the Actor is animate, there is generally ambiguity. For example, when

we insert the NP *kaya* 'rock' instead of Ali in (146) there is no ambiguity (147). It is clear that the rolling down of the rock is not a volitional action.

(147) Kaya tepeden aşağı yuvarlandı.

'The rock rolled down the hill.'

[GİT ([KAYA] , [AŞAĞI [TEPE]])]

The permissive function LET (BIRAK) is expressed in Turkish like in the sentences (148).

(148) a. Kaya uçurumdan aşağı yuvarlandı.

'The rock rolled down the cliff.'

Kuş kafesten dışarı uçtu.

'The bird flew out the cape.'

Mehmet ağacın etrafında koştu.

'Mehmet ran around the tree.'

b. Ali kayayı uçurumdan aşağı itti.

'Ali pushed the rock down the cliff.'

Ali kuşu kafesten dışarı çıkardı.

'Ali removed the bird from the cage.'

Ali Mehmet'i ağaçın etrafında koşturdu.

'Ali made Mehmet run around the tree.'

c. Ali kayayı uçurumdan aşağıya bıraktı / salladı / yuvarladı.

'Ali dropped the rock down the cliff.'

Ali kuşu kafesten dışarı bıraktı / saldı.

'Ali released the bird from the cage.'

Ali Mehmet'i ağacın etrafında koşturdu.

'Ali let Mehmet run around the tree.'

The sentences in (148b) express the causative versions of the sentences in (148a). the causation, in Turkish, are expressed by either verbs which are lexically causative as *it-* 'push' or the suffixes like –DIr, -Ar, -Ir as in *koştur-, çıkar-*. These suffixes also express the permissive sense as in (148c).

The structure for the BIRAK (LET) function is:

(149) $[_{Event}$ BIRAK $(_{Thing}$ x], [Event y])]

To sum, the event types are:

(150)

$$[\text{EVENT}] \longrightarrow \left\{ \begin{array}{l} [_{Event}\ \text{NEDEN}\ [\ \left\{ \begin{array}{l} \text{Thing} \\ \text{Event} \end{array} \right\}\ \text{x}],\ [_{Event}\ \text{y}])] \\ [_{Event}\ \text{BIRAK}\ ([\ \left\{ \begin{array}{l} \text{Thing} \\ \text{Event} \end{array} \right\}\ \text{x}],\ [_{Event}\ \text{y}])] \end{array} \right\}$$

II. 5. 4. Lexical Causatives

In English, there are many causative verbs having what Jackendoff calls the function CS^{+} which refers to the positive outcome. The most common examples for the lexical causatives in English are the verbs *break* and *kill* as in (151) meaning 'cause to break' and 'cause to die'.

(151) a. Bill broke the window.

b. Bill killed Harry.

Jackendoff (1990:133; 1993:38) deals with lexical accusatives with other values of the success parameter. For example, in (152), there is a standard force dynamic interaction between the Agonist which is *the door* and the Antagonist which is *Amy,* with undetermined outcome.

(152) Amy pushed / pulled (on) the door as hard as she could,

{ and it finally opened. / but it wouldn't budge. }

The door's moving or not cannot be inferred. It may be opened or not. The only difference between *push* and *pull* is the direction of the antagonist's force. It is away from the antagonist in *push*, and toward the antagonist in *pull.*

In addition to the lexically causative verb *it-* 'push' in (148b) there are a number of verbs in Turkish: *as-* 'hang up', *bük-* 'bend', *çak-* 'nail', *çek-* 'pull', *dik-* 'erect', *diz-* 'string', *dök-* 'pour', *eğ-* 'tip', *ger-* 'stretch', *koy-* 'put', *sapla-* 'thrust into', *sav-* 'send away', *savur-* 'hurl', *ser-* 'spread out', *sıyır-* 'graze', *sok-* 'insert', *sök-* 'extract', *tak-* 'attach', *tık-* 'cram', *tıka-* 'plug', *yık-* 'pull down', etc.

The verbs *as-* 'hang up', *çak-* 'nail', *dik-* 'erect', *diz-* 'string', *koy-* 'put', *sapla-* 'thrust into', *ser-* 'spread out', *sok-* 'insert', *tak-* 'attach', *tık-* 'cram' and *tıka-* 'plug' have the function CS^{+} and they roughly mean "cause to stay" as in (153).

(153) a. Ayşe çamaşırları ipe <u>astı</u>.

'Ayşe hung the clothes on the line.'

b. Adam duvara çivi <u>çaktı</u>.

'The man pounded a nail into the wall.'

c. Ali bahçeye direk dikti.

'Ali placed a pole in the garden.'

d. Çocuk boncukları ipe dizdi.

'The child strung the beads.'

e. Adam kitapları rafa koydu.

'The man put the books on the table.'

f. Mehmet Onbaşı bayrağı toprağa sapladı.

'The Corporal Mehmet plunged the flag into the soil.'

g. Çiçekli örtüyü masanın üstüne serdi.

'She spread out the cloth with flowers on the table.'

h. Cep telefonunu şarj etmek için prize soktu.

'He inserted the plug of the cellular phone into the socket to charge.'

i. Savaşı protesto için vitrindeki mankenlere gaz maskesi taktı.

'To protest the war he put on gas-masks on the mannequin in the shopwindow.'

j. Nesrin, kitapların bir bir tozunu aldı, sonra büyük sandığa tıktı.

'Nesrin dusted the books one by one, then crammed into a big chest.'

k. Kulaklarına pamuk tıkadı.

'He stuffed his ears with cotton.'

As in their English counterparts, the Turkish verbs *çek-* 'pull' and *it-* 'pull' in (154) have a standard force dynamic interaction between the Agonist, *kapı* 'the door', and the Antagonist, *Ayşe*, with undetermined outcome. Whether the door moved or not cannot be inferred from the sentences.

(154) Ayşe kapıyı çekti / itti.

'Ayşe pulled / pushed the door.'

The verbs *bük-* 'bend', *eğ-* 'tip', *ger-* 'stretch', *sav-* 'send away', *sök-* 'extract, uproot', *yık-* 'pull down' again have the function CS^{+} that is they have positive outcomes. In (155),

(155) a. Jandarma Ahmet'in kolunu büktü.

'The gendarme bent Ahmet's arm.'

b. Adam güçlü kollarıyla demir parmaklıkları eğdi.

'The man tipped the iron bars with his strong arms.'

c. Çocuk sapanı kulağına kadar gerdi.

'The child stretched the slingshot up to his ear.'

d. Başkan işçileri başından savdı.

'The chairman sent away the workers.'

e. Belediye parktaki ağaçları kökünden söktü.

'Municipality uprooted the trees in the park.'

f. Güreşçi rakibini yere yıktı.

'The wrestler pulled down his rival.'

All the sentences in (155) have a standard force dynamic interaction between the Agonist and the Antagonist. The Agonists are *Ahmet*, *sapan*, *işçiler*, *ağaçlar* and *rakip* respectively. The Antagonists are *jandarma*, *adam*, *çocuk*, *başkan*, *belediye* and *güreşçi*.

II. 5. 5. Causation in Path

In English, some verbs like *enter* and *approach* lexicalizes the path- and place-functions and do not express them by a preposition. Jackendoff (1983:183-184) shows their semantic structures as in (156) and (157):

(156) "enter": [$_{Event}$ GO ([$_{Thing}$ x], [$_{Path}$ TO ([$_{Place}$ IN ([$_{Thing}$ z])])])]

(157) "approach": [$_{Event}$ GO ([$_{Thing}$ x], [$_{Path}$ TOWARD ([$_{Thing}$ y])])]

For Turkish, the verbs *gir-* 'enter' and *in-* 'go down' can be given as examples for the lexicalization of path- and place-functions. Their semantic structures are shown in (158) and (159).

(158) "gir-": [$_{Event}$ GİT ([$_{Thing}$ x], [$_{Path}$ A ([$_{Place}$ İÇ ([$_{Thing}$ z])])])]

(159) "in-": [$_{Event}$ GİT ([$_{Thing}$ x], [$_{Path}$ A ([$_{Place}$ AŞAĞI ([$_{Thing}$ z])])])]

The other verbs in Turkish which lexicalize path- or path- and place-functions are *yaklaş-* 'approach', *yanaş-* 'approach', *uzaklaş-* 'go faraway', *yakınlaş-* 'get closer', *yüksel-* 'rise', *alçal-* 'decline', *daral-* 'narrow', *boşal-* 'run out', *gel-* 'come', *git-* 'go', *kay-* 'slide', *gir-* 'enter', *çık-* 'go out', *in-* 'descend', *gerile-* 'draw back', *ilerle-* 'proceed', *düş-* 'fall', *çakıl-* 'fall', *bin-* 'mount', *geç-* 'pass', *kaz-* 'dig', and *göm-* 'bury'.

As Jackendoff (1983:184) states "verbs may lexicalize more than just a path or place-function". They can also lexicalize the theme. Jackendoff gives the verbs *butter* and *dust* as examples.

(160) "butter": [$_{Event}$ CAUSE ([$_{Thing}$ x], [$_{Event}$ GO ([$_{Thing}$ BUTTER], [$_{Path}$ TO ([$_{Place}$ ON ([$_{Thing}$ y])])])])]

(161) "dust": [$_{Event}$ CAUSE ([$_{Thing}$ x], [$_{Event}$ GO ([$_{Thing}$ DUST], [$_{Path}$ FROM ([$_{Place}$ ON ([$_{Thing}$ y])])])])]

These denominal verbs have different path-functions. As Jackendoff (1990:164) states "...such denominal verbs in English is obviously lexical rather than syntactic". Therefore, he considers each verb "to be a lexical item of its own". Jackendoff (1990) classifies the denominal verbs according to incorporation of argument adjunct: those that incorporate a "distributive location" like *fill* and *cover*; those that incorporate Theme like *butter*, *powder*, *water*, *ice* and *frost*; those permits the Theme to be expressed by means of an *of*-adjunct like *empty*, *uncover*, *skin* and *dust*; those that incorporate the noun as Goal rather than Theme like *bottle*, *pocket* an *package*; those that have locative alternation like *load*, *spray*, *pack*, *stuff*, *clear*, and *drain*.

In Turkish, the lexicalization of the theme and the path is expressed by the addition of the suffix "-lA" which makes verbs nouns, as given in (162), (163) and (164).

(162) "yağla-" (butter)

[$_{Event}$ NEDEN ([$_{Thing}$ x], [$_{Event}$ GİT ([$_{Thing}$ YAĞ], [$_{Path}$ A ([$_{Place}$ ÜST ([$_{Thing}$ y])])])])]

alçıla- 'to cover with plaster', *asfaltla-* 'asphalt', *astarla-* 'line, *badanala-* 'whitewash', *cilala-*'polish', *çimentola-* 'cement', *katranla-* 'tar', *kremle-* 'cream', *macunla-* 'putty' , *pudrala-* 'powder', *pulla-* 'stamp' , *rimelle-* 'mascara', *vazelinle-*, 'vaseline', *vernikle-* 'varnish'.

(163) "bohçala-" (bundle up)

[$_{Event}$ NEDEN ([$_{Thing}$ x], [$_{Event}$ GİT ([$_{Thing}$ x], [$_{Path}$ A ([$_{Place}$ İÇ ([$_{Thing}$ y])])])])]

kılıfla- 'cover', *sandıkla-* 'box', *kefenle-* 'wrap in a shroud', *ambalajla-*, 'pack', *çıkınla-* 'bundle up', *çuvalla-* 'bag', *kundakla-* 'swaddle'.

(164) "biberle-" (pepper)

[$_{Event}$ NEDEN ([$_{Thing}$ x], [$_{Event}$ GİT ([$_{Thing}$ BİBER], [$_{Path}$ A ([$_{Place}$ İÇ ([$_{Thing}$ y])])])])]

tuzla- 'salt', *salçala-* 'sauce', *yoğurtla-* 'put yoghurt in/on', *şekerle-* 'sugar', *şerbetle-* 'pour sherbet on'.

From these examples, a general principle of lexicalization can be emerged, which Jackendoff (1983:185) calls Lexical Variable Principle:

A variable in the structure of a lexical item must be capable of being filled by a conceptual constituent.

III. NON-SPATIAL SEMANTIC FIELDS IN TURKISH AND ENGLISH

Up to now, we have seen that lexical conceptual semantics deals with sentences which involve spatial relations. Jackendoff (1983, 1990, and 1992) takes the view of Gruber's Hypothesis to explain the concepts of non-spatial relations. This theory claims that "the formalism for encoding concepts of spatial location and motion, suitably abstracted, can be generalized to many other semantic fields" (Jackendoff, 1990:25; 1992:37). According to this claim many verbs and prepositions are used in two or more semantic fields. The following examples illustrate the parallelism between the spatial and non-spatial concepts.

(165) Spatial location and motion

a. The bird went from the ground to the tree.

b. The bird is in the tree.

c. Harry kept the bird in the cage.

(166) Possession

a. The inheritance went to Philip.

b. The money is Philip's.

c. Susan kept the money.

(167) Ascription of properties

a. (i) The light went / changed from green to red.

(ii) Harry went from elated to depressed.

b. (i) The light is red.

(ii) Harry is depressed.

c. Sam kept the crowd happy.

These groups have the sentences with the verbs *be*, *go* or *change* and *keep*. The verbs *be* and *keep* appear with the same preposition *in* as in (165b) and (165c). On the other hand, the verbs *go* and *change* appear with the prepositions *from* and *to*. Furthermore, the *go* sentences express change of some sort (e.g. location, possession or property) and the *be* sentences express their terminal states. The *keep* sentences denote the causation of a state that lasts over a period of time.

Jackendoff (1972, 1976, 1983 and 1992) extends and formalizes Gruber's work within the context of conceptual semantics. Gruber's Thematic Relations Hypothesis (TRH) may be stated like this.

> In any semantic field of [EVENTS] and [STATES], the principal event-, state-, path- and place- functions are a subset of those used for the analysis of spatial location and motion. Fields differ in only three possible ways:
> a. what sorts of entities may appear as theme;
> b. what sorts of entities may appear as reference objects;
> c. what kind of relation assumes the role played by location in the field of spatial expressions.
>
> (Jackendoff, 1983:188)

According to this hypothesis, the examples in (165-167) can be represented by the basic conceptual functions in (168).

(168) a. $[_{\text{Event}}$ GO ([ ], $\begin{bmatrix} \text{FROM ([ ])} \\ _{\text{Path}}\text{ TO ([ ])} \end{bmatrix}$)]

b. $[_{\text{State}}$ BE ([ ]), $[_{\text{Place}}$])]

c. $[_{\text{Event}}$ STAY ([ ], $[_{\text{Place}}$])]

Jackendoff presents a third dimension by introducing the notion of field in addition to *spatial* and *causal* dimension of his representation. This dimension extends the semantic content of spatial primitives to other domains such as Temporal, Possessive,

Identificational, Circumstantial and Existential which are notated as subscripts on the functions like GO_{Poss}, GO_{Ident}, GO_{Temp} etc.

III. 1. Temporal Field

Clark (1973:49-50) explains the structure of Temporal domain according to the notions dimensionality, directionality and the conceptions, moving ego and moving time metaphors. First, "time is one-dimensional" and is "described by the one-dimensional spatial terms" as in (169a). Second, "time is asymmetrical or directed" and is described by "one-dimensional relational prepositions which are also asymmetrical" as in (169b). Third, "humans are seen in one of two ways with respect to the time 'highway'":

a. we are moving along it with future time ahead of us and the past behind us; or
b. the highway is moving past us from front to back.

These two conceptions are called the moving ego and moving time metaphors and are exemplified in (169c) and (169d).

(169) a. Time was short.

The day has been long.

The end of the world is near.

Monday seems so far away.

b. before, after, ahead, behind, in front, in back, etc.

c. Trouble lies ahead.

The worst of it is behind us.

We are just coming into troubled times.

I look forward to Monday.

John will be here from Monday on(ward).

d. Noon crept up on us.

Friday arrived before we knew it.

Thursday rushed by.

Time flew by.

(cited in Iwata, 1999:73)

Considering the above mentioned conceptions of time, Iwata (1999:74) shows the structure of Temporal field as in Figure 3.

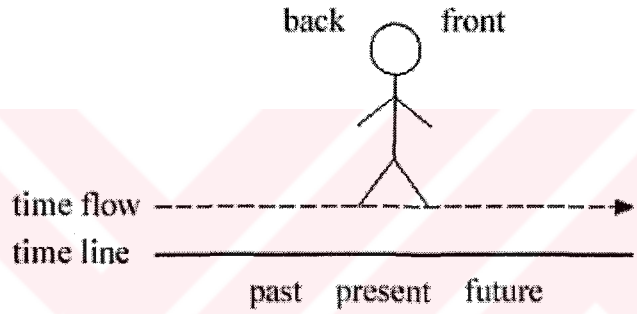


Figure 3. Structure of Temporal field

The conceptualization of time is seen as linear extending from the past to the future or from the past to the present to the future. As Iwata (1999:73) states "we humans are located on the time flow, with our front-back orientation corresponding to the future-past orientation, and are thereby conveyed in the direction of future".

So, the structure of Temporal field contains one-dimensionality, the directionality of time and the moving ego and the moving time metaphors. The moving ego and moving time metaphors display two ways for construing physical movement: either a person travels through a landscape, or the landscape travels past him. Iwata (1999:74) gives the examples (170a) and (170b).

(170) a. We're approaching Kyoto.

b. Kyoto is approaching.

Making a parallelism with (170), moving ego and moving time can be exemplified in (171a) and (171b).

(171) a. We're approaching Christmas.

b. Christmas is approaching.

Turkish uses the similar parallelism between Spatial field and Temporal field as in (172) and (173) respectively.

(172) a. Şehre yavaş yavaş yaklaşıyoruz.

'We are approaching the city slowly.'

b. Şehir yavaş yavaş yaklaşıyor.

'The city is approaching slowly.'

(173) a. Yaza yaklaşıyoruz.

'We are approaching the summer.'

b. Yaz yaklaşıyor.

'The summer is approaching.'

In the examples above, (171a) and (173a) are the instances of moving ego and (171b) and (173b) are the instances of moving time.

Another conceptualization of time structuring the Temporal field is based on Jackendoff (1983). In his approach, Jackendoff claims that non-spatial relations can be explained by adopting the functions of Spatial field. In the Spatial field, themes and reference objects are both referred to [THINGS]; in the Temporal field, [EVENTS] and [STATES] are the themes and [TIMES] are the reference objects. Thus, according to

criteria of the Thematic Relations Hypothesis, the Temporal field may be defined as follows:

Temporal field:

a. [EVENTS] and [STATES] appear as theme.

b. [TIMES] appear as reference object.

c. Time of occurrence plays the role of location.

(Jackendoff, 1983:189)

Non-spatial relations are explained parallel with spatial relations. Jackendoff (1983:190) exemplifies the Temporal expressions as in (174a-c) and the spatial ones as in (174a-c). The conceptual structures of the sentences are illustrated in (174a'-c') and (175a'-c').

(174) a. The meeting is at 6:00.

a'. $[_{State}\ BE_{Temp}\ ([_{Event}\ MEETING], [_{Place}\ AT_{Temp}\ ([_{Time}\ 6{:}00])])]$

b. We moved the meeting from Tuesday to Thursday.

b'. $[_{Event}\ CAUSE\ ([_{Thing}\ WE], [_{Event}\ GO_{Temp}\ ([_{Event}\ MEETING],$

$$\begin{bmatrix} FROM_{Temp}\ ([_{Time}\ TUESDAY]) \\ {}_{Path}\ TO_{Temp}\ ([_{Time}\ Thursday]) \end{bmatrix})])]$$

c. Despite the weather, we kept the meeting at 6:00.

c'. $[_{Event}\ CAUSE\ ([_{Thing}\ WE], [_{Event}\ STAY_{Temp}\ ([_{Event}\ MEETING],$

$[_{Place}\ AT_{Temp}\ ([_{Time}\ 6{:}00])])])]$

(175) a. The statue is in the park.

a'. $[_{State}\ BE\ ([_{Event}\ STATUE], [_{Place}\ AT\ ([PARK])])]$

b. We moved the statue from the park to the zoo.

b'. [$_{Event}$ CAUSE ([$_{Thing}$ WE], [$_{Event}$ GO ([$_{Thing}$ STATUE],

$$\begin{bmatrix} \text{FROM } ([_{Place} \text{ PARK}]) \\ _{Path}\text{ TO } ([_{Placee} \text{ ZOO}]) \end{bmatrix})])]$$

c. Despite the weather, we kept the statue on its pedestal.

c'. [$_{Event}$ CAUSE ([$_{Thing}$ WE], [$_{Event}$ STAY ([$_{Thing}$ STATUE],

[$_{Place}$ AT ([PEDESTAL])])])]

The verbs used to express change in (174) are identical to the verbs of spatial motion in (175). The sentences in (174) assert the temporal location or change of an event parallel to the spatial expressions in (175). The parallelism between (174) and (175) can be expressed by saying that two different modes of movement can be both in the Temporal field and in the Spatial field.

This conceptualization of Temporal field can be expressed as EVENTS ARE LOCATED ON A TIME-LINE. For example, the abstract movement in (174b), the change of scheduling, can be described as in Figure 4.

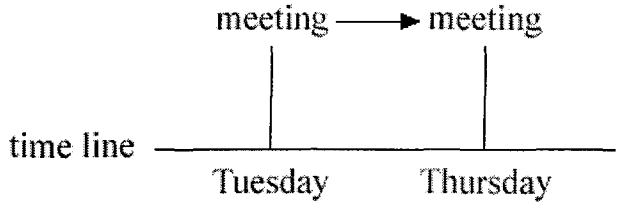


Figure 4. The abstract movement in Temporal field

Iwata (1999:77) distinguishes the time flow from the static time line and claims that the ego is conveyed on the time flow. So, the time moves not the ego. The ego can be considered as in the vehicle of time. As the vehicle moves, the ego moves as well.

For Turkish, we can give the examples in (176) and (177). The sentences in (176) denote the temporal location of an event parallel to the spatial expressions in (177).

(114) a. Toplantı saat 6'da.

'The meeting is at 6 o'clock.'

a'. [$_{State}$ OL$_{Temp}$ ([$_{Event}$ TOPLANTI], [$_{Place}$ DA$_{Temp}$ ([$_{Time}$ 6:00])])]

b. Toplantının saatini 5'den 6'ya aldık / attık.

'We moved / postponed the meeting from 5.00 to 6.00.'

b'. [$_{Event}$ NEDEN ([$_{Thing}$ BİZ], [$_{Event}$ GİT$_{Temp}$ ([$_{Event}$ TOPLANTI], [DEN$_{Temp}$ ([$_{Time}$ 5:00]) / $_{Path}$ A$_{Temp}$ ([$_{Time}$ 6:00])])])]

c. Havaya rağmen toplantının saatini 6 olarak bıraktık / tuttuk.

'Despite the weather, we left / kept the meeting at 6.00.'

c'. [$_{Event}$ NEDEN ([$_{Thing}$ BİZ], [$_{Event}$ KAL$_{Temp}$ ([$_{Event}$ TOPLANTI], [$_{Place}$ DA$_{Temp}$ ([$_{Time}$ 6:00])])])]

d. Toplantının saati 6 olarak kaldı.

'The meeting remained at 6 o'clock.'

d'. [$_{Event}$ KAL$_{Temp}$ ([$_{Event}$ TOPLANTI], [$_{Place}$ DA$_{Temp}$ ([$_{Time}$ 6:00])])]

e. Toplantı ayın 18'ine / yarına kaldı.

'The time of the meeting has been put off to 18th of this month / tomorrow.'

e'. [$_{Event}$ KAL$_{Temp}$ ([$_{Event}$ TOPLANTI], [$_{Path}$ A$_{Temp}$ ([$_{Time}$ YARIN])])]

(177) a. Masa bahçede.

'The table is in the garden.'

a'. [$_{State}$ OL ([$_{Thing}$ MASA], [$_{Place}$ DA ([$_{Thing}$ BAHÇE])])]

b. Masayı evden bahçeye aldık / attık.

'We moved / threw the table from the house to the garden.'

b'. [$_{Event}$ NEDEN ([$_{Thing}$ BİZ], [$_{Event}$ GİT ([$_{Thing}$ MASA],

$$\begin{bmatrix} \text{DAN } ([_{Place} \text{ EV}]) \\ _{Path} \text{ A } ([_{Place} \text{ BAHÇE}]) \end{bmatrix})])]$$

c. Havaya rağmen masayı bahçede bıraktık / tuttuk.

'Despite the weather, we left / kept the table in the garden.'

c'. [$_{Event}$ NEDEN ([$_{Thing}$ BİZ], [$_{Event}$ KAL ([$_{Thing}$ MASA],

[$_{Place}$ DA ([BAHÇE])])])]

d. Havaya rağmen masa bahçede kaldı.

'Despite the weather, the table stayed in the garden.'

d'. [$_{Event}$ KAL ([$_{Thing}$ MASA], [$_{Place}$ DA ([BAHÇE])])]

The verbs which are used to express change or which are without change in (176) are identical to the verbs of spatial motion in (177). Also, the sentences in (176) and (177) have the same syntactic structures. However, when we examine the argument structures of the sentences, we see that their semantic contents change. While the sentences in (176) show the Temporal field, the sentences in (177) show Spatial field. Besides, in (176b and c) the time of the meeting is changed from 5 to 6. Therefore, the abstract motion is the change of scheduling. In Turkish, also, the temporal expressions are necessary to evaluate the sentences as spatial or temporal. For example, the sentences in (176) do not have the temporal reading when the phrases "5'den 6'ya" and "6 olarak" are omitted.

(116) a. * Toplantının saatini aldık.

b. * Toplantının saatini attık.

c. * Toplantının saatini bıraktık.

d. * Toplantının saatini tuttuk.

e. * Toplantının saati kaldı.

The sentences in (179) are the examples for the Temporal field. When they are compared to the spatial sentences in (180), it can be seen that they have the same syntactic structures but different semantic contents.

(179) a. Yaz / Ramazan girdi.

'The summer / Ramadan started.'

a'. [$_{Event}$ GİT$_{Temp}$ ([$_{Event}$ YAZ])]

b. Askerliğin bitmesine 4 ay kaldı.

'There are 4 months for finishing the military service.'

b'. [$_{Event}$ KAL$_{Temp}$ ([$_{Event}$ ASKERLİK], [$_{Time}$ 4 AY])])]

c. Evi boyamak tam 10 saat tuttu.

'It lasted 10 hours to paint the house.'

c'. [$_{Event}$ GİT$_{Temp}$ ([$_{Event}$ EVİ BOYAMAK], [$_{Time}$ 10 SAAT])]

d. Bu ayakkabı 5 yıl gitti.

'These shoes lasted me for 5 years.'

d'. [$_{Event}$ GİT$_{Temp}$ ([$_{Thing}$ AYAKKABI], [$_{Time}$ 5 YIL])]

(180) a Çocuk odaya girdi.

'The child entered into the room.'

a'. [$_{Event}$ GİT ([$_{Thing}$ ÇOCUK], [$_{Path}$ A ([$_{Place}$ ODA])])]

b. Yolun bitmesine 3 km kaldı.

'There are 3 kilometers for finishing the road.'

b'. [$_{Event}$ KAL ([$_{Event}$ YOLUN BİTMESİ], [$_{Path}$ 3 KM])])]

c. Bu kanepe çok yer tuttu.

'This coach took up a lot of room.'

c'. [$_{Event}$ GİT ([$_{Thing}$ KANEPE], [$_{Place}$ ÇOK YER])]

d. Bu araba 30 000 km gitti.

'This car went 30 000 km.'

d'. [$_{Event}$ GİT ([$_{Thing}$ ARABA], [$_{Path}$ 30 000 KM])]

Again in the sentences in (179) do not have the temporal reading without the phrases "4 ay", "tam on saat" and "5 yıl" as seen in (181). In the similar way, spatial expressions in (180) such as "3 km" and "çok yer" determine the Spatial field membership of the verbs *kal-, tut-* and *git-*.

(181) a. * Askerliğin bitmesine kaldı.

b. * Evi boyamak tuttu.

c. * Bu ayakkabı gitti.

Besides, in Turkish there are some verbs such as *sür-* 'last' which are used only in temporal reading.

(182) a. Fırtına üç gün sürdü.

'The storm lasted three days.'

b. Toplantı 5'den 6'ya kadar sürdü.

'The meeting lasted from 5.00 to 6.00.'

The comparison of the temporal expressions in (a) sentences to the spatial expressions of extent in (b) sentences in (183) shows similar results.

(183) a. Ron's speech went / extended / lasted from 2:00 to 4:00.

a'. $[_{State}\ GO_{Ext,\ Temp}\ ([_{Event}\ SPEECH], \begin{bmatrix} FROM_{Temp}\ ([_{Time}\ 2{:}00]) \\ _{Path}\ TO_{Temp}\ ([_{Time}\ 4{:}00]) \end{bmatrix})]$

b. The road went / extended / lasted from Denver to Indianapolis.

b'. $[_{State}\ GO_{Ext,}\ ([_{Thing}\ ROAD], \begin{bmatrix} FROM\ ([_{Place}\ DENVER]) \\ _{Path}\ TO\ ([_{Place}\ INDIANAPOLIS]) \end{bmatrix})]$

(184) a. Toplantı 5'den 6'ya kadar uzadı.

'The meeting extended from 5.00 to 6.00.'

a'. $[_{State}\ GİT_{Ext,\ Temp}\ ([_{Event}\ TOPLANTI], \begin{bmatrix} DAN_{Temp}\ ([_{Time}\ 5{:}00]) \\ _{Path}\ A_{Temp}\ ([_{Time}\ 6{:}00]) \end{bmatrix})]$

b. Kamyon kuyruğu sınırdan şehre kadar uzadı.

'The queue of trucks extended from the border to the city.'

b'. $[_{State}\ GİT_{Ext,}\ ([_{Thing}\ TIR\ KUYRUĞU], \begin{bmatrix} DAN\ ([_{Place}\ SINIR]) \\ _{Path}\ A\ ([_{Place}\ ŞEHİR]) \end{bmatrix})]$

(185) a. Toplantının süresi 5 saati buldu.

'The period of the meeting reached 5 hours.'

a'. $[_{State}\ GİT_{Ext,\ Temp}\ ([_{Event}\ TOPLANTI], [_{Time}\ 5\ SAAT])]$

b. Gidilen yol 100 km.yi buldu.

'The road gone reached 100 km.'

b'. $[_{State}\ GİT_{Ext,}\ ([_{Thing}\ YOL], [_{Path}\ 100\ KM])]$

The function Go_{Ext} in (b) sentences in (183-185) maps a [THING] and a [PATH] into a [STATE] and asserts that the [THING] occupies every point of the [PATH]. In Temporal domain, in (a) sentences in (183-185), Go_{Ext} maps an [EVENT] and a

temporal [PATH] into a [STATE] and asserts that the [EVENT] occupies all points in time within the temporal [PATH].

In addition to the path concept, in the (a) sentences in (183-185), the abstract motion is the passage of time. In the (a) sentences, time flows, for example, from 2 to 4 or from 5 to 6. Because the motion is continuous and one-dimensional, the passage of time is also continuous and one-dimensional.

III. 2. Possessive Field

Possessive field has several distinct notions of possession. For example, the way one's possesses one's nose or a book are called inalienable possession and alienable possession respectively. Alienable possession divides into ownership and temporary control.

In possession, location plays an important role. Jackendoff (1983:192) treats the alienable possession which satisfies the Thematic Relations Hypothesis.

Alienable possession:

a. [THINGS] appear as theme.

b. [THINGS] appear as reference object.

c. Being alienably possessed plays the role of location; that is, "*y* has/ possesses *x*" is the conceptual parallel to spatial "*x* is at *y*".

He differs the possessional path from the physical path with respect to the dimensionality and continuity.

> Physical space is of course 3-dimensional, so an object can *move up*, *down*, *frontward*, *backward*, and *sideways*. By contrast, the possessional parallel has no dimensions: one can't give something *upward* or *frontward*. Physical space is continuous: if something moves from point A to point B, it occupies all the intermediate positions between A and

> B along the way. By contrast, the possessional parallel is discontinuous: there are no intermediate positions that an object traverses between being owned by X and being owned by Y. One can *move* a book *toward* or even *partway toward* Bill; but one cannot *give* a book *toward*, much less *partway toward*, Bill.
>
> (Jackendoff 1992:64)

In the light of Thematic Relations Hypothesis, Jackendoff (1992:64) claims that "the parallelism between spatial and possessional concepts is the result of three independent factors": The conception of physical space and of objects being located in it, the notion of possession which is a relation between a possessed object and a person, the possessor, and the innate abstract organizing system for concepts.

Jackendoff (1983:192) gives the examples in (186) which display the functional possibilities.

(186) a. Beth has / possesses / owns the doll.

The doll belongs to Beth.

a'. $[_{State}\ BE_{Poss}\ ([DOLL], [_{Place}\ AT_{Poss}\ ([BETH])])]$

b. Beth received the doll.

b'. $[_{Event}\ GO_{Poss}\ ([DOLL], [_{Path}\ TO_{Poss}\ [BETH])])]$

c. Beth lost the doll.

c'. $[_{Event}\ GO_{Poss}\ ([DOLL], [_{Path}\ FROM_{Poss}\ [BETH])])]$

---

d. Amy gave the doll to Beth.

d'. $[CAUSE\ ([AMY], [GO_{Poss}\ ([DOLL], \begin{bmatrix} FROM_{Poss}\ ([AMY]) \\ _{Path}\ TO_{Poss}\ ([BETH]) \end{bmatrix})])]$

e. Amy kept the doll.

e'. $[CAUSE\ ([AMY], [STAY_{Poss}\ ([DOLL], [_{Place}\ AT_{Poss}\ ([AMY])])])]$

f. Amy gave up/relinquished the doll.

f'. [LET ([AMY], [GO_{Poss} ([DOLL], [$FROM_{Poss}$ ([AMY])])])]

g. Beth obtained the doll.

g'. [CAUSE ([BETH], [GO_{Poss} ([DOLL], [TO_{Poss} ([BETH])])])]

h. Beth accepted the doll.

h'. [LET ([BETH], [GO_{Poss} ([DOLL], [TO_{Poss} ([BETH])])])]

i. Amy sold the doll to Beth for $5.

i'. [CAUSE ([AMY], [GO_{Poss} ([DOLL], [$FROM_{Poss}$ ([AMY]) / TO_{Poss} ([BETH])) / GO_{Poss} ([$5], [$FROM_{Poss}$ ([BETH]) / TO_{Poss} ([AMY]))])]

j. Beth bought the doll from Amy for $5.

j'. [CAUSE ([BETH], [GO_{Poss} ([DOLL], [$FROM_{Poss}$ ([AMY]) / TO_{Poss} ([BETH])) / GO_{Poss} ([$5], [$FROM_{Poss}$ ([BETH]) / TO_{Poss} ([AMY]))])]

As Iwata (1999: 78) states "being possessed is conceptualized as abstract location, and change of ownership as change of abstract location". The use of prepositions *from* and *to* clearly shows the parallelism between change of possession and spatial motion. The prepositions *from* and *to* express possessive source- (186i) and goal-functions (186d, h).

In the examples (186 a-j), causation is important in field of possession. *Receive*

and *lose* are noncausative events. The distinction between CAUSE and LET can be seen in the contrasts between *give* and *relinquish* and between *obtain* and *accept*. With the verbs such as *buy* and *sell*, the subject is conceptualized as the initiator of the transfer of both the doll and the money. Hence, the possessional field can be expressed by the metaphor POSSESSIONS ARE OBJECTS IN A PERSON'S PROXIMITY (Iwata, 1999:79).

In (187), the Possessive field is exemplified for Turkish.

(187) a. Ayşe bir araba sahibi. / Ayşe'nin arabası var. / Araba Ayşe'ye ait.

'Ayşe owns a car. / Ayşe has a car. / The car belongs to Ayşe.'

a'. [$_{State}$ OL$_{Poss}$ ([ARABA], [$_{Place}$ DA$_{Poss}$ ([AYŞE])])]

b. Ayşe arabayı aldı.

'Ayşe received the car.'

b'. [$_{Event}$ GİT$_{Poss}$ ([ARABA], [$_{Path}$ A$_{Poss}$ [AYŞE])])]

c. Ayşe bebeği kaybetti.

'Ayşe lost the doll.'

c'. [$_{Event}$ GİT$_{Poss}$ ([BEBEK], [$_{Path}$ DAN$_{Poss}$ [AYŞE])])]

d. Ayşe bebeği Tülay'a verdi.

'Ayşe gave the doll to Tülay.'

d'. [NEDEN ([AYŞE], [GİT$_{Poss}$ ([BEBEK], [DAN$_{Poss}$ ([AYŞE]) / $_{Path}$ A$_{Poss}$ ([TÜLAY])])])]

e. Ayşe arabayı elinde tuttu.

'Ayşe kept the doll.'

e'.[NEDEN ([AYŞE],[KAL$_{Poss}$ ([ARABA], [$_{Place}$ DA$_{Poss}$ ([AYŞE])])])]

f. Ayşe arabadan vazgeçti.

'Ayşe gave up the car.'

f'. [BIRAK ([AYŞE], [GİT$_{Poss}$ ([ARABA], [DAN$_{Poss}$ ([AYŞE])])])]

g. Ayşe arabayı elde etti / edindi.

'Ayşe obtained the car.'

g'. [NEDEN ([AYŞE], [GİT$_{Poss}$ ([ARABA], [A$_{Poss}$ ([AYŞE])])])]

h. Ayşe arabayı kabul etti.

'Ayşe accepted the car.'

h'. [BIRAK ([AYŞE], [GİT$_{Poss}$ ([ARABA], [A$_{Poss}$ ([AYŞE])])])]

i. Ayşe arabayı Tülay'a 20 milyara sattı.

'Ayşe sold the car to Tülay for 20 billions.'

i'.[NEDEN ([AYŞE], [GİT$_{Poss}$ ([20 MİLYAR], [DAN$_{Poss}$ ([TÜLAY])))] GİT$_{Poss}$ ([ARABA], [DAN$_{Poss}$ ([AYŞE])) A$_{Poss}$ ([TÜLAY])

j. Tülay arabayı Ayşe'den 20 milyara (satın) aldı.

'Tülay bougt the car from Ayşe for 20 billions.'

j'. [NEDEN ([TÜLAY], [GİT$_{Poss}$ ([20 MİLYAR], [DAN$_{Poss}$ ([TÜLAY])))] GİT$_{Poss}$ ([ARABA], [DAN$_{Poss}$ ([AYŞE])) A$_{Poss}$ ([TÜLAY])

The sentences in (188) illustrates the other examples of the notion of possession in Turkish and the sentences (189) express their counterparts in spatial motion

(188) a. Onun bütün masraflarını ben çektim.

'I bore all his expenses.'

a'. [$_{Event}$ GİT$_{Poss}$ ([MASRAFLAR] , [$_{Path}$ A$_{Poss}$ ([BEN])])]

b. Anne çocuğu için gözyaşı döktü.

'The mother shed tears for her child.'

b'. [$_{Event}$ GİT$_{Poss}$ ([GÖZYAŞI] , [$_{Path}$ DAN$_{Poss}$ ([ANNE])])]

c. Ayşe şüpheye / tereddüte düştü.

'Ayşe doubted / hesitated.'

c'. [$_{State}$ OL$_{Poss}$ ([ŞÜPHE] , [$_{Place}$ DE$_{Poss}$ ([AYŞE])])]

d. Bu konuşmayı yapmak size düştü.

'It is incumbent on you to make this speech.'

d'. [$_{Event}$ GİT$_{Poss}$ ([KONUŞMA YAPMAK] , [$_{Path}$ A$_{Poss}$ ([SİZ])])]

e. Mirastan ona bu ev düştü.

'This house passed to him by inheritance.'

e'. [$_{Event}$ GİT$_{Poss}$ ([EV] , [A$_{Poss}$ ([O]) ; $_{Path}$ DAN$_{Poss}$ ([MİRAS])])]

f. Bu ev bana babamdan geçti.

'This house was inherited me from my father.'

f'. [$_{Event}$ GİT$_{Poss}$ ([EV] , [A$_{Poss}$ ([BEN]) ; $_{Path}$ DAN$_{Poss}$ ([BABAM])])]

g. Suçu bana yıktı. / Suçu benim üzerime attı.

'He attributed the offence to me.'

g'. [NEDEN ([O] , [GO$_{Poss}$ ([SUÇ] , [$_{Path}$ A$_{Poss}$ ([BEN])])])]

h. Bisküviler nem almış.

'The biscuits absorbed damp.'

h'. [$_{Event}$ GİT$_{Poss}$ ([NEM], [$_{Path}$ A$_{Poss}$ [BİSKÜVİ])]

i. Eline geçen para çoluk çocuğa gidiyor.

'All the money he makes is spent on his wife and children.'

i'. $[_{Event}\ GİT_{Poss}\ ([PARA]\ ,\ \begin{bmatrix} DAN_{Poss}\ ([O]) \\ _{Path}\ A_{Poss}\ ([ÇOLUK\ ÇOCUK]) \end{bmatrix}\ )]$

j. Gemiler ve saray hepsi gitti.

'The ships and the palace, all were gone.'

$[_{Event}\ GİT_{Poss}\ ([GEMİLER\ VE\ SARAY]\ ,\ [_{Path}\ DAN_{Poss}\ ([O])])]$

(189) a. Odadaki bütün masaları köşeye ben çektim.

'I pulled all the tables in the room to the corner.'

a'. $[_{Event}\ NEDEN\ ([_{Thing}\ ADAM]\ ,\ [_{Event}\ GİT\ ([_{Thing}\ MASA]\ ,\ [_{Path}\ A\ ([_{Place}\ KÖŞE])])])]$

b. Çocuk çöpü döktü.

'The child threw away the garbage.'

b'. $[_{Event}\ NEDEN\ ([_{Thing}\ ÇOCUK]\ ,\ [_{Event}\ GİT\ ([_{Thing}\ ÇÖP])])]$

c. Ayşe yere düştü.

'Ayşe fell down.'

c'. $[_{Event}\ GİT\ ([_{Thing}\ AYŞE]\ ,\ [_{Path}\ A\ ([_{Place}\ YER])])]$

d. Balkondan kafasına saksı düştü.

'A flowerpot fell down from the balcony to his head.'

d'. $[_{Event}\ GİT\ ([_{Thing}\ SAKSI]\ ,\ \begin{bmatrix} DAN\ ([_{Place}\ BALKON]) \\ _{Path}\ A\ ([_{Place}\ KAFA]) \end{bmatrix}\ )]$

e. Adam sokağa bahçeden geçti.

'The man passed to the street through the garden.'

e'. [Event GİT ([Thing ADAM] { DAN ([Place BAHÇE]) / Path A ([Place SOKAK]) })]

f. Rüzgar ağacı yere yıktı. / Adam taşı benim üzerime attı.

'The wind pull down the tree. / The man threw the stone on me.'

f'. [Event NEDEN ([Thing RÜZGAR], [Event GİT ([Thing AĞAÇ]) , ([Path A [Place YER])])]

g. Mersine gelen herkes Cennet – Cehennem'e gidiyor.

'Everybody coming to Mersin go to Heaven – Hell.

g'. [Event GİT ([Thing HERKES], [Path A ([Place CENNET CEHENNEM])])]

h. Misafirlerin hepsi gitti.

'All the guests went.'

h'. [Event GİT ([Thing MİSAFİRLER] , [Path A ([Place DIŞARI])])]

The sentences, which denote possession or change of possession in (188), have identical verbs and syntactic structures with the sentences which denote spatial motion in (189). However, their semantic contents change according to argument structures of the sentences as we have also seen in the Temporal Field. The sentences in (188) show the Possessional field while the sentences in (189) show Spatial field.

Besides, in the sentences in (187d, i and j) and (188e, f and i) the parallelism between the change of ownership and the spatial motion is achieved by the use of the dative case –A and the ablative case –DAn. In these sentences, the possessive source- and goal-functions are expressed by the ablative case –DAn and the dative case –A respectively. Furthermore, in (187i and j), the paths consist not only the transfer of

possession but also the transfer of money.

III. 3. Identificational Field

Another semantic field, called Identificational field, concerns categorization of objects and ascription of properties to them. Sentences belonging to the Identificational field contain an [OBJECT] as theme, and [OBJECTS] and [PROPERTIES] as reference object. "In this field the Theme is referential, and the 'reference object' denoted by the predicate nominal is a category or type" (Jackendoff, 1990:117).

Identificational field:

a. [THINGS] appear as theme.

b. [THING TYPES] and [PROPERTIES] appear as reference objects.

c. Being an instance of a category or having a property plays the role of location (Jackendoff, 1983:194).

The sentences in (190) show some sentences with Identificational verbs.

(190) a. Elise is a pianist.

a'. $[_{State}\ BE_{Ident}\ ([_{Thing\ Token}\ ELISE],\ [_{Place}\ AT_{Ident}\ ([_{Thing\ Type}\ PIANIST])])]$

b. Elise became/ turned into a mother.

b'. $[_{Event}\ GO_{Ident}\ ([_{Token}\ ELISE],\ [_{Path}\ TO_{Ident}\ ([_{Type}\ MOTHER])])]$

c. The coach changed from a handsome young man into a pumpkin.

c'. $[_{Event}\ GO_{Ident}\ ([_{Token}\ COACH], \begin{bmatrix} FROM_{Ident}\ ([MAN]) \\ _{Path}\ TO_{Ident}\ ([PUMPKIN]) \end{bmatrix})]$

d. The coach stayed/remained a pumpkin.

d'. [$_{Event}$ STAY$_{Ident}$ ([$_{Token}$ COACH], [$_{Place}$ AT$_{Ident}$ ([$_{Type}$ PUMPKIN])])]

e. Sol made Gary a celebrity.

e'. [CAUSE ([SOL], [GO$_{Ident}$ ([GARY], [TO$_{Ident}$ ([CELEBRITY])])])]

f. Sol kept Gary a celebrity.

f'. [CAUSE ([SOL], [STAY$_{Ident}$ ([GARY], [AT$_{Ident}$ ([CELEBRITY])])])]

g. Sol left Gary a celebrity.

g'. [LET ([SOL], [STAY$_{Ident}$ ([GARY], [AT$_{Ident}$ ([CELEBRITY])])])]

The conceptualization of the Identificational field can be expressed by the metaphor PROPETIES ARE LOCATIONS. Therefore, being a member of a category or having a property is considered as location, and change of property is change of abstract location (Iwata, 1999:79). The initial state of change can be expressed by *from* and the end-state of change by *into* as in (190c). This can be illustrated as in Figure 5.

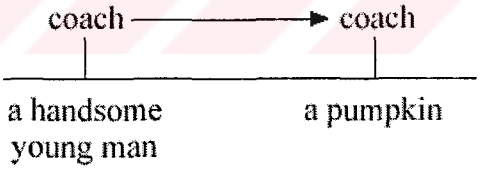


Figure 5. Change of abstract location in Identificational field.

The preposition *as* frequently appears as a marker of Identificational location. (191) gives some representative constructions.

(191) a. I used to work as a musician.

b. He imagined me as a celebrity.

c. He treated me as a celebrity.

d. He hired me as a janitor.

e. As a citizen of Lower Bassadonia, I protest vehemently.

All the verbs in (190) can appear with an adjective phrase in place of the predicate nominal as in (192).

(192) a. The light is red.

a'[BE_{Ident} ([LIGHT], [AT_{Ident} ([$_{Property}$ RED])])]

b. The light changed from red to green

b'. [GO_{Ident} ([LIGHT], $\begin{bmatrix} FROM_{Ident}\ ([_{Property}\ RED]) \\ TO_{Ident}\ ([_{Property}\ GREEN]) \end{bmatrix}$)]

c. Sol kept Gary famous.

c'. [CAUSE ([SOL], [$STAY_{Ident}$ ([GARY], [AT_{Ident} ([$_{Property}$ FAMOUS])])])]

Many [PROPERTIES] lexicalize with a GO_{Ident} function to form so-called inchoative verbs, a few of which appear in (193).

(193) a. The pages yellowed.

a'. [GO_{Ident} ([PAGES], [TO_{Ident} ([$_{Property}$ YELLOW])])]

b. The metal melted.

[GO_{Ident} ([METAL], $\begin{bmatrix} FROM_{Ident}\ ([SOLID]) \\ TO_{Ident}\ ([LIQUID]) \end{bmatrix}$)]

c. The flames blackened the building.

c'. [CAUSE ([FLAMES], [GO_{Ident} ([BUILDING], [TO_{Ident} ([BLACK])])])]

(Jackendoff, 1983:195)

The Identificational field, unlike the Possessive field, shows continuous [PATHS] as well as end-states. For example, the verb *range* expresses a GO_{Ext} function

and specifies occupation of end points and all or many points in between. The sentences in (194a, b) show the Identificational cases and the sentence in (194c) shows the spatial use of *range.*

(194) a. Our clients range from psychiatrists to psychopaths.

a'. $[_{State}\ GO_{Ext,Ident}$ ([OUR CLIENTS],

$$\begin{bmatrix} FROM_{Ident}\ ([PSYCHIATRISTS]) \\ TO_{Ident}\ ([PSYCHOPATHS]) \end{bmatrix}\ )]$$

b. This theory ranges from the sublime to the ridiculous.

b'. $[_{State}\ GO_{Ext,\ Ident}$ ([THEORY], $\begin{bmatrix} FROM_{Ident}\ ([SUBLIME]) \\ TO_{Ident}\ ([RIDICULOUS]) \end{bmatrix}\ )]$

c. Jackrabbits range from Maine to Florida.

c'. $[_{State}\ GO_{Ext}$ ([JACKRABBITS], $\begin{bmatrix} FROM\ ([MAINE]) \\ TO\ ([FLORIDA]) \end{bmatrix}\ )]$

(Jackendoff, 1983:196)

In (195), the Identificational sentences in Turkish are exemplified.

(195) a. Ayşe bir öğretmendir.

'Ayşe is a teacher.'

a'. $[_{State}\ OL_{Ident}\ ([_{Thing\ Token}\ AYŞE], [_{Place}\ DA_{Ident}\ ([_{Thing\ Type}\ ÖĞRETMEN])])]$

b. Ayşe öğretmen oldu.

'Ayşe became a teacher.'

b'. $[_{State}\ GİT_{Ident}\ ([_{Token}\ AYŞE]\ , [_{Path}\ A_{Ident}\ ([_{Type}\ ÖĞRETMEN])])]$

c. Genç adam kurbağadan prense dönüştü.

'The young man changed from a frog into a prince.'

c'. $[_{Event}\ GİT_{Ident}\ ([_{Token}\ ADAM]\ ,\ \begin{bmatrix} DAN_{Ident}\ ([KURBAĞA]) \\ _{Path}\ A_{Ident}\ ([PRENS]) \end{bmatrix}\ )]$

d. Genç adam kurbağa olarak kaldı.

'The young man remained frog.'

d'. $[_{Event}\ KAL_{Ident}\ ([_{Token}\ ADAM]\ ,\ [_{Place}\ DA_{Ident}\ ([_{Type}\ KURBAĞA])])]$

e. Ali Ahmet'i müdür yaptı.

'Ali made Ahmet a director.'

e'. $[CAUSE\ ([ALİ]\ ,\ [GİT_{Ident}\ ([AHMET]\ ,\ [A_{Ident}\ ([MÜDÜR])])])]$

f. Ali Ahmet'in müdür olarak kalmasını sağladı.

'Ali kept Ahmet a director.'

f'. $[CAUSE\ ([ALİ]\ ,\ [KAL_{Ident}\ ([AHMET]\ ,\ [DA_{Ident}\ ([MEŞHUR])])])]$

g. Ali Ahmet'in müdür olarak kalmasına olanak tanıdı.

'Ali left Ahmet a director.'

g'. $[BIRAK\ ([ALİ]\ ,\ [KAL_{Ident}\ ([AHMET]\ ,\ [DA_{Ident}\ ([MEŞHUR])])])]$

h. Evsahibi evi otele çevirdi.

'The landlord turned the house into a hotel.'

h'. $[NEDEN\ ([EVSAHİBİ]\ ,\ [GİT_{Ident}\ ([EV],\ [A_{Ident}\ ([OTEL])])])]$

i. İşçiler halıyı yuvarladılar.

'The workers rolled the carpet.'

i'. $[NEDEN\ ([İŞÇİLER],[GİT_{Ident}\ ([HALI],\ [A_{Ident}\ ([_{Property}$ YUVARLAK])])])]

j. Adam yorgun / zayıf / şehit / esir düştü.

'The man became fatigue / weak / martry / prisoner.'

j'. [GİT$_{Ident}$ ([ADAM] , [$_{Path}$ A$_{Ident}$ ([$_{Property}$ YORGUN])])]

k. Adamın neşesi / rahatı kaçtı.

'The man was disturbed.'

k'. [GİT$_{Ident}$ ([NEŞE] , [$_{Path}$ DAN$_{Ident}$ ([ADAM])])]

The postpositions *olarak* and *gibi* seem to be the markers of Identificational location. The postposition *gibi*, as in (196b and c), is used with the clausal complements and the postposition *olarak*, as seen in (196 a, d and e), is used with the nominal complements.

(196) a.Ben müzisyen olarak çalışırdım.

'I used work as a musician.'

b. Ali beni ünlü biriymişim gibi düşündü.

'Ali imagined me as a celebrity.'

c. Ali bana ünlü biriymişim gibi davrandı.

'Ali treated me as a celebrity.'

d. Ali beni kapıcı olarak tuttu.

'Ali hired me as a janitor.'

e. T. C. vatandaşı olarak savaşı protesto ettim.

'As a citizen of Turkish Republic, I protested the war.'

In the Identificational field, the verbs can also appear with an adjective phrase instead of a nominal predicate as in (197).

(197) a. Işık kırmızı.

'The light is red.'

a'. [OL_{Ident} ([IŞIK], [DA_{Ident} ([$_{Property}$ KIRMIZI])])]

b. Işık kırmızıdan yeşile döndü.

'The light changed from red to green.'

b'. [$GİT_{Ident}$ ([IŞIK], $\begin{bmatrix} DAN_{Ident}([_{Property}\ KIRMIZI]) \\ A_{Ident}([_{Property}\ YEŞİL]) \end{bmatrix}$)]

c. Ali Ahmet'in ününü korudu.

'Ali kept Ahmet famous.'

c'. [NEDEN ([ALİ], [KAL_{Ident}([AHMET], [DA_{Ident}([$_{Property}$ ÜNLÜ)])])]

The function $GİT_{Ident}$ is also used to represent the verbs of change of state as in (198). In these sentences, there is a change of property. The ablative case -DAn denotes the initial state of the change and the dative case –A denotes the final state of the change.

(198) a. Alkol uçtu.

'The alcohol evaporated.'

a'. [$GİT_{Ident}$ ([ALKOL], $\begin{bmatrix} DAN_{Ident}([SIVI]) \\ A_{Ident}([GAZ]) \end{bmatrix}$)]

b. Boyanın rengi uçtu.

'The color of the paint faded away.'

b'. [$GİT_{Ident}$ ([RENK], $\begin{bmatrix} DAN_{Ident}([CANLI]) \\ A_{Ident}([SOLUK]) \end{bmatrix}$)]

c. Boyacı boyanın rengini açtı.

'The painter made the color lighter.'

c'. [NEDEN ([BOYACI] , [GİT$_{Ident}$ ([RENK], $\begin{bmatrix} DAN_{Ident}([KOYU]) \\ A_{Ident}([AÇIK]) \end{bmatrix}$)])]

d. Hava açtı.

'The weather has cleared up.'

d'. [GİT$_{Ident}$ ([HAVA], $\begin{bmatrix} DAN_{Ident}([KAPALI]) \\ A_{Ident}([AÇIK]) \end{bmatrix}$)]

e. Bu karpuz geçmiş.

'This watermelon is overriped.'

e'. [GİT$_{Ident}$ ([KARPUZ] , $\begin{bmatrix} DAN_{Ident}([TAZE]) \\ DOĞRU_{Ident}([ÇÜRÜK]) \end{bmatrix}$)]

f. Kazak çekti.

'The sweater shrank.'

f'. [GİT$_{Ident}$ ([KAZAK] , $\begin{bmatrix} DAN_{Ident}([BÜYÜK]) \\ A_{Ident}([KÜÇÜK]) \end{bmatrix}$)]

g. Ev çöktü.

'The house collapsed.'

g'. [GİT$_{Ident}$ ([EV] , $\begin{bmatrix} DAN_{Ident}([SAĞLAM]) \\ A_{Ident}([YIKIK]) \end{bmatrix}$)]

Identificational field also shows continuous [PATHS]. For example, in (199a and b), the verbs *değiş-* and *(dağılım / değişiklik) göster-* express a GİT$_{Ident}$ function in Turkish and specifies the all points between the initial and endpoints. The sentence in (199c) shows the spatial use of *göster-* but this time it is used with the derived noun *yayılım* which denotes the spatial extension. We also see that there is no use of the verb *değiş-* in the spatial extension sense.

(199) a. Üniversite öğrencilerinin yaşları 18 ile 25 arasında değişir / dağılım gösterir.

'The age of university students changes / ranges from 18 to 25.'

a'. $[_{State}\ GİT_{Ext,\ Ident}([Ü.\ ÖĞRENCİLERİ],\ \begin{bmatrix} DAN_{Ident}([18]) \\ A_{Ident}([25]) \end{bmatrix})]$

b. Topun rengi sarı ile turuncu arasında değişir / değişiklik gösterir.

'The color of the ball changes / ranges from yellow to orange.'

b'. $[_{State}\ GİT_{Ext,\ Ident}([RENK],\ \begin{bmatrix} DAN_{Ident}([SARI]) \\ A_{Ident}([TURUNCU]) \end{bmatrix})]$

c. Mezarlık doğudan batıya doğru bir yayılım gösterir.

'The graveyard ranges from east to west.'

c'. $[_{State}\ GİT_{Ext}([MEZARLIK],\ \begin{bmatrix} DAN([DOĞU]) \\ A_{Ident}([BATI]) \end{bmatrix})]$

III. 4. Circumstantial Field

The next field is called *Circumstantial field* and it can be defined as follows.

Circumstantial field:

a. [THINGS] appear as theme.

b. [EVENTS] and [STATES] appear as reference objects.

c. "x is a character of y" plays the role of spatial "x is at y" (Jackendoff, 1983:198).

In the Circumstantial field, the verbs subcategorize a subordinate clause that expresses the reference [EVENT] or [STATE]. The subordinate clause does not have a

subject but the theme is used as the subject. For example, In (200a and b) the subordinate clause "composing quartets" does not have an overt syntactic subject; "Fred" is understood as fulfilling this function. The lexical parallel with (d) suggests an analysis in which "Louise" is agent, "Fred" is theme, and "composing quartets" serves as a kind of [PLACE]

(200) a. Fred kept composing quartets.

a'. [$_{Event}$ STAY$_{Circ}$ ([FRED]$_i$, [$_{Place}$ AT$_{Circ}$ ([$_{Event}$ *i* COMPOSE QUARTETS])])]

b. Louise kept Fred composing quartets.

b'. [CAUSE ([LOUISE], [STAY$_{Circ}$ ([FRED]i, [$_{Place}$ AT$_{Circ}$ ([$_{Event}$ *i* COMPOSE QUARTETS])])])]

c. Fred stayed in the attic.

c'. [$_{Event}$ STAY ([FRED], [$_{Place}$ AT ([$_{Thing}$ ATTIC])])]

d. Louise kept Fred in the attic.

d'. [CAUSE ([LOUISE], [STAY ([FRED], [$_{Place}$ AT ([$_{Thing}$ ATTIC])])])]

Jackendoff (1983:198) suggests that "just as spatial 'keep' means 'maintain in a position over time', circumstantial 'keep' means 'maintain in a role in an event or situation over time'".

Jackendoff (1990:199) analyses the aspectual verbs *start* and *stop* as circumstantial GO and the verb *be* as circumstantial BE as shown in (201) and (202).

(201) a. Ludwig started composing quartets.

a'. [GO$_{Circ}$ ([LUDWIG]$_i$, [$_{Path}$ TO$_{Circ}$ ([i COMPOSE QUARTETS])])]

b. Ludwig stopped composing quartets.

b'. [GO_{Circ} ([LUDWIG]$_i$,[$_{Path}$ $FROM_{Circ}$ ([i COMPOSE QUARTETS])])]

(202) Ludwig is composing quartets.

[$_{State}$ BE_{Circ} ([LUDWIG]$_i$, [$_{Place}$ AT_{Circ} ([i COMPOSE QUARTETS])])]

Circumstantial function appears with the causatives as in (203).

(203) a. 1.Sue forced/pressured/tricked/talked Jim into singing.

2.Sue got/forced/caused/coerced Jim to sing.

a'. [CAUSE ([SUE], [GO_{Circ} ([JIM]$_i$, [TO_{Circ} ([*i* SING])])])]

b. Sue kept/ restrained/ prevented Jim from singing.

b'. [CAUSE ([SUE], [$STAY_{Circ}$ ([JIM]i, [NOT AT_{Circ} ([*i* SING])])])]

c. Sue allowed /permitted Jim to sing.

c'. [LET ([SUE], [GO_{Circ} ([JIM]$_i$, [TO_{Circ} ([*i* SING])])])]

d. Sue released Jim from singing.

d'. [LET ([SUE], [GO_{Circ} ([JIM]$_i$, [$FROM_{Circ}$ ([*i* SING])])])]

e. Sue exempted Jim from singing.

e'. [LET ([SUE], [$STAY_{Circ}$ ([JIM]$_i$, [NOT AT_{Circ} ([*i* SING])])])]

In (203a), Sue's action is aimed at Jim's coming to sing and she succeeds. In (203b), Sue's action results in Jim's continuing not to sing. In (203c), Jim probably sang by Sue's allowing him to sing. In (203d), Sue allowed him to stop. Finally, in (203e), Sue chose not to force Jim to sing.

For Turkish, the sentences in (204) can be given as examples for the Circumstantial field.

(204) a. Ali beste yapmaya devam etti. / Ali beste yapmayı sürdürdü.

'Ali kept composing.'

a'. [$_{Event}$ KAL$_{Circ}$ ([ALİ]$_i$, [$_{Place}$ DA$_{Circ}$ ([$_{Event}$ *i* BESTE YAP-])])]

b. Ahmet Ali'nin beste yapmaya devam etmesini / beste yapmayı sürdürmesini sağladı.

'Ahmet kept Ali composing.'

b'. [NEDEN ([AHMET] , [KAL$_{Circ}$ ([ALİ]i, [$_{Place}$ DA$_{Circ}$ ([$_{Event}$ *i* BESTE YAP-])])])]

In (205), the aspectual verbs *başla-* and *kaçın-* appear as circumstantial GİT.

(205) a. Adamlar koşmaya başladılar.

'The men started running.'

a'. [GİT$_{Circ}$ ([ADAMLAR]$_i$, [$_{Path}$ A$_{Circ}$ ([$_{Event}$ i KOŞ-])])]

b. Adamlar koşmaktan kaçındılar.

'The men avoided running.'

b'. [KAL$_{Circ}$ ([ADAMLAR]$_i$, [$_{Path}$ DAN$_{Circ}$ ([$_{Event}$ i KOŞ-])])]

c. Adamlar kapıda durmaya başladılar.

'The men started satnding at the door.'

c'. [GİT$_{Circ}$ ([ADAMLAR]i , [$_{Path}$ A$_{Circ}$ ([$_{State}$ i DUR-], [$_{Place}$ DA ([$_{Thing}$ KAPI])])])]

d. Adamlar kapıda durmaktan kaçındılar.

'The men avoided standing at the door.'

d'. [KAL$_{Circ}$ ([ADAMLAR]$_i$, [$_{Path}$ DAN$_{Circ}$ ([$_{State}$ i DUR-], [$_{Place}$ DA ([$_{Thing}$ KAPI])])])]

Circumstantial function also appears with the causatives in Turkish.

(206) a. Ayşe Ali'yi şarkı söylemesi için zorladı / mecbur etti / baskı yaptı / kandırdı.

'Ayşe forced / pressured / tricked Ali into singing.'

a'. [NEDEN ([AYŞE], [GİT$_{Circ}$ ([ALİ]$_i$, [A$_{Circ}$ ([*i* ŞARKI SÖYLE-])])])]

b. 1. Ayşe Ali'nin şarkı söylemesini engelledi / önledi / yasakladı.

'Ayşe kept / prohibited / prevented Ali from singing.'

2. Ayşe Ali'nin şarkı söylemesinin önüne geçti.

'Ayşe prevented Ali from singing.'

3. Ayşe Ali'yi şarkı söylemekten alıkoydu / menetti.

'Ayşe detained / forbid Ali from singing.'

b'. [NEDEN ([AYŞE] , [KAL$_{Circ}$ ([ALİ]i, [DA DEĞİL$_{Circ}$ ([*i* ŞARKI SÖYLE-])])])]

c. Ayşe Ali'ye şarkı söylemesi için izin verdi / bıraktı.

'Ayşe released Ali from singing. / Ayşe let Ali sing.'

c'. [BIRAK ([AYŞE], [GİT$_{Circ}$ ([ALİ]$_i$, [A$_{Circ}$ ([*i* ŞARKI SÖYLE-])])])]

d. Ayşe Ali'nin şarkı söylemekten azad etti / kurtardı.

'Ayşe released Ali from singing.'

d'. [BIRAK ([AYŞE], [GİT$_{Circ}$ ([ALİ]$_i$, [DAN$_{Circ}$ ([*i* ŞARKI SÖYLE-])])])]

e. Ayşe Ali'yi şarkı söylemekten muaf tuttu.

'Ayşe exempted Ali from singing.'

e'. [BIRAK ([AYŞE], [KAL$_{Circ}$ ([ALİ]$_i$, [DA DEĞİL$_{Circ}$ ([*i* ŞARKI SÖYLE-])])])]

In (206a), Ayşe's action is directed to Ali's singing and he sang at last. In (206b), Ayşe's action results in Ali's continuing not to sing. In (206c), Ayşe allowed him to sing and he probably sang. In (206d), Ayşe allowed him to stop and in (206e), Ayşe chose not to force Ali to sing.

III. 5. Existential Field

The last field, existential field, has a degenerate space which contains just one location. In the Existential field, the theme is understood to exist for things, to have happened for events, or to hold true for states.

Existential field:

a. [THINGS] and [STATES] can serve as theme.

b. There is one reference region, called [EX], expressed by "existence" (Jackendoff, 1983:202).

In English, the expressions like *be in existence, be out of existence, come into existence, go out of existence, stay in existence, bring into existence* and *keep in existence* are the event and state realizations of Existential field. In addition, the verbs *exist, persist, create, destroy, appear, present* and *survive* are the verbs used in Existential field. Among these verbs, exist, persist create and destroy are the lexicalizations of *be in existence, stay in existence, cause to come into existence* and *cause to go out of existence*, respectively. The sentences in (207a-i) are taken from Dorr's (2001) LCS Database Documentation and the field [EXIST] is based on this study.

(207) a. The boat appeared.

a'. [GO_{Exist} ([$_{Thing}$ BOAT], [EXIST])]

b. A solution presented itself.

b'. [GO_{Exist} ([$_{Event}$ SOLUTION], [EXIST])]

c. John's beliefs presented themselves.

c'. [GO_{Exist} ([$_{State}$ JOHN'S BELIEFS], [EXIST])]

d. The man survived.

d'. [$STAY_{Exist}$ ([$_{Thing}$ MAN], [EXIST])]

e. The party persisted.

e'. [$STAY_{Exist}$ ([$_{Event}$ PARTY], [EXIST])]

f. His beliefs persisted.

f'. [$STAY_{Exist}$ ([$_{State}$ HIS BELIEFS], [EXIST])]

g. There was a man.

g'. [BE_{Exist} ([$_{Thing}$ MAN], [EXIST])]

h. There was a party.

h'. [BE_{Exist} ([$_{Event}$ PARTY], [EXIST])]

i. There was an election.

i'. [BE_{Exist} ([$_{State}$ ELECTION], [EXIST])]

j. God created the heaven and the earth

j'. [CAUSE ([GOD], [GO_{Exist} ([HEAVEN AND EARTH], [EXIST])])]

k. The hunters destroyed the trees.

k'. [CAUSE ([HUNTERS], [GO_{Exist} ([HEAVEN AND EARTH], [NOT EXIST])])]

In the sentences in (207), the arguments are either a Thing or an Event or a

State. In (207a, b, d, g, j and k) the argument is a Thing, in (207b, e, h) it is an Event and in (207f and i) it is a State. In (207j and k), the Existential field appears with the causative verbs *create* and *destroy*. The former causes to exist whereas the latter causes not to exist.

In Turkish, the expressions like *mevcut ol-* 'be present, exist', *var ol-* 'be, exist', *baki ol-* 'remain over, survive', *yok et-* 'anhiliate, demolish', *ortadan kaldır-* 'abolish, destroy, take away', *ortadan kalk-* 'be abolished, disappear', *ortadan kaybol-* 'disappear', *ortaya at-* 'put forward, introduce', *ortaya çıkar-* 'discover', *ortaya çık-* 'appear, come out', *ortaya dök-* 'reveal, disclose', *ortaya dökül-* 'be revealed', *ortaya koy-* 'put forward', *meydana getir-* 'create, bring into being', *yarat-* 'create', *yap-* 'do, make, construct' and *oluştur-* 'form' can be the examples for the existential field. (208) shows the sentences in existential field and their representations.

(208) a. Eskiden kalite vardı.

'There used to exist quality in the past.'

a'. [OL_{Exist} ([$_{State}$ KALİTE], [VAR])]

b. Katillerin isimleri mevcut.

'The names of the murderers exist.'

b'. [OL_{Exist} ([$_{Thing}$ İSİMLER] , [VAR])]

c. Fırtına bir kasabayı yok etti.

'The storm annihilated a town.'

c'. [NEDEN ([FIRTINA] , [$GİT_{Exist}$ ([$_{Thing}$ KASABA] , [YOK])])]

d. Belediye hurdayı ortadan kaldırdı.

'The municipal employers took away the junk.'

d'. [NEDEN ([BELEDİYE] , [$GİT_{Exist}$ ([$_{Thing}$ HURDA] , [YOK])])]

$GİT_{Exist}$ as in (208e and f) are used in the Existential field.

III. 6. Conclusion

In this chapter, we have seen that many verbs appear in two or more semantic fields namely Temporal, Possessional, Identificational, Circumstantial and Existential. Each of these fields use the same entities such as [THING], [PATH], [EVENT] and [STATE] in different ways to describe the semantic content of a sentence. Within a field, one verb expresses simple characteristics. For example, *be* sentences may denote being in a particular location, belonging to a particular person, being of a particular color, or being scheduled at a particular time. However, the conceptual system has also complex concepts that can be applied to any field. For instance, the *go /change* sentences denote a change from one characteristic to another and *keep* sentences denote having a particular characteristic over a period of time. "Because similarly structured complex concepts appear in many (and possibly all) semantic fields, it is convenient for the language to use the same words as it switches from one field to another" (Jackendoff, 2002:357-358).

The notion of polysemy is associated with these cross-field parallels. Jackendoff (2002:359) considers a verb as having various related senses because of the syntactic and lexical peculiarities in each field. Besides, all these peculiarities have to be learned because "they cannot be part of the general mapping that relates these fields to each other. This means that each word must specify in which fields it appears and what peculiarities it has in each". Moreover, he, taking the Possessional field as an example, states that possessional concepts are not entirely parallel to spatial concepts "because the notion of location in physical space ranges over three continuous orthogonal degrees of freedom, whereas what we might call 'possessional space' ranges over the discontinuous

unstructured set of individuals" (Jackendoff, 1992:65).

Non-spatial semantic fields have varieties of motion and space. In the Temporal field, "time is conceptualized as moving". Another thing that can be moved is the scheduling of activities. As a result, there are two kinds of abstract motion which are passage of time and change of scheduling. In the Possessional field, "the transfer of ownership counts as motion". In the Identificational field, "change of properties is change of abstract location" (Iwata, 1999:80-81).

The parameters dimensionality, inherent direction and continuity distinguish the varieties of space from each other. Physical space is three-dimensional and continuous but it is not inherently directed because one can go either from one place to another or vice versa. Temporal space is one-dimensional, continuous and inherently directed. Time flows from the past to the present to the future. Possessional space is two-dimensional and it is not continuous. It is not inherently directed because the transfer of ownership goes from anyone to anyone else. Finally, Identificational space is two-dimensional, continuous but it is not inherently directed (Iwata, 1999:81). The three parameters can be shown as in Table 2.

	Spat	Temp	Poss	Ident
Dimensionality	3-D	1-D	2-D	2-D
Directedness	−	+	−	−
Continuousness	+	+	−	+

Table 2. Parameters for Non-spatial fields

CONCLUSION

Semantics, the theory of meaning, concerns the meaning of a sentence which is based on its lexical constituents. Jackendoff (1983, 1990) develops a theory of meaning which he calls Conceptual Semantics. Conceptual semantics deals with the mental representation of the world and its relation to language. Its essential units are conceptual primitives or conceptual constituents and each of which belongs to one of the major conceptual categories such as Event, State, Thing, Place, Path and Property.

Conceptual Semantics is concerned with the form of the internal mental representations and with the formal relations between this level and other levels of representations. This organization includes two levels of structure: syntactic structures and conceptual structures. Syntactic structures divide a sentence into constituents. Conceptual structures are the levels of mental representation that are the forms of the interpretation of the construction of the world. Conceptual structures are defined by a set of conceptual primitives and principles of combination. Each conceptual category is decomposed into a function-argument structure, which is called formation rule. Both levels of structure are described by a set of formation rules that form the well-formedness rules of the level.

Sentences expressing spatial motion or location contain a prepositional or postpositional phrase, which corresponds to either a [PLACE] or a [PATH]. A [PLACE] represents a point or region in space and a [PATH] denotes the direction and shows the motion from a source to a goal through some medium, passing two or more milestones.

A sentence that describes spatial motion or location refers to a state or an event. In sentences expressing state, the theme is located and in sentences expressing event, the theme is moving in some way with respect to a place or a path. A conceptual

constituent that belongs to the category State can be elaborated as one of the State-functions that are BE, ORIENT and GO_{Ext}. GO and STAY are the Event-functions which elaborate the conceptual constituents which belongs to the category Event.

The Event-functions, GO and STAY, are the functions that elaborate only non-causative verbs. There are also verbs which have a causative form and which indicate that an action is performed. Sentences containing causative verbs describe an agent or a cause bringing about an event. A conceptual constituent, which belongs to the category Event, can be elaborated as an Event-function CAUSE.

Jackendoff (1990, 1993) takes up and develops Talmy's (1985b) account of force dynamic interaction for conceptual semantic formalization of causative functions. In force dynamic interaction, the two actors, the agonist and the antagonist, have opposing forces. Jackendoff introduces a function CS with a success parameter for encoding the application of force. CS^{+} and CS^{u} are used for the application of force with a successful outcome and with an undetermined outcome respectively. In addition to causative agency, there is permissive agency, which involves a different relation between the agent and the event called the function LET.

The formation rules that are described for the spatial field can also be applied to other non-spatial fields which are Temporal, Possessional, Identificational, Circumstantial and Existential. Many verbs and prepositions appear in two or more semantic fields. The sentences which denote one of the non-spatial fields have identical verbs and syntactic structures with the sentences which denote spatial motion. Yet, argument structures of the sentences change their semantic contents. For example, the temporal expressions are necessary to evaluate the sentences as spatial or temporal in

Temporal field.

This study examines the conceptual primitives in Turkish and it decomposes, defines and classifies the conceptual structures of Turkish sentences. In order to achieve our aim, we have studied through a comprehensive database collected from Turkish dictionaries and various electronic texts and arrived at the following conclusions:

i. Turkish uses the conceptual primitives Event, State, Thing, Path, Place and Property to identify the linguistic structures.

ii. Among the conceptual primitives, Event and State correspond to verbs; Path to postpositions, case markers and adverbs; Place to case markers and postpositions; and Property to adjectives and inchoative verbs.

iii. Since Turkish use case markers efficiently, unlike English, the distinction between path and place reading is obvious in Turkish.

iv. In Turkish, many verbs describe motion and imply an implicit path. The paths, which are divided as bounded-paths, directions and routes by Jackendoff (1983), can be expressed by postpositions and by lexicalization of path into the verbs.

v. The verbs that imply manner of motion are fewer in Turkish and they are mostly translocational. Therefore, two different conceptual structures can be assigned to the verbs that encode both manner and path: MOVE-function and GO-function respectively.

vi. The State-functions OL, YÖNEL and GİT_{Ext} elaborate the conceptual constituents that belong to the category State. GİT and KAL are the Event-functions in the category Event in Turkish.

vii. The causation in Event can be elaborated as an Event-function NEDEN in Turkish.

viii. In Turkish, the causation is expressed by either lexically causative verbs (*it-, çek-*) or the suffixes like –DIr, -Ar, -Ir (*koştur-, çıkar-*). These suffixes also express the permissive sense. The lexicalization of path in causation is expressed by the addition of the suffix –lA (*yağla-, bohçala-*).

ix. Like in English, Turkish verbs can be used in both spatial and non-spatial fields.

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APPENDIX

The following list is based on the documentation in (Dorr, 2001).

Locational Field: ({Thing | Event | State}, {Thing | Event})

ORIENT LOC (Thing, Thing)

Levha/ tabela/ işaret Ankara'yı gösteriyor.

Ev deniz tarafına bakıyor.

Ev deniz tarafını görüyor.

Tren tünelin içinden geçiyor.

Mardin'de hemen hemen her ev bu "deniz"e bakıyor.

Siz anımsamazsınız ama hocam iyi bilir..." diye bir parmak uzanıyor üstüme doğru.

Kameralar orada, uzanıyor bir mikrofon.

ORIENT LOC (Thing, Event)

Pembe-mavi bir neonun ışıkları herkesin gittiği yönü işaret ediyor.

GO LOC (Thing, Thing)

Ali eve koştu.

GO-EXT LOC (Thing, Thing)

Yol Mersin'den Adana'ya gidiyor / uzanıyor.

Ağaç tavana ulaşıyor / varıyor / uzanıyor.

Aşevi Kuyruğu sokak boyunca uzuyor.

Buradan güneye yayılan drenaj alanı Seferihisar bölgesine açılıyor ve Ege'ye boşalıyor.

Gobi Çölü,1.300.000 kilometrekarelik alanı kapsıyor ve doğu-batı uzunluğu 1930 km., kuzey-güney uzunluğu 970 km.'ye erişiyor.

Şehrin duvarları, gerideki dağ eteklerine kadar varıyor.

Aynı manzarada ikinci bir ufuk, Tuna boyunca sürüp gidiyor.

Kükürtdioksit yüklü dumanlar kimsenin beklemediği zamanlarda tüm coğrafyayı kaplıyor ve kabus o zaman başlıyor.

Tır kuyruğu sınırdan şehre kadar uzadı.

GO-EXT LOC (Event, Thing)

Trafik sokaklardan taşıp nehre kadar ulaşıyor Bangkok'ta.

Yolculuk, Yarmuk Vadisi'nden, Ürdün'ün içlerine, Amman'a kadar sürüyor.

GO-EXT LOC (State, Thing)

Değişim atmosferi, başta Türkiye olmak üzere tüm bölgeyi sarıyor.

STAY LOC (Thing, Thing)

Deprem gecesi işte bu yatakta tam 45 saniye oturdum kaldım.

Herkesin acıyarak bakışlarına, bana yol vermelerine şaşırarak bakakaldım.

Tüm bağrınmalarıma karşın kimseye sesimi duyuramayınca yaklaşık bir saat aslanın tepesinde kaldım.

Dün otobüse bindiğimde her zamanki gibi dörtlü koltuklara oturdum.

Kedi kaçınca gidip kuşu aldım. Sanki insana çok alışkınmış gibi parmağıma tünedi

BE LOC (Thing, Thing)

Arkanızda yön gösteren bir tabela bulunuyor.

İki külüstür araba benzin pompalarının önünde duruyor.

Possessional Field: ({Thing | Event | State}, Thing)

GO POSS (Thing, Thing)

Ayşe arabayı aldı.

Ayşe bebeği kaybetti

Ayşe bebeği Tülay'a verdi.

Ayşe arabadan vazgeçti

Ayşe arabayı elde etti / edindi.

Ayşe arabayı kabul etti.

Ayşe arabayı Tülay'a 20 milyara sattı.

Tülay arabayı Ayşe'den 20 milyara (satın) aldı.

Onun bütün masraflarını ben çektim.

Anne çocuğu için gözyaşı döktü

Mirastan ona bu ev düştü.

Bu ev bana babamdan geçti

Eline geçen para çoluk çocuğa gidiyor.

Gemiler ve saray hepsi gitti.

GO POSS (Event, Thing)

Bu konuşmayı yapmak size düştü.

Suçu bana yıktı.

Suçu benim üzerime attı.

GO POSS (State, Thing)

Bisküviler nem almış.

STAY POSS (Thing, Thing)

Ayşe arabayı elinde tuttu.

BE POSS (Thing, Thing)

Ayşe bir araba sahibi.

Ayşe'nin arabası var.

Araba Ayşe'ye ait.

BE POSS (State, Thing)

Ayşe şüpheye / tereddüte düştü

Temporal Field: ({Event | State}, {Time | Event | State})

GO-EXT Temp (Event, Time)

Toplantının saatini 5'den 6'ya aldık / attık.

Toplantı 5'den 6'ya kadar sürdü.

GO-EXT Temp (State, Time)

Toplantının süresi 5 saati buldu.

Toplantı 5'den 6'ya kadar uzadı.

GO-TEMP Temp (Thing, Time)

Bu ayakkabı 5 yıl gitti

GO TEMP (Event, Time)

The meeting went from 9 to 5.

Toplantı 5'den 6'ya kadar sürdü.

GO TEMP (Event, Event)

Yaz / Ramazan girdi.

Evi boyamak tam 10 saat tuttu.

STAY TEMP (Event, Time)

Toplantının saati 6 olarak kaldı.

STAY TEMP (Event, Event)

Askerliğin bitmesine 4 ay kaldı.

BE TEMP (Event, Time)

Toplantı saat 6'da.

Identificational Field: ({Thing | Event | State}, {Thing | Event | Property})

GO IDENT (Thing, Thing)

Genç adam kurbağadan prense dönüştü.

Ev sahibi evi otele çevirdi.

GO IDENT (Thing, Property)

İşçiler halıyı yuvarladılar.

Adam yorgun / zayıf / şehit / esir düştü.

Işık kırmızıdan yeşile döndü.

Alkol uçtu.

Boyanın rengi uçtu

Boyacı boyanın rengini açtı.

Hava açtı.

Bu karpuz geçmiş

Kazak çekti

Ev çöktü.

GO IDENT (State, Thing)

Ayşe öğretmen oldu.

Adamın neşesi / rahatı kaçtı.

GO-EXT Ident (State, Thing)

Üniversite öğrencilerinin yaşları 18 ile 25 arasında değişir / dağılım gösterir.

GO-EXT Ident (State, Property)

Topun rengi sarı ile turuncu arasında değişir / değişiklik gösterir.

Mezarlık doğudan batıya doğru bir yayılım gösterir.

STAY IDENT (Thing, Thing)

Genç adam kurbağa olarak kaldı

Ali Ahmet'in müdür olarak kalmasını sağladı

Ali Ahmet'in müdür olarak kalmasına olanak tanıdı.

STAY IDENT (Thing, Property)

Ali Ahmet'in ününü korudu.

BE IDENT (Thing, Thing)

Ayşe bir öğretmendir.

BE IDENT (Thing, Property)

Işık kırmızı.

Existential Field: ({Thing | Event | State}, EXIST)

GO EXIST (Thing, EXIST)

Fırtına bir kasabayı yok etti.

Belediye hurdayı ortadan kaldırdı.

Kaçakçılar bilmeden antik kent ortaya çıkardı.

Koç Vakfı büyük bir tesis meydana getirdi.

GO EXIST (Event, EXIST)

Paris Şartı yeni bir dönemin başlangıcını oluşturdu.

GO EXIST (State, EXIST)

Şüpheleri tamamen ortadan kalktı.

Gerçek talihli ortaya çıktı

Denktaş isteğini net bir şekilde ortaya koydu.

Alınan karar şüphe yarattı

BE EXIST (Thing, EXIST)

Katillerin isimleri mevcut

BE EXIST (State, EXIST)

Eskiden kalite vardı.

Circumstantial Field: (Thing, {Event | State})

GO CIRC (Thing, Event)

Adamlar koşmaya başladılar

Ayşe Ali'yi şarkı söylemesi için zorladı / mecbur etti / baskı yaptı / kandırdı.

GO CIRC (Thing, State)

Adamlar kapıda durmaya başladılar

STAY CIRC (Thing, Event)

Ali beste yapmaya devam etti.

Ali beste yapmayı sürdürdü

Ahmet Ali'nin beste yapmaya devam etmesini / beste yapmayı sürdürmesini sağladı.

Adamlar koşmaktan kaçındılar.

Ayşe Ali'nin şarkı söylemesini engelledi / önledi / yasakladı.

Ayşe Ali'nin şarkı söylemesinin önüne geçti.

Ayşe Ali'yi şarkı söyle-ten alıkoydu / menetti. /

STAY CIRC (Thing, State)

Adamlar kapıda durmaktan kaçındılar.

CAUSE (Thing, Event)

Ahmet topu camdan dışarı attı / fırlattı / savurdu.

Ali kayayı uçurumdan aşağı itti.

Ali kuşu kafesten dışarı çıkardı.

Ali Mehmet'i ağacın etrafında koşturdu.

CAUSE (Thing, State)

Ayşe kitapları rafta tuttu / sakladı / korudu.

Ayşe çamaşırları ipe astı.

Ali bahçeye direk dikti.

Çocuk boncukları ipe dizdi.

Adam duvara çivi çaktı.

Adam kitapları rafa koydu.

Mehmet Onbaşı bayrağı toprağa sapladı.

Çiçekli örtüyü masanın üzerine serdi.

Cep telefonunu şarj etmek için prize soktu.

Savaşı protesto için vitrindeki mankenlere gaz maskesi taktı.

Nesrin kitapların bir bir tozunu aldı, sonra büyük bir sandığa tıktı.

Kulaklarına pamuk tıkadı.

CAUSE EXCHANGE (Thing, Event)

Ayşe bebeği Tülay'a verdi.

Ayşe arabayı Tülay'a 20 milyara sattı.

Tülay arabayı Ayşe'den 20 milyara (satın) aldı.

LET (Thing, Event)

Ayşe Ali'ye şarkı söylemesi için izin verdi / bıraktı.

Ayşe Ali'nin şarkı söylemekten azad etti / kurtardı.

Ayşe Ali'yi şarkı söylemekten muaf tuttu.

Ali kayayı uçurumdan aşağıya bıraktı / salladı /^yuvarladı.

Ali Mehmet'i ağacın etrafında koşturdu.